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Right From The Start: The Effects Of
Early Events On Subsequent Project
Team Development And Performance

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WORKING PAPER

SERIES

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**Right From The Start:
The Effects Of Early Events On Subsequent Project Team
Development And Performance**

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This paper has not undergone formal review or approval of the faculty of the ILR School. It is intended to make results of Center research available to others interested in preliminary form to encourage discussion and suggestions.

Abstract

This study contributes to the team development and effectiveness literatures by exploring the activities and outputs of three high performing and three low performing ad hoc project teams from initiation to project completion. While, all six teams progressed through four common phases of development, the high and low performers exhibited several striking differences in the specifics of their activities and outputs at various points along the way. Most notably, the high performing teams got things right from the start and subsequently progressed steadily, if not smoothly, through the remaining phases of development to ultimate success. In contrast, the low performing teams stumbled in the early going and never really recovered. Based on these findings, we suggest that researchers, as well as team leaders, have much to gain from devoting considerably more attention to the ways in which project teams are mobilized and launched.

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Right From The Start: The Effects Of Early Events On Subsequent Project Team Development And Performance

Ad hoc project teams are an essential feature of organizational life. At any given time, in all organizations of any size, many such teams can be found studying and analyzing issues and producing and sometimes implementing recommendations or solutions, usually under fairly tight deadlines (Keller, 2001). Given the putative importance of the projects involved, as well as the time and talent costs incurred, both scholars and managers stand to benefit from insights that help to improve the efficiency and effectiveness with which project teams mobilize around their tasks and subsequently pursue them to completion. Interestingly, however, research on project team effectiveness has given short shrift to the process of project team development (Cohen and Bailey, 1997), while students of project team development often allude to, but seldom study, the extent to which developmental processes relate to project team effectiveness (Marks, Mathieu, and Zaccaro, 2001). In the present study, we sought to bring these two streams of research together in hopes of advancing our understanding of both.

Specifically, we focused on three high performing and three low performing ad hoc project teams, tracking, categorizing, and comparing their activities and outputs from the moment their projects were initiated until their work was completed. We were interested in answering two broad questions. To what extent and in what ways, if at all, do high and low performing project teams differ with respect to: (1) their overall patterns of project team development and (2) the specific activities engaged in and outputs produced at various points in the team development process? Briefly, at the macro level, we found that all six teams, irrespective of ultimate performance, pursued (and five completed) a common, four-phase path of project team development. At the more micro level, however, our findings showed several important differences in activities and outputs across high and low performing teams at every phase and inflection point along the developmental path. Unexpectedly, and potentially more

significantly, though, we discovered that the most important differentiator between effective and ineffective teams pertained to the way in which they were mobilized and launched. Those that got off to a smooth start flourished, while those that stumbled in the early going did not.

Project Team Effectiveness And Development

Ad hoc project teams consist of members who are brought together on short notice, usually from disparate functions, units and even geographies, and charged with finding appropriate ways to capitalize on emerging opportunities or deal with perceived threats, typically within tight time constraints. It is expected that the individuals involved will find ways to work together effectively, structure and execute unfamiliar tasks, obtain essential resources, deal with multiple stakeholders, manage their time against deadlines, and ultimately produce high quality products or solutions (Hackman, 1990; Keller, 2001). These are daunting challenges, exacerbated often by high stakes and always by the specter of failure (Gersick and Davis-Sacks, 1990). Not surprisingly, therefore, theorists and researchers have long been interested in documenting the dynamics of project team development and uncovering the correlates of project team effectiveness. What is surprising, however, is the extent to which these two streams of inquiry have traveled down parallel and seldom intersecting paths.

Project Team Effectiveness

Most studies of project team effectiveness are cross-sectional examinations of relationships between or among managerial perceptions of one or more measures of team design (e.g., size, diversity), task features (e.g., unfamiliarity or complexity), team processes (e.g., internal or external communication), or psychosocial traits (e.g., cohesion), and one or more measures of team performance (e.g., adherence to budgets and deadlines, quality of products or solutions) (Brown and Eisenhardt, 1995; Cohen and Bailey, 1997). From time to time theorists pick up on the results of such studies and weave feature-based models of project team effectiveness (e.g., Kessler and Chakrabarti, 1996; Verona, 1999; Sheremata, 2000). While insightful and useful, this work emphasizes team “statics” (McGrath, 1986) at the expense of team dynamics since it essentially ignores or downplays the potential influences of team

progress, or lack of progress, over time on ultimate team performance (Goodman, Ancona, Lawrence, and Tushman, 2001; Marks, et al, 2001).

Project Team Development

Students of project team development, on the other hand, focus on the ways in which teams shape and alter their features and activities over time and on constructing models purporting to capture the dynamics of this progression (e.g., Bales and Strodtbeck, 1951; Tuckman, 1965; Tuckman and Jensen, 1977; Gersick, 1988, 1989; Wheelan, 1994; Koslowski, Gully, Nason, and Smith, 1999; Chang, Bordia and Duck, in press). Researchers, and even more so theorists, typically suggest, and sometimes even claim, that teams following the described or prescribed progression and/or processes outperform teams following alternative paths or activity patterns. But, so far there is little evidence to support such allusions. Only recently has research on project team development begun directly to address the issue of team effectiveness (see, for example, Arrow and McGrath, 1993; Smith and Comer, 1994; Waller, 1999; Jehn and Mannix, 2001). To date, however, none of these studies has incorporated the full sweep of project team development from beginning to end.

This we do. Initially, however, there was a question of which, if any, of the many models of team development to adopt as a theoretical base. After some deliberation, we chose Gersick's (1988, 1989) punctuated equilibrium model (PEM). We did so for five main reasons. First, it was explicitly derived from research on project teams, as opposed to, say, therapy or T-groups or work or parallel teams, as were many of the other models. Second, the PEM is one of the few models based, at least initially, on observations of actual project teams operating in real work organizations, rather than student teams performing laboratory simulations. Third, the model is well known, having garnered over 200 citations in the Social Science Citation Index. Fourth, the model has recently generated some empirical support (Chang, et al, in press). Fifth, notwithstanding the recent interest, the PEM remains seriously under-researched, especially in actual organizational settings (Cohen and Bailey, 1997).

Basically, the PEM suggests that rather than developing gradually over time, project

teams progress fitfully through sustained periods of inertia punctuated by concentrated periods of transition. Gersick (1989: 276) summarized her findings and the model as follows:

“Every group exhibited a distinctive approach to its task as soon as it commenced and stayed with that approach through a period of inertia, which I called phase 1, that lasted until precisely halfway through the group’s allotted duration. Every group then underwent what I called a transition. In a concentrated burst of activity, groups dropped old patterns, reengaged with their outside supervisors, adopted new perspectives on their work, and made dramatic progress... Those new approaches carried groups through a second major phase of inertial activity, called phase 2, as they executed plans created at transition. Groups made one last shift in their behavioral patterns just before their deadlines, when they launched into a final burst of activity to finish their work. I called this last phase completion.”

Our study is an exploration and extension, not a test, of the PEM. Gersick (1988, 1989), for example, sometimes referred to two and sometimes, as above, to three phases of project team development, even while hinting at a fourth by suggesting that “... the sheer speed with which recurring patterns appear [at a team’s first meeting] suggest they are influenced by material established before the group convenes” (Gersick, 1988: 33). Related research in the laboratory has supported a two-phase model (Chang, et al, in press). Thus, while initially accepting the basic premise that project teams go through intermittent phases of continuity and change, we in no way preordained or constrained the number or nature of phases that might emerge from the data, and indeed were quite prepared to find differences on these scores across high and low performing project teams. Additionally, it is not clear whether project teams tend to progress sequentially through phases, as the PEM suggests, or sometimes to revert back to or repeat phases that have not gone well (e.g., Marks, et al, 2001). While it is reasonable to assume that high and low performing teams might differ in this respect, the nature of these differences remain to be uncovered.

When do project teams begin? Studies of project team development, including Gersick’s (1988, 1989), tend to assume that a team’s work begins with its inaugural or launch meeting.

This assumption is consistent with the constraints of team research conducted in laboratories. But, its veracity has been called into question. Gersick (1988: 37), as noted above, speculated on the importance of events that occur before teams' first meetings, and urged "... group leaders [to] prepare carefully for [these] meeting[s] ...". Other studies have shown that project team progression and/or performance may be influenced by the nature of strategies that team leaders initially bring to the task (Ancona, 1990), the careful choreography of team initiations (Brown and Eisenhardt, 1997), and the pre-launch enrollment and preparation of team members (Brown and Eisenhardt, 1997; Edmondson, Bohmer, and Pisano, 2001). Bettenhausen and Murnighan (1985) suggest that these effects may relate to the formation of team members' "scripts" and group norms, which in turn affect early team performance. This accumulating speculation and evidence moved us to use the times that projects were initiated, rather than teams' first formal meetings, as the starting point for data collection and analysis in an attempt to uncover the influence of early events on later team development and effectiveness.

Ambiguity also surrounds the conditions that induce, as well as the timing and characteristics of, project team transitions, not to mention the associated performance effects. In Gersick's (1988, 1989) studies, transitions were brought on by concerns about pacing, specifically the passage of time in conjunction with perceptions of progress against deadlines (see also Ancona, Okhuysen and Perlow, 2001), although other models (e.g., Wheelan, 1994) suggest that transition triggers may have more to do with the completion of certain phase-related activities. Gersick (1988, 1989) found that teams undergo a major transition approximately (not always "precisely", as stated in the quote above) around the midpoint between their first meetings and their deadlines and a minor one just before their deadlines, much as often happens when bargaining sessions reach the 11th hour (Lim and Murnighan, 1994). A more recent laboratory study (Chang, et al, in press), however, uncovered midpoint transitions in only nine of 25 teams; 12 of the remaining 16 teams underwent one or more identifiable transitions but most of these occurred in the early, rather than late, going. Transitions are, by definition, periods of evaluation, recalibration, and change, but they appear

to differ considerably across teams with respect to intensity (Chang, et al, in press) and the specifics of how and how well they are managed. Most of Gersick's (1988, 1989) teams, for example, used their midpoint transitions to generate significantly revised and generally more focused approaches to their tasks, but not all of them did. In the present study, we hoped to clear up some of the ambiguity surrounding project team transitions by shedding additional light on their triggers, timing, and patterns. More important, though, we were interested in ascertaining the extent to which these factors seem to matter in terms of ultimate team performance.

