



In Search of Partnering Excellence

Special Publication 17-1

July 1991



Construction Industry Institute



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CII was founded in 1983 to improve the cost effectiveness of the nation's largest industry. The members, who represent a broad cross-section of owners and contractors, believe that many of the problems that limit cost effectiveness are common ones, and that real improvements can be best accomplished in a cooperative environment with the benefits being shared by the construction industry at large

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Technology

Advanced Technological Systems
Computer Integrated Design &
Construction
Constructability
Electronic Data Management
EPC Flexibility
Modularization
Technology

Organization

Constructability Implementation
Partnering
Pre-Project Planning
Project Organization
Project Team Building Project Team
Risk/Reward Allocation

People

Construction Work Force
Continuing Supervisory Education
Education and Training
Employee Effectiveness
Safety
Zero Accidents

Information

CICE Impact Evaluation
Industry Data & Statistics
International Construction
Model Plant
Owner Engineering Organization
Project Management Assessment Survey

Controls

ASCE Quality Manual
Change Order Impacts
Claims
Contraction, Phase II
Contracts
Cost/Schedule Controls
Design
Materials Management
New Approaches for Schedule Reduction
Overtime
Overtime, Phase II
Productivity Measurement
Quality Management
Quality Performance Measurement
Total Quality Management

Sigma

Barriers to Implementation
Construction 2000
Insurance
Retrofit Projects
U.S. Navy Demonstration Project

In Search of Partnering Excellence

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Construction Industry Institute*

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Executive Summary

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Introduction

The concept of partnering is an approach to conducting business that addresses the economic and technological challenges confronting the U.S. construction industry in the 1990s. This new approach focuses on making long-term commitments with mutual goals for all parties involved to achieve mutual success. It is also an excellent vehicle to help attain total quality management (TQM) for construction projects. Partnering is a term used to define an optimum relationship between a customer and supplier, not to be confused with the formal legal entity, “a partnership,” and its associated mutual liabilities.

In 1987, the Construction Industry Institute (CII) established a task force on partnering to evaluate the feasibility of this method of doing business. The mission of the task force was to identify the benefits and risks associated with partnering, and to provide guidelines on the process of how to plan, organize, and select a partner, and how to implement a partnering relationship. Contract considerations for partnering relationships were also considered in the study.

Partnering refers to long-term agreements between companies to cooperate to an unusually high degree to achieve separate yet complementary objectives. The task force defines partnering as: *a long-term commitment between two or more organizations for the purpose of achieving specific business objectives by maximizing the effectiveness of each participant's resources. This requires changing traditional relationships to a shared culture without regard to organizational boundaries. The relationship is based upon trust, dedication to common goals, and an understanding of each other's individual expectations and values. Expected benefits include improved efficiency and cost effectiveness, increased opportunity for innovation, and the continuous improvement of quality products and services.*

Key Elements of Partnering

The three key elements of any successful partnering relationship are trust, long-term commitment, and shared vision. As these elements are developed, other sub-elements are achieved and the benefits to all parties are maximized. Both customer and supplier can profit from reduced overhead and workload stability. Competitive advantage is enhanced through improved cost, quality and schedule. Most importantly, total quality management and continuous improvement are achieved.

Growth and balance are important to the continual improvement of the partnering agreement. For example, in developing long-term commitment, a partnering agreement may grow from single to multiple projects. Likewise, trust may evolve from competitive bidding through complete disclosure of project costs in a cost-plus relationship. Shared vision can expand to open sharing and mutual development of business objectives. Partnering is a many-faceted relationship needing constant nurturing to achieve continuous improvement and maximum benefit.

Other important aspects of successful partnering relationships are: equity, investment, synergism, shared risks, mutual rewards, a systemic relationship and competitive advantage.

Environment for Total Quality Management

Partnering provides an ideal environment for total quality management because it focuses on a long-term approach of improving ongoing processes rather than an emphasis on individual projects or tasks. Everyone involved in the partnering process must continuously focus on the business objectives set forth in the partnering charter or mission statement. The overall success of the business objectives and the participants will be achieved through effective resource utilization and the continuous improvement of the quality of products and services. Likewise, everyone involved in part-

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nering should resist the temptation to focus on a single task or project, but should concentrate on the long-term aspects of the process.

Cultural Changes Required for a Good Relationship

Partnering relationships are characterized by key practices that represent marked departures from most organizations' cultures. The success of the relationship will largely be determined by recognition of and thoughtful, prompt change from past practices. Individuals and entire organizations may initially feel a loss of control, at risk or awkwardly dependent. Through commitment to partnering principles, cultural change can and must be made. The results will support and sustain the relationship.

