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Managing Team – Stakeholder Knowledge Linkages: Their Impact on New Product Development Team Success

Abstract:

Although research on innovation teams has become an elaborated field in organization theory, there are few studies that have treated teams and their internal and external knowledge linkages as the level of analysis. Based on the innovation team literature, knowledge linkages within and outside of the team have an important impact on performance. We investigated new product development teams within a mature chemical company to explore the relationship between team success and knowledge network linkages between team members and their stakeholders. While previous team innovation studies have primarily concentrated on team members, this research extends beyond this work by pointing towards the conditions of successful knowledge linkages across the team. Based on qualitative data collection and analysis, we build a model of new product development team success offering three propositions suggesting that effective NPD teams require perceptual agreement between team members and internal stakeholders, a large number of external company stakeholder knowledge linkages and many non-redundant internal company knowledge linkages. Contrary to existing research, our data suggests that there are both costs and benefits associated with extensive communication between team members and organizational stakeholders.

Introduction

New product development (NPD) includes all activities needed to conceive, design, produce and deliver a product to the market, including solving a steady stream of problems. This requires, on the one hand, generating ideas and, on the other hand, collectively implementing the ideas generated. Teams have widely been recognized as the driver of new product development efforts (Brown and Eisenhardt, 1995; Clark and Fujimoto, 1991).

New product development teams require structures and processes that facilitate both creative action and collective action (Sheramata, 2000). To help foster creative action, principles such as decentralized decision-making and sharing information across hierarchical divisions are frequently implemented. To facilitate collective action, multifunctional teams integrate dispersed knowledge by using plans and schedules to direct the creative processes towards commonly established goals. New product development teams, like high-performing organizations, require both elements (Eisenhardt, 1989) in order to support innovation. The key question that emerges is how do new product development (NPD) teams bridge the knowledge flow inside and outside of the team to accomplish these twofold challenges.

Managing the Knowledge Flow Inside and Outside the New Product Development Team

Efficient knowledge flow in new product development teams (NPD) is frequently associated with overcoming problems at two levels: those affecting the team and those affecting the relationship between the product development team and other stakeholders (Dougherty and Hardy, 1996). At the team level, problems include positioning the product in the market, understanding new markets and forming multifunctional team. When team level problems are resolved, innovation still does not always occur (Dougherty and Hardy, 1996). This second level of problems affects the interface with the rest of the organization and with outside constituents.

At the team–organization interface, managing the knowledge flow with functions such as production, marketing and sales, and HR, etc. has been shown to be crucial to help coordinate activities needed to design, develop and market the new product. At the interface between the team and external constituents, there is a need to acquire external resources and knowledge (Griffin and Hauser, 1992), which includes incorporating customer and supplier input in order to develop a product that responds to the demands of the customer. It is only when problems at the team level and between the team and other stakeholders – both inside and outside the organization – are resolved at multiple stages of innovation that new businesses based on new product introductions can develop (Dougherty and Hardy, 1996; Souder, 1988). Although the importance of managing the knowledge flow within the team has long been recognized, the importance of the knowledge flow between the team and other organizational or outside stakeholders is an area that has not been sufficiently explored.

Theories of knowledge creation and transfer suggest that if new product development teams are able to create dense knowledge networks within the team and build bridges between different organizational and outside stakeholders (Nonaka and Takeuchi, 1995; Davenport and Prusak, 1998; Kogut and Zander, 1992), they will be more successful in creating new businesses. Dense networks foster shared understanding that leads to the creation of knowledge within the team, which is necessary to mobilize innovative action and help establish communication channels across the team that lead to the implementation of innovative ideas. Empirical evidence suggesting that dense knowledge networks and innovation success have a strong positive relationship is starting to emerge. While Reagans and Zuckerman (2001) have found that dense and heterogeneous internal team networks have a positive influence on team success, Sparrowe et al. (2001) primarily focus on the negative relationship between dense negative relationships among team members and a lack of success. But all of these studies focus on the effects of structural communication properties within the team and their effect on performance. The innovation team literature does, however, suggest

that the knowledge flow between team members and other stakeholders is equally if not more important (Ancona and Caldwell, 1992a; b). The importance of knowledge linkages to stakeholders lies in the opportunity of teams to tap into important and valuable resources and knowledge outside of the team. Being embedded in social relationships offers a team access to these resources and leads to team success (Lin et al., 2001; Burt 2001). Being closely connected supports the emergence of effective norms, increases trustworthiness, thereby reduces uncertainty leading to better cooperation and thus higher performance. In our study, we therefore wanted to investigate the impact of knowledge linkages between the innovation team and their internal and external stakeholders on team success.