Finally in this context, research and theory pertaining to project team development tends to emphasize process. Studies of project team effectiveness, on the other hand, often add inputs and outcomes to the equation by adopting the familiar input-process-outcome (I-P-O) framework (Hackman, 1983; Gist, Locke and Taylor, 1987; Guzzo and Shea, 1992). Generally, this is done in a rather static way. Either all variables are measured more or less simultaneously or, if input and process measures are taken over time, they are collapsed into single indicators to be related to one-time measures of team performance. Combining the team development and effectiveness perspectives, however, allows for a more dynamic take; "... over time, team performance can be viewed as a series of I-P-O episodes." (Marks, et al, 2001: 360). This suggests that for each phase of project team development, it makes sense to focus not only on the description of the task-work undertaken, but also on the quality of the resulting outputs (which, of course, are the inputs for the next phase). This we did, thus making it possible to track project team effectiveness over time, and to ascertain, in particular, the points at which ineffective teams appear to go off track (Gersick, 1989; McGrath, 1991; Kozlowski, et al, 1999).

In sum, while we used extant theory and research to guide the design of the present study, we also concluded that these were neither voluminous nor definitive enough to warrant the explication of specific propositions or hypotheses. Our chosen task, then, was to explore, document, and contrast, from beginning to end, differences in the task-work performed, as well

as intermittent outputs produced, across high and low performing project teams. We aimed to derive conceptually grounded theory, replete with appropriate propositions, to guide future research focusing on the complex relationships between project team dynamics on the one hand and project team effectiveness on the other.

METHODS

Given the need to generate grounded theory, we chose to employ a field-based, multiple case study methodology (Eisenhardt, 1989a; Yin, 1994). Confederates were enlisted to alert us to the formation of teams in their firms that were, first, tackling important organizational issues and, second, roughly compatible with the definition of project teams provided earlier (i.e., ad hoc, involved with unfamiliar tasks, having functionally diverse memberships and firm deadlines, and so forth). Of the first nine teams identified, three were rejected because they involved either preexisting project teams or indefinite deadlines. The remaining six, all of which met our criteria (as shown below), agreed to participate in the study. Fortunately, as will be documented later, the six consisted of three that clearly were, and three that clearly were not, high performing teams.

Organizational and Team Characteristics

The six teams came from five large, well-known multinational firms (the two from the same firm operated independently and had no known contact with one another). At the time of the study, these corporations had annual revenues ranging from just under \$2 billion to about \$87.5 billion, putting all but one of them in the *Fortune* 500 (and the fifth in the *Fortune* 1000). The business units that initiated the teams compete in industries as varied as photographic equipment, scientific and control instruments, telecommunications equipment, computers, and furniture.

The six teams, euphemistically referred to as Paper, Wood, and Glass (the eventual high performers) and Image, Chair, and School (those that did not fare as well), had multiple goals and purposes. Four (Paper, Glass, Chair, and School) were charged with making recommendations; they were formed, respectively, to: advise top management on the

acquisition of an Israeli firm, design two pilot programs in e-commerce, formulate a new global service solution, and devise a strategy for delivering distance learning corporate-wide (and eventually to the broader marketplace). The remaining two teams (Wood and Image) were further expected to implement their products: a business-to-consumer Web site and a new business model to boost the sales of a key product.

All six teams were spontaneously formed. That is, they were hastily constructed responses to unexpected and, for their organizations, novel opportunities or challenges. The following quotes, taken from interviews with the project champions (i.e., initiators) of the Wood and Image teams and the leader of the School team, respectively, illustrate the unanticipated nature of the efforts: (1) "... this project came up very quickly out of nowhere."; (2) "The leadership team ... identified [six strategic initiatives]; this team was the brainchild of that meeting."; and (3) "[The clients] turned to me and said, 'On April 5th and 6th, you will bring us [x]'. I thought, 'Oh my God, oh my God, what will we do.'" The novelty of the tasks undertaken is reflected in quotes such as the following: "Never been through [an acquisition like this] before" (from a member of the Paper team), "... this involves a whole new platform" (from a member of the Glass team), and "[this] represents a fundamental reinvention of customer relationships" (from the leader of the Chair team).

The teams varied in size from five to nine members. All six were cross-functional; three (Glass, Image, and School) included participants drawn from four different functions, while the remaining three (Paper, Wood, and Chair) had five functions represented. The teams were also diverse with respect to gender; the number of female participants varied from two (on five, seven, and eight person teams) to four (on the nine person team). In three cases (Wood, Chair, and School), team members worked at the same site, and in three (Paper, Glass, and Image) they were drawn from two different sites. On average, only about one-sixth of the participants had ongoing working relationships with one another at the time the teams were formed.

Finally, the teams were temporary. All had specific deadlines for the completion of their work; expected project durations, in days, were: 39 (School), 40 (Paper), 91 (Chair), 97 (Wood),

101 (Glass), and 259 (Image). In all cases, it was assumed that the teams would disband when their projects were completed.

Data Collection

Data were collected through mid-case interviews, observations, secondary documents, and post-case interviews and surveys. Consistent with multiple case study research (Eisenhardt, 1989a) and prior work (e.g., Brown and Eisenhardt, 1997; Eisenhardt, 1989b), most of the data were obtained from the semi-structured, post-case interviews with project champions, team leaders, and team members.

Because of variations in lead times, as well as some delays in gaining access, case identification occurred, and thus data collection began at varying points in the teams' life spans: Chair and School prior to their launch meetings; Wood, Glass, and Image at about the midpoints of their projects, and Paper very near the end of its project.

There were 23 mid-case interviews, each lasting from about 30 minutes to over an hour; most were conducted by phone. Per team, the number varied from zero (Paper) to six (Wood and Chair). Some of these interviews were with project champions to obtain information about events precipitating the projects, as well as team objectives and performance indicators, compositions, and deadlines. Others were with team leaders, as well as selected team members, to delve into team activities that had occurred during the first half of their projects.

To help track team events as they unfolded, real-time data were collected via observations and secondary sources. The first author spent approximately 87 hours observing 26 different team events (e.g., team meetings and presentations), taking notes on activities and impressions. Per team, the number of events observed ranged from zero (Paper) to eight (Glass). Secondary sources were also opportunistically tapped; these included documents describing initial work objectives, work plans, final presentations, and post-hoc team evaluations.

As the teams completed their work, project champions, team leaders, and team members (and, where possible, the projects' customers) were again interviewed using a semi-

structured format with three parts. In the first part, the interviewees were asked to describe their previous (and often ongoing) roles within the company, areas of expertise, and roles on the team, as well as the processes by which they came to be part of the teams. In the second part, they were asked (as a verification of data collected earlier) to describe the teams' projects and objectives, reasons for the teams' initiations, and the degree to which their companies had tackled similar problems in the past. In the final part, which represented the majority of the time, respondents were asked to provide detailed descriptions of the teams' events from beginning to end. To ground actions or events to specific dates, the interviewees were asked to refer to calendars and dated team outputs. In follow-up questions, an interrogation style was used (e.g., What happened next? Why did you decide to do that?). There were 52 post-case interviews ranging in length from one to over two hours; the number per team ranged from four (School) to 12 (Paper). Finally, a brief questionnaire was used to obtain data on potentially critical and quantifiable factors such as team member familiarity, perceived mobilization speed, and team performance.

Data Analysis

Data analysis began with the writing of case stories (Eisenhardt, 1989a). First, all data were entered into chronologically ordered narratives with dates assigned to each team activity and output. Observation notes and secondary source materials were placed into the case stories in the proper sequence. While similarities and differences among the data were noted along the way, no formal case analyses were conducted until all six stories were complete.

Next, case stories were “open coded” (Strauss and Corbin, 1992); each line was examined and quotes or observations were grouped into emerging themes. Consistent with inductive methods, we kept an open mind with respect to categories at this point (except, of course, for those pre-determined in the questionnaire). If the data suggested more than one content category, the quote or observation was placed in both. For example, the comment, “This is a new area for us. All we knew was that it’s called [X] and we have an unreasonable deadline”, was coded as both project novelty and perceived time pressure. This process ensured that potentially critical variables would be allowed to emerge.

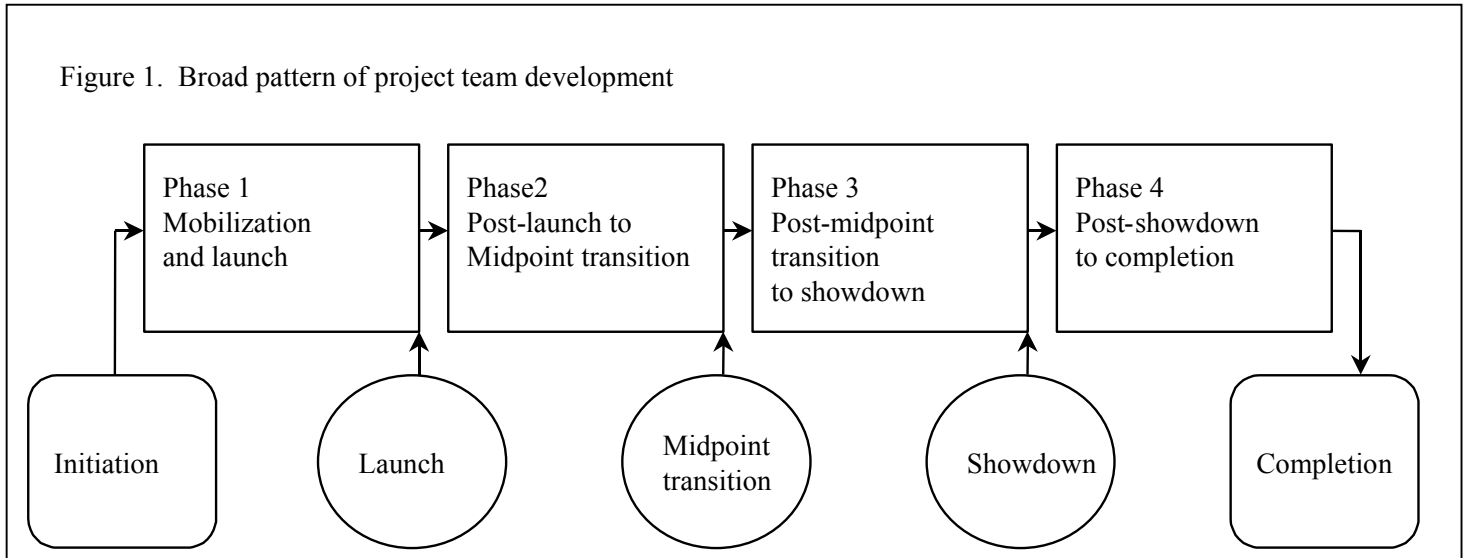
The case stories were then condensed in two successive steps. The first involved compressing multiple accounts of single activities into one brief description. These compressed accounts, together with the within-case variables, were used to identify transition points for each team. Transition points were indicated when the data showed a major shift in the nature, direction, or intensity of a team’s task-work activities. Examples include (1) creating an initial approach to the project, (2) rescoping project goals, (3) scrapping one approach to the project for another, (4) producing a clear output, (5) dramatically altering task-work pace or effort level, and (6) disbanding the team. Subsequently, the case stories were further reduced to one page overviews, short enough to provide an easily accessible perspective of each major event, yet detailed enough to trace general observations back to specific dates and activities. These overviews were organized around the alternating periods of inertia and transition that emerged from the within-case analysis and included descriptions of the teams’ primary task focuses and activities and the timing, triggers, contents, and outputs of their transition points.