The essential factor in installing a successful partnering relationship is to ensure commitment to the concept by both organizations, from the CEOs down through all employees who may be impacted. The major cultural changes and individual practices require that each individual's supervisor, customers and peers demonstrate their support. Operating in the new atmosphere with new practices is then much less awkward and threatening.

Management of change should be a joint activity of the partners, particularly since each will need to better understand the goals and culture of the other prior to their integration. The degree of difficulty in implementing major cultural changes can easily be underestimated. It is natural to address mechanics, procedures and early items of work while assuming the people issues be solved with time. In fact, the mechanics will be of no value if people are not both understanding and motivated to work in the new partnering culture.

CII Partnering Task Force Publication

This report from the task force includes an in-depth discussion of the research findings on current partnering practices in construction.

Data is presented on existing relationships, espoused benefits and concerns, and applications to small businesses and projects. Especially useful are the detailed guidelines proposed for selecting a partner, developing a partnering agreement, and implementation of a partnering relationship.

Two videos developed by the task force are available from CII. The first concentrates on the definition of partnering and its potential benefits and concerns. The second video concentrates on the implementation of a partnering relationship. Both videos have been developed to complement this publication, but they also can be used independently.

Summary

Partnering offers many opportunities to participants in the U.S. construction industry to improve the total quality and cost effectiveness of construction projects, while developing an atmosphere much more conducive to innovation, teamwork, trust and commitment. Partnering also can enhance U.S. competitiveness in the worldwide marketplace. Rather than a new contract system, partnering is an improved process for cooperative business relations.

Partnering requires a long-term process to evaluate entering into a relationship. It also requires a long-term process to select a partner and implement the relationship. Cultural change is required by all parties to achieve success. It can be used by either large or small businesses, for either large or small projects. Relationships can be developed among all participants in construction: owner-contractor, owner-supplier, contractor-supplier and contractor-contractor.

Several partnering relationships are now in existence. Despite their limited experience, most are optimistic about the potential for future success. Many other companies are considering entering into partnering relationships.

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Partnering is an excellent vehicle for attaining TQM in the construction process. An effective partnering relationship will facilitate improved quality by replacing the adversarial atmosphere of traditional business relationships with a team approach to achieve common goals. Team members can challenge directives when the impact on the work affects quality or is disproportionate to the benefits. The potential for improved quality also is increased due to a better understanding of project scope and an atmosphere more conducive to implementing new technologies.

The business environment for engineering and construction changed sharply in the early 1970s due to ever-increasing inflation, oil embargoes and other economic factors. As a result industry sought new business strategies to handle these challenges, with heavy emphasis on cost effectiveness. Today, these challenges and several others, such as new technologies, high risk investments, changing regulations and foreign competition, are forcing the continued search for improved business methods.

A basic issue is finding ways to achieve cost effectiveness and total quality in construction projects. Can both customers and suppliers of construction goods and services achieve more satisfaction and trust in their relationships? In other words, can everyone win in today's competitive business environment? Partnering is believed to be a vehicle to reach these improved outcomes.

In 1987, CII established a task force on partnering to evaluate the feasibility of this method of doing business in the construction industry. Partnering is a term used to define an optimum relationship between a customer and supplier, not to be confused with the formal legal entity, "a partnership." True partnering is based on meeting mutual needs and interests, exhibiting sincere trust and allowing time to nurture and develop the relationship. Partnering also means sharing the rewards and recognition derived from the relationship.

The CII Partnering Task Force was formed with the following mission and purpose:

To:

Determine the benefits and risks, economic and other, of "partnering"

In a way that:

Provides guidelines on the process of how to plan, organize, and select a partner, and how to implement a "partnering" relationship

So that:

The industry members can successfully implement "partnering."

The goals and objectives of the task force were to define the concept of "partnering" and provide general guidelines by:

- Studying existing partnering relationships and related practices
- Determining the benefits and concerns of existing partnering relationships
- If feasible, recommending ways to improve the existing partnering approach
- Considering application of partnering to small projects and its use by small firms
- Developing guidelines on how to select a partner
- Investigating contract considerations for partnering relationships
- Recommending ways to implement a partnering relationship.

Partnering is not a new concept. Many companies already have long-term relationships with suppliers and other businesses that contain many of the elements of partnering. These relationships continue because they are found to be an efficient way to execute projects and result in saving both time and money. The benefits of such relationships have led to the evolution of "partnering."

