MSPE ADR handout list

Master outline for training program

01	Ground rules
02	Generic line of action
03 to 06	Conflict - its nature & source
07	People
08	Destructive Conflict
09	Positive Conflict
10	The dio/pdo/udo intersection
11	Obligations and business needs
12	Obligations and professional needs
13	Obligations hierarchy
14	Participants in designing & building
15	Questions to be asked about your project
16 & 17	Negotiated dispute resolution and project success
18 to 20	37 elements of importance to success in design & construction
21	Project delivery systems and their users
22	Macro matrix boundaries of the construction industry
23	Traditional project delivery system characteristics
24	Non traditional project delivery system characteristics
25	Questions to ask to guide ethical decision making
26	Money flow
27	Project costs committed and spent
28	Costs committed
29	Professional service contract characteristics
30	Construction contract characteristics
31 & 32	Claim prone job characteristics
33 to 36	Common causes of contested claims
37	Paretos law
38	4 i's improvement cycle
39	Route of issue & dispute resolution
40 & 41	Alternative dispute resolution systems
42 to 45	An overview of partnering
46 to 48	Case study #1
49 & 50	Steps to be taken in partnering
51 to 54	Guidelines for the application and use of partnering concepts

"SERVING THE PUBLIC, AND THE DESIGN AND CONSTRUCTION PROFESSIONS THROUGH ALTERNATIVE DISPUTE RESOLUTION"

a training program for standing neutrals.

MISSION

To train and educate those interested in becoming standing neutrals in the basics of issue resolution and decision making. The program is designed to build on the individual's industry knowledge and objectivity so as to allow intelligent, professional participation in a wide variety of dispute resolution situations.

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SERVING THE PUBLIC AND THE DESIGN AND CONSTRUCTION PROFESSIONS THROUGH ALTERNATIVE DISPUTE RESOLUTION - a training program for standing neutrals.

1. **Training mission**
   To train and educate those interested in becoming standing neutrals in the basics of issue resolution and decision making. The program is designed to build on the individual's industry knowledge and objectivity so as to allow intelligent, professional participation in a wide variety of dispute resolution situations.

2. **Subjects to be addressed include:**
   a) The nature of destructive conflict and how it can be managed.
   b) Methods and styles of managing destructive conflict in the planning, design and construction industry.
   c) Procedures used to resolve disputes and problems throughout the project.
   d) Experiences and applications of alternative dispute resolution (ADR).
3. **Program outline**
   a) Registration
   b) Welcome and Introductions
      (1) Introduction of subject - Ron Hausmann
      (2) Introduction of instructors and class members
   c) Overview of subject
   A standing neutral is a technically trained and educated professional in the planning, design, and construction disciplines, who is capable of objectively listening, analyzing,evaluating, and advising concerning construction related demands or claims which are in dispute.

   The neutral's product is a recommendation of a course of action based on the neutral's opinion as to the outcome of such course of action. Recommendations are based on the unbiased judgment of the neutral and are generally not considered binding.

      (1) The line of action - what needs to be done to design and construct a facility?
         (a) Conceive the project.
         (b) Write the program for the project.
         (c) Describe the project so as to be understandable to those who must approve it.
         (d) Approve the program, the design, and the financing.
         (e) Design the facility.
         (f) Construct the facility.
         (g) Turn over to the operators.
         (h) Operate the facility.
         (i) Maintain the facility.
      (2) The participants - who does what?
         (a) Conceivers
         • *Those who conceive the idea and provide the wherewithal to bring the environmental program to a successful conclusion. The conceiver may be the owner but it also might be a governmental agency, a financial source, an architect, an engineer, a contractor, a vendor or a potential tenant looking for space. We identify the conceiver since he usually is the key person driving the project on to completion.*
         (b) Translators
         • *Those who translate the environmental program into construction language. Traditionally we think of the architect/engineer as the translator. However careful consideration of this matter shows there are many others who translate the conceiver's fundamental ideas into*

understandable, workable construction language. Subcontractors, suppliers, vendors, manufacturers, contractors and the conceiver may all play a role in translating.

(c) Constructors

• *Those who interpret the construction language and convert it to a actual physical environment. Occupying this role are general contractors, specialty contractors, vendors, suppliers, manufacturers, artists and others who actually put the materials into place in the field.*

(d) Operators

• *Those who operate and maintain the completed physical environment on a continuing basis. Usually the party responsible for this function is an owner or tenant working through a plant or facilities manager.*

(e) Regulators

• *Those who fill a review & inspection position to help insure protection of the health, safety & welfare of the people. This is usually done by enforcing regulations written and adopted by qualified public or private bodies. Examples of regulators include those who work for building departments, departments of natural resources, public health agencies, fire prevention organizations, technical societies and other such groups.*

d) Elements of conflict in planning, design and construction.
   (1) Definitions
   (2) Why has construction become so adversarial?
   (3) Reasons why disputes are not resolved promptly and fairly.
   (4) Categories of conflict.
   (5) Experiences with conflict.
   (6) Recognizing risk.
   (7) Risk and conflict
      (a) The benefits of proper risk allocation.
      (b) What is risk in the design, and construction profession?
      (c) Who assigns risk?
      (d) Who accepts risk?
      (e) Who controls risk?
   (8) Basic assumptions about people and conflict.
   (9) Destructive and positive conflict.
   (10) The intersections of activities and how they generate conflict
   (11) Our obligations
      (a) And business needs.
      (b) And professional needs.
      (c) Hierarchy.

e) Negotiated dispute resolution and project success.
   (1) What are measures of success in construction?
   (2) Benefits of good dispute resolution
      (a) Time saved.
      (b) Cost controlled.
      (c) Profit maximized.
      (d) Value added.
      (e) Program conformance improved.
      (f) Permanent scars of destructive conflict minimized.
      (g) Fairness demonstrated and confidence restored.
   (3) What is alternative dispute resolution?

(4) Origin of negotiated methods of dispute resolution.
  (a) Informal negotiation *was* the delivery technique before excessive legal systems were imposed upon the industry. (or were accepted by it)
(5) ADR guidelines
(6) What is needed for successin in dispute resolution?

f) What are some of the ingredients of a successful ADR system?
(1) Trust among participants - natural and learned.
(2) A desire to properly allocate risk.
(3) Intelligent commitment.
(4) Experience in design and construction techniques and practices.
(5) Effective methods to reduce resolve destructive disputes.
(6) A recognizable celebration of success.
(7) Higher management support and participation.
(8) Successes accurately measured.
(9) Adequate funding to carry out the ADR process.
(10) Adequate time committed to carry out the ADR process.
(11) Balanced talents and qualities of the participants.
(12) Effective communication modes.
(13) Support from all participants.
(14) An understanding of project delivery systems.
(15) A desire to act ethically and with integrity.
(16) An understanding of how money flow impacts a project.
(17) An understanding of trouble in design and construction.

g) ADR guidelines for effective project use.
(1) A basic ADR principle - The earlier in a construction project that the participants employ dispute resolution techniques, the more these techniques will contribute to project success.
(2) Even when problems turn into disputes, litigation should not be the initial method used to resolve them.
(3) Non-binding dispute resolution should be attempted before resorting to binding dispute resolution.
(4) Advance commitment to ADR methods, contributes to effectively and fairly solving problems as they arise.
(5) A cooperative project environment helps prevent disputes.
(6) Jobsite dispute resolution often helps dispose of problems as they arise & before they multiply.
(7) Dispute resolution proceedings should be conducted expertly, and effectively by experienced design and construction practitioners.

h) Some resolution methods available.
(1) Non binding
  (a) *Prevention methods* - produces maximum harmony - usually least cost.
  (b) *Internal negotiation methods* - parties involved conduct negotiations - requires consensus - relatively cost free.
  (c) *Informal external neutral methods* - preselected external neutral serves as a informal dispute-resolver - relatively low cost.
  (d) *Formal external neutral method* - preselected external neutral(s) serves as formal dispute resolver - relatively low cost - usually requires considerable preparation, and may require legal assistance.

(2) Binding
  (a) *Outside of courtroom* - dispute given to knowledgeable third party - moderate cost - may require legal assistance.
  (b) *Inside of courtroom* - most expensive - usually requires legal assistance.

i) An overview of partnering.
j) Experiences with partnering system issue and dispute resolution.
  (1) Project type
    (a) Public Sector
    (b) Private Sector
    (c) Third Sector
  (2) Case study #1 - The world wide data business project
k) Guidelines for partnering.
l) The future of ADR systems. - questions to consider.
  (1) How will they evolve?
  (2) How long will we need them?
  (3) What will be their ultimate effect on planning, design, and construction?
  (4) What actions might we take to make ADR of value to the public, to our clients, and to the construction industry?
  (5) Recommendations for the future use of alternative dispute resolution.

Ralph J. Stephenson PE PC
Consulting Engineer

GROUND RULES

1. Open your mind to new ideas & to new applications of old ideas.

2. Listen well & ask helpful questions.

3. Be selective in which techniques you use.

4. Learn more about the subjects of interest to you.

5. Relax and enjoy the company of your professional friends.

RALPH J. STEPHENSON, P.E.
CONSULTING ENGINEER

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LINE OF ACTION

02

Ralph J. Stephenson, P. E., P. C.
Consulting Engineer
November 27, 1993

Conflict - its nature and source in the construction profession

I. **Definitions**

A. ***Adversarial***
Taking the position of an opponent or enemy. Opposing another's interests or desires.

B. ***Authority***
The prerogatives, either vested or acquired over a long period of time, that allow an individual to carry out their responsibilities and duties. This includes the right to determine, adjudicate, or otherwise settle issues or disputes; the right to control, command, or determine.

C. ***Conflict***
A state of disagreement and disharmony.

D. ***Destructive conflict***
Animosity or disagreement which results in lowering the potential for an individual or organization to succeed.

E. ***Dispute***
To engage in argument or discussion. To quarrel or fight. An expressed disagreement.

F. ***Partnering***
A method of conducting business in the planning, design, and construction profession without the need for unnecessary, excessive and/or debilitating external party involvement.

G. ***Positive conflict***
Hostility that is managed so its resolution raises the potential for well intentioned individuals or organizations to succeed at being excellent.

H. ***Program***
A narrative oriented statement of the needs and character of the proposed user operation, the requirements of the user and owner, the nature of the environment to be planned, designed and built, and the corresponding characteristics of the space that will satisfy these needs and requirements. Sometimes called the brief.

I. ***Quality***
A characteristic of superior excellence.

J. ***Responsibility***
The assignment, spoken or understood, that a person in an organization has as their part in maintaining the organization's health and vitality.

K. ***Resolution***
A course of action determined or decided upon that can result in clearing conflict or dispute.

L. ***Risk***
Any exposure to the possibility of harm, danger, loss or damage to people, property, or other interest. To expose to a chance of loss or damage.

M. ***Third party***
An individual or group that is not primarily engaged in facilities programming, design, construction, or operations.

II. **Why has construction become so adversarial?**

A. **The process of dispute resolution is not well understood.**

B. **We are having increasing difficulty controlling the indirect predictable, and the unpredictable impacts on our jobs.**

C. **<u>Professional success</u> requires we consider the following:**

1. **The design and construction professional is obliged, above all, to protect the health, welfare and safety of the public.**

2. The legal professional is obliged, above all, to protect the interest of his or her client. These interests are defined by the body of law. Thus the body of law, not the law professional, is depended upon in legal resolutions to protect the health, welfare & safety of the public.
3. The legal process has moved too far outside the control of those depending on its proper use to fairly resolve damaging conflict.

D. Business success requires we take these business actions.
1. Provide a quality management process leading to a well constructed facility.
2. Profitably produce services and facilities.
3. Measure the quality of the process you provide.
4. Help manage destructive conflict.
5. Encourage early action on potentially damaging events.
6. Reduce professional liability costs.

III. Why are disputes often not resolved promptly and fairly.
A. Differences in goals and objectives of parties to the project.
B. Lack of clear understandings about the design and construction industry needs.
C. Lack of value-added for third party interests through prompt and fair settlements.
D. Excessive resort to legal based delays and road blocks to resolution.
E. Excessive demands on resolution resources (courts, arbitrators, judges and other agencies involved).
F. Greed.

IV. Some categories of conflict in planning, design, and construction.
A. Approval processes.
B. Being a good neighbor.
C. Closing out.
D. Communicating.
E. Constructibility.
F. Construction document quality.
G. Cost growth.
H. Good work site.
I. Job morale & attitude.
J. Legal matters.
K. Paper and administrative work.
L. Payment.
M. Planning and scheduling.
N. Policies and procedures.
O. Processing revisions.
P. Procurement.
Q. Program conditions.
R. Project cost structure.
S. Quality control.
T. Submittal processing.
U. Time growth.

V. Some experiences with conflict in construction and partnering.
A. What actions do others engage in that create problems for us, or do we engage in that create problems for others? (sample responses from an actual charter meeting.)
1. Giving directions to proceed without a timely change order.
2. Failing to establish clear chain of command.