Next came cross-case analysis (Miles and Huberman, 1984; Eisenhardt, 1989a). We used both the compressed accounts and the one-page overviews to compare the cases and identify and position common actions, transition points, and outputs, as well as to refine the unique aspects of individual cases. To reduce the possibility of premature or even false conclusions, the data were analyzed in a couple of ways (Eisenhardt, 1989a). Initially, pairs of cases were selected and process maps were used to identify key similarities and differences (Miles and Huberman, 1984). Then, the cases were divided and compared by data sources to check for potential systematic biases.

Ultimately, the cross-case analysis yielded tentative propositions pertaining to the number of, as well as the content and outputs associated with, various phases of team development. Evidence from each case was again compared to the emerging propositions. Differences were used to extend and refine the propositions and to build a tentative framework. At this point, we returned to the literature to compare the insights that were emerging from the inductive process against existing theory and evidence (some of which had accumulated since the study began). This done, we decided not to undertake additional data collection mostly because the six project teams obviously divided equally into those that were high and low performers, but also because the findings were clearly converging around logical common themes (Eisenhardt, 1989a) and because the number of cases in hand compared favorably with multiple case study theory (Eisenhardt, 1989a; Yin, 1994) and with the number included in earlier comparable research on related phenomena (e.g., Ancona, 1990).

BROAD PATTERN OF PROJECT TEAM DEVELOPMENT

Cross-team comparisons yielded remarkably similar patterns across the teams (with the exception of the School team which had been tracking with the others until it abruptly disbanded in midstream). Between initiation and completion, all six teams traversed, with no signs of reversion, four distinct phases of project team development (see Figure 1).



The first phase, mobilization and launch, extended from the time the projects were initiated until the teams completed their first formal meetings. Early in this phase, team leaders mobilized data and resources and prepared for their teams' launch meetings, which in turn served as a time of transition in the sense that this was the first time the teams came together and produced a common output (i.e., initial performance strategies). Following the initial meetings, the teams entered another phase, which we call post-launch to midpoint transition, during which they pursued and struggled with their initial performance strategies. This continued until they reached a point (which for most came approximately halfway between their launches and their designated deadlines [Gersick, 1988, 1989]) where they began to worry about their progress and prospects and, in five of the six cases, significantly altered the scopes of, and/or the ways they were approaching, their projects (the sixth team, School, disbanded at this point).

The five remaining teams then entered the third phase, post-midpoint transition to showdown. Again, the teams initially focused on implementing the outputs emanating from their midpoint transitions. As their deadlines approached, mild to serious panic ensued, leading to a third transition, dubbed showdown, during which all teams again made significant shifts,

particularly in the intensity of their activities. From this point on, for better or for worse, the teams pursued their chosen courses through to project completion.

Although the four phase, three transition pattern of team development was ubiquitous, more in-depth analyses clearly indicated, first, that the teams dichotomized when it came to overall levels of performance and, further, that the two groups differed in several important respects in terms of activities pursued and outputs produced along the way. Attention first turns to the data pertaining to overall levels of team performance.

PROJECT TEAM PERFORMANCE

Team performance was assessed on three commonly used dimensions: adherence to deadlines, quality of products or solutions, and degree of team ownership of products or solutions. (A fourth dimension on the questionnaire, adherence to budgets, failed to materialize since none of the teams had one.) As noted, data on these dimensions were collected through observations and post-case interviews, as well as the post-case questionnaires (where all items were rated using 7-point scales). Ultimately, notwithstanding some variations across data sources, the six project teams clearly divided into three that were high performers and three that were not. Interestingly, however, these differences were only partially apparent from ongoing observations of the teams. Even the ultimately high performers (Paper, Wood, and Glass) struggled at various points, and in all cases it was unclear until the very end that they would meet their deadlines with products or solutions the team members could embrace. The ultimately low performers (Image, Chair, and School) also struggled, of course, often with more fundamental issues (e.g., product or solution definition and team resources), but even here the two survivors were well along in the process before it became apparent that they had little chance of delivering products or solutions of acceptable quality by their initial deadlines.

The High Performing Teams

The Paper team made its presentation to top management as scheduled and, following a brief discussion, its recommendation to acquire the Israeli firm was accepted. In the post-case interview, the project champion expressed both surprise and delight, "They did it, and it

was a smashing success. The CEO said, 'We've got something here'... I have to figure out how to recreate this team. I believe this is the way we'll have to operate more and more". A similar sentiment was echoed by various team members; for example, "... We did it ... it was fun, and an exciting thing to be part of". On the questionnaire, the project champion gave the team a 6 for on time performance, and 7s for quality and collective ownership of the team's recommendation. The team leader gave the team 7s on all three dimensions of performance, while team members produced mean ratings of 6.5, 6.0, and 6.5, respectively, on these dimensions.

Wood, the second high performing team, created a Web site and, with some serious last-minute heroics, got it up and running just in time for its scheduled unveiling. The team's internal customers were delighted, as indicated by this quote from a marketing manager, "We just changed the way we do business ... We shook up the competition. [Wood] has proven that its market presence is powerful, that's what we've done." The project champion was similarly enthused, "This was highly successful. It may open up anywhere from \$50 to 100 million [in additional revenues]." The team leader, perhaps reflecting his battle scars, was a bit more reserved, "We got it done. It wasn't pretty, but it's done". A team member expressed a similar sentiment, "It was an incredible accomplishment that we set out [to do] and achieved. The technical solution is lousy, but we met the business needs so it was a success." On the questionnaire, ratings by the project champion, team leader, and team members (mean) for on-time performance were, respectively, 7, 7, and 6.0, and for collective ownership of the product, respectively, 7, 6, and 5.9. The project champion gave the team a 7 for quality of product, although the team leader and the team members were, as the preceding comments about the technology suggest, a bit more reserved on this point; their ratings were 5 and 4.8.

The Glass team (the third high performer) presented its business plan for the firm's first two pilot e-commerce ventures on the originally scheduled date, again to rave reviews from the project's internal customer, an Executive VP of Marketing, "I'm impressed ... I never thought we'd get this far ...". The team's two project champions were similarly pleased. One,

representing Information Technology, said, “It was effective, we got a lot of bang for the buck.” The other, from Marketing, noted, “When people look back, they’ll say this was one of the strategically most important things we’ve ever done ...”. The team participants were no less proud of their accomplishment; as one team member put it, “At the end of the day, we had a damn good presentation.” Consistently, the project champions and the team leader gave ratings of 6 and 7 on all three dimensions of performance, while the team members average ratings were 6.4, 5.8, and 6.0 for on-time performance, quality of solution, and collective ownership of the solution.

The Low Performing Teams

The Image team initially developed a business model with five key components, but only one of these was actually implemented (the rest were either dropped or integrated into other projects). Even this took the team four months longer than originally planned (i.e., the project extended from the original eight and a half months to over a year). The project champion’s perspective on this is unknown since he declined repeated requests for a post-case interview. The team leader, however, summed up the situation as follows, “It was tough to get key resources in some areas. Action items were not getting done.” One team member wondered, “... Why haven’t we accomplished more?” Another mused, “I heard [another team member] say that [the project] ... was horrible, but I don’t know.” The team leader rated the team 3 and 4 for on-time performance and collective ownership, although her rating of 6 indicates satisfaction with the limited product that finally emerged. The team members concurred with the first two ratings -- the mean scores were 3.6 and 4.0 -- but were less sanguine about the quality of the team’s product -- here the mean rating was only 4.2.

The Chair team essentially disbanded 11 days before its original deadline. Subsequently, the team leader and one of the team members worked with an internal consultant to produce the desired service solution some two months after the team’s original deadline. Again, the project champion could not be interviewed, in this case because he had left the firm. The team leader said, “I’d rate [the team’s performance] down ...”, although she was pleased

with the service solution that was ultimately produced; on the questionnaire, she gave the team a 4 for on-time performance and a 5 for collective ownership of the solution, but a 6 for quality of the service solution. Again, the team members were less enamored with both the process and solution; the means of their ratings were 2.6, 4.3, and 4.1, respectively, on timeliness, quality, and collective ownership. The nature of their concerns emerged during the interviews; to wit: “[The service solution] is more of a presentation than a how to. I don’t know if our objectives slipped or what.”; “At the end of the day, I’m still not sure if we’ve got something salable.”; “I’m not sure ... how much the team bought into the solution.”; and “We were unable to reach a consensus. We went through the process and got input ... but it was a stalemate.”

The School team, as noted earlier, failed to complete its project. Around the time of the team’s midpoint transition, the project champion realized that the team had serious shortcomings, “What we went through wasn’t unique. You need to address a problem and sometimes you don’t have the right expertise ... They weren’t the right group.” Similarly, the team leader saw the futility of proceeding, “[The team members] never really gelled in the first place. Plus, they really didn’t have the time that it would have taken ... It became clear that it just wasn’t going to happen...”. Given these concerns, the two decided to disband the team and turn the project over to a group of outside consultants. The transfer took place just a little more than a week before the team’s final deadline.

So, this is how the teams ultimately fared. Now, attention is turned to the specific activities and outputs that brought them to these results. The discussion proceeds phase-by-phase across the team development process (an overview of the results is provided in Table 1).

