IF YOU HAVEN'T PLANNED IT, YOU CAN'T CONTROL IT

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TOPICS

1. *What is Planning in its Basic Form?*
2. *What Activities or Tasks Need Planning in an Engineering Firm?*
3. *Why is Planning So Important?*
4. *Understanding the Relationship Between Planning and Scheduling*
5. *The Seven Basic Steps to Plan Anything*
6. *What Activities or Tasks Need Controlling in an Engineering Firm?*
7. *What is Controlling in its Basic Form?*
8. *What Controlling Definitely IS NOT*
9. *Various Methods of Controlling*
10. *Guidelines for a Positive Control System*
11. *Tracing the Causes of Incompetence*
12. *How to Deal with Employee Mistakes*

INTRODUCTION

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WHAT IS PLANNING IN ITS BASIC FORM?

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WHAT IS PLANNING IN ITS BASIC FORM?

PLANNING IS THE STRATEGY AND TACTICS TO ACHIEVE ANY GOAL.

Planning is Required to Get from Here to There.

It's the Game Plan—
Regardless of the Game you are Playing.

"GREAT BATTLES ARE WON BEFORE THE ARMIES APPROACH THE BATTLEFIELD."

Planning asks "Where are we now, where do we want to go, and what's the best/most feasible way to get there?"

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Shooting from the hip *is not planning.*

Reacting to whatever happens *is not planning.*

Just showing up at the office everyday *is not planning.*

WHAT ACTIVITIES OR TASKS NEED PLANNING IN AN ENGINEERING FIRM?

TASKS REQUIRING PLANNING IN TECHNICAL ORGANIZATIONS

A. General Management:

1. Long range planning, both strategic and action planning.
2. Organization development, structuring, roles and responsibility definitions.
3. Setting, administering and reviewing operating practices.
4. Setting, administering and reviewing personnel policies.
5. Ensuring proper execution of specific management functions.
6. Auditing and rewarding performance and results with respect to goals and objectives.
7. Providing effective day-to-day internal communications.
8. Improvement, research and development of products or services.
9. Staying in contact with clients, customers, etc. regarding their needs, feedback and ideas.
10. Ownership transition.

B. Production Management:

1. Staff assignments, scheduling and planning.
2. Job, project, program or function scheduling.
3. Technical and quality control supervision.
4. Auditing and unblocking project or program progress.
5. Day-to-day cost control and cost accounting.
6. Client relations and communications.
7. Standard details and operating practices.
8. Computer development and utilization.
9. Formal and on-the-job training of people.

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C. New Business Development:

1. Market research, development and planning.
2. Product or service development.
3. Client contacts: for new and existing clients.
4. Fee negotiation, price structuring, etc.
5. Developing and administering contracts.
6. Public and community relations and communications.
7. Promotional, sales and educational materials/media.

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D. Financial Management:

1. Financial planning based on goals, history, etc.
2. Cash flow management for minimum risk or idleness.
3. Billing procedures and cost allocation.
4. Collection of accounts receivable based on work done.
5. Payroll, bonus and earnings management.
6. Accounts payable based on services/materials received.
7. Financial records for internal, external and operating use.
8. Inventory reporting, accuracy and control.
9. Taxes and related reports.

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E. Administrative Management:

1. Personnel needs, selection and hiring.
2. Personnel objectives, appraisals and feedback.
3. Personnel salary review and administration.
4. Personnel fringe benefits administration.
5. Personnel development, career planning, etc.
6. Insurance: liability, personnel, property, etc.
7. Correspondence, records, documents and files.
8. Supplies, vehicles, tools and equipment.
9. Facilities and work environment.
10. Security: facilities and personnel.
11. Continuing education, internal library.

F. Information Management:

1. Necessary hardware.
2. Necessary software.
3. Intranet and Internet requirements.
4. Company web site.

WHY IS PLANNING SO IMPORTANT?

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Because if you don't have a plan, you don't know when you have strayed from the path that leads to success.

And, if you are a manager, planning the professional growth/ development of those that report to you …

… THAT MAY BE THE MOST IMPORTANT PLANNING THAT YOU DO.

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UNDERSTANDING THE RELATIONSHIP BETWEEN PLANNING & SCHEDULING

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WHAT'S MORE IMPORTANT: PLANNING OR SCHEDULING?

NEITHER, *but* …

If you try to schedule anything without a lot of good planning before you start the scheduling, you've got garbage.

PLANNING MUST ALWAYS PRECEED SCHEDULING.

