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MANAGEMENT ACTION PLANNING (MAP)
A NEW APPROACH TO SAFETY MANAGEMENT

David L. Woods and Robert M. Latimer

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A PROPOSAL FOR
MANAGEMENT ACTION PLANNING (MAP)
A NEW APPROACH TO SAFETY MANAGEMENT

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March 30, 1979
ACKNOWLEDGMENTS

Management Action Planning (MAP) is a pre-accident/incident management tool developed from the Management Oversight and Risk Tree (MORT)* accident/incident investigation program. The MORT approach to safety is to find what actually went wrong, and then identify the management oversights that led to the situation. Our approach goes beyond this negative fault-finding way of looking at management. Management Action Planning (MAP) approach is preventive. There still may be losses, but they will not come as a surprise, because risks will have been evaluated and costs accepted.

The MORT program was developed by W. G. Johnson (1973) and is coordinated by the EG&G Idaho, Inc., System Safety Development Center, under contract with the United States Department of Energy.*

Appreciation is acknowledged for the helpful discussions with employees of Lawrence Berkeley and Livermore Laboratories; Reynolds Electrical and Engineering Co., Inc., Nevada Test Site, EG&G System Safety Development Center, Idaho Falls, Idaho; United Nuclear Industries, Inc., Richland Washington; Department of Energy; and with those who attended the MORT and Accident/Incident training courses, and various other meetings attended by the authors.

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ABSTRACT

Management Action Planning (MAP) is a comprehensive approach to managing that prevents oversights when planning organizational activities, solving problems, or making decisions. It is a supplement to the management systems currently used by organizations.

MAP is the positive side of the negative fault-finding accident/incident investigation approach to correcting problems. It is a practical, get-the-job-done approach to doing organizational activities with maximum productivity and profit.

MAP helps managers ask the right questions so they can avoid oversights that may lead to accidents or incidents affecting people's safety, their productivity, or the outcome of the organization's activities.

Most organizational activities involve doing projects, or making changes in normal operations. To do this successfully involves four activity areas: defining the proposed idea, getting ready, doing the project or making the change, and then ending the project or incorporating the change.

To avoid oversights in any of these activity areas, managers need to address six general concerns: goals and policies, scheduling, finance, facilities and equipment, procedures and training, and personnel.

MAP helps determine which decisions to make, the level at which these decisions should be made, and then how to make them. There are five concerns that need to be considered when getting decision-making information: costs, benefits, risks, human factors, and political impact.

Oversights that may affect people's safety or the results of the organization's activity can be avoided when the proper decisions are made at the appropriate organizational level, and with enough of the right information.
I. INTRODUCTION

Management Action Planning (MAP) is not a set of rules to be imposed on a department's operations, nor is it intended to change the way managers run their organizations. MAP is a "get-the-job-done" approach that focuses on action/task identification, planning, decisions, and productivity. MAP assumes that managers and their subordinates are doing a good job, and thus serves neither as a crutch nor a way of finding managerial weaknesses. MAP is designed to supplement current management procedures—to act as a "mindjogger," a guide to help managers who are planning or implementing a new project, or changing an existing program. MAP helps avoid oversights that could affect employee safety or program outcomes.

MAP can be used by any organization because it is simply a way of helping management know what information is needed to plan and do an activity, and then where and how to make the decisions. Only when decisions are made at the appropriate level, with enough of the right information, can managers avoid oversights when balancing costs, benefits, and risks.

Management Action Planning focuses on all of the problems that managers must face when guiding their organization toward meeting its goals. Some of these areas of concern are Goals, Schedules, Finances, Facilities and Equipment, Procedures and Training, and Human Resources.

**Goals** covers why do the program.

**Schedules** covers when to do each activity.

**Finances** covers budget, accounting, business services, purchasing; all aspects of how money is obtained, spent, and accounted for.

**Facilities and Equipment** covers all of the building, space, facilities, equipment, tools; in essence, all of the things needed to do the job.

**Procedures and Training** covers all of the written and unwritten information that is needed to learn or know in order to do both normal operations and emergency preparedness.

