SAG HARBOR GROUP WHITE PAPER

"The Invisible Hand is Nowhere to Be Seen."

Lessons Learned From Managing Project Teams

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"The invisible hand is nowhere to be seen."
-- Indian economist, 1960

"The real world is a special case."
-- Prof. Ken Arrow, 1975

In the neoliberal economist's fairy-tale of perfectly competitive markets, there is nothing very special about managing large teams – or, for that matter, about doing most of the things that business people actually do. Supply and demand is subject to the iron discipline of arms-length prices for well-known commodities. The problem of getting work done is largely a matter of monitoring these "given" prices and deciding whether to buy or sell. So the task of coordinating large numbers of managers and workers is often accomplished through the market's "invisible hand." There is little motivation to develop new offers, search for new customers, negotiate better agreements, or seek customer feedback.

Nor is the performance of agreements to do work a problem -- work has long since been decentralized into a series of precise contracts for identical goods and services that are cost-less to enforce. Cost and productivity functions are readily observable, defined by purely physical relationships between inputs and outputs. Since enterprises are also virtually identical and information is perfect and free, it makes no sense to invest in improving project coordination practices. Any advantages would only be quickly imitated away by one's competitors.

Beyond the Invisible Hand

Unfortunately, outside the economist's fairy tale, as an Indian economist once remarked, "The invisible hand is nowhere to be seen." The design of new products and services, the search for new customers and suppliers, and the negotiation of new business relationships are not marginal activities. Products and services are not homogeneous; they have to be tailored to meet the needs of particular customers, and their characteristics may only be discovered in the act of consumption. So the very notions of separate "supply" and "demand" curves for homogeneous goods and services, so dear to the economist's heart, become ambiguous. Nor are agreements pertaining to their delivery self-enforcing. And information, technical know-how, and skill are certainly not free and instantly transferable; they often have to be accumulated through costly investments and experience.

Most important for our purposes here, beyond the fairy tale world the coordination of work can usually not be left up to some impersonal market, but requires direct coordination by way of communication networks and organizational command structures. And the *coordination practices* that organizations adopt can yield either competitive advantages or disadvantages that are decisive. This is especially true in professional service markets where intangible, "dynamic" aspects of value and cost are crucial.

All this is hardly surprising to anyone who has worked in large enterprises, especially in industries where big projects are the order of the day – "durable goods" industries like power plants, jet engines, and oil drilling, as well as also research- and service-intensive markets like pharmaceuticals, network management, advertising, and corporate software development. In such markets, even when they are dominated by private enterprises that are otherwise ruthlessly capitalistic, the use of free markets as an alternative to direct coordination for resource allocation and day-to-day management remains the exception to the rule.

The Growth of Team Management

Even apart from the importance of large team management skills *within* such enterprises, the last decade has seen an extraordinary increase in team management as a *cross-enterprise* concern. This has been supported by coincident with many key trends in the global environment -- the explosion of merger-and-acquisition deals in the late 1990s,[1] an increasing corporate focus on explicit management of supply chain and outsourcing alternatives, an overall flattening of corporate hierarchy, the belated urgency of the Y2K and Euro "mass update" problems, and the more general rise of global *inter-industry* competition.

At the same time, rapid developments in communication and computer technologies -- the emergence of client/server networking and secure, highly-distributed Internet-based communications – have begun to produce tools that facilitate the decentralization and redistribution of teamwork across traditional organizational and geographic boundaries. Combined with the proliferation of communication tools like voicemail, e-mail, teleconferencing, video conferencing, paging, and group calendaring, there are now more tools for virtual team coordination than ever before.

On the basis of such trends, "virtual teams," "knowledge management," and "project management" have recently replaced "quality management" and "corporate reengineering" as the hot topics of the day. In the words of Tom Peters, "In the new economy, all work is project work.[2]" Consistent with this, we see many task specialists within organizations are spending an increasing share of their work time in ad-hoc teams, often working across business units or organizations with people they may never have met.

At the same time, a whole new generation of project management specialists have sprung up in the last few years, offering new combinations of consulting, software, Internet-based services, and training.[3] There are now at least eighty vendors who are marketing software for project management, and

fifty others selling related tools for software project cost estimation, project benchmarking, running electronic meetings, and performing requirements analysis. Not surprisingly, with the rise in project management as a specialized activity, there has also been a push to establish "project management" as a certified profession. [4]

On the one hand, the abundance of all these new specialists, tools, and techniques promises to make project coordination more effective than ever before. On the other hand, it threatens to overwhelm team members with a blizzard of conflicting tools and approaches.