INSERT TABLE 1 ABOUT HERE

Research Approach and Method

We concluded from our literature review (see Table 1) that building on the existing NPD team effectiveness studies, it is important to investigate the team input, team process variables and team's output over time. Although team – stakeholder knowledge linkages can primarily be associated with the existing team process variables such as boundary management (Gladstein, 1984) or interfunctional harmony (Souder, 1988), there are other methods previously underexplored such as the social network approach or 360° feedback data. Given the multitude of method choices in investigating team-stakeholder knowledge linkages and the dynamic nature of changing linkages over time, we chose a qualitative, grounded theory study (Eisenhardt, 1989). We designed our study to take into account the most important categories of team effectiveness studies and their underlying assumptions. Table 2 shows the categories and subcategories we incorporated into our study based on their importance in previous research. At the same time, we allowed for sufficient space to make adjustments to these categories based on our findings from the analyses.

INSERT TABLE 2 ABOUT HERE

We studied eight NPD teams within a global manufacturing company over a period of 36 months: two periods of data collection plus two periods of interviewing with the team leaders and their bosses. The first data collection period was followed by a period of interviewing with the team leaders and bosses. A second round of data collection led to another round of interviews with the team leaders. Data was collected through multiple methods, including interviews, questionnaires and quantitative company documentation. The data collection protocol is summarized in Table 3.

INSERT TABLE 3 ABOUT HERE

Site and Case Selection

The research site was at Manufacturing Corp. with annual sales of \$23 billion and over 40,000 employees in 2001. At the time of the first round of data collection, the company covered a wide range of markets and products, including food, transportation, health and medicine, personal and home care, and building and construction. The company operated across North America, Europe and Asia. One-site sampling schemes have been used widely in innovation research as broad contextual factors like structural characteristics and industry that are known to influence the innovative ability can be controlled (Tsai and Ghoshal, 1998).

Using a theoretical replication logic with multiple cases (Yin 1989), the eight NPD projects were identified based on their longevity, their growth potential for the company and the continuing support from the company's senior management sponsors. After receiving initial funding, the projects were regularly evaluated using a stage-gate process consisting of five stages: Preliminary Investigation, Building the Business Case, Testing and Validation, Development and Market Launch. All of the projects moved from Building the Business Case to Development throughout the study period. All of the teams studied consisted of core team members and peripheral members who were stakeholders within the company supporting the team from a functional perspective, either

within marketing, manufacturing, R&D, finance, legal, etc. (see Table 4 for more information on the teams). In terms of team composition, we did not find any particular link between the individual team composition data and team success. Therefore we are not reporting on the team input variables.

INSERT TABLE 4 ABOUT HERE

Data Collection

We collected data from multiple sources at several points in time, which allowed the tracking of categories. This led to multiple templates of findings across the eight NPD teams, a process recommended by qualitative research (Miles and Huberman, 1994). We analyzed the findings on each category across the eight teams and continued to reassess the validity of the initial categories. The different sources of data collection added richness and enhanced the final model. The two primary data collection methods were 360° questionnaires and communication network questionnaires. In the validated 360° questionnaire (Fey and Denison, 2003), the team members and the stakeholders were asked to evaluate the team on 12 indices covering four traits: adaptability, mission, consistency and involvement. Upstream stakeholders were organizational members from marketing & sales and downstream were from R&D and production. The communication network questionnaire consisted of a team and team-stakeholder communication network on knowledge exchange. Both instruments reflect knowledge linkages but from two different perspectives. While the 360° questionnaire looks at the distributed cognition of people in organizations (Boland and Tenkasi, 1995) as team members and stakeholders make sense of their environment, the communication network questionnaire identifies the conduit through which information flows from sender to receiver reflecting the information-processing school of thought (Tushman, 1978).