Table 1

| <i>An overview of the results</i> | | |
|-----------------------------------|--|--|
| Phase 1 | | |
| Team | Mobilization process | Launch outputs |
| Paper | <p>Duration: 35%</p> <p>Mobilization strategy: Comprehensive</p> <p>Project champion and two initial participants use many sources to define the nature of the project and to identify and select participants with needed skills.</p> | <p>Resources alignment: Yes</p> <p>Performance strategy: Complete</p> <p>The team identifies key pieces of information needed for a valuation; assigns individuals and sub-teams to collect the missing data.</p> <p>“[After the launch meeting] we’ve got tasks and duties coming out our ears.”</p> |
| Wood | <p>Duration: 33%</p> <p>Mobilization strategy: Comprehensive</p> <p>Project champion and team leader work closely with the internal customer and additional colleagues to specify the proposed Web site and to locate participants with identified competencies.</p> | <p>Resources alignment: Yes</p> <p>Performance strategy: Complete</p> <p>The team agrees on the task at hand; develops Site functionality and initial work plan documents; creates three sub-teams to begin work.</p> <p>“A lot of synergy built very quickly. We came together and started making it happen fast.”</p> |
| Glass | <p>Duration: 37%</p> <p>Mobilization strategy: Comprehensive</p> <p>Project champions tap many colleagues to shape the nature of the project and to identify and select competent team members.</p> | <p>Resources alignment: Yes</p> <p>Performance strategy: Complete</p> <p>The team creates a ‘charter’; assigns sub-teams to fashion technology-related strategies and to develop business cases for the two pilots.</p> <p>“[After launch] we showed [our internal customer – SBU-CEO] our charter and asked, ‘Is this what success looks like to you?’”</p> |
| Image | <p>Duration: 34%</p> <p>Mobilization strategy: Limited</p> <p>Project champion and team leader select team members to achieve ‘broad participation’; ask participants to bring relevant ideas with them to the launch meeting.</p> | <p>Resources alignment: No</p> <p>Performance strategy: Complete</p> <p>The team identifies and agrees to pursue a five initiative solution; creates sub-teams to further develop each of the initiatives.</p> <p>“When we got together [at launch]... we narrowed down to five products.”</p> |
| Chair | <p>Duration: 51%</p> <p>Mobilization strategy: Limited</p> <p>Team leader develops an initial work process; selects team members to ensure that all service areas are represented.</p> | <p>Resources alignment: No</p> <p>Performance strategy: Incomplete</p> <p>The team disagrees about the basic goal of the project; is unsure of how to define the task; continues to use the work plan devised by the team leader.</p> <p>“We talked about what [the solution] could be... [but] there were a lot of different definitions in the room.”</p> |
| School | <p>Duration: 49%</p> <p>Mobilization strategy: Limited</p> <p>Team leader hires a facilitator; the two design a work process and identify team members who represent units with a vested interest in the project's outcome.</p> | <p>Resources Alignment: No</p> <p>Performance Strategy: Incomplete</p> <p>The team struggles to understand the nature of the task.</p> <p>“We didn’t do a very good job bringing [the team members] on board. They were confused: What’s going on here?”</p> |

Table 1 continued

Phase 2

| | |
|---|--|
| Post-launch process | Midpoint transition |
| The team collects and analyzes target company, internal, market, and customer data. | <p>Timing: 52%</p> <p>Trigger: Confusion reigns; multiple valuation models emerge. “[Prior to the transition] there were between 50 and 100 assumptions and they... changed every day for two weeks.”</p> <p>Outputs: The team agrees on a single valuation model; prioritizes its list of business valuation assumptions; creates new task designations focused on finalizing a recommendation. “This became the model that brought the [other] two together.”</p> |
| Sub-teams work to design the Web site’s layout, acquire software, and address a critical political issue. | <p>Timing: 37%</p> <p>Trigger: Milestones are missed as layout, software, and political problems emerge. “I don’t think we ever could have made the deadline.”</p> <p>Output: The team narrows the scope of its project by eliminating transactional aspects of the Web site; re-specifies work plans; shifts attention to site implementation tasks. “We had to adjust the [task designations and milestones] schedule.”</p> |
| Sub-teams collect and analyze internal and external data, debate alternative technological approaches. | <p>Timing: 56%</p> <p>Trigger: Team members disagree about whether to emphasize short- or long-term benefits of the two pilots. “It was too far into the project to still be debating the scope.”</p> <p>Output: The team resolves ‘scope’ issues; decides to emphasize short-run pilot benefits with limited discussion of long-run implications; creates a plan to finalize and build consensus for final ROI and budget figures. “We worked out detailed information on the pilots... we got [ROI] ranges.”</p> |
| The team struggles to illuminate and specify the solution set, lacks customer data. | <p>Timing: 46%</p> <p>Trigger: Team members questions particular initiatives; additional opportunities emerge. The project champion calls for a vote. “We’d been working on this stuff for eight weeks. [The project champion] finally called the question.”</p> <p>Output: The team drops and adds two initiatives; the initiatives are “not well defined” and the team lacks “a solid plan”. “We got together as a team and voted. Out of that came a particular course to be most actively pursued.”</p> |
| The team debates alternative solution set definitions. | <p>Timing: 49%</p> <p>Trigger: The team remains deadlocked over the definition of the solution. “We’re in a death spiral... We don’t even have a common definition of [the solution] yet.”</p> <p>Output: The team adopts a broadly defined ‘hinged’ solution; lacks a detailed understanding of what the approach entails. “At some point the scope shifted. It became a cookbook.”</p> |
| Sub-teams generate ‘straw models’ of extant learning processes. | <p>Timing: 60%</p> <p>Trigger: The team is still unable to specify a deliverable since straw models “didn’t get [the team] where [it] needed to be”. “It became clear that it just wasn’t going to happen.”</p> <p>Output: The project champion and team leader meet and decide to disband the team in favor of a group of consultants. “[The team] never gelled in the first place. Plus, they really didn’t have the time that it would have taken [to do the work].”</p> |

Table 1 continued

| Phase 3 | | Phase 4 |
|---|--|--|
| Post-midpoint transition process | Showdown | Post-showdown process |
| The team works to finalize its final valuation and recommendation. | Timing: 92% Trigger: The team loses confidence; asks project champion for a three-week extension. “We still had a couple days, but we were really struggling... it looked like it was going to be a disaster.” Action: Project champion encourages team to complete its work on time. “[The project champion] says, ‘No you’ve got to do it’... Finally, the team said, ‘o.k. we’ll do it.’” | The team goes into overdrive; works around the clock to complete the project. “We weren’t planning, we were on-the-fly.” |
| The team begins implementing the Site; conducts a series of code and data drops. | Timing: 89% Trigger: Political and technical issues mount; a senior executive “tried to shut down the project”. Action: The CIO and project champion overrule; instruct the team to “... do whatever it takes to get it done... Deliver [the project] at all costs.” | The team works to complete the project in a wild flurry of activity. “We had to alter the best laid plans... Things had to get done right now!” |
| The team works to reach agreement on the pilots’ ROI and budgetary estimates. | Timing: 94% Trigger: The team reaches a fundamental impasse. “was amazing how skittish [everyone] got when it came to the numbers.” Action: The project champion ‘lost confidence’; initiates activity in effort to resolve the disagreements. “When I lost my positive attitude it was a shock to the group, but it may have helped.” | “It The team dramatically accelerates overall action. “We’re attached to the front of a train laying down tracks right before the train rolls over them.” |
| The team attempts to narrow down and flesh out its solution set. | Timing: 76% Trigger: The team struggles; decides to try and accelerate team activity. “We decided to... bring [the project] to closure as quickly as possible. To drag it out would have given it death.” Action: The team asks its project champion for additional resources needed to drive the project toward completion; the request is denied. “We asked [our project champion] for more resources but he refused to free-up anyone.” | The team drops activities that would have required the additional participants; keeps “plodding along” until the team leader is “told [by the project champion] to get the team together and disband.” |
| The team works to specify, and assemble a methodology for, the ‘hinged’ solution. | Timing: 82% Trigger: Critical issues remain unresolved as the project leaders’ work process ends. “There are six to eight big gaps that need addressing.” Action: The team leader disbands all team members but one; hires an internal consultant.. “There were too many chiefs and not enough Indians [on the team]. There wasn’t anyone who could take it and make it go.” | The three remaining participants delay and then package-up a final solution. “... Then for some reason, the pace seemed to slow down... we had some floundering.” |
| - | - | - |

PHASE 1: MOBILIZATION AND LAUNCH

During mobilization and launch, the high and low performing teams differed with respect to: duration of the process, mobilization strategies, launch meeting activities, and key outputs.

Duration

Duration was determined by dividing the total number of days spent on this phase (i.e., between the day the project leader was appointed and the day the team held its first formal meeting) by the total number of days available to the team between the date of its initiation and its original deadline. In addition, in the post-case interviews respondents were asked to describe and characterize the speed with which their teams got started. Third, the questionnaire asked team participants to indicate on a 7-point scale the extent to which they believed their teams “mobilized quickly”.

Mobilization and launch consumed about one-third of the high performing teams’ available time; specific figures were 35%, 33%, and 37%, respectively, for the Paper, Wood, and Glass teams. Team participants rated this quite to moderately fast; mean ratings on the “mobilized quickly” item were 6.1, 5.8, and 5.4, respectively. In interviews, leaders and members of these teams used phrases such as “did a month of work in five days”, “dropped everything and started forming a team”, and “pretty fast, all things considered”. In contrast, two of the three low performing teams spent about one-half their allotted times getting started -- 51% for Chair and 49% for School -- which, not surprisingly, was viewed as rather slow in both the ratings -- 2.5, and 4.3 -- and the comments: “There was a timing mishap; everything went sideways for a while”, and “It’s the three week start-up time [on a 39 day project] that’s the killer”. The third ultimately low performing team (Image, which as we shall see was somewhat of an outlier in several respects throughout this period) traversed the mobilization and launch phase relatively quickly (in 34% of its allotted time, which was rated as moderately fast --4.8 -- by team participants).

Mobilization Strategies

Our analysis of team leader activities during mobilization uncovered eight of particular importance that we subsequently grouped into four categories: (1) content clarification (activities directed toward defining project scopes, gathering supportive background information, and creating working documents), (2) process formation (activities aimed at developing work plans and task designations), (3) personnel matters (activities focused on creating roles and responsibilities of team members, establishing criteria for selecting team members, and acquiring team members), and (4) team member involvement (activities designed to bring people other than project champions and team leaders into the loop). These, in turn, clustered into two quite distinct mobilization strategies.

The leaders of the high performing teams followed what we call a comprehensive mobilization strategy. They: (1) focused considerable attention on content clarification activities, (2) basically ignored process formation activities, (3) put a great deal of effort into specifying project roles and associated competency requirements and selecting team members with the appropriate backgrounds and skills, and (4) reached out to engage between three and six others (usually potential or selected team members) in their mobilization activities. Consider, for example, the experience of the Paper team, which, it will be recalled, was formed to make a recommendation for or against the acquisition of an Israeli firm. Initially, the project champion together with the two managers who first spotted the opportunity focused their efforts on doing a valuation of the potential acquisition. One of the managers visited the target company to collect data on its products, operations, and people, while the other consulted with experts both within and outside the firm to pick up additional information about the company. The two managers then prepared an opportunity assessment document that, after a careful internal review, served as a key data source at the team's launch meeting. Simultaneously, the project champion, with input from the same two managers, selected a team leader who, in conjunction with the others, identified two additional team roles and their associated competency requirements, reached out

to numerous colleagues to identify and screen several possible candidates, and selected four new team members (a seventh was added during the team's launch meeting). Collectively, these activities took about two weeks, just over one-third of the Paper team's available time.