Disappointing Results – Command and Control

Despite all this recent activity in the project management arena, it turns out that many enterprises have had trouble achieving significant productivity gains by adopting the standard approaches to project management advocated by these suppliers. There is also plenty of evidence that we still have a very long way to go to make large project management and the operation of virtual teams effective.

- For example, in the U.S. alone, more than $250 billion is now spent each year on more than 175,000 software development projects. One recent study found that more than 31 percent of such projects are cancelled before they are completed, only 16 percent of them come in on time and on budget, and that the average project exceeds its original time to market estimate by 222 percent.[5]

- A second recent study found that out of the total work time spent on 197 software development projects, only about 24 percent of the time was productive. About 15 percent of the time was spent on cancelled projects, and another 35 percent was spent on repairing and testing defects; the balance was spent on Y2K-related issues.[6] As another software analyst observed, "Three quarters of all large systems are operating failures that either do not function as intended or are not used at all."[7] Recent notorious examples of such project failures have only underscored this generalization.[8]

- Consistent with such findings, in several recent cases, companies that regarded themselves as on the cutting edge of task-oriented project management tools and methods have actually had difficulty realizing any payback at all from these methods – despite the fact that the "hidden costs" of poor management were as high as 25 to 50 percent of operating revenues.

Such disappointments are perhaps not all that surprising, once we look more closely at the limitations of conventional project management techniques. These turn out to be deeply rooted in a formalistic, top-down, almost military style that can be labeled the *"command and control"* paradigm.

There are many variations on this command-and-control approach, but it typically begins with the drafting of a proposed "scope of work" and a detailed "project plan." Depending on team structure, this might be done by a dedicated project manager or some other central authority figure, or by individual team members – though the tendency in this model is for project managers to play a strong top-down role.

A typical plan includes a detailed list of "tasks" to be performed and "deliverables" to be produced, an assignment of these tasks against available "resources" (e.g., people), a "timeline," a proposed sequence and timetable for the tasks; a "Gantt chart" that shows dependencies among sequences of tasks and key milestones; and a budget that translates resources into overall costs.

The initial plan is intended to summarize work assignments and schedules for individual team members. As work actually proceeds, the project manager and his staff are likely to use the plan as a tracking device for monitoring progress toward completed work, taking periodic stock of how close each task is to completion, how far behind schedule it is, and which tasks are on the "critical path," key to the project's overall fate. The data produced by these assessments may or may not be shared with team members, to motivate them to take corrective action with respect to those items that are over budget or behind schedule.

Consistent with this task-oriented, information-oriented approach, some companies have also established "quality control" offices that monitor how various projects and functional units are doing with respect to various performance indicators like project cycle time, engineering change orders, waste, and customer satisfaction. In this capacity, "professional" project managers and "quality engineers" may play a role as specialized cadre of experts within a company, lending support and identifying opportunities for practice improvements.

So far, this "command and control" approach to project management has been implemented in more than two dozen software programs, most of which are capable of producing quite elaborate multi-colored charts and tables, and many other sophisticated variations on the basic elements just mentioned.[9]

Unfortunately, what this approach to team management has ***not*** been able to do, even with all these bells and whistles, is to produce consistent improvements in

the quality, timeliness, and costs of projects. Indeed, *in many situations it has actually been a net generator of increased cost, complexity, delay and friction.*

Key Pathologies

*T*he most important factor responsible for this ironic outcome is that traditional project management focuses far too much on managing reified task lists and plans, rather than on *managing the network of commitments and coordination that team members undertake to do their work.* This shows up in several ways.

- Vague Customer Requirements. Many a project lacks clear customers, whose concerns could help to define precise requests (specifications, requirements, conditions of satisfaction) that determine which tasks are included in the plan.[10] So despite the construction of elaborate "paper plans," the project may not really belong to anybody. Team members spend their time doing "work, " defined as "carrying out the identified tasks" rather than as satisfying real customers, internal or external. (Oddly enough, project teams seem to do a better job of this with respect to *external* customers than *internal* requestors.)

- Vague Team Responsibilities. Even if customers are clearly identified, and their requirements are understood, project teams may also fail to make clear, well-grounded promises to undertake such tasks. It may be very unclear exactly who has promised to get which tasks done at which times. This is not the same as simply assigning Joe to perform a given task by date X – Joe should actually feel that he has agreed and to do it, implying (among other things) that he (a) understands the request, and (b) was given a chance to modify or decline it. Otherwise there is no clear responsibility for on-time performance.