You can't schedule what you haven't planned.

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PLANNING …

is determining "what" needs to be done and the required resources to make it happen, and the possible barriers to making it happen.

SCHEDULING …

determines when activities can or should be done in a logical relationship to other activities, and fixing the appropriate durations to complete the total exercise (project or whatever).

THE SEVEN BASIC STEPS TO PLAN ANYTHING

THE 7 BASIC STEPS TO PLAN ANYTHING

1. **Assessment of the current situation** (where are we now?).
2. **Define and set goals** (where do we want to go?).
3. **Develop one or more action plans of how best to get there.**
4. **Set the time, cost and resource constraints.**
5. **Determine methods and procedures for making the action plans happen.**
6. **Implement the plan** (authorize action).
7. **Monitor what happens** (information and control system at work).

Some Terms Used in Planning

Brief Descriptions of Commonly Used Terms:

MISSION: The reason an organization exists.

GOALS – OBJECTIVES: Desired results (long or short term).

POLICIES: Guidelines for what can and can't be done in the firm's areas of operations.

PROCEDURES: Step-by-step chronological sequence of actions to be taken.

STRATEGIC PLAN: Top-level, longer-range planning dealing with continuing purpose of the organization.

OPERATIONAL PLANS: Deal with execution of top-level strategic plans on a month-to-month, week-to-week basis.

IMPLEMENTATION PLANS: Specific parts of operational plans (also called detailed action plans).

BUDGETS: A plan in financial or monetary terms.

SINGLE USE PLAN: A plan used just once, i.e. to move an office, or a project plan.

STANDING PLAN: A plan to cover repetitive situations, i.e. responding to RFP's, processing invoices, reviewing shop drawings, etc.

WHAT ACTIVITIES OR TASKS NEED CONTROLLING IN AN ENGINEERING FIRM?

TASKS REQUIRING CONTROLLING IN TECHNICAL ORGANIZATIONS

A. General Management

Refer to slides 9-14 for detailed examples.

B. Production Management

C. New Business Development

D. Financial Management

E. Administrative Management

F. Information Management

WHAT IS CONTROLLING IN ITS BASIC FORM?

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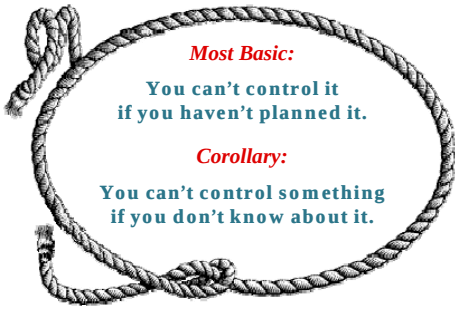

PROPER CONTROL *does* **NOT** *mean having omnipotent power.*

IT IS …

… the process of assessing progress toward achieving planned goals, deadlines, targets, destinations, etc., and taking corrective action where ***deviations from that plan*** *have occurred.*

… a system of helping and guiding yourself (as a manager) and others who work with you, to use the capabilities that you and others have, to achieve what has been agreed on, that needs to be accomplished.

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PLANNING:
defines someone's (or lots of someones') expectations.

CONTROLLING:
defines the degree to which those expectations are being met.

JUST REMEMBER:

A great system for control requires a great planning and information system.

Poor plans, and/or poor information on what's happening, lead to lousy control.

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WHAT CONTROLLING IS NOT

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CONTROLLING DEFINITELY IS *NOT:*

1. The personal approval of everything done by subordinates.
2. Giving someone an assignment, properly understood, with an agreed upon deadline, waiting until the day the assignment is due, and raising Cain if it isn't done.
3. Getting copies of letters, reports, drawings, specs or whatever, and just letting them pile up without reading or evaluating, and never giving the subordinate any feedback on the material (positive or negative).
4. A long list of don't do this and don't do that.
5. A method of blaming subordinates if things go wrong, and taking the honors when things go right.

6. A way of justifying Murphy's Laws (See Appendix I).
7. A way of justifying policies that are "penny-wise—pound foolish."
8. A way of dangling the carrot in front of people to get them to always put out more without ever reaching the carrot.
9. A system for holding aggressive self-starters back because they might be able to accomplish more than the manager can plan.
10. A score card to hold up to show the average or lower performer that he's inferior to others.