In contrast, the three low performing teams (Image, Chair, and School) followed a much more limited mobilization strategy. The leader of these teams: (1) eschewed content clarification activities, (2) focused primarily on process formation activities, (3) specified only a limited number of (usually leadership) roles and gave only broad attention to competency requirements and, instead, chose to staff their teams using a stakeholder or political approach, and (4) involved at most one other person in their process formation activities and in the identification and selection of team members. Here the experience of the School team is illustrative. This team, as noted, was formed to make recommendations on ways to best invest up to \$8 million to improve the host company's distributed learning efforts. Once identified, the team leader quickly enlisted a colleague -- a facilitator from the organization's internal consulting unit -- to assist with the team's mobilization activities. Subsequently, these two spent very little time on the substance of the project, rather devoting most of their efforts to designing a work plan (i.e., schedule of activities) for the team to follow. Only one role, that of team leader, was specifically designated; otherwise, the team leader did her best to assemble a mix of trainers and information technology specialists who represented the various units with a vested interest in the project's outcome. Collectively, these mobilization activities consumed a little less than three weeks, roughly one-half the School team's allotted time.

Launch Meeting Activities

Launch meetings constituted the teams first major transition point. At this juncture, the teams transformed from, at best, loose collections of individuals to identifiable entities, and their activities switched from data collection, preliminary planning, and staffing to collective decision-making. Some teams made this switch more effectively than others.

The three high performing teams, as the preceding discussion suggests, entered their

launch meetings armed with carefully scoped projects, preliminary notions about what their final products or solutions should look like, supporting documents, and team members with a wealth of information about the critical issues involved and a fair amount of familiarity with one another (as a result of interacting during the mobilization period). The team leaders planned participatory meetings consisting of working sessions organized around carefully defined topics. Consider again the case of the Paper team. The team leader scheduled the launch meeting to coincide with a larger gathering of the company's New Business Development Group so that several knowledgeable non-participants could be brought into the discussions. At the meeting, most of the attention centered on the specifics of the acquisition target's business -- the nature of its intellectual property, its ability to protect this intellectual property, its capacity to turn ideas into real products, and so forth.

In contrast, two of the low performing teams (Chair and School) entered their launch meetings with very little a priori information and with members who had little previous experience with one another. In both cases, the team leaders prepared leader-centered agendas designed primarily to communicate and get buy-in for their perspectives on the projects, as well as their tentative action plans and pre-determined meeting schedules. Both leaders hoped to focus the meetings' discussions and decisions on the implementation of their plans and schedules. Instead, both encountered resistance characterized in large part by intensive efforts to clarify the projects' goals, technical aspects, and staffing, as well as by considerable confusion. The School team's launch meeting, for example, lasted four hours. Early on, the team leader attempted to, "... define the width, the height, and the depth of the problem space". But, the team quickly proceeded to expand on this by generating 14 related "problem statements", none of which was ever adequately clarified. At this juncture, the team leader lamented that the team was "... expanding the scope of the project", while the team members continued to express bewilderment. Near the end of the meeting, for example, one team member said, "I'm confused; I'm trying to put my finger on what's wrong", while another

wondered, “Do we have a problem here or not?”

The third ultimately less successful team, Image, again provides a partial exception. Before the launch meeting, the project champion attempted to clarify both the purpose and scope of the project and, in turn, asked team members to come to the meeting armed with relevant background information and ideas for increasing sales of the product in question. The team leader, though, designed what was intended to be a leader-centered, rather than participatory, agenda for the meeting. The meeting was a mixed bag. While there were periods of confusion and frustration (in large part because those assembled lacked essential information and knowledge) and the meeting took much longer than expected, for the most part the discussion remained focused on substantive issues.

Mobilization and Launch Outputs

One important output from the mobilization and launch phase was team design. Four of the six teams that were assembled during this phase stayed together for the duration, while the remaining two teams (Image and Chair) each added just one new member toward the end of their projects. Interestingly, as suggested earlier, the high and low performing teams did not differ much on such commonly studied team design variables as size (the means were 8 and 7 members), functional diversity (the mean proportion of functions represented to team size were 55% and 64%), gender diversity (the percentage of female participants averaged 33% and 39%), geographic dispersion (two of the high performing teams drew members from a couple of different locations, while only one of the low performing teams did), and member familiarity (across the high performing teams 10%, 17%, and 21% of the members were working together when the teams were formed, while the corresponding figures for the low performing teams were 11%, 13%, and 22%). The two sets of teams did vary, though, in terms of resource alignment.

At launch, the high performing teams were more adequately and appropriately staffed than were their low performing counterparts. Across the former, team members were, on

average, about evenly distributed among those whose commitments to their projects were full-time (29%), part-time (i.e., they had at least some released time from their regular assignments, 29%), and over-time (i.e., they were expected to continue performing their regular assignments while also working on the projects, 42%). Across the low performing teams, the corresponding time commitments were zero, 25% and 75%. On the questionnaire (again using a 7-point scale), participants on the high performing teams, on average, rated their “access to needed resources” between 4.8 and 6.1, while the ratings of those on the low performing teams averaged between 3.3 and 4.0. Further, mid-case and post-case interviews with those on the high performing teams elicited no concerns about resource scarcity or misalignment, while corresponding interviews with respondents on the low performing teams were laced with concerns about both. For example, “... the problem was complex and no one had the resources to address it”, “I would have put a person on this full-time ... The biggest problem is our inordinate workload and this was just another thing to do”, “Some of the people who could have contributed weren’t [in the launch meeting]”, “There were some people [in the launch meeting], I still don’t know why they were there”, and “[One assigned team member] checked in once, but hasn’t actively participated”.

The second important output of the mobilization and launch phase consisted of the performance strategies that emerged from the team meetings. Their key dimensions of these strategies were: (1) problem clarification (i.e., specifications of the teams’ tasks and/or solutions or products), (2) solution framework (i.e., a plan of activities for moving forward) and (3) task designations (i.e., a set of post-launch assignments). Four teams, the three high performers plus Image, produced complete performance strategies consisting of all three dimensions. The members of the Paper team, to continue the current example, indicated in interviews that they left the launch meeting with a clear idea of what needed to be done, a detailed list that identified key pieces of missing information, and a set of sub-teams that had, in the words of one member, “...tasks and duties coming out [their] ears.”

The remaining low performing teams (Chair and School) emerged from their launch meetings with only partial performance strategies. Both failed to reach agreement with respect to problem clarification and to produce a solution framework. Nonetheless, both managed to make task designations of a sort. The Chair team, after much debate, fell back on those that the team leader had originally proposed. The School team, literally during the last five minutes of the meeting, opted for what one participant referred to as a “divide and conquer” approach. Two members of the team were assigned to document current procedures and report back to the team with “straw models” that would give the team, in the words of the leader, “... something to shoot at”.

PHASE 2: POST-LAUNCH TO MIDPOINT TRANSITION

Post-launch, the six teams pushed ahead to work on the outputs they had produced at their meetings, three with vigor and three with less focus and energy. This continued until all six encountered yet another transition when accumulating concerns forced them to reconsider the paths they were on and to make adjustments. Once again, however, the high and low performing teams differed, although not so much in terms of when and why they encountered these transitions as in terms of the resulting outputs.

Post-Launch Process

Post-launch, three of the four (the three ultimately high performers) that had complete performance strategies turned their attention to implementation. Illustrative is the Wood team, which emerged from its launch meeting with three sub-teams, all of which had Gantt charts focused on key issues, assignments, and deadlines. Two of these sub-teams engaged with outside vendors to begin producing essential software and Web site designs, while the third addressed a critical internal political issue. The sub-teams worked independently, but regularly shared information and progress reports. The team leader actively provided support and assistance, calling all-team meetings every two weeks or so.

Image, the fourth team with a high quality launch, in contrast, lost momentum. Shortly

after its initial meeting, during a progress report to the team's internal client (a division-wide leadership team) key managers (not on the team) severely criticized the team for not focusing on customers' needs. Subsequently, the team leader tried to refocus the project around its external customers and to rejuvenate the team, but these efforts failed; planned communications and progress reports never materialized, critical "voice of customer" data went uncollected, and team meetings were consistently postponed to the extent that they occurred only about once every six weeks.

The remaining two (ultimately low performing) teams floundered as well. The Chair team, for example, pursued only two of six potential goals it had identified, and then only half-heartedly. An agreement to conduct "best practice" research, for instance, resulted in compliance by only three of eight team members, and they simply perused Web sites rather than making calls or visits to exemplary firms. All-team meetings designed to discuss progress degenerated into intense debates over definitional and operational issues. This impasse continued for more than a month.

Midpoint Transition: Timing, Triggers, and Outputs

Part-way down the road, all six teams, irrespective of how things were going, reached a point where they found it necessary to step back from their chosen paths, recalibrate their progress, and alter their courses of action. The earliest team (Wood) and latest one (School, which was disbanded soon thereafter) reached this juncture 37% and 60% of the way between their launch meetings and original deadlines; the remaining four teams encountered it just about half way (specifically, between 46% and 56%) between these two milestones, however, so we chose to adopt Gersick's (1988, 1989) term, midpoint transition, to describe this point. In all six cases, this transition was triggered by a growing concern about the lack of progress being made and/or the amount of work that remained to be done vis-à-vis the teams' deadlines. Comments taken from interviews with participants on the Wood and Chair teams (to continue the extant examples) are illustrative. From the Wood team: "There was just too much work there ... I don't

think we could have ever met the deadline.”, “We had to adjust the schedule...” And from the Chair team: “We are in a death spiral ... We don’t even have a common definition of [our solution] yet.”

Notwithstanding timing and trigger similarities, team outputs at the midpoint transition clearly differed across the high and low performing teams. All of the former narrowed the scopes of their projects, revised their solution frameworks by discarding dysfunctional ideas and activities and integrating those that remained, and altered task designations to be consistent with the new solution frameworks. Again, we pick up the example of the Wood team. Its three sub-teams encountered difficulties just a few weeks into the post-launch period. There were delays in code writing and Web page design work; meantime, a major debate among company executives about the desirability of direct marketing to consumers almost scuttled the project altogether. With anxieties about lost time and the project’s viability mounting, the team leader called an all-team meeting that included the project’s main internal client, as well as the project champion. Concluding that the team had neither the time nor the organizational support to continue as planned, those assembled re-scoped its project by dropping the business-to-consumer (i.e., transactional) piece, established a new set of functionality requirements for what was now to be a strictly informational Web site, and drafted a new work plan to reflect revised tasks and milestones. The team emerged from this exercise with 41 of its original 97 days to deadline remaining.