The task force concludes that partnering is a viable business approach and can be used in all of the interfaces between participants in the construction industry. Most existing partnering relationships are between owners and engineers, but other arrangements include: owner-constructor, owner-supplier, and constructor-supplier. The task force feels that the concepts of partnering could be expanded to include relationships with other industry participants such as labor, government, regulatory agencies, and operations and maintenance. The key point is that all of these relationships can benefit from partnering.

This final report presents the findings of the task force plus specific guidelines for entering and implementing a partnering relationship.

Within the context of the research which it has performed, the task force defines “partnering” as follows:

“Partnering is a long-term commitment between two or more organizations for the purpose of achieving specific business objectives by maximizing the effectiveness of each participant’s resources. This requires changing traditional relationships to a shared culture without regard to organizational boundaries. The relationship is based upon trust, dedication to common goals, and an understanding of each other’s individual expectations and values. Expected benefits include improved efficiency and cost effectiveness, increased opportunity for innovation, and the continuous improvement of quality products and services.”

Partnering is simply a relationship wherein:

- All seek win-win solutions.
- Value is placed on long-term relationships.
- Trust and openness are norms.
- An environment for long-term profitability exists.
- All are encouraged to openly address any problem.
- All understand that neither benefits from exploitation of the other.
- Innovation is encouraged.
- Each partner is aware of the other’s needs, concerns and objectives, and is
- interested in helping their partner achieve such.
- Overall performance is improved.

2.1 What It Is Not:

Partnering is not to be construed as a legal “partnership” with the associated joint liabilities. Great care should be taken to make this point clear to all parties involved in a partnering relationship.

Partnering is not a quick fix or panacea to be applied to all relationships. It requires a total commitment, proper conditions and the right chemistry between organizations for it to

thrive and prosper. The partnering concept is intended to accentuate the strength of each partner and will enable them to overcome fundamental company weaknesses.

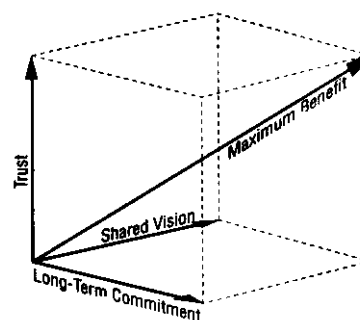
Questions are often asked as to whether partnering is a new name for “evergreen” or open-ended contractual arrangements. Several aspects of a well-developed partnering arrangement highlight the differences. Partnering involves a long-term commitment by both parties; evergreen arrangements are merely open-ended with little or no commitment. Partnering is a mutually supportive relationship with participants treated as equals in a “win-win” situation; evergreen arrangements are usually partially adversarial, tending toward self interest. Probably most important, partnering enables an environment stressing continual improvement by encouraging innovation and resource continuity; evergreen agreements, however, are more protective, utilizing standard practices and have no emphasis on continuous improvement.

2.2 A Model of Partnering

Often partnering will be discussed in oversimplified terms of existence or non-existence. Due to its complex nature, partnering is much better thought of in terms of a continuum or model. One such model could be thought of as the Dimensions of Partnering as shown in Figure 2.1.

The Dimensions of Partnering model depicts the key elements of any partnering relationship: trust, long-term commitment, and shared

Figure 2.1



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vision. As these key elements are developed in a relationship, other sub-elements are achieved and the benefits to all parties are maximized. Both the customer and the supplier can profit from reduced overhead and workload stability. Competitive advantage in their respective markets is enhanced through improved cost, quality and schedule. Most importantly, Total Quality Management and continuous improvement are achieved.

The concept of growth and balance is important to the continual improvement of the partnering agreement. For example, along the key element of long-term commitment, a partnering agreement may grow from a single project to multiple projects. Likewise, trust may range from competitive bidding through a complete disclosure of project costs in a cost-plus contract relationship. Shared vision can grow to open sharing and mutual development of business objectives. Partnering is a many-faceted relationship needing constant nurturing to achieve continuous improvement and maximum benefit.

The “key elements of partnering” are:

Long-Term Commitment

Experience has shown that the benefits of partnering are not achieved quickly. Problems enabling companies to achieve a competitive advantage usually require extensive time to solve or require constant improvement. A long-term commitment to the partnering agreement generates the atmosphere needed to address these issues, frees each partner from constant reassessment and permits “lessons learned” to be passed from initial projects to later projects.

Trust

Trust enables combining the resources and knowledge of each partner in a fashion to eliminate adversarial relationships. Partners are then able to share information, tolerate contact with others and accept diminished control

resulting in enhanced capabilities for the partnering relationship.

Shared Vision

Each of the partnering organizations must understand the need for a shared vision and common mission for the partnering relationship. To achieve this there needs to be a mutual exchange of ideas and an agreement of expectations. Shared vision will be achieved when an atmosphere of openness and candidness has been established.

