

Imperatives for Successful Collaboration in Virtual Teams¹

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Abstract

Collaboration is not only about working together—where everyone focuses on their individual roles—it also takes advantage of collective wisdom and accepts risks to foster creativity and achieve better-than-expected results. In other words, while working together is important for linear or incremental progress, collaboration is necessary to produce exponential or break-through outcomes.

Any professional collaboration within physical or virtual teams entails several phases of engagement after the initial work assignment is completed. While the team and group development model of forming, storming, norming, performing, and adjourning, first proposed by Bruce Tuckman in 1963, is still relevant, it is premised on teamwork in a physically cohabitated setting and employs traditional management principles. Despite advances in telecommunications and information technology, achieving collaboration in virtual team environments remains challenging because of factors such as the degree of virtuality, the virtual workplace, different time zones, interpersonal skills, cultural differences, and the emotional intelligence of the team leader. This leader is expected to manage the triple constraints of the project while allaying the fear and concerns of team members whom he might not have met or worked with previously. It is a daunting task to get the best out of virtual team members because it requires the effective use of various relationship-management techniques. Consequently, while the most important factor for achieving collaboration in a virtual team is effective communication, it is imperative to promote coordination, coopetition, and concurrence to maximize the team's potential.

This paper examines several projects completed during 2013-2016 in which virtual team members were engaged. It discusses the challenges and outcomes of those projects and provides a detailed analysis using a competency-based model to help companies consistently achieve superior results.

1 Introduction

Collaboration, in simple and practical terms, can be defined as the action of working with someone to achieve a defined and common business purpose. The use of this noun has gained huge popularity since the early twentieth century when the Wright brothers collaborated to invent the first airplane and flew it successfully over a beach in North Carolina. Until then, all

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major inventions of the Industrial Age were largely credited to the individuals, e.g., Alfred Nobel, Louis Pasteur, Graham Bell, and Thomas Edison, to name a few. The central idea behind collaboration is co-laboring, which is also one of the reasons why organizations exist, i.e., to tap into the collective skillset, knowledge, and experience of a group of people to solve problems, innovate, and create intellectual property that would otherwise be difficult to achieve individually.

Global competition and the internet of things have compelled companies to innovate and transform their businesses at a pace not seen in the twentieth century. The need to innovate applies not only to traditional industries in technology, manufacturing and supply chain domains, but also to knowledge-based industries¹ that rely on intellectual capabilities. Such needs require a diverse workforce that may or may not be co-located to foster new ideas, processes, and management techniques. The power of successful collaboration within virtual teams, across companies and geographies, is exemplified by two Fortune 500 companies – Apple and Boeing. The first, with the highest market capitalization in the world, relies on 100+ suppliers located in six continents, yet delivering a stunning 73 inventory turns in a year, i.e., one every five days. The latter uses more than two million parts manufactured in a dozen of countries to assemble a 787 Dreamliner, performing with unparalleled fuel efficiency and range flexibility.

Collaboration takes place in two primary forms, active or synchronous, and passive or asynchronous. In active collaboration, driven physically or remotely, the individuals interact directly and in real time, where responses and feedback are provided instantly. In the passive form, interaction is time-lagged, i.e., the information is shared electronically, and individuals read and respond at their convenience. The success of either form of collaboration is, however, not guaranteed and depends on the organizational culture, employee engagement, accountability matrix, social presence, training, and coopetition. In the following sections, some of the key imperatives for successful collaboration are examined, which applies to both forms, albeit in varying degrees.

2 Barriers to Successful Collaboration

Collaboration is often fraught with challenges and therefore every project requires a new, fresh approach. There are known and unknown barriers to true collaboration, but the two most common, and perhaps, the most difficult to deal with, are self-interest and power struggles. It all begins with individualism—humans are naturally trained to work towards personal goals, and to put their needs before the organization or the community. Therefore, some stakeholders try to manipulate their success at others' expense, an omnipresent phenomenon. Such issues are not raised openly in a corporate environment for the fear of retribution, but politics is a different play, where power struggles almost always affect collaborative efforts. Conversely, when the stakeholders develop good personal relationships and maintain allegiance to a common purpose, success comes swiftly and surely. This has been demonstrated by two of history's towering leaders—Winston Churchill and Franklin Roosevelt before and during the Second World War. Their friendship was not only unique but also crucial; it helped the free world to achieve a much-needed victory. These leaders spent over 100 days during the war, meeting in far-flung places such as Hyde Park, Washington, Tehran, and Casablanca, and exchanged nearly two thousand messages about war, politics, the burden of command, and their families².