In contrast, for the low performing teams, unlike Gersick’s (1988: 28) slow starters, midpoint transitions were anything but “... exhilarating periods of structuring, making choices, and pulling together”. Mired in its definitional impasse and sensing time pressure, the Chair team, to continue the current example, held a tumultuous meeting during which it finally adopted a broad, so-called “hinged”, definition of its service solution that once again skirted the fundamental “what’s in - what’s out” decision that had eluded the team all along. There was no sign of a solution framework, although the team did assign tasks to team members in a way that

shifted the focus from defining a solution to assembling and detailing the key features of the “hinged” solution. The team leader, however, was far from confident: “We have a broad understanding of what the [service solution] is and what it isn’t, [but] we still need to decide what kind of tools we need and what kinds of people we might need”. At this juncture, the Chair team had been in existence for two months and was just 31 days away from its deadline.

Meantime, the School team wrestled not only with the specification of its deliverable (in the words of the team leader, “[The ‘straw models’]... did not get us where we needed to be”), but also with an obvious lack of team member commitment and competence. It was at this point that both the project champion and the team leader, as noted earlier, lost confidence in the team’s ability to deliver and pulled the plug.

PHASE 3: POST-MIDPOINT TRANSITION TO SHOWDOWN

Following the midpoint transition, the five remaining teams once again entered periods of inertia that lasted until they encountered yet another transition point.

Post-Midpoint Transition Process

The three high performing teams emerged from their midpoint transitions focused on their revised solution frameworks and task designations, with a particular emphasis on resolving just a few make-or-break issues that stood between them and project completion. For example, the Glass team (the one high performing team not yet discussed in detail) concentrated its energy on just one major challenge: to reach agreement with company executives concerning the financials of the two pilot e-commerce programs. The activity was intense, and all did not go well. Over and over, the team struggled to come up with acceptable numbers, only to have them summarily rejected by line executives. One team member summed up the impasse as follows: “Numbers were key in the project champions’ minds. They wanted an ROI ... They were trying to push a business case template into something that didn’t fit ... If you put a number on a piece of paper, sooner or later you’ll get held to it ... That was the [business units’] concern”. This fundamental stalemate continued until just days before the Glass team was to

make its presentation to the organization's Corporate Excellence Committee.

At the same point, the two low performing teams that survived their midpoint transitions began to unravel. The Image team is illustrative. It still lacked agreement on a product definition. It had no firm plan for collecting the "voice of customer" data that had long been recognized as critical. Activity crept to a crawl. In the team leaders' words, "... [The project] wasn't anyone's first priority ... It was really hard to get people to meet".

Showdown: Timing, Triggers, and Action

As deadlines approached, all five remaining teams encountered a third transition -- what we call final showdowns -- which essentially were short, quick bouts of doubt and despair, diversion, and resolve. For the three high performing teams the showdowns came at nearly the last minute; that is, with just two, seven, and four days (or eight, eleven, and six percent of their launch to deadline times) remaining. The two low performing teams that were still in the game, perhaps sensing the inevitable, got to their showdowns much earlier, with 42 and 11 days (or 24% and 18% of their time since launch) remaining.

In all five cases, the showdown triggers consisted of accumulating concerns about the teams' abilities to produce high quality products or solutions in the time they had remaining. Consider again the case of the Glass team. With a week to go, team members began to fret about both the process -- "We weren't working together well" -- and the impending deadline -- "I didn't think we would make it." -- while the team leader was very concerned about the team losing face -- "I lost all confidence. I didn't see how we were going to get there and I expressed that ... How can we walk into the [presentation] without numbers? It would be terrible". Meantime, the leader of the Image team, our instant unsuccessful case, had lost all hope of finishing its project anywhere near the deadline, yet was still expressing concern that "... to drag it out would ... give it death".

As concerns mounted, four of the five teams searched for a way out, primarily by appealing to their project champions for relief in the form of more time, more resources, and

even hands-on intervention. (The Chair team lacked this option since its project champion had left the firm eight days earlier.) The responses of the project champions were bifurcated. Those affiliated with the high performing teams refused to budge on deadlines or resources, but did soften the blow a bit by offering to help in any way they could. The champion of the Glass team, for example, upon learning of its impasse with the Vice Presidents over financials, first made it clear that the team had no choice but to “be there” for its scheduled presentation to the Corporate Excellence Committee. But then she quickly initiated and actively participated in a series of three intense ad hoc meetings that eventually broke the logjam.

Image, the fourth team to appeal to its project champion, however, had an altogether different experience. The team’s request for additional people to help complete the project was summarily denied, and there was no offsetting offer of assistance.

PHASE 4: POST-SLOWDOWN TO COMPLETION

With no way out, all three high performing teams, not altogether happily, kicked their efforts into high gear and entered a period best described as heroic improvisation which the participants found simultaneously exhausting and exhilarating, and which carried the teams on, in all cases, to successful project completion. The Glass team, for example, had just a few days left to finalize an acceptable set of financials. The team’s leader and members worked almost around the clock in what they described as a constant stream of spontaneous and scheduled meetings, conference calls, and late night dinner sessions. There was, as one participant put it, “... a lot of back and forth”, with, in the words of another, “decisions [being made] on the fly”. “We felt like we were attached to the front of a train, laying down on the tracks right before the train runs over us”, the project champion said of the time, “I can’t tell you the amount of discretionary time the team spent to get this done”.

The Image team, on the other hand, took the denial of its request for additional resources as an indication that its deadline was meaningless and its project lacked priority and, from that point on, in the words of one team member, “... just kept plodding along”. Four

months after its original deadline, with just one of its five initiatives completed, the team was disbanded. Chair, the other remaining low performing team, having finished its last scheduled meeting shortly before its original deadline with "... six to eight big gaps that needed addressing" and its project champion gone, also basically disbanded. Two members of the team remained to work with an internal consultant for another couple of months and eventually produced a solution that, in many team member's minds, still left a lot of questions about "... what we will do and what we won't do".

DISCUSSION

Previous research on project team effectiveness has primarily taken the form of cross-sectional studies of relationships between team or task characteristics and various measures of team outcomes (Cohen and Bailey, 1997). The present study adds to this body of knowledge by examining similarities and differences in patterns of project team development across high and low performing teams. At the macro level, the findings show a remarkably similar pattern of project team development irrespective of ultimate team performance. At the micro level, however, they not only show considerable differences in the specifics of the activities undertaken and outputs produced at various phases of project team development, but also strongly suggest that these differences, particularly those in the early going, help to explain the observed variations in project team effectiveness.

Overall Pattern of Project Team Development

Our first research question asked: To what extent and in what ways, if at all, do overall patterns of project team development differ across high and low performing teams? The answer, based on our analyses, is that there are no major differences (with the notable exception of teams that prematurely disband). Overall, the teams we studied progressed, as Gersick's (1988, 1989) broadest conceptualization suggested might be the case, through four clearly identifiable phases -- mobilization and launch, post-launch to midpoint transition, post-midpoint transition to showdown, and post-showdown to completion (refer again to Figure 1) --

each consisting of a period of inertia that ended with a change in direction and/or intensity of the teams' activities.

While this pattern of continuity and change is broadly consistent with Gersick's (1988, 1989) PEM, our findings also extend the model in a couple of important respects. The most obvious addition is the mobilization and launch phase. This was uncovered as a result of beginning data collection when projects were initiated rather than when the teams first met. Our study supports Gersick's (1988) observation that project teams' establish distinctive and crucial behavior patterns during their first formal meetings, as well as her speculation that in organizational settings the nature of these behavioral patterns is strongly influenced by activities that occur before the project teams actually gather for the first time (see also Bettenhausen and Murnighan, 1985). It might be argued that project teams begin their existence only when the members initially meet. The counter-argument, however, supported by the results of the present study, is that researchers who ignore, or in the laboratory cannot replicate, this surprisingly time-consuming phase of project team development run the risk of missing an important determinant of the ways in which such team subsequently develop and perform.

Our second extension of the PEM involves the final phase, showdown to completion. Gersick (1988, 1989) alluded to such a phase, but our study adds to her brief notation by specifying and documenting the timing and nature of the transition we call showdown that precedes and, in many ways, shapes the content and especially the intensity of the activities leading to project completion. Further in-depth study of this phase of project team development would also seem appropriate, especially in the context of research pertaining to the role of deadlines on team behaviors (Waller, Conte, Gibson, and Carpenter, 2001).

Recently, as Cohen and Bailey (1997) urged, PEM research has seen a bit of a resurgence, mostly in the form of classroom or laboratory simulations using student samples (e.g., Seers and Woodruff, 1997; Arrow 1997; Jehn and Mannix, 2001; Chang, et al, in press). It is our

hope that the present study, along with the extended model shown in Figure 1, will encourage broader and deeper explorations of the phases and patterns of successful and unsuccessful project team development in actual organizational settings.

Distinguishing Characteristics of High and Low Performing Teams

Our second, and more important, research question was: To what extent and in what ways, if at all, do the specific activities engaged in and outputs produced at various phases of project team development differ across high and low performing teams? At this point, following the model shown in Figure 2, we integrate the results of our study with other relevant research to explore tentative answers to this question and suggest propositions to guide further research.

Figure 2. Distinguishing characteristics of high performing teams

| PHASE 1: MOBILIZATION AND LAUNCH | | PHASE 2: POST-LAUNCH TO MIDPOINT TRANSITION | | PHASE 3: POST-MIDPOINT TRANSITION TO SHOWDOWN | | PHASE 4: POST-SHOWDOWN TO COMPLETION | |
|--|--|--|--|---|---|--|--|
| <i>Process</i> | <i>Outputs</i> | <i>Process</i> | <i>Outputs</i> | <i>Process</i> | <i>Outputs</i> | <i>Process</i> | <i>Performance Outputs</i> |
| Rapid mobilization and launch Comprehensive mobilization strategy Participatory launch meeting | Resource alignment → Complete and actionable performance strategy | High level of internal and external collaboration and coordination | Narrowed project scope → Detailed solution framework Clear task designations | High level of implementation-focused collaboration | Project champion insistence on project completion | Heroic improvisation | Timely, high quality, and collectively owned product or solution |

Mobilization and Launch. Leaders of the high performing teams mobilized and launched their teams in about one-third of their total available times (from initiations to initial deadlines), while leaders of two of the other three teams (Image was the exception) took roughly one-half their total available times just to get started. Notwithstanding, leaders of the three high performing teams devoted much more time and effort to this phase and, we think as a result, their teams emerged from the phase with obviously higher quality outputs.