3. General contractor covering general conditions costs by charging subs.
4. Lack of timely acceptance of work.
5. Lack of timely responses to
   a) RFI's.
   b) Approval of shop drawings.
   c) Site activity restrictions.
   d) Change orders.
   e) Value engineering.
   f) Acceptance of work.
6. Improper passing of general conditions responsibility to subs.
7. Lack of forum to evaluate and resolve open issues.
8. Slow submittal turn around.
9. Unreasonable punch lists.
10. Failure to recognize impact of changes on ongoing work.
11. Late submission of proposals.
12. Untimely submission of as-builts, operating & maintenance manuals, and training of user personnel.
13. Failure to maintain clean efficient, safe working conditions.
14. Do your own punch lists.
15. Pretest special systems - equipment start-up.
16. Untimely delivery of owner equipment.
17. Slow payment.
18. Design errors and omissions.
19. Resistance to solving problems perceived as *contractor problems.*
20. Changes issued in incomplete form (sketches & narrative).
21. Slow owner response to concurrent reviews & changes.
22. Pass through attitude by general contractor.
23. Bid shopping.

B. Recommendations to help resolve some of the problems we or others cause. (sample recommendations from an actual charter meeting.)
   1. Better communications.
   2. Less defensiveness/more openness.
   3. Fast dispute resolution.
   4. Don't take issues personally.
   5. Contractor review requests for information & submittals before processing.
   6. Be willing to propose/suggest solutions.
   7. Submittal schedule provided.
   8. Prioritization of submittals.
   9. Complete/thorough questions.
   10. Positive attitude.
   11. Recognition of owner's need to eventually occupy, operate and maintain facility/systems.
   12. Recognition of importance of paper work.
   13. Allowing necessary contract time for training.

VI. How to recognize risk on a project (adapted from Mr. Papageorge, R. A.'s comments on risk)
   A. Identify as many potential threats to project success as early as possible.
   B. Identify where problems will be caused by taking risks to help assure project success.
   C. Evaluate and analyze the project team's ability to take the risks identified.

D. **Evaluate and analyze the project team member's abilities to take the needed risks.**
E. **Identify the impact of legal contractual obligations on the risks being considered.**
F. **Evaluate and analyze existing project conditions and the restraints they exert on the project.**
G. **Establish and implement a systematic procedure for identifying and adjusting risk to acceptable levels to assure a high probability of project success.**

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PEOPLE

Most people are honest, concerned, desirous of challenge, need attention, and welcome help in times of turmoil.

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DESTRUCTIVE CONFLICT

Animosity or disagreement which results in lowering the potential for an individual or organization to succeed.

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POSITIVE CONFLICT

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THE DIO/PDO/UDO INTERSECTION

OBLIGATIONS & BUSINESS NEEDS

- **To profitably produce services & facilities.**
- **To provide solutions.**
- **To measure the quality of the process you provide.**
- **To help manage destructive conflict.**
- **To encourage early action on potentially damaging events.**
- **To reduce professional liability costs.**

OBLIGATIONS & PROFESSIONAL NEEDS

- **The design and construction professional is obliged, above all, to protect the health, welfare and safety of the public.**

- **The legal professional is obliged, above all, to protect the interest of his or her client. These interests are supposed to be defined by the body of law. Thus the body of law, not the legal professional, is depended upon to protect the health, welfare & safety of the public - relative to the law.**

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OBLIGATIONS

Hierarchy of professional obligations as formulated by Dean Freund

- **Prime - Protection of public health, welfare & safety**
- **Secondary - Your employer or client**
- **Tertiary - Your peers**

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PARTICIPANTS IN DESIGNING & BUILDING ENVIRONMENTS

There are five basic participants in the process of designing and building environments. These are the conceiver, the translator, the constructor, the operator and the regulator.

Conceivers - Those who conceive the idea and provide the wherewithal to bring the environmental program to a successful conclusion. The conceiver may be the owner but it also might be a governmental agency, a financial source, an architect, an engineer, a contractor, a vendor or a potential tenant looking for space. We identify the conceiver since he usually is the key person driving the project on to completion.

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Regulators - Those who fill a review & inspection position to help insure protection of the health, safety & welfare of the people. This is usually done by enforcing regulations written and adopted by qualified public or private bodies. Examples of regulators include those who work for building departments, departments of natural resources, public health agencies, fire prevention organizations, technical societies and other such groups.

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QUESTIONS TO BE ASKED

1) WHAT? -- What is the scope of the activity?
-- What is the standard of performance?
-- What are our objectives?
-- What are our goals?
-- What is needed to start?

2) WHERE? -- Where will the work take place?

3) WHEN? -- When does the work start?
-- When is the work supposed to finish?
-- When will the work be completed?

4) HOW? -- How do I know when the job is done?
-- How do I know if we've done a good job?
-- How do I get out of the job when it's done?

5) WHO'S? -- Who's responsible?
-- Who's in charge?
-- Who's doing the work?
-- Who's liable?
-- Who's in charge for my client?
-- Who's the ultimate decision maker? (UDM)

H/O 186 4/80

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November 27, 1993

Negotiated dispute resolution and project success

I. **Definitions**

A. ***Binding resolution***
A third party imposed solution to a contested claim in which the conditions are legally binding on the parties.

B. ***Litigation***
The process of formal legal proceedings. Usually results in permanent or temporarily binding resolution.

C. ***Non binding resolution***
A suggested solution to a contested claim or problem in which the conditions are not legally binding on the parties, but are an expert's recommendations for resolution.

D. ***Pro Forma***
A financial model unusually built early in a construction program to show by projecting income and expenses, how the money flow to and from the project will occur. It is often used to establish the capital amount to be allocated to a project based on simulated operating conditions. The term pro forma means according to form.

E. ***Project***
A set of work actions having identifiable objectives, and a beginning and an end.

F. ***Project Delivery System***
A method of assembling, grouping, organizing & managing project resources so as to best achieve project goals & objectives.

II. **Introduction**

A. **Unresolved conflict and disputes often require that a neutral view be considered where positive change is desired.**

III. **What is alternative dispute resolution (ADR)?**

A. **In broadest terms, ADR is a method of resolving disputed design and construction claims outside the courtroom.**

IV. **Origins of negotiated methods of dispute resolution.**

A. **Informal negotiation was the delivery technique before excessive legal systems were imposed upon the industry (or were accepted by us)**

B. **Varies with the time.**

1. **In periods of exceptionally high economic activity, speculative money can be spent on expensive resolution methods to gamble for a high return on the investment.**
2. **In periods of low economic activity money is usually not be spent on high risk, uncontrollable methods of expensive resolution, hoping for a favorable result.**

C. **Today we cannot afford to spend our, nor our client's, money on high risk gambles. Therefore relatively low cost, non binding resolution processes have become popular.**

D. **The long lasting acrimonious atmosphere surrounding binding resolution methods has proven demeaning, unpopular, negative, and harmful to the design and construction professional who wants to practice effectively.**

E. **Temporary adversarial positions taken during short time alternative dispute resolution often helps heal business and professional wounds very rapidly,.**

V. **ADR guidelines for effective project use**

A. **A basic ADR principle - The earlier in a construction project that the participants employ alternative dispute resolution techniques, the more these techniques will contribute to project success.**

B. **Even when problems turn into disputes, litigation should not be the initial method used to resolve them.**
C. **Non-binding dispute resolution should be attempted before resorting to binding dispute resolution.**
D. **Advance commitment to ADR methods, contributes to effectively and fairly solving problems as they arise.**
E. **A cooperative project environment helps prevent disputes.**
F. **Job site dispute resolution often helps dispose of problems as they arise & before they multiply.**
G. **Dispute resolution proceedings should be conducted expertly, and effectively by experienced *design and construction* practitioners.**

VI. **What is needed for success in resolving disputes?**

A. **A comprehensive, clearly written initial program statement that clearly defines measurement yardsticks for the entire project.**
   1. **The character and needs of the proposed user operation.**
   2. **The requirements of the user and owner**
   3. **The nature of the environment to be planned, designed and built**
   4. **The characteristics of the space that will satisfy the user and owner's needs and requirements.**
   5. **A proforma analysis and project budget that properly accommodates three levels of user and owner needs.**
      a) Must list
      Those items that must be included in the scope of work to make the project a go. If any of the items in the must list are not able to be included the project is a no-go.
      b) Want list
      Those items that are wanted and might be possible to include in the scope of work, over and above the must list items, since they provide a definable and acceptable rate of return on their cost.
      c) Wish list
      Those items that the owner and the user wish they could include but might not be able to due to budgetary or other reasons.
         (1) Note that affordable wish list items are best added, not deleted, as the project moves into construction.
   6. **An analysis and preliminary recommendation of the project delivery system best suited to the project.**

B. **A strong desire for a fair resolution, equitable for all involved.**
C. **People in charge who want a fair resolution.**
D. **A dispute resolution technique that is acceptable to those involved.**
E. **The knowledge of how to arrive at a resolution system that can produce a decision.**
F. **An understanding and agreement with the belief that *if you aren't entitled to it don't try to get it!***

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November 27, 1993

Design and construction elements

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

By Ralph J. Stephenson PE PC

• **Summary**

In the design and construction industry there exist many factors which influence the degree of success achieved on a project. They deal with 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 37 basic influences on project delivery systems. Project management concerns 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

• <u>Nine major elements in the design & construction sequence & how they are done</u>

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.

• <u>Five major participants in the design & construction process</u>

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 project
4. **Operators** - Those who operate the completed project
5. **Regulators** - Those who help assure project adherence to the cause of public good

• <u>Ten major types of design & construction problems</u>

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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PROJECT DELIVERY SYSTEMS & THEIR USERS

DEFINITION - A method of assembling, grouping, organizing and managing project resources so as to best accomplish project goals and objectives.

THOSE WHO USE PROJECT DELIVERY SYSTEMS & INFLUENCE THE SELECTION OF THE SYSTEM

Conceiver - the ultimate decision making force behind the entire project
- Developer
- Owner
- User

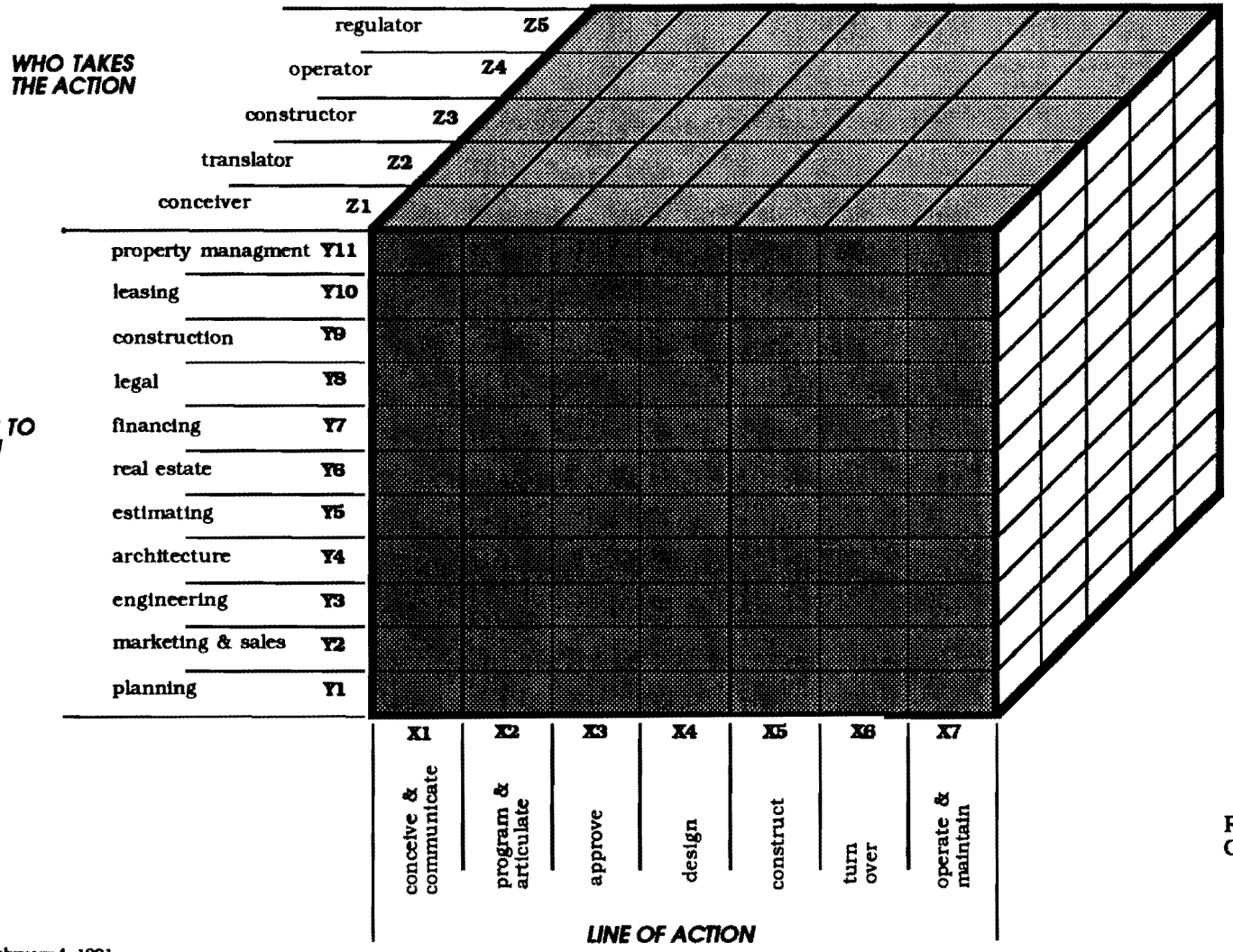
Translator - transfers the concept into construction documents
- Programmer
- Designer
- Manufacturer
- Vendor
- Contractor