In addition, semi-structured interviews with management of the NPD teams and the team leaders themselves were conducted. The first round of interviews consisted of an evaluation of the team

from management's perspective and the second round of interviews focused on team dynamics. During most of the interviews there were two individuals present and communication logs were transcribed.

There are a multitude of success measures for new product development teams (Cooper and Kleinschmidt, 1995) ranging from financial performance, time performance to team effectiveness. Given the large number of potential performance measures for new product development teams, it can be argued that multiple perspectives and criteria need to be taken into consideration. Given that new product development teams will be evaluated differently depending on who evaluates, it has been suggested that multiple evaluators (e.g. team, internal company stakeholders, bosses) ought to be used (Hoegl and Gemuenden, 2001). For the purpose of this study, team performance was described in terms of efficiency and effectiveness. Efficiency was assessed by multiple stakeholders – the team itself, internal company stakeholders and the project team's boss(es) - in terms of adherence to schedules and budgets. This evaluation therefore is a reflection of actual vs. intended inputs. The second performance measure was an effectiveness measure and refers to the degree to which the teams reached their financial goals. Here the company's financial data – actual sales 2003 vs. forecasted sales 2000 – were used. This measure therefore reflects actual vs. intended outcomes. While there were deviations between the two performance measures for “middle range” teams, performance data for the high and low performing teams was consistent across the two measures.

Data Analysis

Data collection and analysis were intertwined although here they are presented as different conceptual stages of the research process. In principle we conducted three types of analysis: template coding, pattern recognition and an analysis of relationships between categories, which led to a model (Eisenhardt, 1989; Yin 1989). We coded the data for each case and then started comparing across cases to recognize patterns and to help build a model of NPD team success. After

the initial pattern recognition phase, we presented our findings to each team leader and incorporated their feedback into the final model. Based on our initial categories, we coded the data into templates that represented these initial categories. Some categories were added and others dropped as we further refined the model. The final categories of the data analysis are shown in Table 5.

INSERT TABLE 5 ABOUT HERE

Towards a Theory of NPD Team Stakeholder Success

We developed three sets of insights from our analysis, each related to the knowledge linkages between the team and its internal and external stakeholders. First, we saw the need for perceptual agreement between the team and internal organizational stakeholders. Second, we saw that teams with a large number of external company contacts exhibited increased performance. Third, we saw that teams with high team cohesion and a large number of non-redundant internal company contacts had decreased performance. (see Figure 1).

INSERT FIGURE 1 ABOUT HERE

Perceptual agreement between the NPD team and organizational stakeholders

Our data showed that effective teams were perceived to have the support from others within the organization. They were viewed to be effective internally at managing the team and externally at managing their goals and adaptability. This view prevailed in the judgment of the team itself as well as by the stakeholders within the company. One of the team leaders said: “Inside [the company], we were perceived to manage our project successfully. I can’t imagine how you’d be successful without having the buy-in from the stakeholders. They are a key set that influences your team.” A sponsor of one of the projects indicated: “Obtaining continued funding was a matter of managing perceptions. If you could show how the project was adding financial value in the long run, you had

a budget and could manage on your own". Yet, it was the combined perceptual agreement of the bosses and others within functional areas that differentiate the successful from the less successful teams.

INSERT FIGURE 2 ABOUT HERE

Figure 2 contrasts the results of the 360° questionnaire of two of the successful NPD teams with two of the less successful teams. The left side of the graphic shows the team's perceptions on the 12 dimensions¹ reflecting the team's internal and external focus while the right side shows the perceptions of the combined stakeholders (downstream, upstream and bosses). Results that showed large discrepancies between the combined stakeholders and the team in their views of the team were generally less successful.

Proposition 1: In high performing new product development teams, there is perceptual agreement between innovation team members and their internal stakeholders on the team's high degree of internal and external focus.