- Weak Commitment Management Skills. An enterprise may also fail to provide many other kinds of support that connect internal and external customers and team members, and are necessary for the development of what we might call a "commitments culture." These include communications mechanisms that can track commitments; training in the disciplines of listening for customer concerns and making clear requests, offers, and promises; and senior management encouragement of commitments-based rewards and "BS –free" evaluation.

The combination of task-oriented project management and the *absence of* a commitments culture, in turn, has many far-reaching consequences.

- Quality Fetishism. Absent a clear definition of who the team's customer really is, and who really owns performance, there is a tendency to become preoccupied with disembodied task management, scheduling, the elaboration of endless to-do lists, and the pursuit of "quality for quality's sake" – with "quality" usually defined from an engineering/ technocratic viewpoint. This kind of fetish for technical perfectionism, independent of any particular customer's actual needs, can be very costly.

- Contagious Insincerity. Focusing on managing abstract tasks that are not based on actual requests, offers, and commitments is also usually associated with insincerity and mutual distrust on the part of team members. In the patois of one leading corporation where such practices have become deeply-embedded, "grin-f**king" becomes the order of the day. This further undermines the commitments process, since no one expects anyone else will keep their promises, give honest assessments of where things stand, or *say no* when they *mean* no. So people become "politically dishonest" – they say yes to everything (in quotes), and then go about their business, feeling overwhelmed by the length of their own task lists and the fact that no one can be depended upon to keep their word.

- Poor Communication Tools and Practices. As we've begun to understand, conventional team management is usually interpreted as *task management* rather than *commitment management*, and communication is usually defined as the *transmission of data* rather than the *coordination of action*. As a result, many of the standard practices employed for team communication are not only incapable of enabling effective coordination; they positively interfere with getting work done on time and to a customer's satisfaction. For example:

  - To-Do Lists. Project management software typically compile task and to-do lists rather than requests, offers, counteroffers, commitments, and the performance of promises. However, tracking to-dos and tasks that have not yet been embodied in actual team commitments is to team management as ten thousand components flying in formation is to an actual airplane. In practice, for example, more than half of all team effort on many projects goes into "tasks" that are not even on the initial lists.

  - Mass Teleconferences. ("Bridge Parties.") In a large project context, these are anathema to good coordination – as anyone can testify who has had the experience of sitting on a call for three hours with thirty other people, waiting for the 10 minutes of relevance to his work. This medium is an ideal way of minimizing responsibility -- one is never quite sure who is on the call and who has dropped off, and there is no automatic, searchable record of observations or commitments. Discussions are necessarily "serial," so a great deal of time is spent just waiting one's turn.

The discussion is also sometimes subject to preemption by those with more aggressive styles. Overall, in the words of one team member at a large company, when asked his opinion of his team's weekly teleconferences, "You mean those sessions were we all dial in and lie to one another?"

- Voice Mail. Of all the devices ever invented for *interfering* with real communication, as well as wasting time and avoiding commitments, this may be the worst. In some organizations – including leading telecommunications and consulting firms – one gets voicemail on more than ninety percent of all call attempts, even when one opts to transfer to the administrative assistant who is supposed to be taking messages, rather than leave a voice mail! As a result, whole organizations have basically stopped talking to each other over the phone, evidently preferring to spend the time listening to their voice mail messages! From the standpoint of effective coordination, this madness also has many other flaws. It is another serial, time consuming process – and one has to wade through a great deal of irrelevant stuff to make sure nothing important has been missed. It is also intrinsically bilateral, difficult for managers to observe or share with a large team. Most important, voicemail is hard to prioritize, search, store, or learn from. Everything becomes a "message," with critical messages mixed up with unimportant ones and observations, requests, offers, and promises all a tangled weave. *The widespread use of voicemail, therefore, is fundamentally inconsistent with the construction of a commitments culture.*

- E: Mail. Unstructured e-mail has an image of being more sophisticated than voicemail, but in fact it is almost as bad, from the standpoint of promoting a commitments culture and effective coordination. Email is not strictly serial, but, like voice mail, one usually has to wade through a great deal of extraneous material to get to the beef. (It is far easier to send fifty e-mail copies than fifty voice mails, so the sheer volume of email messages dwarfs that of voicemail.) It is bilateral and nonpublic, with no audit trail, and it is almost as hard to prioritize as voicemail. So it is tough to manage as part of a commitments process. Because of the sheer volume of email, and its unreliability, it is also easy to hide behind -- as in, "I sent you an email – didn't you get it?" Oddly enough, in some organizations, how many e-mails one gets is still an indicator of status – when in fact it should be viewed as a symptom of poor coordination.