Constructor - builds the components and the job
- Manufacturer
- Vendor
- Specialty contractor
- General contractor
- Construction manager

Operator - operates the completed project
- Facilities planning
- Operation management
- Plant engineering
- Manufacturing engineering

Regulator - insures project adherence to the public good
- Private
- Public
- Quasi public

MACRO MATRIX BOUNDARIES OF DESIGN & CONSTRUCTION



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TRADITIONAL PROJECT DELIVERY SYSTEM CHARACTERISTICS

1. Checks and balances normally built in from start

2. Construction decisions usually based on capital costs

3. Participant selection often made by cost competitive bidding

4. Job control is highly centralized in most stages

5. Project usually being built for owner/users

6. Contract documents completed before bidding

7. Bidders selected from short list derived from long list (occasionally use long list)

8. Bonding is often required

9. Site preparation and expense work often by owner before construction starts

Note - Expense work includes those costs that do not directly increase life or value of the facility.

10. Majority of attention given to the need and want list. Wish list usually considered a luxury.

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NON TRADITIONAL PROJECT DELIVERY SYSTEM CHARACTERISTICS

1. Checks and balances evolve as project proceeds and when need arises.

2. Construction decisions based on capital costs, maintenance costs, operating costs, project quality desired, and desired investment return.

3. Lead participant selection made on professional and technical abilities, and on reputation and past performance, along with estimated project cost.

4. Job control somewhat decentralized during early program and design stages with progressive centralization as the working document and construction phases are approached.

5. Project could be for a variety of conceivers and prime movers including owners, users, investors, developers, funds, syndicates, governmental agencies (privatisation), and groups assembling capital to gain desired returns on investment.

6. Construction is often closely dovetailed with design of the project. Design usually proceeds with construction guidance, and advice from a construction discipline.

7. Capital cost is often negotiated from the pro forma base and reduced in stages to a guaranteed maximum price (gmp).

8. Need for bonding is usually minimized or eliminated by careful selection procedures to maximize probability of success.

9. Site preparation and expense work often done by various members of the selected project or program team.

10. Design and construction is heavily influenced by consideration of the needs, wants and wishes of the participants.

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QUESTIONS TO CONSIDER

Guides to Ethical Decision Making

1. Is my decision legal?

- Does it violate civil law or company policy?

2. Is my decision balanced?

- Is it fair to all concerned in the short and long term situation. Does it avoid sum zero situations?

3. How will my decision make me feel about myself?

- Will it make me proud?
- Will I feel good if it is published in the newspaper?
- Will I feel good if my family finds out about it?

Adapted from "The Power of Ethical Management"
by Kenneth Blanchard & Norman Vincent Peale

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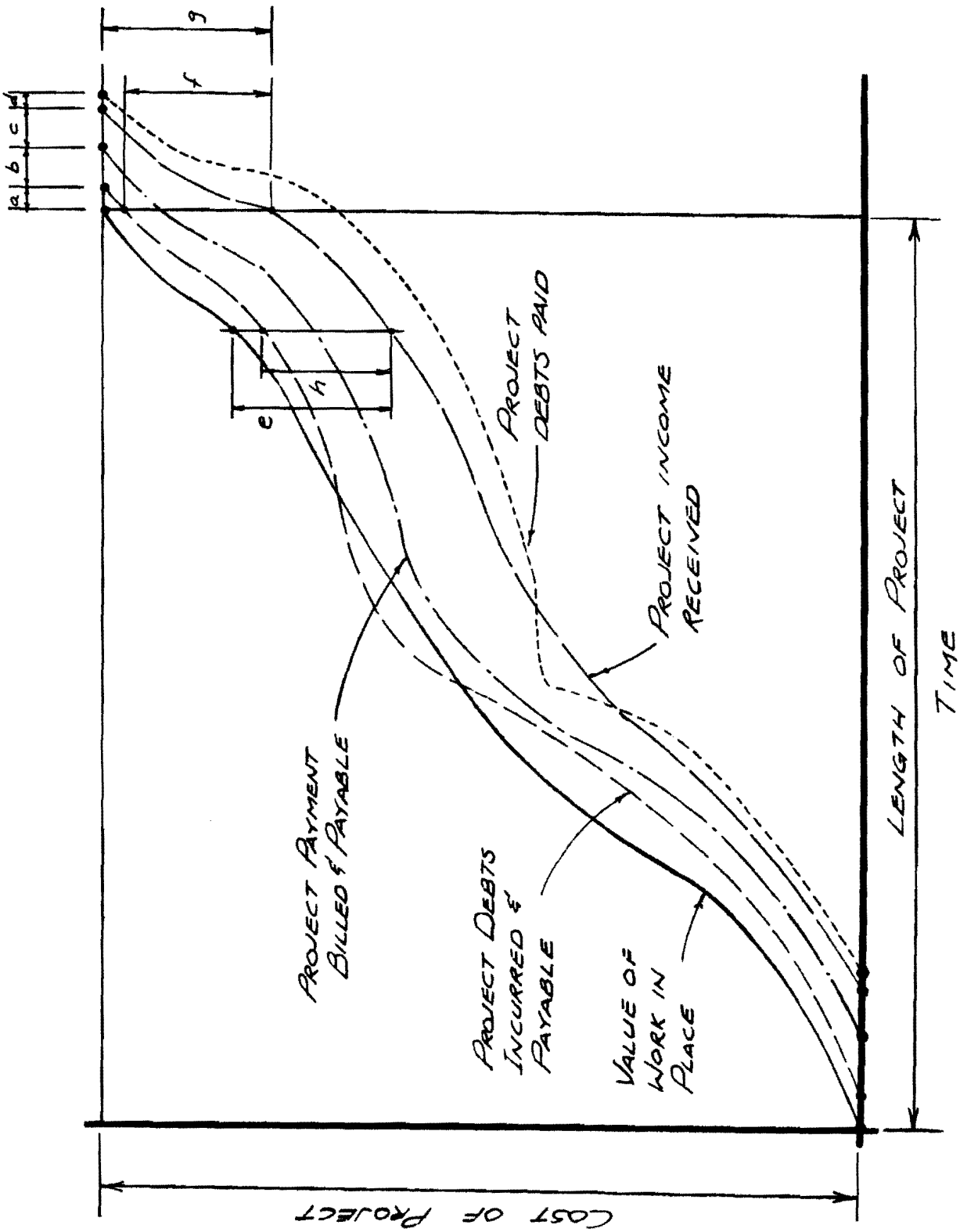
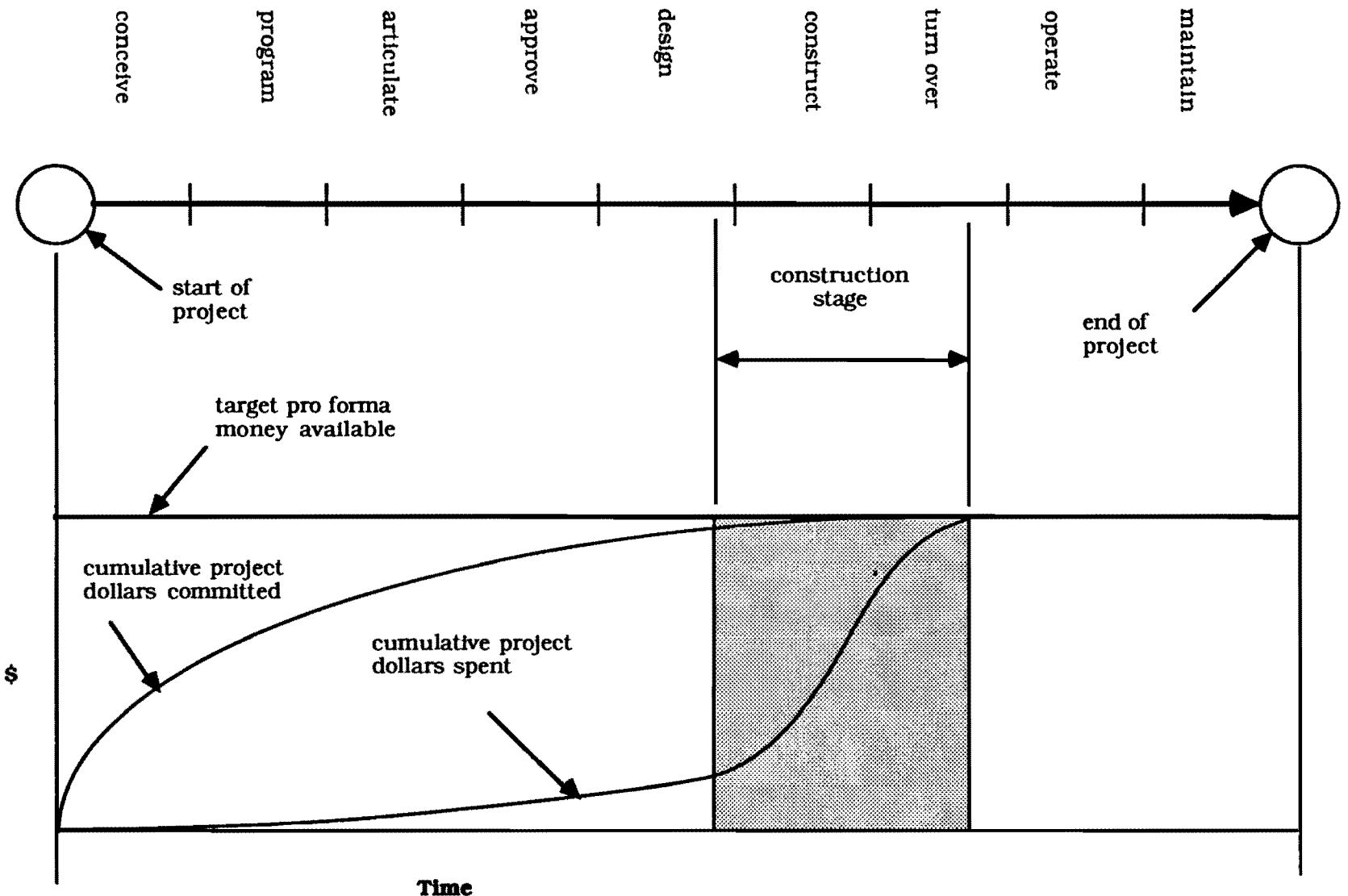


PROJECT MONEY FLOW



Costs Committed Compared to Money Spent on Construction Projects

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Costs Committed vs. Money Spent

Committed costs are promised funds for purposes, that if such purposes are aborted a penalty must be paid, and a loss is often incurred.