We propose that perceptual agreement between NPD teams and their stakeholders on the team's approach to managing the innovation project contributes to the success of the team. Studies have shown that one of the critical success factors for teams is the degree of overlapping mental models within the team (Klimoski and Mohammed 1994, Mathieu et al, 2000). Mental models are socially constructed structures based on common perceptions about the environment (Druskat and Pescosolido, 2002). These models influence team behavior and improve interaction within teams since a common perception provides the basis to anticipate team member behavior (Weick and Roberts 1993). Studies within the team literature come to the conclusion that a greater degree of team agreement leads to a higher convergence of mental models within the team and thereby

increases the performance of teams (Mathieu et al 2000, Druskat and Pescosolido 2002). Other studies using terminology like „shared understanding“, „shared cognition“ or “collective sensemaking” are similar to the concept of mental models with each concept postulating that common perceptions at the team level have a positive impact on team outcome (Klimoski and Mohammed 1994). While the importance of managing interactions inside the team has long been recognized, the importance of the relationship outside the team, i.e. the linkage between the team and organizational stakeholders has not been recognized. We propose that the concept of mental models extends beyond the team to the team – stakeholder level. While it may not be necessary to reach consensus, we propose that stakeholders need to perceive the team as managing the innovation project successfully. This finding is similar to Büchel and Denison (2003) who showed that in order for innovation teams to receive continuous funding, the team and its internal stakeholders have to agree on the entrepreneurial culture of the team. Teams that have great ideas but are not able to act upon the idea by keeping inside stakeholders from different functional areas updated are more likely to be terminated. Our first proposition therefore suggests that perceptual agreement between the team and its organizational stakeholders impacts team success.

Team External Stakeholder Knowledge Links

The data on the eight teams also indicated that those teams with a high degree of external focus – particularly characterized by a large number of external company contacts and a high degree of customer focus were more effective teams (see Table 7). Here the contrast between two team leaders and their degree of external contacts. Team leader AA, an ineffective team, said: “The number of team members with external contacts was two. We spent 40% of our time outside and 60% inside.” Team leader FF, an effective team, by contrast said: “100% of team members were talking to different customers. Even the process research guy had to make a first sales call. He got some mentoring but it was crucial to get an outside perspective.” The results of the 360° data on the

degree of customer focus by the team reinforced these findings indicating that high performing teams were also those with the greatest degree of customer focus.

Proposition 2: In high performing new product development teams, there is a higher number of team external company knowledge linkages.

It has been argued that networks consisting of individuals in bridging roles to the outside are beneficial to innovation (Burt, 2001), since they have the ability to broker the flow of information between people. Individuals who broker the flow of information between others in a network have access to more and scarcer information sources, and by using these information sources, they expand the knowledge base. In a team, a greater number of external contacts by individuals in bridging roles will allow a team to challenge itself, revise assumptions and incorporate new information from outside the team. This argument suggests that a large number of external contacts increases a team's social capital and has a positive effect on the team's performance.

Team - Internal Stakeholder Knowledge Links

While perceptual agreement between the team and its internal company stakeholders was linked to high team performance, we found no direct link between team-internal stakeholder communication density² and team performance. We then further investigated the number of non-redundant contacts outside of the team but within the company. The results of the social network analysis of the team's group centrality measure³ showed clear differences between the teams. We found that successful teams were composed of individuals that had a high number of non-redundant contacts to company internal stakeholders and therefore learned more information supplied by marketing, manufacturing and R&D stakeholders. These teams explicitly managed their contacts to internal company stakeholders by obtaining resources from those that they needed to move the project along while

avoiding that multiple members of the team engaged in ongoing interaction with one particular stakeholder.

This was complemented by our interview results. Here an example of an effective team leader's comments: "We were extremely market focused but less [company] focused. There is no clear connection to anything we do in [the company]. The team was close but with only a few strong connections to others within [the company]." When investigating this phenomenon more closely, we found that teams shared information to keep internal stakeholders up-to-date (by email) but did not necessarily engage in two-way interaction. As another effective team pointed out: "We have been very assertive about the people who need to be informed. Others who would like to know but were not as important were only periodically updated by selected team members." Particularly for teams where disruptive innovations occurred, team – internal stakeholder communication was kept at a minimum, yet the type of contacts that facilitate reconsidering the existing business model had to be supportive. As one team leader pointed out: "When we developed the new product it required a different value chain to get to the customer. Within our company we are excellent at standardizing business activities in our current position in the value chain in order to be cost leaders. This is almost in complete contrast to new business development. If you have friends that you can rely on within the traditional business then it will work smooth. If you don't know anyone then it will not work since that stakeholder will hold up the company policy." . Teams that had few contacts to internal stakeholders but with those that could supply the resources were better off than those that had continuous interaction with company internal stakeholders as we found a negative relationship between team-stakeholder communication density and performance. This led us to the following proposition.