➢ <u>Weak Communication/ Coordination Skills.</u> Another byproduct of the classic approach to project management is that communication and coordination skills of individual team members remain sorely underdeveloped. For example, in the absence of a commitments culture, teams are usually not

practiced in making clear requests, offers, or commitments. They may also not be used to initiating new requests and offers, being in the habit of waiting for requests and offers to come to them. Finally, they may also not be trained to listen effectively – not in the sense of processing information, in the sense of reaching out to and internalizing the concerns of the speaker. This kind of passivity and deafness are not likely to produce much initiative or innovation.

- "Process Police." There is also a tendency for traditional project managers to perform a kind of "back-seat driver" role, disconnected from team members who actually have to do the work. The top-down nature of task management, and the lack of a real commitments process, leads team members to feel disconnected from the project manager and from responsibility all at once. Project managers, in turn, get wrapped up in monitoring compliance with the task list, revising schedules and forecasts, and *managing reports and other information* associated with the project – as compared with *managing commitments.* Predictions, guesses, and hopes become substitutes for commitments; the cold-blooded technocratic icon of "systems engineering and process management" replaces the warm-blooded focus on building team relationships. *Rather than develop skills in coordinating commitments with people, we focus on skills at engineering things.* We end up with the systemic vacuity of the U.S. Post Office rather than the dependability and customer focus of Fedex.

- Forced Marches. When plans break – as they invariably do – there is tendency for those operating under the traditional project management paradigm to seek solace in ever more elaborate plans, more and more review meetings, more "discipline" and "corrective interviews" for team members, and heroic forced marches on nights and weekends. All this usually only just aggravates the problem, which is fundamentally not a "planning" problem, but a *coordination* problem.

- Bad Attitudes. In the midst of such breakdowns, there is also a tendency for team members to lapse into an *excuse culture* rather than a commitments culture. This is characterized by an plethora of unproductive bad moods -- for example, resignation, resentment, self-righteousness, mistrust, finger-pointing, suffering-in-silence, and cynicism. The most important of these is resignation, the general sense that (to borrow a line from *Liason Dangereaux*) "It's beyond my control" – that organizational entropy and disorganization are inevitable. People in this mood retreat into a world, by turn, of heroic efforts, then blame and finger-pointing, then passive shoulder-shrugging and suffering-in-silence. Such moods are hardly conducive to the development of a fast-moving, innovative institutions; they are more likely to be associated with stagnating, inflexible bureaucracies.

- Invisible Waste. The last symptom of conventional team management derives from all the others. Precisely because standard "command and control" pays so little attention to eliciting and managing and commitments, and fails to build practices and tools that track commitments explicitly, it systematically underestimates the costs of poor coordination – in several actual cases, by as much as fifty percent. This is partly because only when the focus shifts to commitments do such costs become visible. For example, there are many instances of poor coordination across organizational boundaries – say, between engineering and sales -- where roles are unclear and no one is clearly responsible for successful handoffs

- **Beyond Project Management → Toward Managing a Network of Commitments**

  In SHG's experience, by far the most important single lesson that enterprises need to learn in order to get their teams to be more productive is that they must shift their focus from "managing tasks" to "managing networks of commitments."

  Project commitments, unlike project tasks, are not simply assigned to (passive) "workers" from bosses (or team leader) on high. They are the product of active negotiations among team members, including offers, requests, counteroffers, agreements, and the processes for monitoring whether or not agreements have actually been lived up to.

  Forming and managing such networks of business commitments is, we would argue, the very essence of what effective team management is really all about. the first instance, such commitments are the consequence of managers and team members being able conduct *the language of business* effectively -- that is, being able to:

  - formulate clear *offers* and *requests to each other;*
  - *respond with clear rejections and counteroffers and counter requests;*
  - *arrive at clear agreements, that everyone understands;*
  - *provide processes that support reaching such agreements, as well as monitoring the performance of these agreements, including a process for declaring whether or not performance has been satisfactory, and clear consequences for the degree of satisfactory performance.*
  - *Identify very clearly who are the agreed-to "performers" – those who are responsible for performing which activities – and who are their*

corresponding "customers" – those who are responsible for reviewing their performance, and declaring their degree of satisfaction with it.

