99-05

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"HOW TO BE A SUCCESSFUL MANAGER OF PROJECTS"

Speaker - Ralph J. Stephenson, P.E.

FLINT CHAPTER MSPE PROGRAM

FLINT, MICHIGAN

Date - March 4, 1999

Location - Sarvis Conference Center, Flint, Michigan

Time - 12:00 noon to 01:30 PM

date printed: 3/3/99

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MSPE Flint Chapter talk - disk 690

I. Title of talk - How to be a Successful Project Manager
II. Location of talk - Restaurant in Flint, Michigan - on south side of Bristol Road 2 blocks east of US 27.
III. Date of talk - March 4, 1999
IV. Number of people expected - about 20
V. Time of talk
   A. Luncheon - 12:00 noon to 12:45 pm
   B. Talk - 12:45 pm to 01:20 pm
VI. Major topic outline - total time available 20 minutes - starting at 12:45 pm
   A. 12:45 to 12:48 pm - Introduction (3 minutes)
      1. Program subject - How to be a Successful Project Manager
      2. How did I select subject of program
         a) Increasing evidence that few project managers fully understand what constitutes a successful project.
         b) Continuing problems in the engineering profession that stem from too little attention being paid to how to direct projects into successful implementation modes.
         c) Too little focus in our institutions of higher learning on what to do with the technology that is being taught.
         d) Ongoing examples of managers shooting themselves in the foot on their jobs because they don't understand the complex elements that make up a successful job.
         e) The ease with which mismanagement or maladministration can be hidden or the blame shifted on short term management assignments. (by the time the problems appear and are identified the project may have been completed or be unsalvageable. Point our the steep and flat probability curves.
      3. Brief review of content
         a) Managing complex change
         b) Distribution curves
         c) Basic tools for success
         d) Elements of importance to success
         e) Recommendations for improvement

B. **12:48 to 12:51 pm - Managing complex change - ho 511- (3 minutes)**
C. **12:51 to 12:54 pm - Probability curves - page 58 & new ho - (3 minutes)**
   1. **Text - adapted from The Nine Master Keys of Management by Lester R. Bittel**
      a) **Flat distribution - In the flat distribution of troubles anything can happen, and often does, without displaying any obvious reason to recognize the problem. It characterizes the situation in which the knowledgeable manager senses trouble just can't seem to get a fix on the cause or the solution. Corrective action is needed but there is always another day to take it.**
      b) **Steep distribution - In the steep distribution of troubles when things go wrong they go wrong very quickly, usually before the manager knows the project is heading for trouble. The central tendency data in the normal curve is squeezed so close together that the gap between the extreme positions is very narrow. Quick corrective action is needed.**
D. **12:54 to 12:57 pm - Basic tools - ho 507 - (3 minutes)**
E. **12:57 to 01:01 pm - 38 elements of success - ho 341 - (4 minutes)**
F. **01:01 to 01:05 pm - Recommendations for improvement - ho 500 - (4 minutes)**

VII. **Handouts to prepare - 9 pages**
   A. **Managing complex change - ho 511 - 1 page**
   B. **Steep and flat probability curves - page 58 - 9 Master Steps - 1 page**
      1. Might do this by hand on a blank transparency
      2. Could put text on transparency and draw curves below the text
      3. Text - adapted from The Nine Master Keys of Management by Lester R. Bittel
         a) Flat distribution - In the flat distribution of troubles anything can happen, and often does, without displaying any obvious reason to recognize the problem. It characterizes the situation in which the knowledgeable