Other important aspects of partnering are:

Equity

The strength of partnering is derived from the synergy of the two organizations permitted through a relationship based on equity and parity. Both parties become mutually motivated when “win-win” solutions are sought rather than the “win-lose” solutions of traditional relationships.

Investment

All parties invest in partnering; each invests the strengths uniquely possessed that can contribute to success. Investment in new business systems also may be required.

Synergism

A synergistic environment will promote the open exchange and consideration of ideas. The “not invented here” syndrome is avoided. The relationship will combine the resources and knowledge of the partners.

Shared Risk

All parties take appropriate risk commensurate with their rewards and the concepts unique to their partnering relationship.

Rewards

There must be advantages and opportunities. All parties should expect more than is available in other relationships commensurate with their investment and risks.

Systemic

The partnering relationship will be systemic in nature. It cannot depend solely on individuals.

Competitive Edge

All parties seek new ways to lower costs and differentiate themselves to gain competitive advantage.

2.3 Environment For Total Quality Management

Partnering provides the ideal environment for total quality management as it focuses on a long-term approach of improving ongoing processes rather than emphasizing individual projects or tasks. When set up and resourced properly, the partnering process will develop projects and tasks as a natural outgrowth of the process. It is extremely important for all involved in the partnering process to focus continuously on the business objectives set forth in the partnering charter or mission statement. The overall success of the business objectives and the participants will be achieved through effective resource utilization and the continuous improvement of the quality of products and services. All involved in partnering should resist the temptation to focus on a single task or project, but should concentrate on the long-term aspects of the process.

The following characteristics of total quality management have been found in most successful partnering arrangements:

- Culture of continuous improvement throughout the partnering organization.
- Constancy of purpose for performance improvement.
- Environment and recognition systems which will encourage employees individually and in teams, to contribute their intellects and energies toward improving the work they perform.
- Ongoing program of education and training in the techniques for continuous

improvement.

- Elimination of barriers to continuous improvement.
- Methods of performance measurement applied to work processes.
- Continuous flow of goal-directed actions that improve the performances of all work processes.
- Everyone working with each other in customer/supplier relationships.
- Enhanced teamwork amongst locations, functions and departments.
- Trust and confidence developed through participative involvement.

Maximum benefits can be achieved when the partnering process mentality is instilled, from the start, in all of the participants. No owner/contractor or customer/supplier relationship can survive without developing a dynamic approach that will allow for continuous improvement. This is especially true for partnering.

2.4 Cultural Differences Under Partnering Relationships

Partnering relationships are characterized by a few key practices, each of which represent marked departures from most organizations' cultures. The success of the relationship will largely be determined by recognition of and thoughtful yet prompt change from those past practices. This will not be easy as individuals and entire organizations will feel a loss of control, at risk and awkwardly dependent. Through commitment to partnering principles, cultural change can and must be made. Results, although mostly qualitative, will then support and sustain the relationship.

Table 2.1 identifies key partnering relationship practices and compares them with traditional practices of most organizations and individuals.

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Table 2.1 Key Partnering Practices vs. Traditional

<i>Key Practices in Partnering Relationships</i>	<i>Traditional Practices</i>
Traditional Practices Mutual Trust forms the basis for strong working relationships	Suspicion and distrust; each party wary of the motives of actions by the other
Shared Goals and Objectives ensure common direction	Each party's goals and objectives, while similar, geared to what is best for them
Open Communications avoids misdirection and bolsters effective working relationships	Communications structured and guarded
Long-Term Commitment provides the opportunity to attain continuous improvement	Single project contracting
Objective Critique geared to candid assessment of performance	Objectivity limited due to fear of reprisal and lack of continuous improvement opportunity
Access to each other's organization; sharing of resources	Limited access with structured procedures and self-preservation taking priority over total optimization
Total Company Involvement Commitment from CEO to team members	Normally limited to project level personnel
Sharing of Business Plans and strategies	Sharing limited by lack of trust and different objectives
Absence or minimization of Contract Terms that create an adversarial environment	Routine adversarial relationships for self- protection
Integration of administrative systems and equipment	Duplication and/or translation with attendant costs and delays

Key cultural changes, including mutual trust, shared goals and open communications, strongly build upon one another to open the door to other opportunities. For example, a long-term commitment provides an opportunity for continuous improvement and a basis for taking additional cost-saving integration steps. Similarly, traditional practices of single project awards, separate objectives and one-sided contract terms compound to yield adversarial working relationships.