**Human Resources** is concerned with all of the people involved in the organizational activities. Human Resources Development (HRD) covers how people learn to do their jobs more effectively. HRD can be divided into three general areas: Employee Development, Management Development, and Organizational Development (OD). Employee Development is concerned with the training courses and the skills employees need to their jobs. Management Development covers the skills managers need to get jobs done through their employees. Organizational Development is concerned with developing an organizational climate where managers and employees can use their skill most effectively. OD may cover a spectrum of activities from helping people feel better about themselves,
to helping a group feel better about its interactions, to a get-the-job-done approach.

In summary, schedules look at time, finances at money, facilities and equipment at space and hardware, procedures and training at how people do their jobs, and human resources at using people. Management Action Planning focuses on how all the aspects of an organization work together to meet goals. Thus Management Action Planning covers ways to assure than when doing any activity nothing is overlooked that could lead to problems, accidents, or incidents.

Each program that an organization does consists of four major steps: (1) defining the reason for the proposed program, (2) getting ready, (3) doing the activity, and (4) finally ending the activity.

Each of the four major steps has six general areas of concern: goals and policies, schedules, finance, facilities and equipment, procedure and training, and people. In each of these interrelated areas of concern they will have to plan, organize, staff, direct, and control, but they do not have to do it alone. The MAP approach helps managers effectively use all of the talents available at all levels within an organization. Effectively managed organizations can prevent oversights that could lead to misused or injured people, damaged equipment; loss of time, money, or desire; or other adverse effects.

MAP uses the following decision-making terms:

Right decision level. As the effect on the organization becomes greater, the decision should be made higher up the organizational ladder.

Right information. The individual making the decision must have enough (but not too much) information to avoid oversights when balancing costs, benefits, and risks.

Costs. All of the short- and long-range, direct and indirect expenses that will be incurred as a result of a decision.

Benefit. The sum of anticipated gains times the odds of success for each gain:

\[
\text{Benefit} = \text{Gains} \times \text{Odds of Success}
\]

Risk. The sum of anticipated losses times the odds that those losses will be incurred:

\[
\text{Risk} = \text{Losses} \times \text{Odds of Failure}
\]
MAP helps all levels of management:

- determine at which level a decision should be made;
- ask questions that will get information needed to make decisions;
- make decisions that optimize the balance between costs, benefits, and risks;
- minimize oversights in planning and implementing projects;
- assure that fewer surprises follow decisions.
II. MANAGEMENT ACTION PLANNING GUIDE

An important part of any problem-solving session is to have a systematic way to look at all parts of the organization so that nothing is overlooked. This can be done by dividing programs into complete (smaller) projects. A project can be defined as a unit of work that starts with DEFINING THE PROPOSED ACTIVITY, then everyone and everything GETS READY, then they DO THE ACTIVITY, and when it is completed, they END THE ACTIVITY. All projects consist of these four steps.

There are two additional substeps to projects: After GETTING READY, it is necessary to make sure you are really ready, or the READINESS APPROVAL step. And, in the real world, during the DOING IT step, things never go as planned so there is a CHANGE step, and this is generally where many problems occur. So all projects consist of DEFINING THE PROPOSED ACTIVITY, GETTING READY, READINESS APPROVAL, DOING THE ACTIVITY, MAKING CHANGES, and ENDING THE ACTIVITY.

However, to look at every part of a large program is too much to expect one manager to do. This is an impossible task for any one person, and thus needs to be subdivided. A good way to subdivide an activity is to look at management concerns common to all parts of an activity. These are GOALS AND POLICIES, SCHEDULES, FINANCE, PROCEDURES AND TRAINING, FACILITIES AND EQUIPMENT, AND PEOPLE.

Since each of the parts of an activity has some common concern, these can be put in a simple table to help identify areas that may need improvement. This table can be used much like the road map to help one know where one has been, where one is and where one is going. Thus the Management Action Planning guide is in reality a map of activities.

When managers adequately plan and carry out these four steps, fewer oversights result. In doing any project large enough to require management approval, the four basic activities can be divided into seven stages. These stages need to be followed for both normal operations and emergency preparedness.
Management Action Planning Guide

The Management Action Planning Guide shows the relationship between the work activities and the management concerns.