Penalties and losses may include such items as:

- OPTION COSTS
- RIGHT OF FIRST REFUSAL COSTS
- LEGAL FEES
- EARLY ENGINEERING FEES
- EARLY PLANNING FEES
- DISPLEASURE OF POLITICAL ENTITIES
- STAFF TIME EXPENDITURES
- LOSS OF CREDIBILITY
- LOSS OF OPPORTUNITY

2. Professional Service Contract Characteristics

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A. Agreement premises

1. Totally negotiated - broad multivalue competition
2. Partially qualified - moderate multivalue competition
3. Totally qualified - narrow multivalue value competition

B. Authority limits

1. As agent
2. As limited agent
3. As contractor

C. Payment methods

1. Fixed total including payroll + overhead + profit + (expenses)
   a. Expenses included
   b. Expenses separate
2. (Payroll costs) x multiplier + fixed fee + expenses
   a. Limit on
   1.) Payroll hours
   2.) Expenses
   b. No limit on
   1.) Payroll hours
   2.) Expenses
3. (Payroll costs) x multiplier for payroll costs & overhead
   a. Expenses included
   b. Expenses separate
4. % of total construction cost
   a. Expenses included
   b. Expenses separate

D. Scope of services

1. Single responsibility
   a. All in house
   b. In house & outside consultants
2. Split responsibility
   a. In house, client & other prime consultants
   b. In house & other prime consultants
   c. In house & client

ho 362 Jan, 90

3. Construction Contract Characteristics

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A. Agreement premises
1. Totally negotiated - broad multivalue competition
2. Partially qualified - moderate multivalue competition
3. Totally qualified - narrow multi valuevalue competition

B. Authority limits
1. As full agent
2. As limited agent
3. As contractor

C. Payment methods
1. Fixed cost (hard money)
2. Time & material + fixed fee
   a. Limit on
      1.) Time & material (gmp) with no shared savings
      2.) Time & material (gmp) with shared savings
   b. No limit on time & material
3. Time & material + % fee
   a. Limit on
      1.) Time & material (gmp) with no shared savings
      2.) Time & material (gmp) with shared savings
   b. No limit on time & material
4. Conditional payments or penalties
   a. Incentive/disincentive
   b. Liquidated damages

D. Scope of services
1. Single responsibility - in house & subcontractors
   a. All trades
      1.) Provide management
      2.) Provide design
      3.) Provide construction labor
      4.) Provide construction materials
   b. Limited trades
      1.) Provide management
      2.) Provide design
      3.) Provide construction labor
      4.) Provide construction materials
2. Split responsibility - in house, subcontractors & other primes
   a. All trades in contract
      1.) Provide management
      2.) Provide design
      3.) Provide construction labor
      4.) Provide construction materials
   b. Limited trades in contract
      1.) Provide management
      2.) Provide design
      3.) Provide construction labor
      4.) Provide construction materials

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Claim Prone Job Characteristics

During the profiling, proposing and negotiating period, it is often possible to gain a good insight into the expected nature of a job if one is fortunate (or unfortunate) enough to be the successful proposer. The problem job is becoming increasingly serious in our business and professional lives and it should be identified early. The problem job generally results in increased costs during the construction period and quite often requires arbitration or litigation to achieve resolution of costs and damages.

Thus, it is good policy for the perceptive owner, architect/engineer and contractor to become familiar with those characteristics that early identify a job as having potential for being a trouble project.

This list of characteristics is by no means complete, nor is it meant to imply that a job having these features will necessarily be claim prone. It is, on the other hand, an honest effort to state certain unique job features that have been identified in projects that have ended up in litigation or arbitration. The list is at random with no attempt to classify or characterize the features.

Claim prone job characteristics may include:

a. A wide spread in proposal prices.

b. Issuance of a large number of pre-bid addenda and instructions.

c. For subcontractors, a poor general contractor reputation if the project is being built by one prime.

d. For projects with separate primes, poor other prime contractor reputations.

e. More than four to six prime contractors involved(applicable on normal building work only).

f. Poor reputation of architect/engineer preparing contract documents.

g. Excessive how-to-do-it emphasis in contract drawings and specifications.

Claim Prone Job Characteristics
(continued)

h. Non-liable party involvement in responsible positions, i.e. non-liable construction manager.

i. Large numbers of allowance items.

j. Zero (or excessively small) tolerance specifications.

k. Poorly defined authority and responsibility patterns in the offices of the architect/engineer, the owner, the general contractor or other prime contractors.

l. Inexperienced specialty contractors.

m. Excessive number of pre-selected suppliers for key material and equipment.

n. Large dollar amount or numbers of owner purchased equipment.

o. Location in strike prone areas.

p. Location in jurisdictionally sensitive areas.

q. Heavy use specified for untried products and equipment.

r. Non-liable party involvement in establishing delivery commitments, i.e. construction manager, architect/engineer, owner representative.

s. Involvement of politically accountable owners, architect/engineers or other contractors.

t. Multi responsibility payment structures.

u. Excessively long time periods to award contracts after a proposal.

(Note: This often occurs in public work where many non-project approvals and agencies are involved.)

v. Poor owner reputation.

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COMMON CAUSES OF CONTESTED CLAIMS

Contested construction claims have increased over the past few years and now must be recognized as a serious road block to proper and profitable construction procedures.

The reasons for the increase in contested claims are many and must be understood in the sense that our society has become somewhat legalistic. That is to say, the recourse to legal resolution, as opposed to interpersonal, technical, or administrative resolution of problems has become a common fortunately shows some signs of diminishing as costs and time involvement in legal matters have increased astronomically.

However, there are claims, there always have been claims, and there will probably always will be contested claims. Those in construction should however, thoroughly understand the structure of the contested claim.

Specifically, contested claims lead to resolution by an administrative settlement, litigation, arbitration, or mediation. There are some common causes of conflict and it is these that stimulate the parties to go to a formal settlement by outsiders. It is important for those in construction to understand how to avoid the mistakes that cause wasteful contested claims.

Several years ago a firm specializing in construction claims and their settlements studied some of the most common causes of disputes. Of two hundred occurrence of contested claims the following percentages were found.

1. Directed Change - 48%

A legitimate change within the contract scope for which the owner must pay.

Examples
- Owner changes the door color after the door is painted.
- Owner revises size of electrical room door opening

Advice
- Required extensions of time should be stated in writing.
- Costs for extended general conditions should be agreed upon early.
- The client or owner is obligated to pay for the change, if there is a charge.
- Payment for the work should be explicitly agreed upon before starting.

2. Constructive change - 42%

An owner's action or inaction that has the same effect as a written order.

Examples
- Shop drawing corrections, showing additional work not covered in contract documents.
- Owner's representative tells a superintendent to relocate a wall with no payment intended.

Advice
- Don't assume changes will be free. Find out if there is a cost.

- Don't enrich contract documents.
- Don't enrich shop drawings.
- Make certain the scope and costs of additional work is clearly understood.

3. Defective or deficient contract documents - 41%

Contract documents which do not adequately portray the true contract scope.

Examples
- A retaining wall shown dotted on the contract documents and expected by the architect/engineer and the owner to be built as part of the contract.
- Dimensional errors that cannot be resolved by verbal clarification.
- Contract documents that expect performance by default. For instance, specifying a miscellaneous iron ladder but not showing it on the drawings.

Advice
- Expect to pay your architect and engineer for good quality assurance in the production of contract documents.
- Select your design team on the basis of performance not cost.
- Clearly define design and construction delivery methods to be used.
- Don't expect your contractor to design the job unless it is a design/build project.
- Don't make unrecorded corrections to contract documents.

4. Delays - 41%

A delay situation beyond the control and not the fault of the contractor.

Examples
- Rock encountered that delays the job but was not shown on the contract documents.

Advice
- Be as thorough as possible in defining physical conditions of the site upon which the facility is to be constructed.
- Specify weather standards when it is necessary to clarify time extensions that might be caused by inclement weather.
- Determine delay costs quickly and eliminate them as soon as possible.
- Don't stop field work without proper authority and a very good reason.

5. Constructive acceleration - 35%

More work with no time extensions, or the same work and a shorter time period in which to do it.

Examples
- Owner refuses to grant time extension for work that will take longer to perform.
- Owner makes unauthorized use of critical path time without extension.
- Owner makes use of float time with the expectation that the contractor will not request or require a

time extension.

Advice
- Never assume the contractor will do extra work within the contract time.
- Work out an early agreement on the use of float time in the network model.
- Never assume a field order is a no cost, no time extension change.

6. Maladministration - 35%

Owner interference with the contractor's right to enjoy least cost performance.

Examples
- Owner directs contractor to provide a certain space in a facility early without such early turn over having been specified in contract documents.
- Owner directs contractor to start work on an encumbered site.
- Architect/engineer unresponsive to legitimate requests for information.

Advice
- Always allow the contractor to select construction methods and means.
- Make certain the site is fully available to the contractor before the job begins.
- Process submittals promptly.
- Clearly define the time frame and the sequence by which submittals are to be processed, and do it early in the job.

7. Differing site conditions - 31%

The actual site differs from that represented on the contract documents, or deviates from ordinary or normal expectations of such a site in that area.

Examples
- Artesian water encountered in sand seam outside of where soil borings were taken.
- Existing basements encountered but not indicated on contract documents.
- Restrictive easements or assessments on the property not made known to the contractor before contract execution.

Advice
- Expect to pay for and get a good site survey
- Make certain soil borings are adequate to show any unusual conditions.
- Locate and define all easements.
- Check the site history for unusual or restricted conditions.
- Take photos of any unusual conditions encountered.

8. Impossibility of performance - 18%

A situation where it is impossible to carry out the contract work.

Examples
- Expecting a contractor to work on an encumbered site.
- Owner refuses to move interfering utilities he is supposed to relocate by contract.
- Specifying installation of above ceiling work that won't fit in the space provided.

Advice
- Expect the design team to check their work thoroughly for interferences.
- Accept your legitimate design and administrative duties and responsibilities and take care of them.
- Resolve dimensional difference early.
- Do your homework to presolve expected problems and interferences.

9. Superior knowledge - 18%

Withholding data or information during the pre contract period, that affects construction on matters of importance.

Examples
- On a steel erection contract not telling the bidders that the steel had been refabricated from a previous job.
- Failing to tell bidders that there is a cost cap on the first two months costs
- Not telling bidders that there is a high pressure gas line through the site that must be accommodated during construction.

Advice
- Be certain all bidders know as much as they must know to propose properly.
- Be certain demolition contract documents specify all work to be done.
- Locate, to the best of your ability, all site obstructions before bidding.
- Don't expect the contractor or the architect and engineer to read your mind.

10. Termination - 7%

Dismissal from the project for convenience or default.

Examples
- The section of the project is no longer needed and is removed from the contract.
- The contractor is behind schedule.
- The contractor's performance is unsatisfactory.
- The owner doesn't like the way the superintendent talks back to him.
- The contractor doesn't manage submittals promptly and accurately.

Advice
- Be certain the cause for dismissal is legitimate and well defined.
- Don't dismiss for minor reasons. Dismissal is serious business.
- If dismissing, be certain proper notice is given.
- Insure the contract documents give you the right to dismiss.

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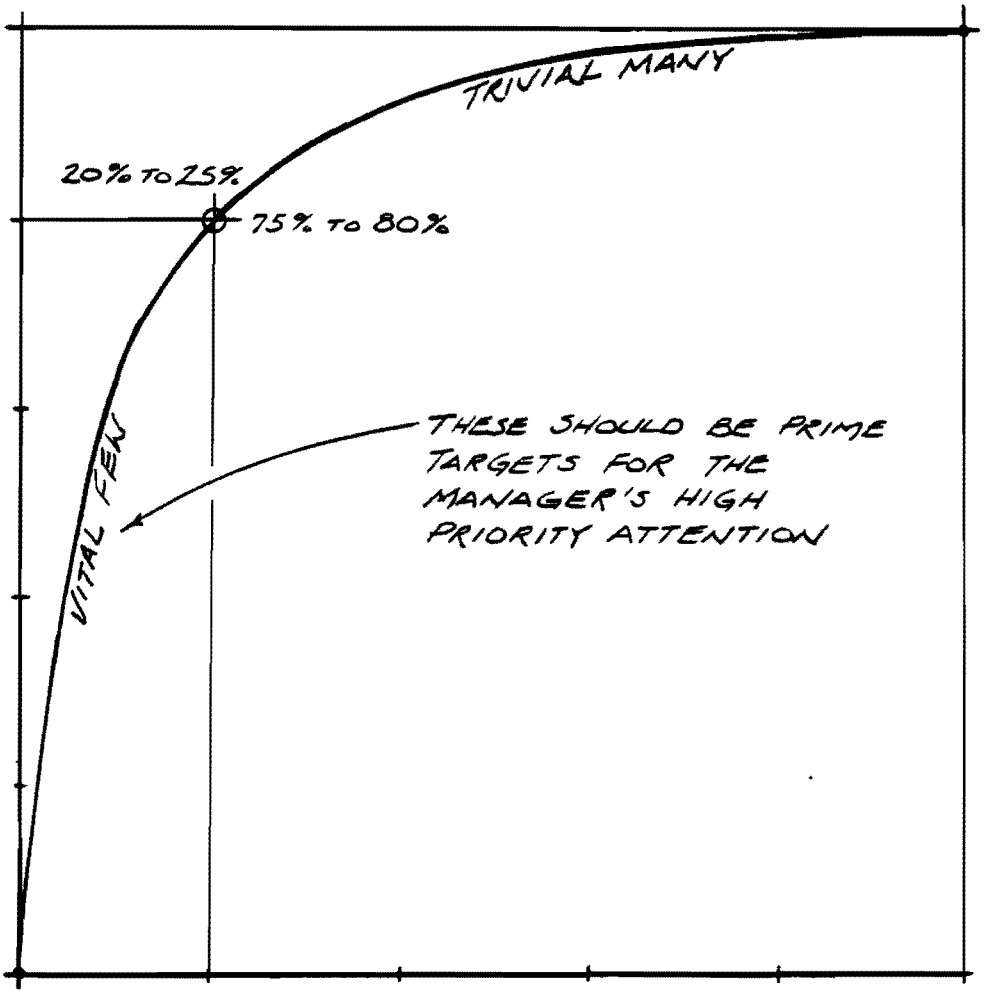
PARETOS LAW - IN AN OBJECT/VALUE SITUATION ONLY A FEW OF THE OBJECTS ACCOUNT FOR THE GREATEST PART OF THE VALUE.