Proposition 3: The higher the number of non-redundant knowledge linkages to internal stakeholders, the higher is the likelihood of new product development team success.

Similar to the argument that non-redundant external contacts improve performance, it has been suggested that internally cohesive teams that have access to knowledge from within the company but outside of the team are able to access information and resources needed for the project. These knowledge ties within the team bridge structural holes to the larger organization and thereby enhance the team's creativity (Ancona and Caldwell, 1992a). Yet maintaining strong internal company ties is costly. According to Hanson (1999) teams obtain the same information from weak ties as from strong ties, but at lower costs. They can therefore dedicate more time and energy to completing the project. It is therefore not the strength of the tie but the associated costs that plays a key role in determining team performance. This could also explain why we found no link between communication density between the team and internal company stakeholders and team performance. While dense internal team networks have traditionally been said to enhance performance (Burt, 2001), it may be that teams with overly dense communication networks beyond the boundaries of the team (with internal stakeholders) are actually the lower performers. One explanation may be that dense networks are often relatively small, robust stable social structures. As team members and organizational stakeholders are increasingly exposed to each other, there is a greater likelihood that their beliefs, assumptions and attitudes will grow more similar, thereby leading to a convergence of views. This means that after increasing interaction between team members and internal stakeholders, they are more likely to stick to old company habits, continuing the same relations even when these stakeholders no longer provide the necessary resources. As a result of increased internal cooperation, teams are more likely to ignore more profitable alternative contacts outside the group. They therefore become more rigid and more embedded over time to the point of blocking new information.

Although Burt (2001) has proposed a strictly positive relationship between networks and performance, this relationship needs to be refined in light of the findings of this study and the

arguments pointing to the “dark side of dense team-internal stakeholder knowledge linkages”. While dense team knowledge networks have always been viewed to support innovation, dense team-internal stakeholder networks for innovation teams may not be beneficial. Here, the benefits of structural holes across the team with the associated lower costs outweigh the benefits of dense knowledge linkages. Teams may have to explicitly manage their relationships within the team, within the organization and across the organization. While it has been suggested that dense team internal networks are more successful (Burt, 2001), the need for dense knowledge linkages between the team and their internal stakeholders is less obvious. The teams may end up walking a tightrope between being overly embedded within the organization while at the same time keeping stakeholders informed about the progress so that perceptual differences do not emerge. Internal loyalties to the organization may also lead the team to ignore useful information from the outside and inhibit the team’s ability to establish new external contacts. While a strictly positive relationship between team internal networks and performance may still apply, it does not seem to be transferable to the team-internal stakeholder interaction. This finding is consistent with Reagan and Zuckerman’s (2001) discussion of the pessimistic and optimistic view on the diversity-performance debate and points towards the circumstances under which diversity, i.e. structural holes can add value. The uniqueness of this study is that it investigated knowledge linkages across teams and therefore looked at team-stakeholder communication links instead of demographic diversity as indicator of team boundary spanning.

Conclusion

In sum, our model of NPD success suggests that not only team members’ internal efforts are worth investigating, but also the linkages between the team and its internal and external stakeholders as these linkages could directly impact success. Teams that have sufficiently aligned organizational stakeholders with the team’s internal and external efforts (through perceptual agreement) have a high number of external company contacts and a high number of non-redundant internal company

contacts are high performing teams. While this pattern found in the data may be less surprising, it is particularly the third proposition that is counterintuitive. The value of the network between the team and its internal stakeholders is derived from the cost benefits that accrue from access to non-redundant contacts rather than the facilitated knowledge exchange that results from strong ties. Although Hanson (1999) has suggested that the value of these non-redundant contacts is contingent upon the complexity of the knowledge, it may be that teams with similar mental model as their stakeholders have an easier time transferring complex knowledge therefore making strong ties to internal stakeholders unnecessary. This would suggest that teams in perceptual agreement with their stakeholders that have a high number of external contacts are potentially better off lowering their communication density to internal stakeholders as the costs associated with internal communication may be too high and unproductive given the launch of a product that is frequently new and uncertain to the company.