VARIOUS METHODS OF CONTROLLING

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Small Operations: **Managers are personally involved in the control process.**

Medium-Large Operations: **Managers are indirectly involved in the control process through the following:**

A. **Personal visits (MBWA).**
B. **Visits by staff members.**
C. **Inspections.**
D. **Reports (written and verbal).**
E. **Staff meetings.**
F. **Financial audits (reviews).**
G. **Personal communication … by phone letter or email.**
H. **Any other medium which will tell you where performance stands with respect to standards, expectations or goals previously set.**

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In order to establish a reliable control system, a manager must make three major decisions:

A. WHERE?
In what areas is control to be exercised?

B. WHAT?
What key indicators will tell where we stand at any given time?

C. STANDARDS?
What standards of performance are to be met?

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How to Maintain Proper Control

Control's Only Purpose: **Assure the manager that what was planned, is actually achieved.**

Control's Basic Need: **Stimulate others to take action to achieve desired results.**

Control's Common Myths:

- **It is a way to check up on people.**
- **It is an end unto itself.**

These myths often lead to resistance and a negative response by those responsible for achieving the desired results.

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GUIDELINES FOR A POSITIVE CONTROL SYSTEM

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The control system should be
the guiding light which leads people
To accomplishment and success,
Rather than a whip to hold them in line.

1. If possible, the people being controlled should be involved in the design of the control system.
2. The desired results expected should be clear to everyone. The results should be reasonable and attainable. Those being controlled should want to achieve the desired results.
3. Performance standards should be derived from these desired results, and the people being controlled should feel these performance standards are fair.

4. Indicators should provide current information.
5. People being controlled should feel free to seek information from the control system which will help them to achieve their objectives.
6. People being controlled should know their limits—decisions, finance, size of errors, number of errors, operations, time, and the like.
7. Accountability should be fixed into the control system.
8. The control system should give purpose to jobs.
9. *Management by exception* should become possible, rather than over-supervising.
10. The control system should be viewed through the eyes of the person being controlled.
11. The ultimate objective of the control system is self control.

TRACING THE CAUSES OF INCOMPETENCE

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What do you do when someone whose performance you have responsibility for
APPEARS INCOMPETENT?

- **Do you take impulsive action?**
- **Do you automatically assume the individual involved was totally at fault?**

DON'T

Symptoms of Incompetence:

- **Missed deadlines**
- **Errors**
- **Omissions or incomplete work**
- **Delays**
- **Poor quality**
- **Breakdowns**
- **Procrastination**
- **Lateness**

WHEN ONE OR MORE OF THESE SYMPTOMS APPEAR,

THE QUESTIONS TO ASK ARE …

- *Why (or how) did this happen?*

and

- *What can be done to prevent it from happening again?*

NOT

Who is to blame?

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In the very best run organizations, poor performance can occur for any number of reasons, such as:

- The individual responsible didn't understand the assignment.
- Team members were incompatible.
- The person assigned to the job wasn't properly trained or lacked the necessary experience.
- A situation beyond the individual's control hampered his or her performance.
- He or she didn't have access to information needed to do the job properly.
- A personal problem or conflict prevented the employee from working up to usual standards.
- The individual was given the wrong information or wrong instructions.

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PUNISHMENT and EMBARRASSMENT

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IMPROVED PERFORMANCE

The objective is to CORRECT, NOT TO BLAME.

Abilities wither under fault-finding, but blossom under encouragements.

What's your track record for "pats on the back" for your people vs. "kicks in the shins?"

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HOW TO DEAL WITH EMPLOYEE MISTAKES

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As long as we are human, every one of us is going to make some mistakes every day.

If people know they will not be harshly criticized or fired for making a mistake--

THEY WILL NOT TRY TO COVER IT UP!

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Delegating authority to others to achieve desired results means:

- They are accountable to achieve those results.
- You have given them the authority to take action.
- Taking action means making decisions.
- Every decision involves risk.
- Some mistakes will be made.

A reasonable margin in judgment for mistakes is required.

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No reasonable margin allowed:
The subordinate concludes they didn't have the necessary authority granted them.

A reasonable margin in judgment
leads the subordinate toward broad desired results, rather than concentrating on preventing small mistakes.

Also allows subordinates to be willing to "stick their necks out" and try new approaches without fear of criticism for minor mistakes.

Let subordinates know the limitations of their authority.

The Management by Exception Principle

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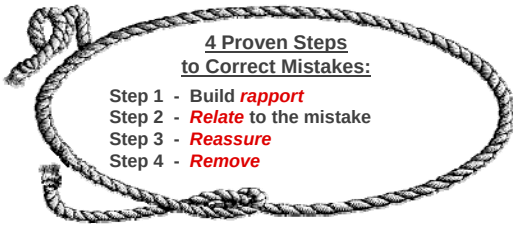
The Four R's Approach to Dealing with Mistakes:

Mistakes can interfere with achieving desired results.