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The seven stages that take a project from start to finish involve different activities and concerns.
Stage 1: The Proposal

Stage 1 involves defining the idea and getting approval. Get, define, and develop idea for the proposed plan, and identify the resources to be used. Check the concept for compatibility with existing organizational goals, policies, and codes. Then get the go-ahead approval to do the detailed planning for schedules and fundings.

Stage 2: Time and Money

Set up funding and scheduling systems.

Stage 3: Getting Started

Get facilities, equipment, procedures, training, and people ready.

Stage 4: Checking It Out

Walk through the operation to make sure everyone and everything works well together and safely. Check to insure that every resource area and person knows its/his/her responsibilities and allocations.

Stage 5: Activity Operations

When everyone and everything works well together and safely, start the operations and do the project.

Stage 6: Modification

As the activity develops, there will always be changes. Consider each change as a complete project within itself, and go through all seven steps. Avoid the impulse to make a change without checking it out by looking at all of the stages the change will go through.

Stage 7. Knowing It's Done

Finish the project or incorporate the change into normal operations.

If any part of these activities is overlooked, people can be injured, equipment and supplies wasted or damaged, and project goals delayed. Watch especially for situations in which:

- equipment is required to exceed its safe capabilities;
- people are required or invited to do tasks where they exceed the limits of their safe mental, physical, or emotional capabilities;
- procedures that do not adequately describe the situations or methods for the operation;
o procedures are difficult to understand and follow by those who use them.

In using MAP, making a change in normal operations is considered the same as doing a complete project: both start with a proposal and then go through the same steps until the project is over or the change has been incorporated into normal operations.

The Seven Stages in Detail

Stage 1: The Proposal

Defining the proposed idea and getting approval requires looking at each of the concerns covered in this stage.

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Defining Goals and Policies. This area covers all of the benefits, goals, objectives and reasons for doing the project or making the change. It also covers identifying all of the policies that govern how the activity is to run, including affirmative action, environmental impact, equipment maintenance, safety, areas of responsibility, and ranges of authority, etc. Why do the project or make the change? Have the overall project goals been written and policies identified? Do the goals and policies cover both normal operations and emergency preparedness?
Defining the Scheduling Needs. Schedules includes both the design and use of a scheduling system that will give reports on when each activity is to start, the elapsed time and slack time, and the critical scheduling points that could affect the meeting of project goals. What scheduling system will be used? How much time will it take to do each activity? When will each activity be started and finished? Have the types of information that the scheduling system can report been identified? Has the type of scheduling system that will be used been identified? Has the equipment, fiscal, and personnel requirements for the scheduling system been delineated?

Defining the Financial Needs. Have the funding sources that will be used to fund each activity been identified? Have the budget limits been written for the capital, operations, and payroll expenses? Has the accounting system been defined?

Defining Facilities and Equipment. Where will each activity be done? What will be needed to do each activity? Facilities and equipment includes all the physical things needed such as land, site development, buildings, facilities, equipment, vehicles, office furniture, supplies, etc. Has all of the equipment needed to meet each activity goal been identified? Will people be required to exceed their capabilities when they are designing, getting, building, installing, using, maintaining and disposing of equipment? Will any piece of equipment exceed the electrical, mechanical, or chemical limits of other equipment with which it will interact? Have all of the requirements of outside authorities been met, including laws, codes, standards, and special requirements of the governing boards, etc.?

Defining the Procedures and Training Needs. This covers all of the procedures, manuals, and technical and interpersonal training. What do the personnel need to know, learn, or find out? Have the procedures and training needed to safely and efficiently meet each activity goal been identified? Do the procedures and training include both normal operations and emergency preparedness?

Defining the Personnel Needs. Personnel includes all the direct and indirect support that will be involved in both normal operations and emergency preparedness activities.

Who is going to do what?

Have the personnel needs of each activity been identified?

Have manpower planning needs been adequately considered?

Personnel needs include:

(a) specific talents

(b) number of people
(c) when and how long people will be on the staff
(d) what training will be given before, during, and after the project
(e) organizational structure
(f) policies to be followed
(g) housing requirement
(h) salary structure
(i) position classification

Getting the Proposal Ready. Have the detailed goals, needs, and resources been identified and written in the proposal? Have the policies covering each activity been identified? Does the proposal cover both normal operations and emergency preparedness?