VALUE OR UTILITY

PRICE
COST
DELAYS
MISTAKES
PROBLEMS
PROFIT
REJECTS
SALES
SAVINGS
SHIPMENTS
WASTE

OBJECTS OR RESOURCES

ACTIVITIES
CAUSES
OCCURANCES
PROBLEMS
RESOURCES
PRODUCTS
DECISIONS
FACILITIES
MATERIALS
METHODS
PRODUCTS
SALES CALLS
SERVICES
STAFF

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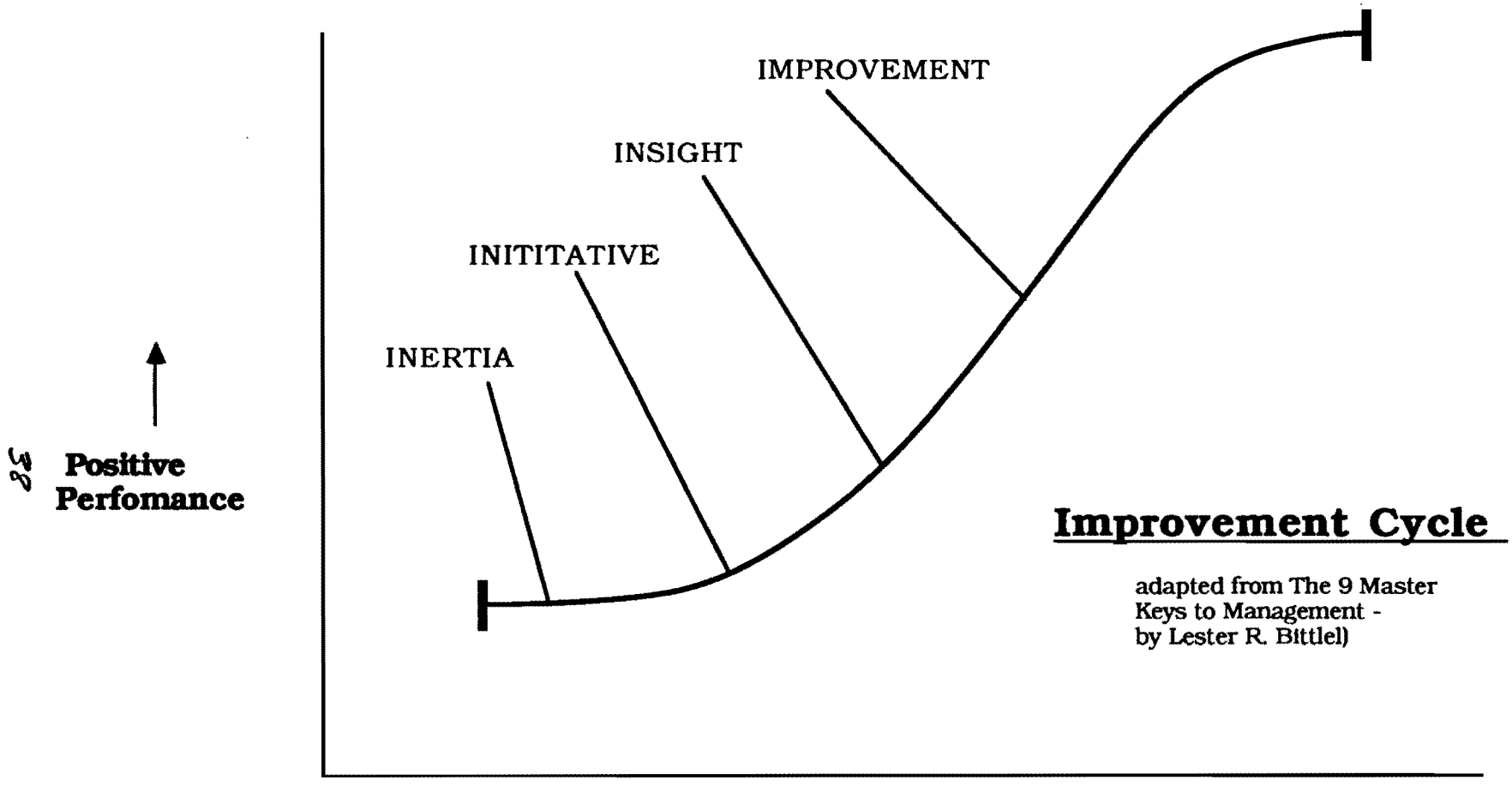
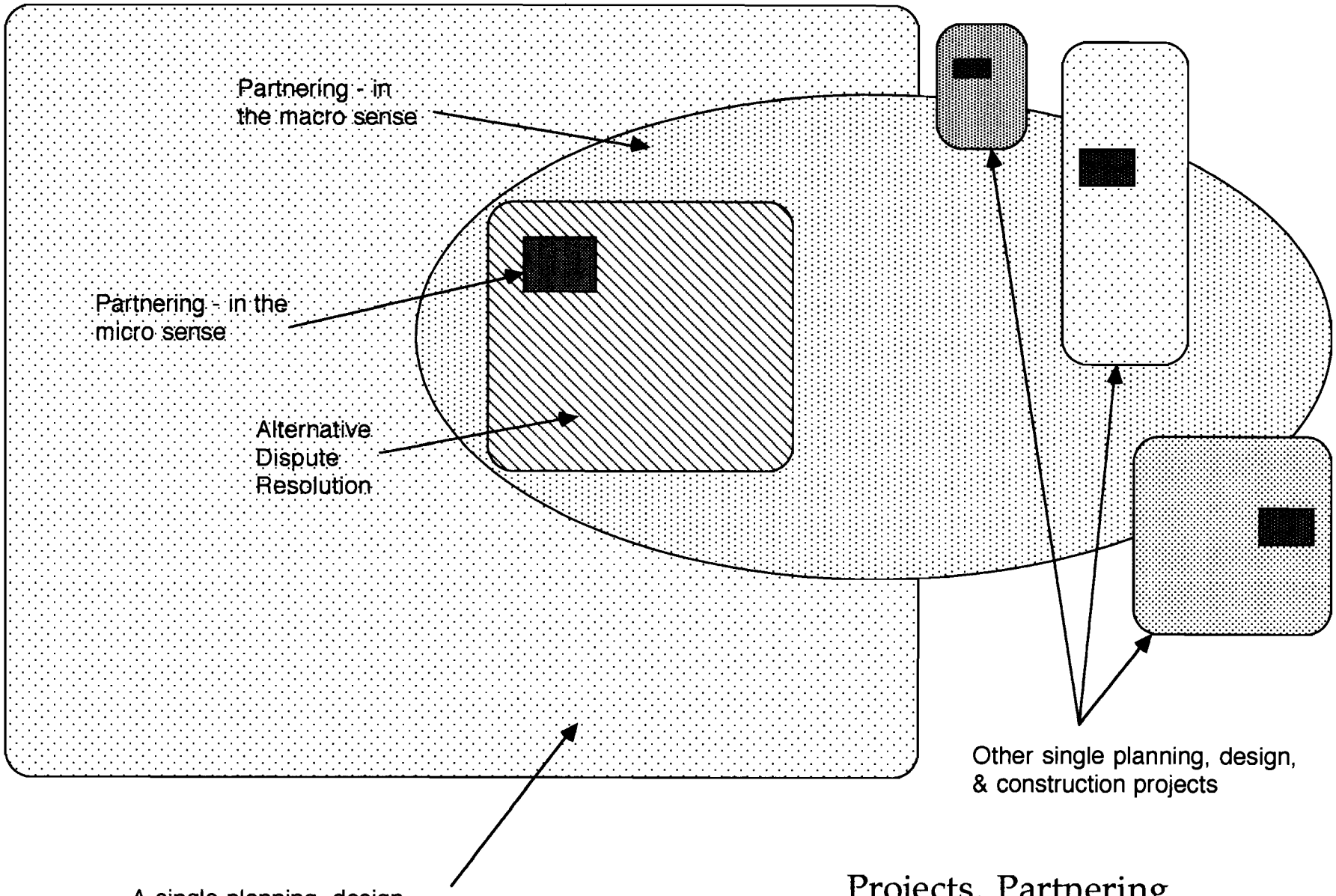


Improvement Cycle

adapted from The 9 Master
Keys to Management -
by Lester R. Bittlel)



Projects, Partnering and ADR

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ho 433, Feb, 94

Sheet
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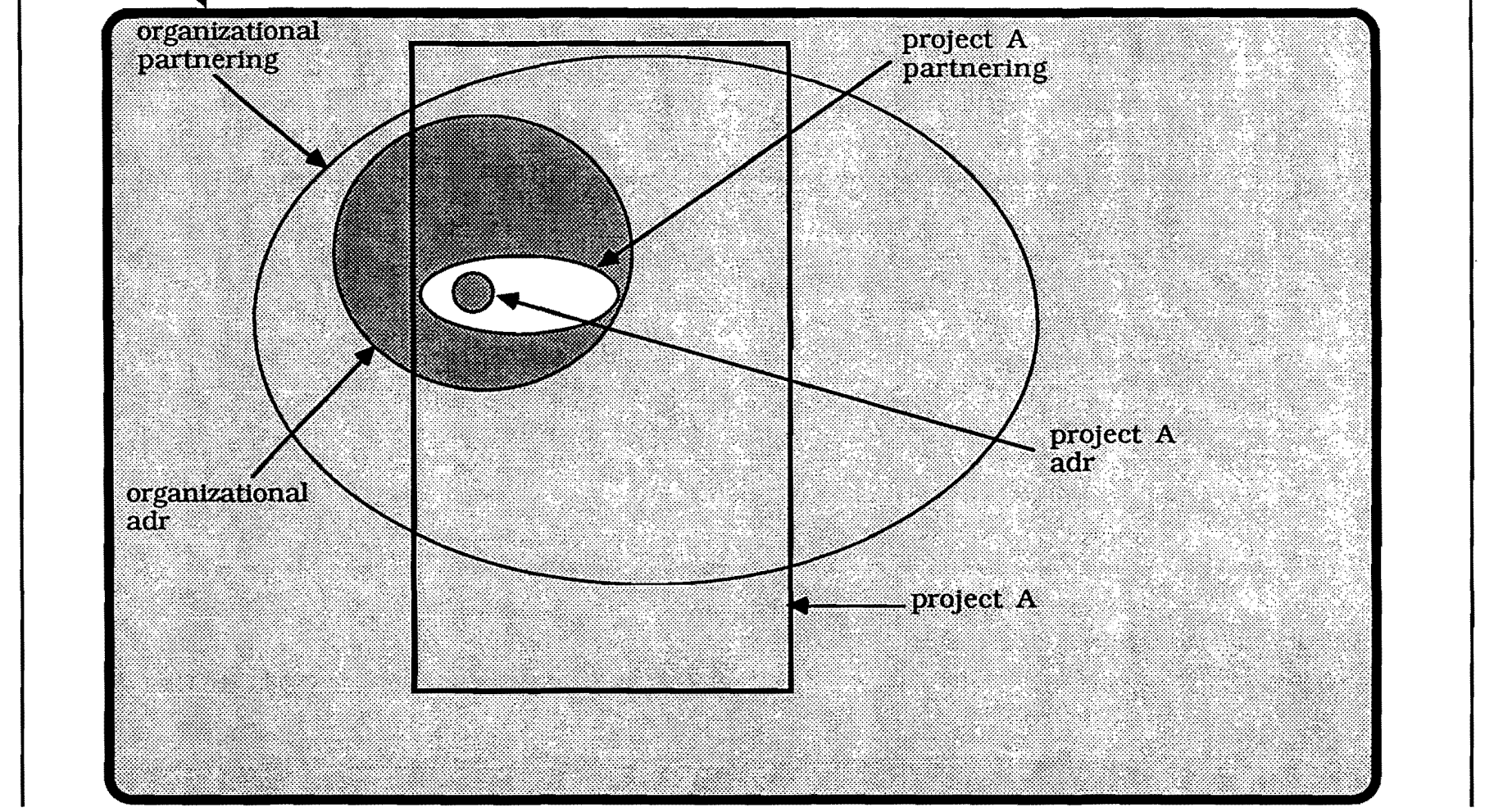
Partnering, ADR, & Project Sets