Specifically, the leaders of the high performing teams employed a comprehensive mobilization strategy that involved a number of colleagues in clarifying the scopes and specifics of their projects and the potential roles, responsibilities, and requisite competencies of team members, as well as in locating potential team members. These leaders then focused their teams' launch meetings on substantive issues (e.g., goals, challenges, and the formation of action plans) and designed and conducted the meetings in a way that elicited open, yet focused, discussions of these issues. These three teams emerged from the mobilization and launch phase not only appropriately staffed, but also with complete and actionable performance strategies consisting of clear statements of their proposed products or solutions, agreed upon work plans for moving forward, and clearly specified sub-group and individual task assignments. Conversely, the leaders of the low performing teams employed limited mobilization strategies that were primarily one- or two-person shows concentrating on timetables and work plans rather than the content of their projects. They relied primarily on their own circle of contacts to locate potential team members and used political rather than competency criteria to make their final selections. Their leader-centered approach to mobilization carried over to the teams' launch meetings. While these leaders hoped to use the meetings to communicate agendas and activate work plans, in fact the sessions devolved into extended and inconclusive discussions of definitional issues and team inadequacies. Thus, all the low performing teams emerged from the mobilization and launch phase poorly staffed and two of the three (again Image was the exception) had only very vague notions about where they were going or how they were going to

get there. Thus:

Proposition 1: Project teams leaders who aggressively pursue comprehensive mobilization strategies and conduct participatory launch meetings are more likely than those who more casually pursue limited mobility strategies and conduct leader-centered launch meetings to emerge from the initial phase of project team development with high quality outputs.

It is hardly surprising that team leaders who drill down hard on the content of their projects, obtain voluminous input on the issues involved from a wide circle of knowledgeable sources (including potential team members) before their launch meetings, remain flexible on process until they see how their projects unfold, and then use their launch meetings to engage in wide-ranging discussions on substantive matters would emerge from the process with high quality performance strategies. Indeed, it would be quite discouraging if the situation were otherwise. What is surprising, however, is why three of the team leaders eschewed these seemingly obvious activities and approaches during the mobilization and launch phase. This apparent anomaly let us to conduct, within the bounds of available data, a post-hoc examination of potential explanations in hopes of raising issues to be explored in subsequent studies.

We began by considering the possibility that the perceived importance and urgency of the projects varied across the organizations involved. On-site observations, as well as data from the interviews, seemed to suggest that all six teams were formed to deal with significant, and for these organizations novel, business issues. Also, with the exception of Image (which ironically traversed the mobilization and launch phase relatively quickly despite having the most extended deadline), the high and low performing teams did not differ much in the tightness of their deadlines. But, the high performing teams did have deadlines that were tied to external events (reports to key executive committees in two instances and an already scheduled trade-show presentation in the third), while the low performing teams' deadlines were more or less arbitrarily set by their project champions. Thus, the team leaders in the former cases may have perceived the deadlines as more salient and, thus, been moved not only to a greater sense of

urgency but also to a more attentive approach to their activities in the early going (Waller, et al, 2001).

Also, the project champions of the high performing teams played an active part in the team's mobilization activities, while comparable involvement occurred in only one instance among the low performing teams. Team leaders may have interpreted these differences as indicative of project importance or urgency. Or it may be that these leaders simply benefited from the project champions' expertise or insights into their projects. Which raises yet another possibility; perhaps in this milieu the leaders of the high performing teams were simply more competent than were the leaders of the low performing teams (a point we will return to later).

Subsequent Phases of Project Team Development. Armed with clear and compelling outputs from their launch meetings, the high performing teams were off and running. Mostly in sub-teams, they quickly began working with key constituencies both within and outside their firms, to gather and evaluate essential ideas and data; activities Ancona and Caldwell (1992a) refer to as technical scouting and coordinating. While certainly not problem-free, these teams nonetheless achieved high levels of collaboration and coordination by engaging in nearly constant communication and by holding frequent meetings. When doubts and concerns about their approaches and progress neared boiling points, these teams were quick to recognize their problems and to regroup and recalibrate. At their midpoint transition meetings, despite considerable tumult, they were able to narrow their projects' scopes, revise their solution frameworks, and alter work plans and team member assignments.

With midpoint transitions traversed, the high performing teams hunkered down. The two whose projects involved designing and/or recommending solutions focused on data analysis, negotiations to reach agreement on final numbers with key constituencies, and details of their presentations. The third team, whose main worry was implementation, put most of its effort into assembling a final product. Notwithstanding solid, if not always smooth, progress, all three of these teams hit another wall just two to seven days before their final deadlines. All three had

serious showdowns with their project champions, appealing for relief, which they did not get, and in some cases assistance, which they did.

This over, all three, not altogether happily, kicked into overdrive and with bursts of heroic improvisation (that post hoc were sources of great pride) finished their projects on time, with high quality solutions or products that had widespread support among the participants.

Certainly, we are not the first to allude to the importance of project team mobilization and launch. Gersick (1989: 37), for example, urged team leaders to prepare carefully for launch meetings, given their importance in forming early team activity patterns. Ancona (1990) found that strategies prepared prior to launch meetings influenced the nature of subsequent team activity and performance. Brown and Eisenhardt (1997) emphasized the importance of carefully choreographing the early days of new product teams by staggering start dates, defining project scopes prior to selecting team members, and matching team members' skills and abilities to project needs. Our results add to these findings and, we believe, strongly suggest that the mobilization and launch phase of project team development offers students of project team effectiveness a much richer avenue for research than has heretofore been recognized.

Indeed, it is our view that the nature of the task-work undertaken and the quality of the outputs produced during the mobilization and launch phase of project team development are major determinants of the success with which teams traverse subsequent phases of the development process and of their ultimate performance. More specifically, we propose the following: Project teams that move (relatively) quickly through, and use a comprehensive strategy during, mobilization and use a participatory approach during launch meetings, and, thus, emerge from this phase of project team development with high quality outputs (proper resource alignments and complete and actionable performance strategies) are more likely than project teams that do not do and achieve these things to:

Proposition 2: Conduct essential within-firm and external technical scouting and coordination activities and engage in high levels of within-team collaboration during their post-launch periods and, thus,

Proposition 3: Produce high quality outputs during their midpoint transitions and, thus,

Proposition 4: Focus on the specifics or implementation of their solutions or products and engage in further high levels of collaboration during their post-midpoint transitions and, thus,

Proposition 5: Encounter insistence on project completion, as well as offers of assistance, from project champions during their showdowns and, thus,

Proposition 6: Engage in heroic improvisation to complete their projects on time and successfully during their post-showdown periods.

Looking at the other side of the coin, two of the three low performing teams in the present study spent nearly one-half their allotted times in the mobilization and launch phase, and basically emerged with little to show for it. Both teams were inadequately staffed and at the end of their launch meetings experienced great confusion among their team members as to why they were involved and what they were supposed to be doing. One of these teams (School) did little following its launch meeting and disintegrated at its midpoint transition. The other (Chair) suffered from low levels of collaboration throughout its project, failed to produce high quality outputs at either its midpoint transition or showdown, and finally disbanded just before its deadline, leaving an ad hoc group to wrap up its work.

The most interesting and illuminating case, though, is that of the third ultimately low performing team, Image. This team traversed the mobilization and launch phase relatively quickly. During mobilization, however, the team leader employed a mixed strategy to focus and staff the project. In a positive vein, she focused more on content than process; on the other hand, she failed to involve anyone other than the project champion in task design deliberations or in the selection of team members who were chosen primarily on political grounds. Going into the launch meeting, the team's project champion attempted to clarify both the purpose and scope of the project and, in turn, asked team members to come to the meeting armed with potentially useful ideas. The meeting itself, however, was designed to be leader-centered, and in fact rather rapidly evolved into an open discussion characterized by considerable confusion

and concern, particularly about the absence of key people with the ability to answer critical questions (which might have been taken as a sign that the project was a low priority for the firm). Notwithstanding, the team emerged from the meeting with a complete and actionable performance strategy. But, subsequently little was done to implement the strategy and an attempt to re-launch and rejuvenate the team failed. Thereafter, the team struggled along until, some four months late, it completed one of its five original initiatives and disbanded.

Collectively, the experiences of low performing project teams suggest that a successful mobilization and launch may be a necessary, if not sufficient, condition for project team effectiveness, while the mixed experience of the Image team in particular suggests that the elements of this phase may be an all or nothing proposition. Thus,

Proposition 7: Project teams that fail to complete the full range of activities in a manner consistent with Proposition 1 above and, thus, fail to emerge from the mobilization and launch phases of project team development both adequately staffed and with a complete and actionable performance strategy are unlikely to be high performers if they push ahead to subsequent phases of team development rather than returning to the mobilization and launch phase to correct their deficiencies.

In this context, we believe that resource alignment -- having sufficient numbers of, and/or time commitments from, team members whose competencies match with project task requirements -- is a critical, but generally unexplored, component of project team design (Hackman and Oldham, 1980; Brown and Eisenhardt, 1997). Studies have shown that a number of team design characteristics are complexly and apparently contingently related to team performance (e.g., Ancona and Caldwell, 1992b; Eisenhardt and Tabrizi, 1995; Jehn, Northcraft, and Neale, 1999; Pelled, Eisenhardt and Xin, 1999). In the present study, several commonly cited project team design characteristics -- size, functional diversity, gender mix, and co-location -- showed no consistent relationship to performance, while resource alignment clearly did. This suggests that the mixed results in previous studies may be accounted for by

variations in project teams' resource alignments. It also suggests that theoretical admonitions to design project teams to ensure that team members reflect all groups with stakes in the outcomes (e.g., Kessler and Chakrabarti, 1996) may be misguided, unless full consideration is also given to time commitment and competency issues. More specifically,

Proposition 8: Relationships between project team design characteristics -- such as the number, functional backgrounds, demographics, and locations of team members -- and project team effectiveness will be modified, if not overwhelmed, by the extent to which team members' time commitments and competencies match the requirements of the tasks the teams are expected to perform.

Another potentially promising avenue for further research, alluded to earlier, pertains to project team leadership across time (e.g., Ancona, 1990; Clark and Wheelwright, 1992; Eisenhardt and Tabrizi, 1995; Lewis, Welsh, Dehler, and Green, 2002). In the present study, tacks taken by the project champions and team leaders during the mobilization and launch phase differed in clear and obvious ways across the high and low performing teams. Since most of the project champions and all of the team leaders stayed with their projects to the end, it seems plausible, although given our data impossible to demonstrate, that those who were on the mark in the early going continued to be effective during the later phases of project team development as well. It would, of course, be useful for future studies systematically to compare the behaviors and effects of project champions and team leaders within and across the various phases of team development across high and low performing project teams (Edmondson, et al, 2001).

Limitations

The exploratory nature of this analysis, as well as the limited size and particular nature of the project teams examined, forbid the drawing of firm conclusions. Thus, subsequent researchers must consider the foregoing as at best suggestive.