Proposal Readiness Approval. Are the activity goals and policies in keeping with the organization's goals and policies? Does the proposal for normal operations fit into the organization's normal operations? Does the proposal conform to existing goals, policies, regulations, and codes? Does the proposal for emergency preparedness fit into the organization's emergency preparedness program? Have appropriate levels of management accepted the proposal for both normal operations and emergency preparedness as acceptable and compatible with the goals and policies of the organization? Have appropriate levels of management approved the proposal?
Stage 2: Time and Money

When will each activity be done? Who is going to pay for each activity? This means arranging for and getting approval to use time and money to do the project.

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A. Scheduling. Based on the needs developed in step one, develop a workable schedule system that gives reports on target dates, elapsed and slack time, and critical scheduling points. The system should be accepted by each user group. When information and training are available for all user groups, the system is ready to be used to schedule the life cycle of the activity or change. A schedule system may vary in complexity from notes on a chalkboard to a computer-assisted, critical-path management system.

Has a scheduling system been developed that will meet the needs?

Has the funding for the scheduling system been arranged?

Is the equipment needed for the scheduling system ready and available?

Have the procedures on how to use the scheduling system been written?
Have the training orientation on the scheduling system been developed?

Have the personnel who will use the scheduling system been selected and trained?

Does the scheduling system meet the needs of all activity areas?

Will all activity areas use the same scheduling system?

Has the scheduling system been accepted and approved for use in all activity areas?

B. Finance. Finances include finding a funding source, obtaining funding, preparing budgets, setting up and using an accounting system, and preparation of reports. Finances must include both normal operations and emergency preparedness activities. Where will the money come from? How much will the project or change cost? Based on the needs developed in step one, set up a budget for capital and operational expense and payroll. This includes account numbers with appropriate signature authority and reporting systems.

When the budget and accounting systems have been reviewed and approved, publish the accounts, budget limits, the signature authority information.

Have detailed budgets been written for each stage of the program?

Has the accounting system been set up to cover each stage of the program?

Is the fiscal system in keeping with project's and organization's goals and policies?

Is there a fund to run the fiscal system?

Is the equipment needed to run the fiscal system ready?

Are the procedures on how to use the fiscal system ready?

Are the training programs on using the fiscal system ready?

Are the people who will run the fiscal system ready?

Do the budgets include all of the costs for both normal operations and emergency preparedness, in each of the following areas:

(a) writing and updating the goals and policies

(b) developing and using the scheduling system
(c) getting and using the funding
(d) designing, getting, maintaining, and disposing of equipment,
(e) writing and updating the procedures and training programs
(f) selecting, training, and using the people

Have the budgets been approved by those who will be using the funding? Has the total budget package been approved as ready to submit for funding approval?

Stage 3: Getting Started

This stage covers getting the facilities and equipment, procedures and training, and people ready to do the project.

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A. Getting Facilities and Equipment Ready. The facilities and equipment includes all of the space facilities, equipment, hardware, apparatus, and supplies— all of the "things" needed to do the project or to make the change.
As part of this step specify, design, order, build, install, and test the operation and compatibility of all of the "things" needed to do the project or make the change.

People must be able to safely make, install, maintain, use, and finally dispose of the equipment, and it must also work properly. Human factors in engineering enter the picture at this point.

Has all of the equipment been installed and tested to meet the criteria? Does any of the equipment require other equipment to exceed its electrical, mechanical, or chemical limits? Does any of the equipment require people to exceed their mental, physical, or emotional capabilities? Is the equipment ready for operational testing with people following the procedures and doing the operations? Is the space adequate to perform each of the activities needed to do the project or make the change?

B. Getting Procedures and Training Ready

Review and rewrite the procedures and manuals, or write new ones that describe all operations and the equipment that is installed and used. These must be written so that the instructions can be understood and followed by the people who use them.

Training must cover the procedures and manuals for all operations and equipment used, and it must be presented to the people who are doing the jobs.

Have the procedures and training programs been written to cover all activity areas?

Have the procedures and training programs been written to cover the equipment and operations that will, in fact, be used?

Have the procedures and training programs been written so that the people who will use and follow them, can do so within their mental, physical, and emotional capabilities?