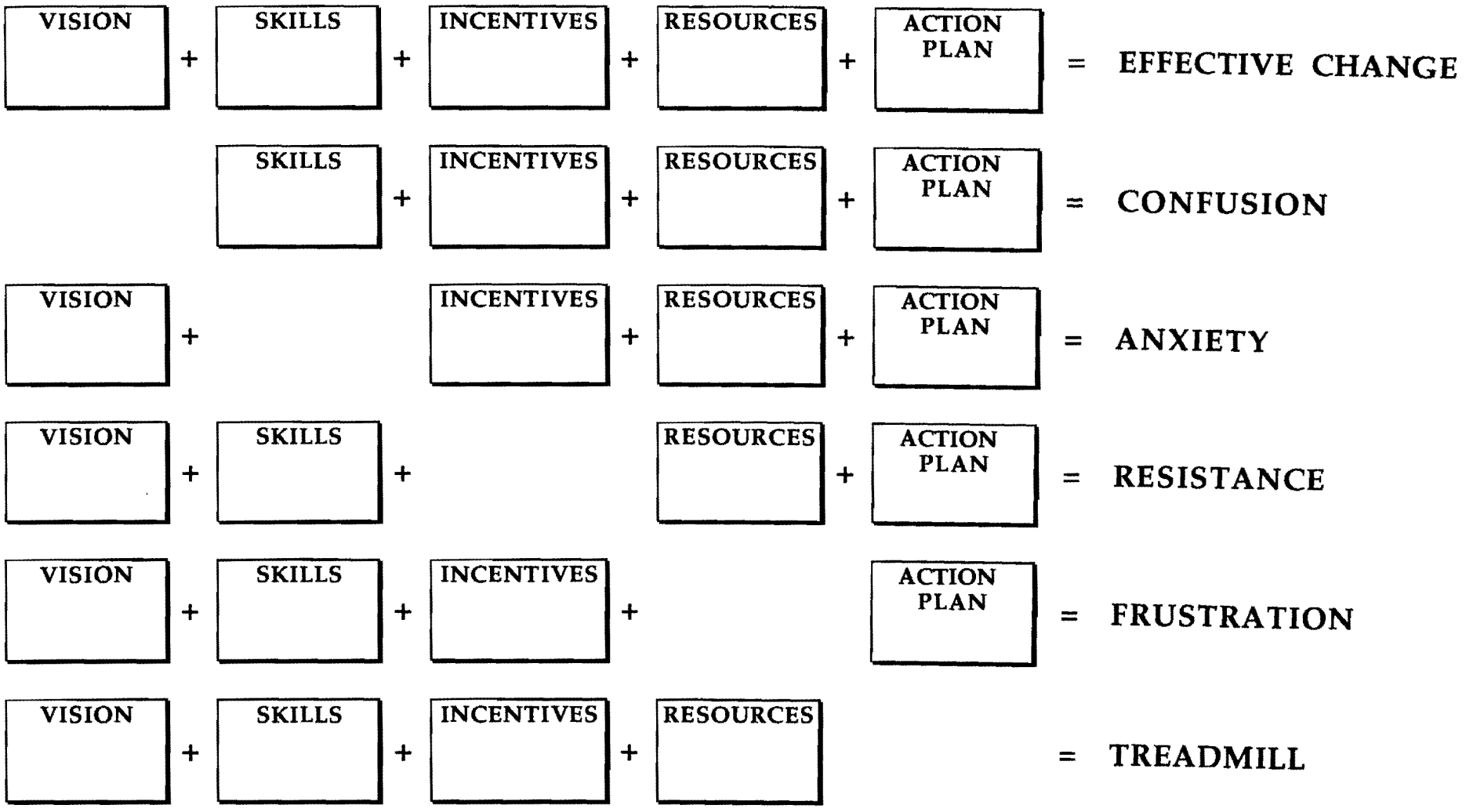
manager senses trouble just can't seem to get a fix on the cause or the solution. Corrective action is needed but there is always another day to take it.

b) Steep distribution - In the steep distribution of troubles when things go wrong they go wrong very quickly, usually before the manager knows the project is heading for trouble. The central tendency data in the normal curve is squeezed so close together that the gap between the extreme positions is very narrow. Quick corrective action is needed.

4. Make two transparencies and overlay one on the other in the presentation. Draw the flat curve on the first transparency and make an overlay of the steep curve on a second transparency.

C. **Basic tools for successful project management - ho 507 - 2 pages**
D. **38 elements of success - ho 341 - perhaps to be modified - 3 pages**
E. **Recommendations for improvement - ho 500 - perhaps to be modified - 3 pages**

MANAGING COMPLEX CHANGE



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PROBABILITY OF ENCOUNTERING JOB PROBLEMS THAT AFFECT PROJECT SUCCESS

Flat Distribution of the Problems

In a flat distribution of problems anything can happen, and often does without displaying any obvious reason to recognize the problem. A flat distribution characterizes the situation in which the manager may sense trouble but just can't seem to get a fix on the cause or the solution.