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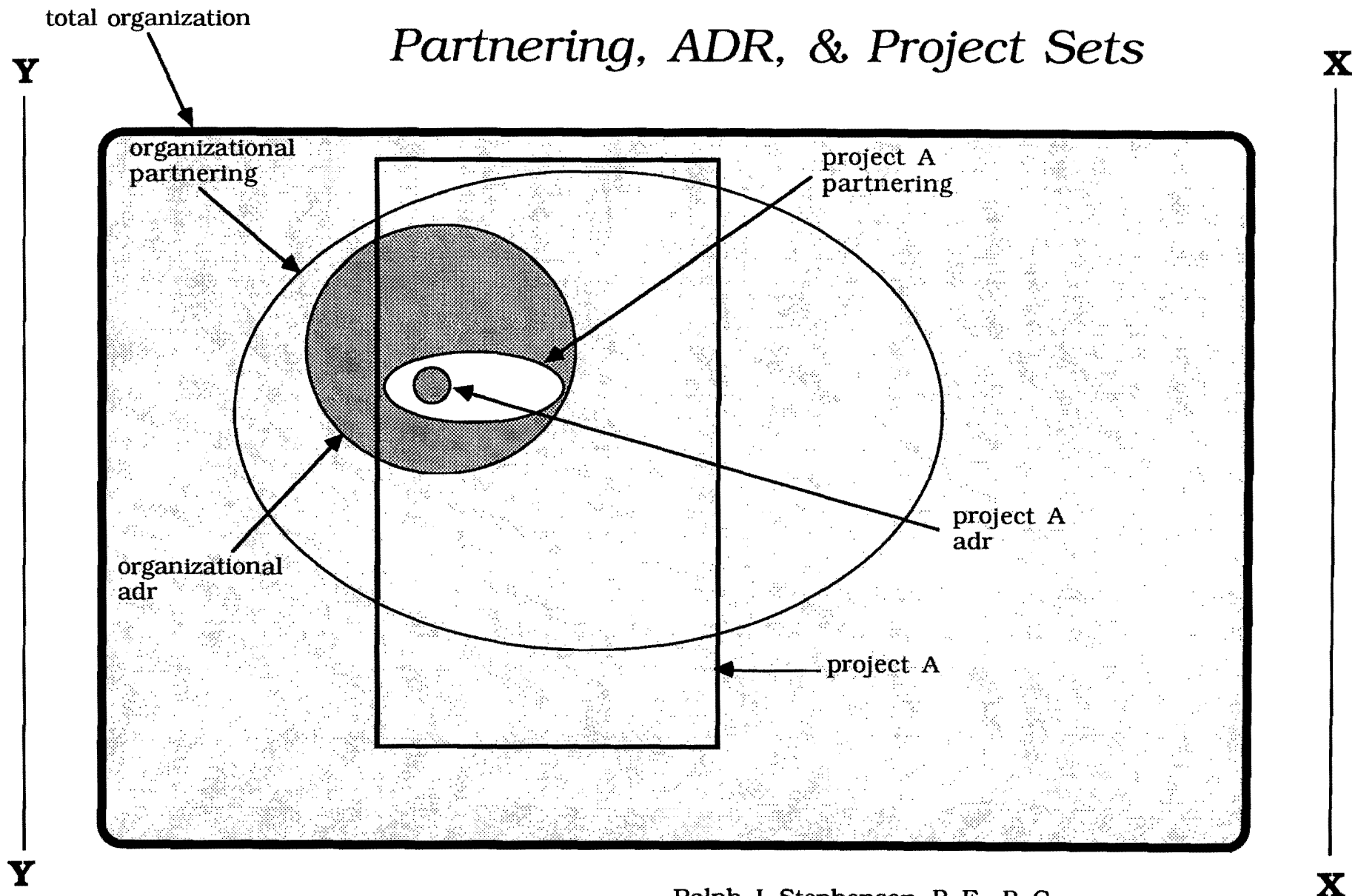
S2

Partnering, ADR, & Project Sets



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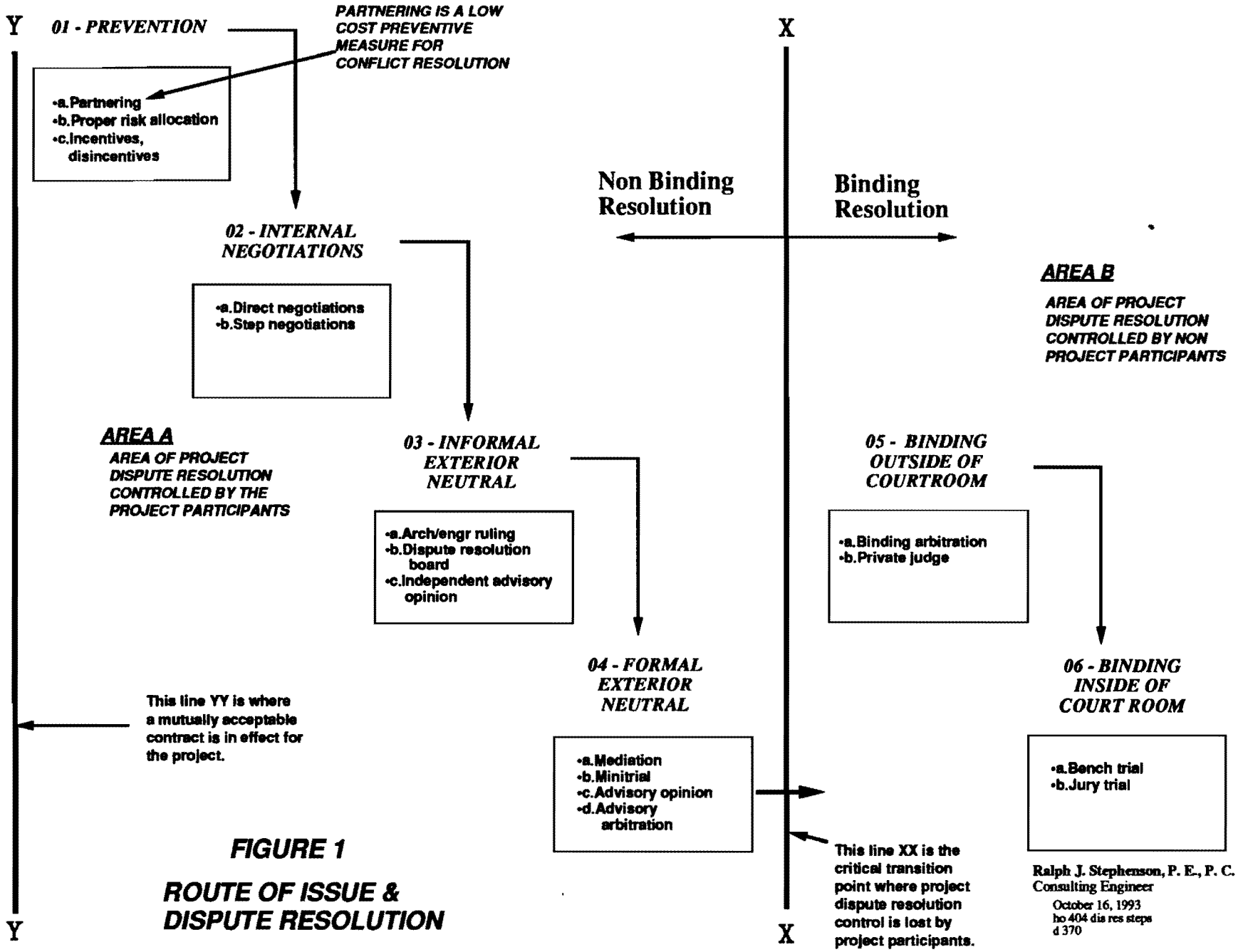

FIGURE 1

ROUTE OF ISSUE & DISPUTE RESOLUTION

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Consulting Engineer
October 16, 1993
ho 404 dis res steps
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Ralph J. Stephenson, P. E., P. C.
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November 27, 1993

Alternative Dispute Resolution Systems

I. **Non binding**

A. ***Prevention methods*** **- produces maximum harmony - usually least cost.**

1. **Intelligent and proper risk allocation.**
   a) Risk should be assigned to the parties that can best manage or control the risk - for example:
      (1) The architect, if the owner has prepared a well conceived and clearly stated program from which to begin design development.
      (2) The owner, if the a/e is expected to assemble and write the program.
      (3) The contractor, where full, well prepared, and checked construction documents are available.
      (4) The owner, where construction begins before construction documents are complete.
   b) Attempts to shift risks to architects, engineers or contractors not able to absorb these risks is not cost-effective
      (1) Reduces competition
      (2) Increases costs due to greater contingency allowances.
      (3) Increases costs and reduces effectiveness because of the potential for increased numbers and intensity of design & construction project disputes.
2. **Incentives for cooperation.**
   a) Incentives or bonus provisions
   b) Disincentives or penalty provisions
3. **Partnering.**
   a) Stresses good faith agreements
   b) Emphasizes teamwork
   c) Encourages good communications

B. ***Internal negotiation methods*** **- parties involved conduct negotiations - requires consensus - relatively cost free.**

One method of using the internal method is to include an resolution method in the issue resolution policy that conflicts will first be submitted to a specified group of stakeholders for advice as to settlement methods and a possible resolution.

1. **Direct negotiations (often start at UDM level).**
2. **Step negotiations (usually start at dispute originating level).**
   a) If the dispute is not resolved at the originating level, it is moved up to the next management level until a resolution is reached.

C. ***Informal external neutral methods*** **- selected external neutral serves as a informal dispute-resolver - relatively low cost. Usually requires nominal preparation.**

1. **Architect/engineer rulings.**
   a) May be respected even though not legally binding.
   b) Must be impartial
2. **Dispute resolution board.**
   a) One member selected by owner and approved by contractor; one by the contractor and approved by the owner; a third by the first two members. Third selection usually acts as chairman.
   b) Those selected should be from the design & construction industry.

c) Must have no conflict of interest.
d) Conduct investigations and hearings on disputes and publish prompt opinions re the dispute.

3. **Independent advisory opinion.**
   a) Mutually agreed upon neutral expert meets informally with interested parties, obtains information from both, and render prediction as to the ultimate outcome if not resolved at meeting level.

D. ***Formal external neutral method*** **- selected external neutral(s) serves as formal dispute resolver - relatively low cost - usually requires considerable preparation, and may require legal assistance.**
   1. **Mediation - settlement conferences and informal hearings conducted by a neutral third party.**
   2. **Minitrial - private settlement method usually initiated by an agreement between the parties - less formal than mediation.**
   3. **Advisory opinion - neutral expert meets formally with both parties, obtains information from both, and render prediction as to the ultimate outcome if adjudicated.**
   4. **Advisory arbitration - abbreviated hearing before neutral expert(s). Arbitrator(s) issue advisory award, and render prediction as to ultimate outcome if adjudicated.**

II. **Binding**

A. ***Outside of courtroom*** **- dispute given to knowledgeable third party - moderate cost - may require legal assistance.**
   1. **Binding arbitration**
   2. **Private judge**

B. ***Inside of courtroom*** **- most expensive - usually requires legal assistance.**
   1. **Bench trial - before a judge**
   2. **Jury trial - before a jury**

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Consulting Engineer
November 27, 1993

An Overview of Partnering

I. Definitions

A. ***Critical Transition Point***
The point in a project delivery system at which the responsibility and authority for the work passes from the supportive group to the ex'e'cutive group.

B. ***External project challenges***
Challenges to the functional or project integrity by those outside the parent organization that seek change or disruption.

C. ***Functional component***
A group designed or adapted to perform some specialized activity or duties, usually concerned with the continuous operation of the company.

D. ***Internal functional or project challenges***
Challenges to the functional or project integrity by those within the parent organization that seek change or disruption.

E. ***Partnering***
A method of conducting business in the planning, design, and construction profession without the need for unnecessary, excessive and/or debilitating external party involvement.

F. ***Partnering charter***
The basic manual for operating a partnering system. Contains at a minimum, the mission of the project team, and their objectives for the project. Usually is signed by those writing the document.

The charter is an agreement in principle and must not supersede or supplant the design and construction contracts in place or to be written.

G. ***Project component.***
Project - as related to management
A group established to achieve a set of objectives by accomplishing a set of related, discrete operations which have a defined beginning & end.

H. ***Relations - Formal Functional***
Organizational connections that concern distribution and use of data, information and decisions that flow along formally defined transmission lines. Formal functional communications are usually written and are normally both from and to individuals and groups.

Formal relations are precisely defined and most day to day business is accomplished within the formal relation framework. The line expressing a formal functional relation usually has an arrowhead at each end to show a mutual exchange of responsibility and authority. If there is a higher authority to be implied a single arrowhead can be used pointing to the superior party.

I. ***Relations - Informal***
The natural channels along which organizationally related material is most easily and comfortably transmitted. The informal relation exists by mutual consent of the parties to the relation, and is stimulated to maximum effectiveness by a mutual profit gained from the relation.