C. Getting the People Ready. This step involves getting and training the people. This may involve reassigning members of the existing staff, or hiring a completely new staff for a new facility. Regardless of the number of people involved, the considerations are the same.

No matter how many jobs are involved, all are designed for and controlled by people—even the most complex or automated activity has a person in control. For people to work effectively, jobs must not require or invite them to exceed the safe limits of their mental, physical, or emotional capabilities. The job requirements are controlled by the design of the equipment and tasks, the way procedures and training programs are written and presented, and the way that the people work together.
To consistently do their jobs safely and well, people must work with equipment that is within their physical limits, procedures must be within their mental limits, and the work situation must be within their emotional limits. Their abilities should match the job requirements, and they should be trained to do their jobs.

Have the right people been selected for each task? Have the people been trained to do their tasks? Has the organizational structure been established? Have personnel been assigned to tasks? Have both technical and interpersonal training been conducted as needed in order for the personnel to meet the activity goals?

Stage 4: Checking It Out

This is a walk through the operation to make sure everyone and everything work together safely and well, and everyone knows his/her responsibilities and obligations.

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There is an important difference between the checking that is done when getting ready in stage 3 and this walk-through check in stage 4. Stage 3 deals with each area as a separate problem. Stage 4 makes sure everyone and everything work together safely and well. It is the last check to prevent an oversight before starting the operations.

Operational testing involves planning and doing a walk-through of all normal operations and emergency preparedness procedures. This is to assure that:

- the procedures are written to be understood by the people doing the jobs
- the equipment is designed and built so the people can do their jobs safely and well
the people know how to, and do their jobs safely and well
the people work together effectively
responsibilities are defined and clear

QUESTIONS TO ASK DURING:

Equipment Readiness Approval

Does the equipment work safely and well when used by the people as they follow the procedures to do the operations?

Does the equipment work effectively under both normal operations and for emergency preparedness situations?

Procedures and Training Programs Readiness Approval

Have the procedures and training programs been shown to match the equipment and people who will be using them?

Personnel Readiness Approval

Have personnel shown that they can follow the procedures to use the equipment while doing their tasks for both normal operations and emergency preparedness activities?
Stage 5: Actual Operations

This involves meeting the goals by having the people work together to follow the procedures and use the equipment in keeping with the schedule, and within the budget. It also involves adjusting to change. As you make changes, you will need to return to Stage 4 to check out the new procedures.

QUESTIONS TO ASK DURING ACTUAL OPERATIONS

Meeting Goals and How Changes Affect Goals and Policies

Have the activity goals remained viable?

Are all activities helping to meet the project goals?

Are all activities in keeping with the project and organization's policies?

Have any conditions changed which affect the importance of meeting the activity goals?
Using the Schedule and How Changes Affect the Schedule

Do all activity areas use the scheduling system?

Is the scheduling system kept current with the "real world" activities?

Are the activities on schedule?

Are records kept of changes in the schedule?

Have changes in other areas affected the scheduling or scheduling system?

Using Finances and How Changes Affect Finances

Is each phase of the activity within its scheduled budget limits?

What effect will proposed changes in the activity have on the budget?

What effect will proposed changes in the activity have on the accounting system?

What effect will outside changes have on the activity's fiscal system or funding levels?

Using Equipment And How Changes Affect Equipment

Is the equipment being maintained and doing its intended function without exceeding the safe limits of other equipment or the capabilities of people using it?

Using Procedures and Training Programs, and How Changes Affect Them

During actual operations, are the procedures being followed?

During operations, are the training programs being used to train new people and to refresh the knowledge and skills of the existing staff? Have the procedures been reviewed by the users to assure that they are accurate, correct, and agreeable with actual operations?

Using Personnel and How Changes Affect Them

Are people following the procedures to do their tasks?

Are personnel kept current on changes in operations, and positions or classifications or new personnel?
Stage 6: Modification

During the life of any activity there will always be changes. Each change or modification should be handled as a complete project within itself. Even for the simplest of changes, at least think through all seven stages.