Corrective action must be taken, but done so as to not cause bitterness or resentment in one or all of your team.

"Bawling out" develops resistance to full cooperation and deflates motivation.



4 Proven Steps to Correct Mistakes:

Step 1 - Build ***rapport***
Step 2 - ***Relate*** to the mistake
Step 3 - ***Reassure***
Step 4 - ***Remove***

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RECAP:

We must control what our subordinates have been delegated to achieve.

This can't be done properly without putting the planning, information and controlling system in place, together, with each and every person on your team.

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Gary D. Bates, PE, F.ASCE

Gary Bates, a partner in the management consulting firm of Roenker Bates Group, is a former construction industry senior executive and educator. He has specialized in the techniques of "effective management through positive communication" and "systems for continuous improvement."

(more …)

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As a registered professional engineer, Gary has nearly three decades of experience in the management of organizations and related design and construction projects valued over $1 billion for domestic and international markets. This included the general management of a 5 office, 700 employee architectural/engineering operation and the development of a new engineering market in Europe and Africa. The last twenty years have involved a wide variety of consultation, facilitation, and training programs for numerous organizations, mostly in the design, construction, and health care industries. He is known nationally for his expertise in partnering, team-building and effective communication, and has facilitated or presented at over 400 workshops, seminars, or meetings throughout the US.

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He received his Bachelor and Master of Science in Civil Engineering from the University of Kentucky. Gary is an active member of the American Arbitration Association and Rotary International. He is active in many other professional and civic organizations including the American Society of Civil Engineers, for which he is the Editor-Emeritus of the "Journal of Management in Engineering," an international publication. He is the co-author of the book ***Win-Win Negotiating: A Professional's Playbook***. Gary has been listed in many biographical registries, including "Who's Who in the Midwest" and "Who's Who in Science and Engineering."

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APPENDIX I

Murphy's Laws:

- **If anything can go wrong, it will.**
- **If there is a possibility of several things going wrong, the one that will cause the most damage will be the one to go wrong.**
- **If you perceive that there are four possible ways in which something can go wrong, and circumvent these, then a fifth way, unprepared for, will promptly develop.**
- **If anything just cannot go wrong, it will anyway.**
- **Left to themselves, things tend to go from bad to worse.**
- **If everything seems to be going well, you have overlooked something.**
- **In nature, nothing is ever right. Therefore, if everything is going right … something is wrong.**
- **A falling object will always land where it can do the most damage … matter will be damaged in direct proportion to its value.**
- **The other line always moves faster.**
- **You will always find something in the last place you look … *or* … in the first place you look, but never discovered on the first attempt.**
- **When a broken appliance is demonstrated for the repairman, it will work perfectly.**
- **Build a system that even a fool can use, and only a fool will use it.**

The Murphy Philosophy: Smile … tomorrow will be worse.

P.E. Structural Exam

Course Dates	Course Topics
Mon., Feb. 14	Gravity Loads
Wed., Feb. 16	Lateral Loads
Wed., Feb. 23	Structural Analysis
Mon., Feb. 28	Masonry Design
Wed., Mar. 2	Timber Design
Mon., Mar. 7	Bridge Loads
Wed., Mar. 9	Bridge Design
Mon., Mar. 14	Concrete Buildings
Mon., Mar. 21	Prestressed Concrete
Wed., Mar. 23	Steel Design
Mon., Mar. 28	Seismic Design

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Thur., Feb. 17	Strength of Materials
Tue., Feb. 22	Structural Design
Thur., Feb. 24	Geometric Design
Tue., Mar. 1	Geomechanics
Thur., Mar. 3	Foundations
Tue., Mar. 8	Hydraulics
Thur., Mar. 10	Hydrology
Tue., Mar. 15	Waste & Water Treatment
Thur., Mar. 17	Construction Engineering
Tue., Mar. 22	Construction Materials
Thur., Mar. 24	Cost Analysis Estimating

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Wed., Mar. 30	Transportation
Thru., Mar. 31	Water Resources
Fri., Apr. 1	Structures

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Fri., Feb. 25	Storm Water
Fri., Mar. 4	Hazardous Waste
Fri., Mar. 11	Waste/Water Treatment
Fri., Mar. 18	Environment Assessment
Fri., Mar. 25	Water Quality

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