Little, if any, authority normally is expressed in informal relations. Communications are usually

oral and one to one. Often informal relations define the hidden organization structure. A line defining an informal relation is usually shown dotted with an arrowhead at each end.

J. ***Relations - Reporting***
The official channels through which each individual conveys, or is given raises, appraisals and evaluations; is fired, assigned or is provided professional, vocational and personal identity in the organization. The true organizational superior of an employee is usually that individual with whom he maintains a reporting relation. The line expressing reporting relations has an arrowhead at one end pointing to the superior.

K. ***Relations - Staff***
The business patterns through which a person or group provides consulting services necessary to achieve goals and objectives. Staff personnel usually have little or no authority over those outside the staff group. The line expressing staff relations has an arrowhead at each end.

L. ***Relations - Temporary***
Those relations created when extraordinary or unusual management demands must be met. The temporary relation is usually unstable and should be kept active for only short periods of time. The line expressing a temporary relation can have an arrowhead at one or both ends depending on the nature of the relations.

Extensive use of temporary relations creates business dysfunctions, breaks down morale and causes internal tensions.

M. ***Stakeholder***
An at-risk member of the charter writing team who has signed the charter.

II. **Project contract components**
- A. **Agreement premises**
- B. **Authority limits**
- C. **Payment methods**
- D. **Scope of services**

III. **Project organization components**
- A. **Relationships**
  1. **Formal**
  2. **Informal**
  3. **Reporting**
  4. **Staff**
  5. **Temporary**
- B. **Functional components**
- C. **Project components**
- D. **Authority**
- E. **Responsibility**
- F. **Internal project challenges**
- G. **External project challenges**

IV. **Partnering is a system of conducting business with minimal destructive conflict. Other names for partnering are:**
- A. **A handshake agreement.**
- B. **A gentleman's agreement.**
- C. **"Let's look at the drawings a bit more closely."**
- D. **"Let's tally up the favor score?"**
- E. **"Let's settle this over a beer."**

V. **Why is partnering applicable in today's construction industry?**
   A. **What value is added by partnering?**
      1. **Lower costs to resolve conflicts.**
      2. **Quicker settlement of conflicts.**
      3. **Knowledgeable professionals make the resolution decisions.**
      4. **Decision makers are closer to the resolution process.**
      5. **Nature of decisions rendered lessen the probability of appeal.**
      6. **Participants gain privacy in the resolution process.**
      7. **Probability of fair resolution is increased by timely consideration of the dispute.**
      8. **Helps cross critical transition points by setting the ground rules for the crossing.**
   B. **Where and why has partnering been successful?**
      1. **Comments on partnering from the Albuquerque District Corps of Engineers staff in a guide to partnering dated February, 1991.**

         "Our experience is positive based on six contracts with four of them substantially complete." Benefits include:

         a) Disputes reduced - no formal claims.
         b) Common objectives achieved (schedule, safety, etc.).
         c) Increased responsiveness.
         d) Higher trust levels.
         e) Improved communication.
         f) Excellent cooperation & teamwork.
         g) Increased value engineering proposals.
         h) Developed expedited process for tracking and resolving open items.
      2. **Comments on partnering by Colonel Charles E. Cowen - Commander Portland District Corps of Engineers in a strategy for partnering in the public sector - April 15, 1991.**
         a) 80 to 100 % reduction in cost growth over the life of major contracts.
         b) Time growth in schedules virtually eliminated.
         c) Paper work reduced by 66%.
         d) All project engineering goals met or exceeded.
         e) Completion with no outstanding claims or litigation.
         f) Safety records significantly improved.
         g) Pleasure put back in the process for all participants.
      3. **Combination partnering relationships surveyed & studied by the Construction Industry Institute and reported in the publication ("In Search of Partnering Excellence" - July 1991).**
         a) Shell Oil/SIP Engineering - 1984.
         b) DuPont/Fluor Daniel - 1986.
         c) Proctor & Gamble/Fluor Daniel - 1986.
         d) Proctor & Gamble/BGP - 1986.
         e) Shell Oil/Bechtel - 1987.
         f) DuPont/MK - Ferguson - 1987.
         g) Shell Oil/The Ralph M. Parsons Company - 1987.
         h) Alcan/Fluor Daniel - 1988.
         i) Union Carbide/Bechtel - 1988.
         j) DuPont/Day & Zimmerman - 1988.

k) Great Northern Nekoosa/Rust International - 1988.
l) Pillsbury/Fluor Daniel - 1989.
m) Hoffman-LaRoche/Day & Zimmerman - 1989.
n) Chevron/Bechtel - 1989.
o) Bethlehem Steel/United Engineers & Constructors - 1989.
p) Proctor & Gamble/M. W. Kellogg - 1989.
q) Chevron/Besteel - 1990.
r) DuPont/H. B. Zachry.

C. **Situations in which partnering may be difficult to use.**
1. **Where the parties intend to pay lip service only to the partnering effort.**
2. **Where individuals in key technical or management positions choose to resist intelligent discussion and fair decision making.**
3. **Where early commitments by the owner have made made good intercontract relationships difficult or impossible to maintain.**
4. **Where construction contracts are let as the documents are being released for field use.**
5. **Where several parties to the contract prefer to resolve disputes by contested claiming & binding resolution.**
6. **Where poor contract documents are made the basis of the partnering effort.**
7. **Where excessive, one sided conditions are placed on sub contractors by prime contractors.**
8. **Where unfair or obscure payment processing systems are specified and enforced.**
9. **Where risk has been poorly defined and unfairly allocated.**

VI. **What are some of the action ingredients of a successful partnering effort?**
A. **Generate and maintain a strong desire to achieve project success for all.**
B. **Make intelligent commitments.**
C. **Avoid accepting or imposing unreasonable risk.**
D. **Work and act ethically, morally, and with integrity.**
E. **Work and act from a position of fairness rather than a position of power.**
F. **Suppress greed.**
G. **Try to establish an honest feeling of trust among participants.**
H. **Gain support from the participants and stakeholders.**
I. **Assign experience, competent people to responsible management positions.**
J. **Have empathy.**
K. **Prepare a good charter, a good partnership evaluation system, and a good issue resolution process.**
L. **Allow time to make the partnering system work.**
M. **Recognize and celebrate success.**
N. **Gain the support and participation of higher management.**
O. **Develop and use guidelines and evaluation systems for measuring performance quality.**

See pages 39. 40. 41 for type of ADR.

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November 27, 1993

Partnering Case study #1 - The World Wide Data Business

I. **Client - Northern States Economic Data Systems (NSEDS)**
NSEDS is a private business devoted to collecting, analyzing, and disseminating economic information for the business, government, and volunteer sectors in political geographic units worldwide.

The information they collect, process, and sell is primarily concerned with methods by which wealth, value, currency or other equivalents interact with the market places in which they are used as a medium of exchange.

The company maintains information collection and market operations from offices located in 25 cities world wide. The home office is in the community of Telitreck, North Dakota. Telitreck has a population of 120,500 people. Of these 1,500 work for NSEDS.

All data analysis is done at the home office and dispatched to the point of use electronically, and by mail, courier, or special messenger. 60 % of the dispatch volume is electronic.

The mission of the company is:

"To derive useful micro to macro global economic information from statistical data, and to provide this information to our clients in accurate, easily used, and highest value-added form."

The company is family founded, owned, and operated. Family members have been actively involved in the direction of the firm for 51 years.

II. **Facility types**
- A. **New office and data processing center building.**
  1. **200,000 square feet on three floors and a lower level.**
  2. **Reinforced concrete frame.**
  3. **Patterned masonry exterior skin and panelized curtain wall.**
  4. **Full amenities for employees and visitors.**
- B. **Remodel existing building after move in to new building.**
  1. **Existing building.**
     a) 160,000 square feet on two floors and a lower level.
     b) Structural steel frame with concrete floors
     c) Plain face brick exterior skin. Good brick appearance. Punched windows.
     d) Minimal amenities for employees and visitors
  2. **Remodeled building.**
     a) Each floor completely gutted and remodeled.
     b) Add full amenities for employees and visitors compatible with new addition.
     c) Exterior skin fully renovated, pointed, and cleaned.
- C. **Site work for new office and for remodeled building.**
  1. **Construct new parking - 1050 cars.**
  2. **Rebuild existing parking lot - 500 cars.**
  3. **Construct new retention pond.**
  4. **Construct new employee recreation area.**

III. Those involved
  A. From NSEDS staff
    1. Mr. Lindsay Dreyfuss - President and chief operating officer - NSEDS
    2. Vice president of operations
    3. Facilities manager
    4. Security manager
    5. Office manager
    6. Data processing manager
    7. Public relations manager
  B. From computer systems contractor staff - Datacomp, Inc.
    1. Computer hardware project manager
    2. Computer software project manager
    3. Space designer
  C. From architect/engineers - Loring & Metzer
    1. President and chief operating officer - architect
    2. Architectural designer - architect
    3. Project Manager - architect
    4. Field Inspector - architect
    5. Interior designer - interiors design
    6. Project Manager - structural
    7. Project Manager - mechanical and electrical
    8. Project Manager - civil engineer
  D. From testing agencies - Strendel - geotechnical, and Mechbal - balancing
    1. Geotechnical - Vice president
    2. Geotechnical - Field and project engineer
    3. Mechanical balancing - Project engineer
  E. From general contractor - Tiltsen and Greene
    1. President
    2. Vice president of operations
    3. Project manager
    4. Field superintendent
  F. From specialty contractors - Brown Mechanical and Powers Electric
    1. President
    2. Estimator and project manager
    3. Field superintendent
  G. From fixtures, furniture, and equipment contractor - Efficiency Design, Inc.
    1. President
    2. Project manager for design
    3. Project manager for installation
    4. Field superintendent

IV. Contract types
  A. Architect engineer - with NSEDS
    1. Partially qualified - selected and negotiated from prequalified list prepared by NSEDS facilities manager.
    2. Authority limits - as limited agent.
    3. Payment method - Payroll costs x 2.75, plus expenses with cap.
    4. Single responsibility - in house and outside consultants

B. General contractor - with NSEDS
   1. Partially qualified - selected and negotiated from prequalified list prepared by Mr. Dreyfuss and facilities manager.
   2. Authority limits - as contractor.
   3. Payment method - time and material with fixed fee and guaranteed maximum price - share in savings over gmp - 80/20.
   4. Single responsibility - manage all subs to provide and install labor and materials for all building and site work.

C. Computer system contractor - with NSEDS
   1. Partially qualified - selected and negotiated from prequalified list prepared by data processing manager.
   2. Authority limits - as contractor.
   3. Payment method - fixed cost.
   4. Single responsibility - provide all management, design, materials and equipment, and install all materials and equipment.

D. Fixtures, furniture, and equipment contractor - with NSEDS
   1. Partially qualified - selected and negotiated from prequalified list by Mr. Dreyfuss.
   2. Authority limits - as contractor.
   3. Payment method - time and material with fixed fee and guaranteed maximum price - no share in savings
   4. Single responsibility - provide all management, design, materials and equipment, and install all materials and equipment.

E. Testing agencies - with NSEDS
   1. Partially qualified - selected and negotiated from prequalified list prepared by architect/engineer and NSEDS facilities manager.
   2. Authority limits - as contractor.
   3. Payment method - time and material with fixed fee and guaranteed maximum price
   4. Single responsibility - provide all labor, materials, testing for building and site work.

F. Specialty contractors - with general contractor
   1. Partially qualified - selected by competitive bids from prequalified list by general contractor.
   2. Authority limits - as contractor.
   3. Payment method - fixed price
   4. Single responsibility - provide and install labor and materials for building and site work according to purchase order from general contractor.