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QUESTIONS TO ASK WHEN MAKING A MODIFICATION OR CHANGE

Effects on the Project of a Change in Goals

Will the proposed change in goals or policies affect the following areas of concern:

(a) organization's or project goals and policies
(b) schedule for meeting project goals
(c) finances
(d) equipment
(e) procedures and training
(f) personnel

Effects on the Project of a Change in Schedules

Will the proposed change in the schedule affect the following areas of concern:

(a) meeting activity goals or following policies
(b) scheduling system
(c) finances
(d) equipment
(e) procedures or training
(f) personnel

Effects on the Project of a Change in Finances

Will the effect of a change in finances or the financial system been analyzed before being put into effect? How will changes in the budget affect the project?

How will proposed changes in the finance system affect the following areas:

(a) meeting or updating goals and policies
(b) meeting the schedule or using the scheduling system
(c) using the finance system
(d) setting, using, maintaining, or disposing of equipment
(e) developing and updating procedures and training
(f) selecting, training, and using people

Effects on the Project of a Change in Equipment

Will the proposed change in equipment adversely affect the meeting of activity goals?

How will the change in equipment affect goals, schedule, finances, other equipment, procedures, training, and people?
How will changes in other phases of the activity affect the equipment? Will proposed changes affect the safety and efficiency of the operations?

**Effects on the Project of Changing Procedures and Training Programs**

Have changes in other activities been reflected in changes in procedures and training?

Has the impact of changes in procedure or training affected other areas: goals and policies, scheduling, finances, equipment, other procedures and training programs, and people.

**Effects on the Projects of Changing Personnel**

How will changes in personnel or job assignments affect goals, policies, schedule, finances, procedures, training, equipment, and other personnel?

**Stage 7: Knowing When It's Done**

All activities must someday come to an end. The end may mean the complete stopping of an activity or it may mean incorporating a change into normal operational procedures.

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QUESTIONS TO ASK AT THE END OF AN ACTIVITY OR PROJECT

Effects on Goals and Policies by Ending the Activity or Incorporating a Change

At the end, did the activity meet the goals?

During the life of the activity, were the policies followed?

After a change, have the goals and policies been updated?

Are updated goals and policies still in kept with the organization's goals and policies?

At the end of the activity, are the original and updated goals and policies included in the project final report?

Effect on the Schedule of Ending The Activity or Incorporating a Change

Have the scheduling goals been met at the end of an activity?

Have records of the scheduling program been included in the final report?

Have changes been incorporated into normal operations without adversely affecting ability to meet the activity goals?

Effects on Finances of Ending the Project or Incorporating a Change

At the end of the activity, or after a funding change, has the end of the fiscal system been planned so that there is proper use of excess money and are the accounting books balanced and closed?

Are there adequate records for a fiscal auditing of all phases of the activities?

Effects on Equipment of Ending the Activity or Incorporating the Change

At the end of the activity, if necessary, has all supplies and equipment been safely and economically disposed of?

When the change has been incorporated into normal operations, has there been an operational readiness test completed and approved?

Effect on Procedures and Training of Ending the Activity or Incorporating the Change

At the completion of a change, has the change been incorporated into normal operations and emergency preparedness?
Effects on Personnel of Ending the Activity, or Incorporating a Change

Have the personnel been updated on the new change?

Have personnel who are no longer needed for the activity been placed in other jobs?
III. BUCK PASSER'S GUIDE - OR, WHO SHOULD MAKE WHAT DECISION?

The Buck Passer's Guide helps managers determine whether they should make a decision, delegate it to their subordinates, or refer it to their boss. It applies to both general or specific, or difficult or easy decisions. Remember these two criteria: if in doubt, ask; and, never surprise the boss.

This Guide assumes that the greater the effect, or perils, of a decision on the organization, the greater the knowledge and authority needed by a person to make that decision. Those who make decisions must be able to achieve an optimum balance of costs, benefits, and risks, and to make decisions with courage, care, and hope. A decision involves some hoped-for gain, and is made with a degree of uncertainty. To use the Buck Passer's Guide, you need to think about odds. Even a gut feeling is better than ignoring the odds altogether.

Decisions can be more efficiently delegated up or down the organizational ladder when everyone uses the same criteria for determining the BUCK STOPS HERE level. The Buck Passer's Guide helps management determine that level.