Certainly, the generalizability of our results is, as always, limited by boundary conditions that need to be expanded in future studies. For example, while our data collection emphasized task-work, several important teamwork variables became apparent at various points in the analysis, most notably participant involvement during the mobilization period and team collaboration during the post -launch, post-midpoint transition, and post showdown periods. Deeper phase-by-phase probes not only into task-work, but also into teamwork (and perhaps even psycho-social characteristics or emergent states), are clearly warranted (e.g., Chang, et al, in press; Marks et al, 2001). Further, we studied only six project teams. To some extent, the experiences of these teams may generalize since they were drawn from five different companies and were working on quite different projects with variable life spans. But, at the same time, all six teams consisted of members who by-and-large had little previous experience working with one another and all six were working on projects involving fairly novel tasks. Previous research suggests that team member familiarity (Goodman & Leydon, 1991) and task novelty (McDonough & Barczak, 1992; Keller, 1994; Olson, Walker & Reukert, 1995) may affect the nature of project teams' activities and perhaps performance. It would be helpful, therefore, if future studies included larger samples reflecting project teams drawn from different types of organizations and with different make-ups and tasks.

We believe that, given the current state of knowledge, qualitative, longitudinal case studies conducted in field settings offer the best hope of teasing out the obviously complex relationships among phases of project team development and project team effectiveness. The immediate task, it seems, is to clarify and enhance our understanding of the various phases of project team development in terms of task-work, teamwork, and leadership activities, as well as their associated outputs. With this information in hand, it should be possible to design laboratory studies to firmly nail down preferred I-P-O combinations both within phases and, more important, across phases to overall project team effectiveness.

CONCLUSION

Broadly, the findings of this exploratory study suggest that project teams tend to follow a common, four-phase development pattern irrespective of the quality of the activities undertaken or the outputs produced during the various phases. More specifically, though, the findings tentatively suggest that this is bad policy; activities during and, especially, outputs emanating from the mobilization and launch phase appear to exert considerable influence on what can and does happen during subsequent phases of team development, as well as on ultimate team performance. Project teams that emerge from this initial phase properly staffed for the task ahead and with complete performance strategies tend to stay on task and have the wherewithal to effectively, if not easily, traverse the inevitably troubling transitions that occur later on. Teams that fail to achieve these outputs, however, and plunge ahead rather than taking time to recover, for whatever reasons, seem never to be quite able to get on track.

So, without in any way dismissing the inherent limitations of the present study, we believe that it offers one overriding suggestion for researchers (and implication for practitioners): The clearest path to understanding (and generating) project team effectiveness may well lie in systematically unraveling (and managing) the complexities of project team development right from the start.

References

- Ancona, D.G. 1990 "Outward bound: Strategies for team survival in an organization." *Academy of Management Journal*, 33: 334-365.
- Ancona, D.G., and D.F. Caldwell 1992a "Bridging the boundary: External activity and performance in organizational teams." *Administrative Science Quarterly*, 37: 634-665.
- 1992b "Demography and design: Predictors of new product team performance." *Organization Science*, 3: 321-341.
- Ancona, D.G., G.A. Okhuysen, and L.A. Perlow 2001 "Taking time to integrate temporal research." *Academy of Management Review*, 26: 512-529.
- Arrow, H. 1997 "Stability, bi-stability, and instability in small group influence patterns." *Journal of Personality and Social Psychology*, 72: 75-85.
- Arrow, H., and J.E. McGrath 1993 "Membership matters – how member change and continuity affect small group structure, process, and performance." *Small Group Research*, 24: 334-361.
- Bales, R.F. and F.L. Strodbeck 1951 "Phases in group problem solving." *Journal of Abnormal and Social Psychology*, 46: 485-495.
- Bettenhausen, K.L. and J.K. Murnighan 1985 "The emergence of norms in competitive decision making groups." *Administrative Science Quarterly*, 30: 350-372.
- Brown, S.L., and K.M. Eisenhardt 1995 "Product development: Past research, present findings, and future directions." *Academy of Management Review*, 20: 343-378.
- 1997 "The art of continuous change: Linking complexity theory and time-paced evolution in relentlessly shifting organizations." *Administrative Science Quarterly*, 42: 1-34.
- Chang, A., P. Bordia, and J. Duck In press "Punctuated equilibrium and linear progression: Toward a new understanding of group development." *Academy of Management Journal*.
- Clark, K., and S.C. Wheelwright 1992 "Organizing and leading "heavyweight" development teams." *California Management Review*, Spring.
- Cohen, S.G., and D.E. Bailey 1997 "What makes teams work: Group effectiveness research from the shop floor to the executive suite." *Journal of Management*, 23: 239 –290.
- Edmonson, A.C., R.M. Bohmer, and G.P. Pisano 2001 "Disrupted routines: Team learning and new technology implementation in hospitals." *Administrative Science Quarterly*, 46: 685-716.
- Eisenhardt, K.M. 1989a "Building theories from case-study research." *Academy of Management Review*, 14: 532-550.
- 1989b "Making fast decisions in high velocity environments." *Academy of Management Journal*, 32: 543-576.
- Eisenhardt, K.M., and B.N. Tabrizi 1995 "Accelerating adaptive processes: Product innovation in the global computer industry." *Administrative Science Quarterly*, 40: 84-110.
- Gersick, C.J.G. 1988 "Time and transition in work teams: Toward a model of group development." *Academy of Management Journal*. 31: 9-41.
- 1989 "Marking time: Predictable transitions in task groups." *Academy of Management Journal*, 32: 274-309.
- Gersick, C.J.G., and M.L. Davis-Sacks 1990 "Summary: Task forces." In J.R. Hackman (ed.), *Groups That Work (and Those That Don't): Creating Conditions for Effective Teamwork*: 146-154. San Francisco: Jossey-Bass.
- Gist, M.E., E.A. Locke, and M.S. Taylor 1987 "Organizational behavior: group structure, process, and effectiveness." *Journal of Management*, 13: 237-258.
- Goodman, P.S., B.S. Lawrence, D.G. Ancona, and M.L. Tushman 2001 "Introduction to the Special Topic Forum on Time and Organizational Research" *Academy of Management Review*, 26: 507-511.
- Goodman, P.S., and D.P. Leydon 1991 "Familiarity and group productivity." *Journal of Applied Psychology*, 76: 578-586.

- Guzzo, R.A., and G.P. Shea 1992 "Group performance and intergroup relations in organizations." In M.D. Dunnette (ed.), *Handbook of Industrial and Organizational Psychology*: 269-313. Palo Alto, CA: Consulting Psychology Press.
- Hackman, J.R. 1983 "A normative model of work group effectiveness." Technical Report #2, Group effectiveness research project, School of Organization and Management, Yale University.
- 1990 *Groups That Work (and Those That Don't): Creating Conditions for Effective Teamwork*. San Francisco: Jossey-Bass.
- Hackman, J.R. and G.R. Oldham 1980 *Work Redesign*. Reading, Mass: Addison-Wesley.
- Jehn, K.A. and E.A. Mannix 2001 "The dynamic nature of conflict: A longitudinal study of intragroup conflict and group performance." *Academy of Management Journal*, 44:238-251.
- Jehn, K.A., G. Northcraft, and M. Neale 1999 "Why differences make a difference: A field study of diversity, conflict and performance in workgroups." *Administrative Science Quarterly*, 44: 741-763.
- Keller, R.T. 1994 "Technology-information processing fit and performance of R&D project groups: A test of contingency theory." *Academy of Management Journal*, 37: 58-74.
- 2001 "Cross-functional project groups in research and new product development: Diversity, communications, job stress and outcomes." *Academy of Management Journal*, 44: 547-556.
- Kessler, E.H., and A.K. Chakrabarti 1996 "Innovation speed: A conceptual model of context, antecedents, and outcomes." *Academy of Management Review*, 21: 1143-1191.
- Koslowski, S.W.J, S.M. Gully, E.R. Nason, and E.M. Smith 1999 "Developing adaptive teams: A theory of compilation and performance across levels and time." In D.R. Ilgen and E.D. Pulakos (eds), *The changing nature of work performance: Implications for staffing, personnel actions, and development*: 240-292. San Francisco: Jossey-Bass.
- Lewis, M., M.A. Welsh, G.E. Dehler, and S.G. Green 2002 "Product development tensions: Exploring contrasting styles of project management." *Academy of Management Journal*.
- Lim S.G.S, and J. K. Murnighan 1994 "Phases, deadlines, and the bargaining process." *Organizational Behavior and Human Decision Processes*, 58: 153-171.
- Marks, M.A., J.E. Mathieu, and S.J. Zaccaro 2001 "A temporally based framework and taxonomy of team processes." *Academy of Management Review*, 26: 343-360.
- McDonough, E.F., and G. Barczak 1992 "The effects of cognitive problem-solving orientation and technological familiarity on faster new product development." *Journal of Product Innovation Management*, 9: 44-52.
- McGrath, J.E. 1986 "Studying groups at work: Ten critical needs for theory and practice." In P.S. Goodman (ed.), *Designing Effective Work Groups*: 362-192. San Francisco: Jossey-Bass.
- 1991 "Time, interaction, and performance (TIP): A theory of groups." *Small Group Research*, 22: 147-174.
- Miles, M.B., and A.M. Huberman 1994 *Qualitative Data Analysis*. Thousand Oaks: Sage.
- Olson, E.M., O.C. Walker, and R.W. Ruekert 1995 "Organizing for effective new product development: The moderating role of product innovativeness." *Journal of Marketing*, 59: 48-61.
- Pelled, L.H., K.M. Eisenhardt, and K.R. Xin 1999 "Exploring the black box: An analysis of work group diversity, conflict and performance." *Administrative Science Quarterly*, 44: 1-28.
- Seers, A., and S. Woodruff 1997 "Temporal pacing in task forces: Group development or deadline pressure?" *Journal of Management*, 23: 169-187.
- Sheremata, W.A. 1998 "Centrifugal and centripetal forces in radical new product development under time pressure." *Academy of Management Review*, 25: 389-408.
- Smith, C., and D. Comer 1994 "Self-organization in small groups: A study of group

- effectiveness with non-equilibrium conditions." *Human Relations*, 47: 553-582.
- Strauss, A.L. and J.M. Corbin 1992 *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*. Newbury Park, CA: Sage.
- Tuckman, B.W. 1965 "Developmental sequences in small-groups." *Psychological Bulletin*, 63: 384-399.
- Tuckman, B.W., and M. Jensen 1977 "Stages of small-group development." *Group and Organizational Studies*, 2: 419-427.
- Verona, G. 1999 "A resource-based view of product development." *Academy of Management Review*, 24: 132-142.
- Waller, M.J. 1999 "The timing of adaptive group responses to non-routine events." *Academy of Management Journal*, 42: 127-137.
- Waller, M.J., J.M. Conte, C.B. Gibson, and M.A. Carpenter 2001 "The effect of individual perceptions of deadlines on team performance." *Academy of Management Review*, 26: 586-600.
- Wheelan, S.A. 1994 *Group Processes: A Developmental Perspective*. Sydney: Allyn and Bacon.
- Yin, R.K. 1994 *Case Study Research: Design and*