While this all sounds quite simple and even obvious in the abstract, in our experience the impact of failing to implement a "commitments culture" and adequate tools for managing commitments be very far-reach. There are a surprising number of enterprises where:

- Team leaders and members are not adept at making clear offer, requests, counteroffers, and agreements.
- Team members routinely "say yes" to any task assigned to them, rather than make counteroffers or requests --- resulting in a high level of "b.s. commitments," slipped deadlines, and distrust later on.
- More generally, team members avoid giving honest feedback to their managers and to each others, resulting in a general "climate of inauthenticity" and distrust.
- Numerous activities lack clear performers, customers, or both.
- Overall organizational efficiency is reduced. Since noone in the organization believes that anything will be done according to original plan – after all, no one really agreed to it, or tried to alter it – they tend to make allowances for expected underperformance. For example, "non-committed" teams have a tendency to take other actions to protect themselves by, for example, building up inventories, allowing for "slippage" in plans, squirreling away extra funds, and overhiring.
- Overall, there is no culture of being held accountable for commitments, once agreed to. Instead, there is a "corporate b.s. culture."

Summary – SHG's Role in Project/ Commitments Management

SHG's senior team has had extensive experience in larges-scale project management, usually in the context of large-scale projects that have involved the definition and articulation of corporate strategy, software development, M&A strategy, and new product design. We offer

- ❖ Coaching and "Commitment" Skills Development for Client Team Members.

- Overall Project Design/ Review.
- Network Infrastructure Design and the Choice of Applications that Support Effective Commitments Management.
- Specification of Processes to Improve Customer/Partner Specification.
- Ex Post Project Review.

We'd be delighted to explore working with you on any of these issues, on a standard consulting fee basis or a success-fee basis. Please address all inquiries to Info@Sagharbor.com.

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ENDNOTES

[1] Among the leading "mega-mergers" to occur in the late 1990s were Chrysler-Daimler Benz, Chase/Chemical Bank, Citicorp-Travelers Group, Toronto Dominion/Canadian Imperial, RBC/ Bank of Montreal, SBC/ Ameritech, MCI/ Worldcom, AT&T/TCI, BankAmerica/NationsBank, GTE/Bell Atlantic, Halliburton/ Dresser Industries, SBC/UBS, and First Commercial Bank/Chang Hwa Commercial Bank/ Hua Nan Commercial Bank in Taiwan.

[2] Tom Peters, quoted in Fast Company, May 1999.

[3] Leading players in the burgeoning distributed project management software and services field include Scitor Corp., Madrigal Software Corp., Primavera Systems, IMSI, QSM, Tower Concepts, Work Management Solutions, Artemis, Inovie, Netmosphere, WebProject, Enterprise Solutions, and Ventana.

[4] See the Project Management Institute, www.pmi.org. The Institute, founded in 1969, has more than 40,000 members around the world, and offers certification as a "project management professionals." Certification has grown sharply in recent years -- as of May 1999 there were about 11,000 certified "PMPs" worldwide, compared with less than 1200 in 1993. Other related organizations around the world include the Association for Project Management in the UK, the International Project Management Association, Worldwide, project management activities have also experienced significant growth and "globalization" in the last decade – for example, the 1997 Chicago Global Project Management Forum was attended by 200 delegates from 60 countries. There has also been an increase in activity by standards-setting bodies with respect to project management.

[5] Standish Group International, estimates for 1995. reported in www.softwaremag.com, April 1998.

[66] Capers Jones, The Impact of Poor Quality and Canceled Projects on the Software Labor Shortage. (Software Productivity Research, Inc., 1998.)

[7] W. Wayt Gibbs, Scientific American, September 1994.

[8] There are many examples of such cost overruns in the software industry. For example, Denver Airport's $193 million investment in a software system for handling baggage in the mid 1990s, which just didn't work; the FAA's $1 billion investment in a new air traffic control system that had to be mothballed before it was deployed;

[9] The best known of these software programs is probably Microsoft Project™ Other leaders are Scitor's _____, Primavera's _____, and Computer Associate's _____. Among the sophisticated features provided by the more elaborate of the se programs are the ability to coordinate resources across multiple sub-projects, monitor results from a Web page, "contour" resources against tasks over time, and distinguish between elapsed time and hours of effort.

[10] The absence of clear customer requirements is often cited as the single most important factor responsible for problems in software development projects.