The Guide lists five decision-making levels: worker, supervisor, mid-management, top management, and outside authority. These levels are determined by job function, not by the decision maker's title:

- Worker: responsible for following procedures and completing tasks.
- Supervisor: responsible for designating specific procedures and assuring workers follow policies.
- Mid-management: responsible for designating general procedures and the meeting of overall organizational goals.
- Top management: responsible for designating overall goals and objectives, and guiding the organization to meet them.
- Outside authority: responsible for assuring that the organization does not violate the goals and policies of the outside authority, and that the organization operates within the contract.

To use the Guide, consider the nature of change and effects of the decision. The highest level for any of the following areas determines the decision level for at least that part of the decision. These are the areas to be considered:

1. $ Costs of project or change,
2. $ Benefits (gains times odds),
3. $ Risks (losses times odds),
4. Human factors, and

5. Political effects on the organization.

The Buck Passer's Guide shows the relationship between the decision makers and their concerns.

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When the decision outcomes will be within the normal routine variations of the job, the worker can make this part of the decision. When the outcomes are new, but not unknown, or will not have any undesirable effects, the supervisor can make this part of the decision. If the outcomes are unknown, the decision should be forwarded through mid-management to top management. When a decision involves unacceptable outcomes, such as a violation of building or fire codes, then it must be forwarded to an outside authority.
1. **Costs of Activity or Change**

The costs include all of the short- and long-range direct and indirect costs that will be incurred as a result of the decision. Cost-level authority can be equated to account-signature authority; as the costs go up, so does the decision level.

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2. $ Benefits (gains times odds)

There are some good reasons for every new activity or change. However, there is seldom certainty that things will come out as planned. So the higher the benefits, the higher up the organizational ladder the decisions should be referred.

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3. **$ Risks (losses times odds)**

For every new activity or change in operations, there are many risks: activity goals may be changed before they are reached; something may take longer than planned; the cost may be greater than the budget; there may be errors in procedures, training, or reports; people may be injured, or not do the job right. Every time an activity is started, there are things that can go wrong, and each risk has projectable dollar loss so the greater the risk the higher the decision should go.

**BUCK PASSER’S GUIDE**

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4. Human Factors

In determining the decision level it is important to consider how people will feel about themselves and about others. Work performance is affected by decisions that cause either tears to be shed or smiles that light the room. Thus the greater the effect on people's feelings and work performances, the higher up the organizational ladder the decision should go.

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5. Political Effects on the Organization

Of great importance in determining the decision-making level is the impact that the decision will have on the organization. Whenever a subordinate is in a position to make a decision that can adversely affect the organization, there needs to be a clear understanding of decision authority. Some decisions may appear to have few political implications; however, a subordinate who is uninformed and politically naive may blunder in a decision that could adversely affect the organization. When in doubt in the political arena, ask your BOSS.

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Buck Stops Here Decision Guide - or, How and When to Make Decisions

Decision making involves a series of choices. When you are asked to make a decision, you have two choices. You can face the decision and do something or you can sidestep it and try to ignore it. If you ignore a decision you are making a de facto decision to not make a decision. However if you face the decision you have two decision choices. You can come out and say that you will:

- not make the decision
- make the decision
If you decide to make a decision, you have two choices:

- ask for more information
- make the decision

If you decide you have enough information to make the decision, you have two choices:

- say YES
- say NO

If YOU are the one who is going to make the decision, consider again the five areas listed in the Buck Passer's Guide. If the answer is NO in any one area then the answer is probably NO on the decision. It is also important to make sure that you know the difference between information that is fact and information that is opinion. You will have to use a lot of information that is opinion, but at least know which is which.

In considering the nature of a proposed change, is it covered by procedures, policy, law, or any other regulating factors, over which you may not have any control?

Consult the person who is most knowledgeable about the reasons for doing the job the way it is now done. In some cases the worker may be the most knowledgeable authority on the subject.

If the change is controlled by regulations, find out who can change the regulations, and whether the change is worth the hassle.

1. **Costs of Activity or Change**

   Cost includes all the short- and long-range direct and indirect costs. They must be at the signature authority level of the decision maker. To say YES, the benefits should be greater than the costs. At least one thing to consider is whether the money can be better spent on some other activity. If this is the best place to spend the money, then the answer is YES, go do it; if not, then it is NO in this area.