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Notes

¹ The 12 dimensions of the 360° survey were shared vision, strategic direction, goals and objectives, core values, agreement, coordination, team empowerment, team orientation, capability development, customer focus, learning and creating change.

² While communication density focuses on the presence or absence of multiple relations within the team, structural holes or non-redundant contacts are responsible for the information benefits across the team.

³ Group centrality measures the contacts of team members with people outside of the team.

Table 1
Review of Research on New Product Development Team Success

Author(s)	Teams	Process Variables	Output
Katz (1982)	50 R&D teams	Internal and external communication	Project performance
Gladstein (1984)	100 sales teams	intragroup process; management	Performance (Sales revenue); Subjective effectiveness
Souder (1988)	289 projects	Interfunctional harmony	New product success
Ancona & Caldwell (1992a)	47 New Product Development Teams	Internal Process; Communication	External Management and team members rated performance
Ancona & Caldwell (1992b)	45 New Product Development Teams	External activities: ambassadorial activities; scouting activities; guard activities	task-coordinator Team performance
Dension & Hart & Kahn (1996)	43 product development teams	Norms; Importance of Work; Effort; Efficiency; Creative Strategy; Breadth	Information Creation; Time Compression; Image Expansion; Learning; Growth Satisfaction; Capability Development; Overall Effectiveness
Doughtery & Hardy (1996)	40 new product development teams	Collaborative structures and processes	Degree of innovativeness and commercial success
Keller (2001)	93 R&D / product development teams	Internal Communication; External Communication; Job Stress	Team Performance

Table 2
Template of Categories for Initial Research Design

Categories
<u>Team outcome</u>
Team effectiveness
Team financial performance
<u>Team Internal and External Evaluation</u>
Internal focus – consistency and involvement
External focus – adaptability and mission
<u>Interaction processes</u>
Knowledge network within team and with stakeholders
Communication between team and company external contacts
<u>Team Context</u>
Goal clarity
Management support
Team based rewards
Team autonomy

Team composition
 Age
 Gender
 Education
 Longevity at Manufacturing Corp.

Table 3

Team Name	Team Size	Team-Stakeholder Size	Purpose of Team
AA	4	16	Team AA developed a technology enabling a new business model and a move downstream.
BB	8	16	Team BB developed technology, which improved the performance of an end-use application.
CC	8	15	Team CC focused on selling technology know-how to companies, such that their efficacy was improved.
DD	26	37	Team DD developed technology, which improved the performance of downstream customers' products.
EE	4	16	Team EE developed technology, which allowed downstream customers a method to measure results.
FF	5	18	Team FF sold raw materials, which improved the performance of end-use products.
GG	3	18	Team GG developed technology and end-use products, which allowed for a new business model and participation downstream.
HH	15	31	Team HH developed technology, which improved the performance of end-use applications.

Table 4
Data Collection Strategy

Data Source	Focal Category	Teams							
		A	B	C	D	E	H	G	F
360° Survey 2001	Team internal and external focus	x	x	x	x	x	x		x
Interview with team bosses	Team effective ness	x	x	x	x	x	x	x	x
Social network analysis	Communication within team and communication between team and stakeholders	x	x	x	x	x	x	x	x
Survey 2003	Team context categories and team diversity	x	x	x	x	x	x	x	x
Interview with team leaders	Team external contacts	x	x	x	x	x	x	x	x
360° Survey 2003	Team internal and external focus and team effectiveness	x	x	x	x	x	x	x	x
Financial analysis 2001-2003	Team financial performance	x	x ¹	x	x	x	x ²	x	x

¹ This team was no longer financed at the beginning of 2003.