Attitude generated - "We'll take care of that procurement next week. I have more important things to do this week."

Steep Distribution of Problems

In a steep distibution of problems, things can go wrong very quickly, usually before the manager knows the project is in trouble. The central tendency data in the normal curve is squeezed so close together that the gap between the extreme positions is very narrow. Quick corrective action is needed.

Attitude generated - "I didn't realize that we needed that hard tile so soon."

Adapted from The Nine Master Keys of Management by Lester R. Bittel

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Basic tools for successful project management - ho 507

Project managers have several fundamental management tools with which they can effectively implement a project action plan, and build a well-functioning team. These include:

- Actions to be taken
- Concepts to effect change
- Functions
- Interrelations - organizational structure
- Participant resources
- People behavior
- Performance measurement
- Planning & scheduling systems
- Thinking processes

Project management tools such as the above are usually very complex: They must be skillfully applied by the project team to be effective. Thus the leader of the project, the project manager, should be well versed in what these tools are, how they are best used, and what they are designed to help accomplish.

Excellent project managers realize that the list is merely a good starting point on which to build a usable project management approach. Each individual should determine what goes into their tool box, and then fill it with those implements that best suit that individual's talents, abilities and needs.

I. • **Actions to be taken**
   - A. Conceive
   - B. Program
   - C. Translate
   - D. Approve
   - E. Design
   - F. Construct
   - G. Turn over
   - H. Operate

II. • **Concepts to effect change**
   - A. Vision
   - B. Skills
   - C. Incentives
   - D. Resources
   - E. Action plan

III. • **Functions**
   - A. Planning
   - B. Organizing
   - C. Staffing
   - D. Directing
   - E. Controlling
   - F. Representing

IV. • **Interrelations - organizational structure**
   - A. Formal functional
   - B. Informal functional
   - C. Reporting

D. Staff
E. Temporary

V. • **Participant resources**
A. Conceiver
B. Translator
C. Constructor
D. User
E. Operator
F. Regulator

VI. • **People behavior**
A. Motivation
B. Hygiene
C. Learning
D. Value systems
E. Personal goals & objectives
F. Personal growth
G. Social relatedness

VII. • **Performance measurement**
A. Measurement units
B. Performance standards

VIII. • **Planning and scheduling systems**
A. Network modeling
1. Arrow diagraming
2. Classic precedence system
3. Modified precedence system
B. Bar or Gantt chart
1. Non scalar - not time scaled
2. Scalar - time scaled
C. Slant charts
D. Narrative schedules
E. Project data arrays
F. Money flow curves

IX. • **Thinking processes**
A. Plan
B. Translate
C. Control
D. Correct
E. Learn

38 Elements of importance to success in design and construction - ho 341

- **Summary**

In the design and construction industry there are many factors which influence the degree of success achieved on a project. They concern project goals, profit types, project sequencing, the nature of the participants and the kinds of problems most likely to be encountered.

If the parties to a planning, design and construction program recognize the nature and importance of these factors, a major step will have been made toward their proper and effective combination and management.

Below are listed 38 basic influences on project delivery systems. Project management is deciding how to combine these into a successful job of which all participants are proud.

- **Six major goals to meet for design & construction project success**

The client, owner & user must be assured upon completion of his job that:

1. The facility program and the facility design have met their needs, desires and wishes.

2. The planning, design and construction work on the project has been accomplished within the time and cost structure required and desired.

3. All relationships on the project have been maintained at a high technical and professional level, and have proven rewarding for those involved and affected.

4. The people involved at all levels of work on the job have realized a financial, professional and technical profit for themselves and their associates by being on the project.

5. The project has been closed out with little or no residual potential for major problems of maintenance or operation.

6. The entire process has been free of unresolved contested claims for additional money, additional time, damage payments, and of the potential for future financial demands after the job has been closed out.