2. **Benefits (Gains Times Odds)**

   There must be some reason for proposing the change or new activity. In many cases, the projected gains from an activity can be given a dollar equivalent. For example: A reduced risk has a dollar value. A research project generating new information has a benefit of prestige, which must be evaluated in terms of dollars. In essence, when a decision is made to spend a certain amount of money on a project, it is the same as saying that the project is worth at least that much money.
Once the dollar values for the projected gains have been established, you must determine the odds of success. The benefits then be given a dollar value and be compared to the costs and risks in dollars.

If the costs and risks are greater than the benefits, the answer is NO. If the benefits are greater than the costs and risks, the answer is YES for this area.

3. $ Risks (Losses Times Odds)

To reduce potential losses to as low a figure as is reasonable, you need to review how people, materials, and money are protected from injury, damage, and misuse.

There are four elements in considering risks:

- If the project does go wrong, what will it cost?
- Have the potential losses been reduced as low as is practical?
- What are the odds that it will go wrong?
- Have the odds of a loss been reduced to as low as is practical?

If the risks have been reduced, and none are above a reasonable level, the answer in this area is YES, go do it.

4. Human Factors

We do not work well when we hurt. And our feelings are often hurt when someone does something to us without our knowing about it until after the decision has been made.

Some of our strongest hurt feelings occur when we feel powerless to control what is happening to us, when someone else makes decisions about our lives, and seems unconcerned about our feelings.

Conversely we work best when we feel good about our jobs and the people we work with and for and do not have to exceed our mental, physical, and emotional capabilities. Consider how the decision will affect the feelings of other people, both above and below the decision maker.

5. Political Effects on the Organization

Any decision may have minor political implications, or may result in some very major political problems. There can also be long-range, insidious political outcomes that are forseeable. The most simple and inviting decisions may have had long-range, undesirable outcomes.
In looking at the political side of a decision, consider at least the following:

- Will the decision set a precedent that, if blindly followed, will degrade the effectiveness of the organization? If you are making your decision because of a precedent, consider the merits of the original decision that set the precedent.

- In the political arena, make sure you understand the short- and long-term results of your decisions.

**Summary**

To avoid oversights and surprises in making decisions, consider the following:

- Who should make the decision?
- Nature of the change?
- Costs
- Benefits
- Risks
- People
- Politics
- Is there a safe balance between benefits, costs, and risks?

If all is OK and it feels right, then the answer is YES, go do it. If it does not feel right, wait.

If you can see no reason for saying NO, then consult with someone else, because you may be overlooking something. For almost every decision there are some reasons for saying NO. Make sure you understand all of the reasons for saying NO and all of the reasons for saying YES.
IV. CONCLUSIONS

In planning and carrying out any activity there are only thirty-six areas that need to be considered. However, every one of these areas must be considered if oversights are to be avoided.

Every project or change goes through seven stages in its life cycle. These are: Stage 1, The Proposal; Stage 2, Time and Money's Stage 3, Getting Started; Stage 4, Checking It Out; Stage 5, Actual Operations; Stage 6, Modifications; Stage 7, Knowing It's Done. If one stage is started without finishing the preceding stage, oversight can result. To help keep track of how each stage is progressing, the Management Action Planning Guide can be used as a format for the status reports.

During the life of an activity, situations will change. Status reports based on the MAP Guide will accurately focus on areas where potential problems may be developing. Such reports both simplify and increase the accuracy of communication up and down the organizational ladder.
When decisions are needed the Buck Passer's Guide helps to determine at what level each of the five parts of every decision should be made.

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Each of the five parts of a decision should be made by the most knowledgeable person. Thus these decisions have a higher probability of being an appropriate balance between the costs, benefits, and risks. Decision recommendations based on the Buck Passer's Guide give concise information to all those involved in the decision process.

A single work group or all levels of a major organization can use both the Management Action Planning Guide and the Buck Passer's Guide.

These work groups or organizations will have fewer oversights and thus fewer accidents, or incidents, that injure people, damage equipment, or waste time or money. This type of management can result in a higher level of productivity and improve the ability to meet organizational goals.
This report was done with support from the Department of Energy. Any conclusions or opinions expressed in this report represent solely those of the author(s) and not necessarily those of The Regents of the University of California, the Lawrence Berkeley Laboratory or the Department of Energy.

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