V. Current status of project
   A. Contract documents for new building complete.
   B. General construction contracts for new building awarded.
   C. Construction sub contracts for new building awarded.
   D. Testing contracts awarded.
   E. Remodeling for existing building in design development,
   F. Construction consultant contract for existing building awarded to general contractor for new building - to be converted to guaranteed maximum construction contract as design proceeds.
   G. Specialty sub contractors for new building in favored position for existing building remodeling, if they perform well on new building - this is well known by the subs

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Outline of Steps to be Taken in Planning and Implementing a Partnering System

I. Generate and express interest - from internal or external source.
II. Verbally brief those expressing interest on key points in the system.
III. Determine the ultimate decision maker in the system.
IV. Provide the ultimate decision maker (UDM) with a written description of the partnering system.
   A. Your understanding of the project, its characteristics, and its function.
   B. A definition of what is to be accomplished in the charter meeting.
   C. Definitions of key terms in partnering.
   D. Cost of the charter meeting and of maintaining the partnering system.
   E. A description of the follow up work after writing the charter.
V. In conjunction with the UDM select those who will attend the charter workshop - participants & observers.
VI. UDM give approval to proceed with the partnering meeting.
VII. Provide the UDM with suggested details of the charter meeting.
   A. Project name and brief description.
   B. Date of meeting.
   C. Location of meeting.
   D. Time of meeting.
   E. List of desired participants and visitors - prepared with UDM.
   F. Suggested letter to be sent to attendees.
   G. Agenda for meeting.
   H. Meeting room set up.
   I. Equipment needs.
   J. Award memento suggestions.
   K. Meeting follow up suggestions.
   L. List of key definitions.
VIII. Obtain formal approval to proceed with meeting.
IX. Prepare working notebook for meeting - should include at minimum
   A. Title page
   B. Agenda
   C. Key definitions
   D. Meeting outline and details
   E. Possible team groupings
   F. Route of dispute resolution
   G. Sample charters
   H. Sample issue resolution description.
   I. Sample partnering evaluation work sheet.
X. Conduct charter writing work shop analysis workshop.
XI. Write charter.
XII. Sign charter.
XIII. Award memento.
XIV. Have celebration session.
XV. Project task force prepare and implement issue resolution policy.
XVI. Project task force prepare and implement partnering evaluation system

XVII. **Reconvene and reconsider the partnering system at major milestone points in project.**
XVIII. **At the close of the project conduct a partnering critique of the systems characteristics.**

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November 27, 1993

Guidelines for the Application and Use of Partnering Concepts

I. **Definitions**

A. ***Ethics***
The study of the general nature of morals and of the specific moral choices to be made by the individual in his relation with others.

B. ***Goals***
The unquantified desires of an organization or individual expressed without time or other resources assigned.

C. ***Leadership***
The process of persuasion or example by which an individual induces a group to pursue objectives held by the leader or shared by the leader and his or her followers.

D. ***Mission***
A statement of the most important result to be achieved by the project being successfully completed.

E. ***Moral***
Of or concerned with the judgment principles of right and wrong in relation to human action and character.

F. ***Objectives***
Quantified targets derived from established goals. The most commonly used resources in converting goals to objectives are money, time, human abilities, human actions, equipment, and space.

G. ***Sum zero***
A situation in which there is a winner and a loser. The loser often usually loses what the winner wins.

H. ***System***
An assemblage or combination of things or parts forming a complex or unitary whole.

II. **Determine the need for a partnering system.**

A. **Suggestions and ideas to help in deciding about the use of partnering.**

1. **Litigation *should not* be considered as an initial method used to resolve construction disputes.**
2. **Partnering is most effective when used early in the project.**
3. **Advance commitment to partnering methods helps solve problems at their source and as they arise.**
4. **Support for partnering must be gained at all project team levels, particularly at the senior management level in those organizations involved.**
5. **Non-binding dispute resolution methods should be considered before resorting to binding dispute resolution.**
6. **Job site dispute resolution helps dispose of problems before they multiply.**
7. **All partnering participants must take responsibility for their thoughts and actions.**
8. **All managers must provide leadership where they can, or where they are expected to lead.**
9. **Don't play sum zero games.**
10. **Understand and use ethical principles to gauge your behavior**
11. **Partnering assumes most people are honest, concerned, desirous of challenge, need attention, and welcome help in times of turmoil.**

III. **Set goals and objectives to be gained from a partnering system.**

A. **The goals of a partnering system should be broadly stated by the project mission defined during a charter meeting.**

1. **Typical mission statements - from actual charters**

a) We seek to work together as a team producing valuable, accurate , high-quality hydrographic surveys at a fairly negotiated price.
b) We, the partners for construction of the Bonneville Navigation Lock, commit to trust, cooperation an excellence for the benefit of all stakeholders.
c) We, the Project Team commit to construct a quality facility, on time and within budget, maximizing safety, communications, & cooperation so that all participants can be proud and profitable in their accomplishments.
d) Our mission is to work together in a trustworthy and professional manner to produce a quality project completed within budget, safely, and on time.

B. **The objectives of a partnering system should be specific, understandable, and possible.**

1. **Typical partnering goals and objectives at random - from actual charters (some paraphrased).**

a) Address the problem not the person.
b) Construction employees should maintain professional relationship with the client's employees and the public.
c) Be a good construction neighborhood.
d) Build it right the first time.
e) Close out the job in a proper and timely manner.
f) Define and clearly communicate quality expectations.
g) Encourage value engineering.
h) Have fun.
i) Hold changes to a minimum.
j) Hold regular team progress meetings and prepare and publish minutes.
k) Limit cost growth to less than 5 %.
l) Make timely release of retainage.
m) Minimize paperwork.
n) Minimize submittal and approval times for shop drawings.
o) No litigation.
p) Pay promptly.
q) Plan, organize and publish site layout and organization.
r) Prepare and implement a partnering evaluation system.
s) Prepare and implement an effective alternative dispute resolution system.
t) Prepare and publish close out procedures for all trades
u) Prepare and publish organizational chain of command (with phone and fax numbers).
v) Prepare and publish program to regularly monitor and report on job quality.
w) Prepare and publish progress schedule and update regularly.
x) Prepare and publish standard procedures for payment, changes, questions and other documentation.
y) Prepare and submit complete and accurate submittals and shop drawings in a timely manner.
z) Prepare, approve, and commit to a total quality management program.
aa) Promptly resolve conflicts at the lowest possible level.

ab) Stress and encourage pride in good workmanship.
ac) Treat this project as if you were the owner.

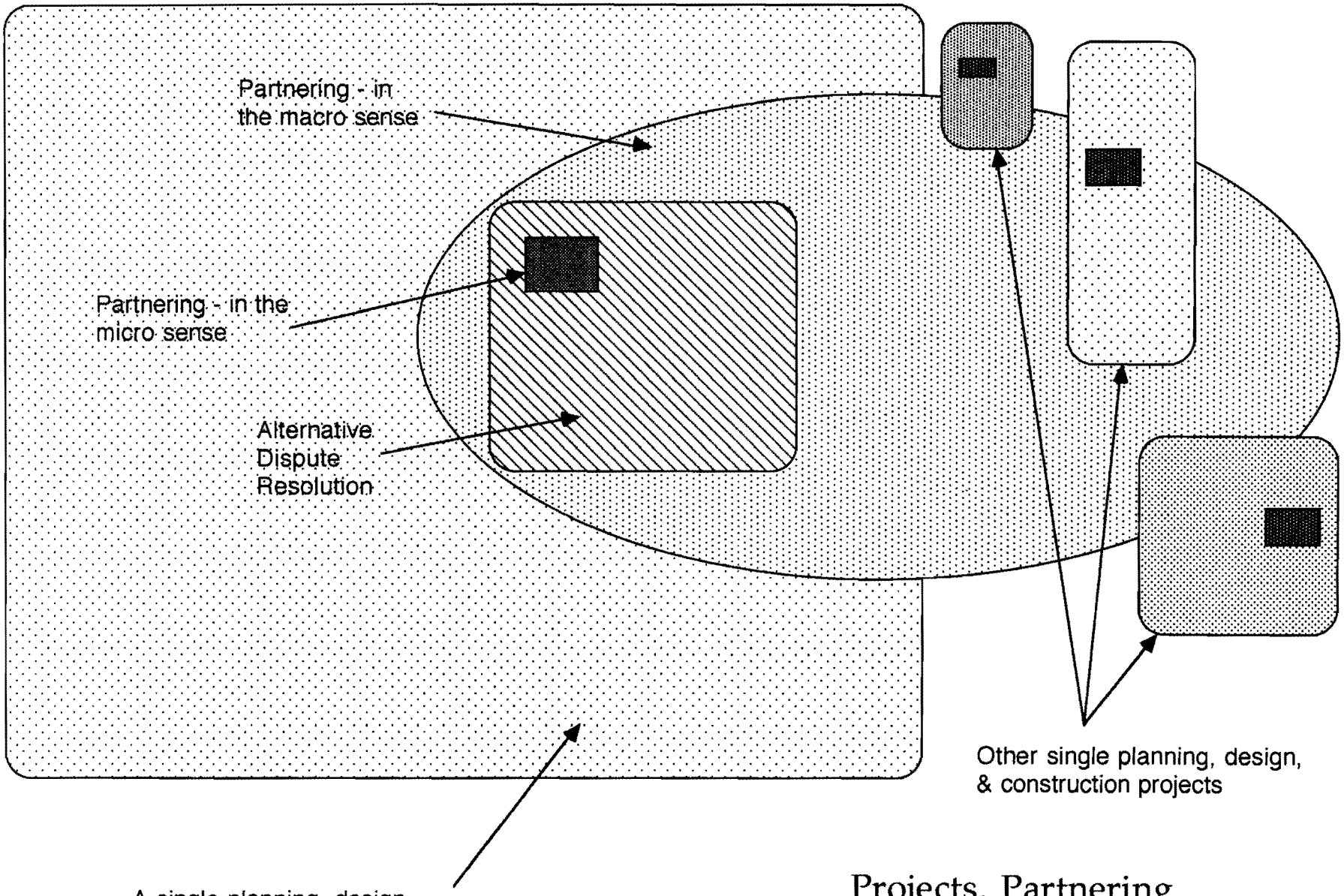
IV. **Obtain management commitment for use of a partnering system.**
  A. **Top management commitment to non binding resolution of conflict issues is vital to partnering success.**
  B. **All levels of management and operations must be shown where value is added for them by use of the partnering process.**

V. **Develop a partnering plan of action (the charter).**
  A. **Tips for planning the partnering process.**
    1. **During the project programming period, encourage the owner, user, and design team to learn about, and consider, a partnering effort.**
    2. **During the construction proposal period, encourage prospective prime contractors, vendors and specialty contractors to learn about, and consider a partnering effort.**
    3. **Alert all parties that the project staff may, or will, be expected to be operate within a partnering system by which the facility is built.**
    4. **May be desirable to hold some early partnering orientation sessions to insure adequate understanding of partnering assumptions and requirements.**
    5. **Award contracts on the basis of well thought out partnering principles and guidelines.**
    6. **Gain and display the owner/user team support for the use of partnering to all involved.**
    7. **Adopt and display the design team support for the use of partnering to all involved.**
    8. **Inform and gain as much support for partnering from associations and other trade organizations as may influence the project implementation**
    9. **Continually review the partnering guidelines and assumptions for improvement.**
  B. **Tips for writing the basic partnering document - the charter.**
    1. **Staff assistance recommended - you may not have all of these people available, but somebody has to do the following if you are going to write the charter in a single day.**
      a) Someone to introduce the subject - these are the top managers of the project team organizations.
      b) Someone to chair the meeting - usually an outside neutral individual, a leader who is knowledgeable about the design and construction profession.
      c) Someone to help take notes during combined group discussions.
      d) Someone to help break out and reassemble groups.
      e) Someone to display flip charts and other material as needed.
      f) Someone to tend, as needed, to the break out groups.
      g) Someone to make and distribute copies.
    2. **Equipment recommended**
      a) Lap top or portable word processor & someone who knows how to use it.
        (1) The meeting chair may type notes and other material as the meeting proceeds.
      b) Copier near at hand - must be capable of quickly producing high quality copies of material prepared in the charter meeting.
      c) Flip charts - probably as many as 5 to 7 with felt pens of various colors available for each.
      d) Marker boards, markers, & erasers.
      e) Wall space for display of charts.
      f) Drafting tape - non paint destructive.
      g) Push pins.
      h) Transparent scotch tape.

i) Overhead transparency projector with spare bulb.
j) Large screen - 6' x 6' at least

3. **Select who is to be in charge of the initial organizing effort**
   a) Owner?
   b) User?
   c) Designer?
   d) Contractor?
   e) Neutral party?
   f) Other?
4. **Set the date, time and place of the charter meeting.**
   a) Make certain all key people can attend!
5. **Invite all involved in responsible project decision making and operations actions to the charter meeting.**
   a) Owner.
   b) Users.
   c) Financing sources.
   d) Planners.
   e) Architects.
   f) Engineers.
   g) Specialty designers.
   h) Prime contractors.
   i) Sub contractors.
   j) Key vendors.
   k) Key suppliers.
   l) Operators of the facility.
   m) Regulatory representatives - who among these benefits from a good project?
   n) Guests - who do you want to see you in action? Who might benefit from observing the session?
6. **Provide a briefing document to all expected to attend - to be sent over signature of senior management executive (of the owner, designer, or principal contractor).**
   a) State objectives of the meeting.
   b) Explain who is invited and expected to attend.
   c) Present an agenda - well thought out & well written.
7. **Conduct the partnering meeting & write the charter in one day.**

VI. **Award a memento of the day's work to all participants.**
   A. **Specially lettered celebration coffee cup.**
   B. **Baseball cap with event lettering.**
   C. **Calculation tablet in windproof folder lettered with the project name and the event.**
   D. **Special badges with partnering meeting lettering and a message.**
   E. **Certificate, specially lettered to celebrate the event.**
   F. **Lettered T shirts (may be expensive).**
   G. **Later, a special parchment copy of the signed charter.**
   H. **Other?**



Projects, Partnering and ADR

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