² Here the data between 2001 -2003 did not allow for a comparison between forecasts and actual as no revenue was expected to occur until 2004.

Table 5
Final Template of Categories Emerging from Data Analysis

Final Categories	
Team – stakeholder perceptual agreement	
Team – external knowledge linkages	
Team – internal stakeholder knowledge linkages	
Team performance (team effectiveness and actual vs. forecasted sales 2 years)	

Table 6
Team – Internal stakeholder agreement and team success

Team	Team Internal Stakeholder perceptual agreement	Sales forecasts	vs.	Team effectiveness
AA	Low	Low		Low
CC	Medium	Low		Low
GG	Low	Medium		Low
HH	Low	Medium		Medium
BB	Medium	No funding		Medium-high
EE	High	No sales yet		High
DD	High	Outperformed		High
FF	High	High		High

Table 7
Knowledge linkages between team members and external stakeholders

Team	Number of external contacts by team members	Sales forecasts	vs.	Team effectiveness
AA	Low	Low		Low
CC	Low	Low		Low
GG	Medium	Medium		Low
HH	Medium-High	Medium		Medium
BB	High	No funding		Medium-high
EE	Medium-High	No sales yet		High
DD	High	Outperformed		High
FF	High	High		High

Table 8
Knowledge linkages between team members and internal stakeholders

Team	Number of non-redundant contacts to internal stakeholders	Sales forecasts	vs.	Team effectiveness
AA	Low-medium	Low		Low
CC	Low	Low		Low
GG	Medium	Medium		Low
HH	Medium	Medium		Medium
BB	Low-Medium	No funding		Medium-high
EE	Medium	No sales yet		High
DD	High	Outperformed		High
FF	High	High		High

Figure 1
Model of NPD Team Success

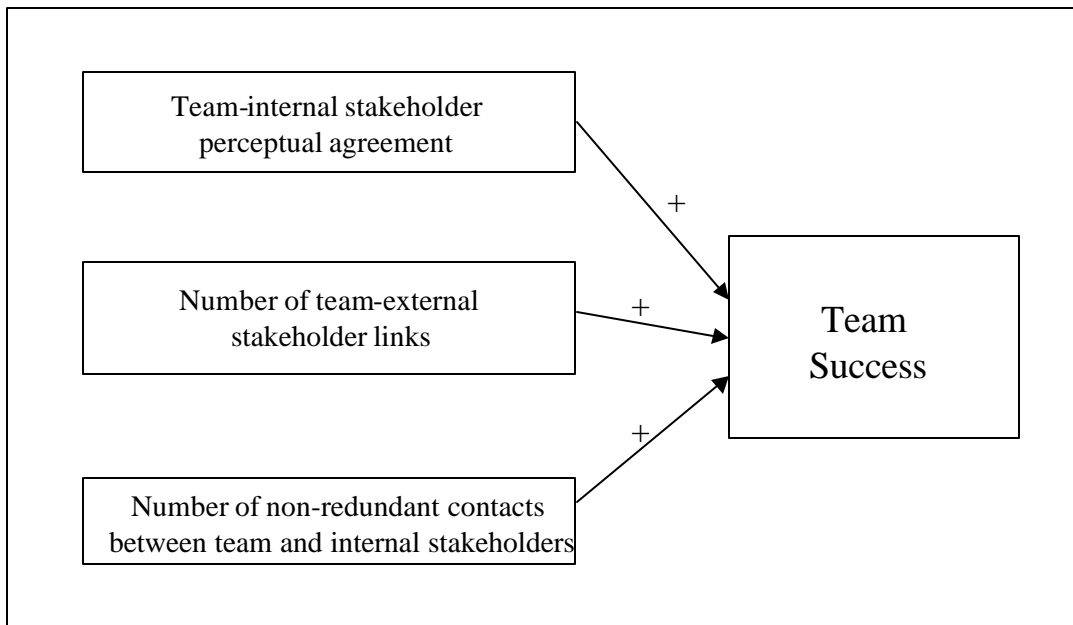


Figure 2
Contrast between two the Results of 360° Data on Team and Internal Stakeholder Perceptions of a Successful and Unsuccessful Team