- **Seven types of profit**
  1. **Financial** - an improvement in a money position
  2. **Social** - a gratifying experience contributing to society's well being
  3. **Self actualization** - a gain in personal non financial satisfaction by contributive work
  4. **Value system** - reward gained by application of values in which one believes
  5. **Technical** - acquisition of technical skill or technical data of value
  6. **Enjoyment** - personal enjoyment of a situation gained from involvement in it
  7. **Educational** - learning made possible only by efforts exerted in any given situation

- Nine major elements in the design & construction sequence & how they are done
  1. **Conceive the basic project**
     Visualize and state the fundamental nature of the proposed project, what purpose it is to serve, and its base characteristics.
  2. **Prepare the program**
     Set down the physical characteristics of the total project in written and graphic form so as to be able to translate these characteristics into approval documents from which the full design can proceed.
  3. **Articulate the program for approval**
     Merge the concept, and the written and graphic program into written and graphic construction language which can be reviewed and released by the ultimate decision makers for full design.
  4. **Approve the basic project**
     Approve the concept, the program, and the merging of the two. This approval by those in authority initiates the full design and construction process
  5. **Design the project**
     Prepare full contract documents for construction use.
  6. **Construct the project**
     Build the project and make it ready for turnover to the owner or user.
  7. **Turn over the project**
     Release the constructed project to the owner or user with full documentation needed to operated and maintain the completed environment.
  8. **Operate the project**
     Take over, run in, and make the new environment fully operational.
  9. **Maintain the project**
     Keep the new environment in proper operating condition by a well conceived and effectively managed maintenance effort.

- Six major participants in the design & construction process
  1. **Conceiver** - The ultimate decision making force behind the entire program
  2. **Translators** - The parties that translate the project concept into construction documents
  3. **Constructors** - Those who build the facility
  4. **Operators** - Those who operate the completed facility
  5. **Regulators** - Those who help assure project adherence to the cause of public good
  6. **Users** - Those who occupy and use the facility for the purpose for which it is intended

- Ten major types of design & construction problems
  1. **Constructive acceleration**
     An action by a party to the contract that forces more work to be done with no time extension, or the same amount of work and a shorter period of time in which to do it.
  2. **Constructive change**
     A construction action or inaction by a party to the contract that has the same effect as a written order.
  3. **Defective or deficient contract documents**
     Contract documents which do not adequately portray the true contract scope.

4. **Delay**
   A situation, beyond the control and not the fault of a contract party, that causes a delay to the project
5. **Differing site condition**
   A situation in which the actual conditions at the site of a project differs from those represented on the contract documents, or from reasonable expectations of a site in that area.
6. **Directed change**
   A legitimate change within the contract scope for which the owner is obligated to pay.
7. **Impossibility of performance**
   A situation in which it is impossible to carry out the work within the contract requirements.
8. **Maladministration**
   The interference of one contract party with another contract party's rights, that prevents the latter party from enjoying the benefits of least cost performance within the contract provisions.
9. **Superior knowledge**
   The withholding of knowledge by one party to a contract from another party to the contract during the precontract period, and that, subsequent to contract execution, adversely affects the second party's construction operations in matters of importance.
10. **Termination**
    Dismissal of a party to the project contract for convenience or default.

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20 RECOMMENDATIONS TO HELP IMPROVE OUR PROFESSIONAL AND BUSINESS PRACTICES

01. Manage the job as if all team members are working toward the same project end objectives.

02. Set a good example for other managers on your project.

03. Exercise intelligent, consistent decision-making tempered with good judgment and empathy for others.

04. Plan the project well, communicate the plan, & know yourself what your plan says.

05. Listen well.

06. Avoid using emotional words in project discussions.

07. Try to match your non-word world with your world of words.

08. Submit properly prepared pay requests and require the same of others.

09. Learn to close out your job quickly and cleanly.

10. Properly manage the submittal system.

11. Consider the regulatory agencies as friends and important participants in your project.

12. Educate and train your staff in partnering and ADR principles.

13. Take the project mission seriously and work hard to accomplish it.

14. Set a good example to industry newcomers. They are the hope of today, and the you of tomorrow.

15. Be available.

16. Believe that others on the job want to do well -- it's contagious.

17. Keep the job clean and the site well organized.

18. Keep good people on the job by making them want to stay.

19. Be honest and open with the project team about your plans and schedules.

20. Determine early in the job what each party's profit motive is, and then help them achieve that specific profit.

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WE HAVE MET THE ENEMY AND HE IS US.

From Walt Kelly and Pogo

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