The following data drawn from experiences of current partnering relationships further

demonstrate the advantages of partnering characteristics:

- In excess of 80 percent of survey respondents who are participating in a partnering relationship feel an increase in trust, teamwork, openness and communication, and a reduction in adversarial positions.
- More than 50 percent have experienced cultural shifts and a focus on work processes rather than tasks.
- In excess of 65 percent practice the sharing of planning activities and joint developments.

2.5 Cultural Changes Required For A Good Relationship

The essential factor in installing a successful partnering relationship is to ensure commitment to the concept by both organizations, from the CEO to all employees who may be impacted. The major cultural changes and individual practices required make it important that each individual's supervisor, customers and peers demonstrate their support. Operating in the new atmosphere and with new practices is then much less awkward and threatening.

Management of change should be a joint activity of the partners, particularly since each will need to understand more fully the goals and culture of the other prior to their integration. The degree of difficulty in implementing major cultural changes can easily be underestimated. It is natural to address mechanics, procedures and early pieces of work while assuming the people issues will solve themselves with time. In fact, the mechanics will be of no value if people are not understanding and motivated to work in the new culture. When major cultural changes are anticipated (threat to employment, blocked careers), professional assistance should be considered. A long-term emphasis by both organizations will clarify for individuals the necessity for change and help reduce their personal risk.

Some of the major actions needed to initiate cultural changes when entering into a partnering relationship are:

- Mutual trust, a cornerstone of the partnering relationship, must be established to a much greater degree than is common in traditional relationships. It should be viewed as a "leap of faith" or "paradigm shift" based on long-term commitment.
- Trust must start in the form of trusting terms in the partnering agreement. Legal, business development, and purchasing functions of the organizations must subordinate them-

selves to the overall relationship goals.

- Both parties must identify with and work together toward continuous improvement. Lessons should be carefully documented and shared.
- All must come to understand that open and frequent communications foster the potential for improvement. Objective dialogue concerning the disputes that will undoubtedly arise without recourse to legal remedies will further strengthen a partnering relationship.
- To be most effective in aligning goals and in planning for work, the partners must come to better understand each other's businesses and make decisions with all interests in mind. Employees working in the relationship should come to think and act indistinguishable from each other.
- Dependency is a natural consequence of long-term commitment and the various integration and efficiency producing steps that will be made. The organizations and individuals must recognize this not as a weakness but rather as related to the commercial strength of the relationship and necessary for competitive advantage.
- Decisions under the partnering relationship must be formulated and implemented as a team. This will most likely result in the contractor being more proactive and the owner less directive in certain areas.

2.6 Applications of Partnering

The user surveys, case studies and interviews with several partnering owners and contractors indicate that partnering is being also applied in several industries, with the key concepts applied by some public agencies. More information and data are presented in Chapter 5.

Partnering relationships also cover the full range of engineering and construction services as shown in Table 2.2. Interviews with several

users indicates that most of the current relationships focus on engineering, perhaps because the relationships are in the early years and have not developed to the construction phase as yet. Also, several long-standing owner-constructor continuing service relationships are already in existence with these same firms.

Table 2.2 Typical Services Provided In Partnering

Service Provided	Percent of Respondents Involved
Engineering studies	89%
Procurement	86%
Detailed design	86%
Scope development	79%
Construction management	79%
Process design	64%
Construction	54%
Maintenance	21%
Equipment design/manufacture	18%
Training	04%

The application of partnering within owner organizations varies considerably. In some owner organizations it was initiated, and is only being applied, by a single business unit. In other owner organizations it is applied in all businesses. The utilization depends on the structure of the owner's organization relative to the decentralization and independence of business units. In the area of public works, for example, many of the partnering principles are being applied on an individual project basis depending on the nature and size of the project and the interest of the two parties. This has been on a noncontractual agreement basis so far.

Partnering also is being applied on small projects. In this instance the relationship covers many small projects for the same owner, thus creating a larger volume of work. Partnering does not appear applicable to small, stand-alone single projects because the size of such

projects does not support the effort to develop the relationship. A series of small projects evenly spread over time, however, would be a candidate application. Partnering also is applicable to small businesses.

Partnering is currently being utilized effectively in the U.S. construction industry; however, there is tremendous potential for much broader, beneficial applications. Two key factors may stimulate such applications: first, existing relationships must continue to be successful and show measurable benefits; and second, a method of measuring the benefits of the broader application must be developed.

Partnering is a business strategy that offers many advantages to the parties involved. As in any business arrangement, however, success will depend on the conduct of the parties and their ability to overcome some of the inherent obstacles and barriers related to doing business differently. This chapter presents some of the benefits that parties entering a relationship are going to experience, plus some of the concerns identified. Since few partnering relationships have existed long enough to have solid historical data, many of the views presented are based on the collective opinions of construction industry participants.

3.1 Benefits of Partnering

The task force identified several potential benefits of partnering relationships based on discussions with participants with existing partners, case studies, survey data and the collective experience of its members. It is believed

that partnering will significantly improve the owner's competitive advantage, plus provide many benefits to other participants. These benefits were summarized in the following primary areas:

1. Improved Ability to Respond to Changing Business Conditions (Table 3.1)
2. Improved Quality and Safety (Table 3.2)
3. Reduced Cost, Schedule and Improved Profit (Value) (Table 3.3)
4. More Effective Utilization of Resources (Table 3.4)

The following tables further identify these potential benefits from both the owner's and contractor's perspectives, plus present survey and case histories data to support the task force conclusions. Since the information presented is straightforward, no additional text is presented for the sake of brevity

Table 3.1 Benefit: Improved Ability to Respond to Changing Business Conditions

Item	Contractor's Perspective	Owner's Perspective
Knowledge	The knowledge of the owners business plans will allow the contractor to improve the type of and use of resources in changing business climates.	The contractor will make better decisions if the owner's business needs are better understood.
Confidentiality	The long-term relationship should reduce potential problems associated with traditional approaches.	By reducing the numbers of outside contacts, the security of confidential information should be enhanced.
Joint Perspective		
Relationships	Adversarial relationships will be reduced which will allow focus on mutual goals to the benefit of both organizations.	
Responsiveness	A partner will be more responsive to the short-term emergency, changing project or business needs.	
Survey Results		
	Less Adversarial 85%	Increased Openness 82%
	Improved Resource Planning 85%	Increased Trust 78%

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Table 3.2 Improved Quality and Safety

Item	Joint Perspective
<i>Rework</i>	Rework should be reduced as the owner's requirements become clearer to the contractor and the partners work together earlier to resolve questions.
<i>Standards</i>	The contractor will better understand the owner's standards and therefore increase compliance to them. Combined staffs will develop more cost-effective standards.
<i>Consistency</i>	The knowledge of quality expectations of the owner will improve consistency between projects.
<i>Communication</i>	As the partners gain experience with each other, they will develop a common language which will allow a better understanding of requirements.
<i>Safety</i>	Actual safety performance should improve as partners better understand each other and as the knowledge of process and systems improve.
<i>Continuous Improvement</i>	With the long-term focus on commitment to quality service, continuous improvement will result. Partnerships enhance a total quality environment.

Survey Results

Improved Safety 90% Fewer Errors 82% Improved Quality 96%

Table 3.3 Benefit: Reduced Cost and Schedule and Improved Profit (Value)

Item	Contractor's Perspective	Owner's Perspective
<i>In-House Cost</i>	A long term commitment is made to support the contractor's overhead costs associated with the core group.	A capable partner will allow owners to reduce in-house fixed staff and minimize oversight of contractor.
<i>Selection</i>	The cost associated with bidding on a project basis will be eliminated.	The costs associated with contractor selection on a project basis is eliminated.
<i>Administration</i>	The cost to negotiate and administer contracts will be decreased as partners become knowledgeable of their counterpart's legal and litigation concerns.	
<i>Learning Curve</i>	The costs associated with kickoff and indoctrination of a project will be significantly reduced as partners move down the learning curve and better understand requirements. In addition the time to initiate a project will be significantly reduced.	
<i>Innovation</i>	The partners will be able to discuss innovation and associated risks in an open manner, and share risks and rewards fairly.	
<i>Constructability</i>	The early involvement by the contractor can assist in constructability input and maximizing value engineering, thus improving both cost and schedule.	

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Commitment The long-term trust relationship will contribute to all parties focusing on the project goals and result in improved cost and schedule performance.

Survey Results

Total Project Cost Reduced 8%
Improved Contractor Profitability 10%
Improvement in Schedule 7%

Table 3.4 Benefit: Effective Utilization of Resources

Item	Contractor's Perspective	Owner's Perspective
<i>In-House Cost</i>	Provides a known baseload of work.	Allows for owner to concentrate technical work force on operations and maintenance support, avoiding the demanding swings of project support.
<i>Selection</i>	Allows for better planning of resources during the development of a project.	Allows for ready access to resources during project development.
	The improved relationship should provide a better means to respond to owner emergencies.	Provides an entry to contractor resources to respond to owner emergencies.
	Can provide access to owner specialist who can enhance contractor capabilities.	Can provide access to specialist resources not otherwise available to owner.
	The owner's personnel and desires become known to the contractor, who is better able to supply quality service.	The contractor's personnel will become better known to the owner and a better, earlier match of assignment and resource should occur.
Item	Joint Perspective	
<i>Claims/Disputes</i>	Disputes can be resolved in a more efficient manner without the adversarial relationship, and are not unduly expended in this effort.	
<i>Checkout/Startup</i>	The continuity of resources during the latter project phases of checkout and startup are better accomplished with a partnering relationship.	
<i>Continuity</i>	Partnering allows for the continuity of personnel from project to project, thus reducing the learning curve. Considerably. Resources understand the culture and needs of partners.	

Survey Results

Engineering Cost Reduction 10%
Administrative Cost Reduction 6%
Improved Communications and Teamwork 82% of respondents

3.2 Challenger and Concerns of Partnering

A partnering relationship presents challenges and concerns to both owners and contractors. It is important that these challenges and concerns be recognized and dealt with, in which case they can be minimized. The task force sought to identify the challenges and concerns of parties involved in partnering to attain a

successful relationship during the research project. Some of the major opinions of the industry participants contacted are summarized in Tables 3.5 and 3.6, along with suggested actions to avoid or minimize the listed challenge or concern. Table 3.5 presents the viewpoint of an owner, while Table 3.6 presents the viewpoint of a contractor.

Table 3.5 Challenges and Concerns of Partnering: An Owners Viewpoint

Challenges and Concerns	How to Avoid or Minimize
<i>Obtaining and maintaining organizational commitment</i>	1. Top management must demonstrate their commitment to the remainder of the organization. 2. Education using CII and other information. 3. Involvement to remove mystique and create trust. 4. Celebrate successes. 5. Commitment must transcend management changes.
<i>Threat to careers of staff</i>	1. Early communication of partnering objectives. 2. Identify/demonstrate any reassignments early and openly. 3. Release to hire by partners. 4. Owner's staff roles change to more supervisory/educational. 5. Communication! Communication!
<i>Integration of cultures and skills</i>	1. Design and communicate integration intent. 2. Focus organization on benefits while attending to people's needs.
<i>Protecting proprietary information</i>	1. Secrecy and restrictivity terms. 2. Physical separation. 3. Reduced and controlled turnover.
<i>Fairly sharing risks/rewards</i>	1. Openly exchange expectations. 2. Use an incentive (+ and -) system. 3. Risk assigned to partner best able to handle it.
<i>Creates a dependency</i>	1. Develop an expectation of success, reducing dependency concern. 2. Consider a second partner if justified by work level.
<i>Assuring competitive services</i>	1. Tie rates before incentives to alternatives. 2. Measure quantifiable elements of results. 3. Dedication to continuous improvement.
<i>Partnering under decentralized owner engineering</i>	1. Owner engineering organizational components must coordinate to maximize value.

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Table 3.5 Challenges and Concerns of Partnering: A Contractor's Viewpoint

Challenges and Concerns	How to Avoid or Minimize
<i>Development and communication of the concept of partnering to the contractor's organization</i>	1. Obtain commitment of contractor's top management. 2. Share expectations of both partners and continually reinforce the partnering agreement's mission and vision. 3. Consider interdivisional loaning of personnel to acquaint a larger group of the contractor's staff with the partnering agreement. 4. Review roles and responsibilities brought about by the partnering agreement.
<i>Maintain continual improvement</i>	1. Utilize a shared total quality management program. 2. Require periodic evaluations of the partnership. Both owner and contractor must participate as equals. 3. Implement a personnel development and training program.
<i>Eventual clash of corporate cultures</i>	1. Obtain commitment of both parties' top management to the success of the partnership. 2. Contractor's management needs to anticipate the culture clash and develop an understanding of the owner's corporate values. 3. Involve the contractor, as broadly as possible, in the owner's business plans.
<i>Maintaining a focus on the owner's business objectives</i>	1. Maintain a "win-win" perspective. It must be understood that if the owner is successful, the contractor will be rewarded accordingly. 2. The owner can provide assistance by sharing with the contractor, to the greatest extent possible, business objectives, and also permit involvement by the contractor in early conceptual phases. 3. The contractor must view each project in its entirety and not simply a position of the portion of the project.
<i>Creation of too strong of a dependency on one owner</i>	1. Contractor must limit amount of work performed for one owner/partner. 2. Partnering agreements with multiple owners can be developed.

Certain needs and commitments are normally required in order to establish successful partnering relationships. From the owner's side there may be a need to improve quality, reduce cost, respond to fluctuating resource availability and overcome the lack of skills and information in the organization. Also, the owner must be willing to change procedures of operations, open up to outsiders, and share goals, strengths and weaknesses. Finally, the owner must focus on the overall results of the relationship, not on a single aspect such as engineering or procurement.

From the supplier's and the contractor's side, there may be a need for a stable workload and enhanced business opportunities. Partnering requires that contractors participate with the owner in the project planning and estimating phases to minimize both cost and schedule. In addition it requires that contractors and suppliers be involved in the procurement of needed materials, be able to carry the extra workload and provide the quality of work required. Moreover, they should be open to learning owners' procedures, adopting their goals and being prepared to spend time and money in order to accomplish these requirements. When such conditions are met, meaningful partnering relationships can be established.

This chapter presents general information of existing partnering relationships in the construction industry as supported by the data collected by the task force. Sample case studies representing three current partnering relationships and input from project case histories have been summarized. Finally, information about international partnering is presented.

4.1 Statistics and Trends In Partnering

Partnering as a strategy was introduced to the construction industry about six to seven years ago. Figure 4.1 represents the cumulative number of true partnering relationships identi-

fied and studied by the task force. Several other relationships were reviewed, and many others doubtlessly exist. The trend, supported by the data collected, is that the number of partnering relationships in the construction industry is increasing.

Figure 4.1

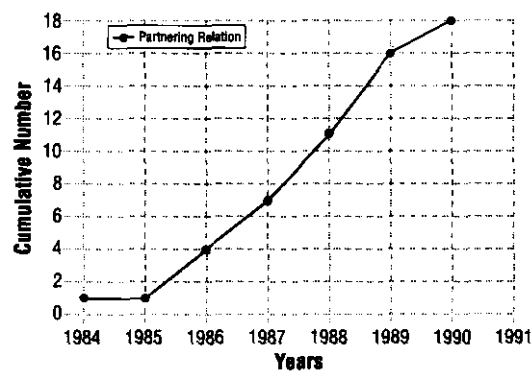


Table 4.1 lists the relationships identified by the task force during the information collection period that are true partnering; also listed are identified relationships called "near partnering" since they do not have all of the basic elements of partnering as defined by the task force.

4.2 General Information About Partnering Relationships

Different aspects about partnering relationships are summarized from the data collected by the task force. These aspects include the party responsible for initiating the partnering arrangement, how the arrangement was initiated, the commercial basis on which projects were performed, the sizes of projects that were performed under these relationships, and concerns about entering and continuing partnering arrangements. The information presented is a combination of all of the responses of the "partnering" and the "near partnering" relationships studied; however, not all responded to the surveys.

4.2.1 Initiation of the Partnering Arrangement

Ninety percent of the respondents to the second task force survey indicate that the owner is responsible for initiating the partnering arrangement, with a few initiated by contractors. Since the survey, many design and construction contractors have initiated active programs to market partnering services to clients.

It is essential for parties that want to be involved in a partnering arrangement to know the other party's needs, requirements and expectations of the relationship up front. Thus, most

companies have chosen the negotiation process to establish their arrangements. In the second task force 68 percent of the relationships responding were established through negotiations, while 32 percent were established through a bidding procedure.

Table 4.1 Partnering Relationships Surveyed

True Partnering Relationships Studied	Date Started
1. Shell Oil/SIP Engineering	1984
2. DuPont/Fluor Daniel	1986
3. Procter & Gamble/Fluor Daniel	1986
4. Procter & Gamble/BGP	1986
5. Shell Oil/Bechtel	1987
6. DuPont/MK-Ferguson	1987
7. Shell Oil/The Ralph M. Parsons Company	1987
8. Alcan/Fluor Daniel	1988
9. Union Carbide/Bechtel	1988
10. DuPont/Day & Zimmermann	1988
11. Great Northern Nekoosa/Rust International	1988
12. Pillsbury/Fluor Daniel	1989
13. Hoffmann-LaRoche/Day & Zimmermann	1989
14. Chevron/Bechtel	1989
15. Bethlehem Steel/United Engineers & Constructors	1989
16. Procter & Gamble/M.W. Kellogg	1989
17. Chevron/Besteel	1990
18. DuPont/H.B. Zachry	
Near-partnering Relationships Surveyed	
1. Eastman Chemicals/United Engineers & Constructors	1984
2. U.S. Army Corps of Engineers/Fru-Con	1988
3. U.S. Army Corps of Engineers/W&J Construction	1989
4. Chevron/Dresser-Rand	1990
5. Chevron/Babcock & Wilcox	1990
6. Reynolds Metal/Rust International	1988
7. Tennessee Eastman/Bechtel	1989
8. IBM/C.T. Main	1989
9. General Foods/Rust International	1990