In the following section, some of the common barriers are discussed that inhibit teams and groups from performing to their full potential and delivering the desired outcomes.

2.1 Physical Considerations

Physical separation plays a vital role in people's ability to interact effectively and to complete assignments on time. Different geographic locations and time zones of team members can impede the prospects of realizing the full potential of team collaboration because of the "out of sight, out of mind" syndrome. In many ways, virtual collaboration is akin to distance learning; both rely on electronic communication and offer the flexibility of time and location. However, virtual collaboration requires a bi-directional exchange of information. Distance learning uses a unidirectional information flow. In synchronous team collaboration, when one or more team members are physically separated from the rest, the quality of communication becomes extremely critical. It depends on technical aspects such as network quality and communication devices; meeting etiquettes such as frequent interjections, not paying attention, and speaking too fast; and resource aspects such as presence of competent and knowledgeable team members, contextual material, and time. Video conferencing is a more effective medium than audio because it provides the benefits of visual aids such as eye contact, body gestures, and the ability to create social bonds. In a diverse workforce when a majority of the team converses in one particular language that is foreign for some, effective communication can become onerous.

2.2 Cultural Considerations

Cross-cultural teams manifest their strengths through diversity of perspective, insight, and experience. However, to reap these benefits, team members must collaborate effectively across cultural boundaries. People from individualistic countries, with a low power distance³, usually express their views and opinions openly because they consider constructive criticism between colleagues as an expression of knowledge and confidence. It enhances the decision-making process and is used as a tool for personal development. People from hierarchical or collectivist cultures, however, tend to wait until the senior members have spoken as a mark of respect. They practice implicit communication and prefer receiving feedback from their superiors in private settings. They strive for building consensus and eschew confrontation to avoid upsetting group dynamics; therefore, it is not uncommon to see such teams struggling when dealing with the disagreements. Members of a cross-cultural team must therefore understand and respect the contrasting behaviors of other cultures to capitalize on the team's potential. One way to achieve this and maximize the productivity of the team is to establish rules of engagement to ensure everyone in the team has an identical understanding of the common business purpose and the accurate definition of their roles.

2.3 Organizational Behavior Considerations

Collaboration is not just about "getting along"⁴; it requires the active engagement of all participants. A successful virtual collaboration invokes six essential project management skills – leadership, communication, team management, negotiation, personal organization, and risk management. As in any project, effective leadership is critical for a good collaborative process, but the diversity, interdependencies and relationships among stakeholders determine how quickly collaboration moves through the processes of negotiations, commitment, and execution. When projects are well defined, relationships are established and information is shared in a

transparent manner; engagement happens easily and painlessly. When one or more of these factors are lacking, extra time and orchestration is required to build trust among participants to produce the desired results. Trust is a principle of successful collaborative relationships (Ragan, 2003; Townsend, 2004; Brown and Keast, 2006; Bryson et al., 2006); however, it builds slowly and incrementally. It is, therefore, essential to create a positive environment at the project initiation phase, i.e., when selecting the team, defining relationships, setting rules of engagement, and establishing the success criteria. When a team makes good initial progress, the trust builds through positive interactions and promotes further expansion of formal and informal relationships. Trust also fosters inter-dependability and flexibility that are essential for innovation and risk taking.

2.4 Performance Considerations

Successful virtual team players share a few traits: effective communication skills, the ability to work independently, high emotional intelligence, and the resilience to recover from inevitable setbacks. Team leaders should conduct behavioral interviews and personality tests to screen for these qualities because it is helpful to be aware of the personality types and sensitivities in globally distributed work groups. They should identify the strengths and weaknesses of their people and provide necessary training to create a high-performance team. Performance excellence is achieved in an environment where goals are clearly communicated, collective skillsets are leveraged, and team members can engage in friendly competition. One way to help boost the collective performance is to encourage members to take risks and compete for the best ideas. This healthy competition, if carried out in a manner that maintains mutual respect and pleasant interactions, helps in improving their placement within the team. Positive competition among team members enhances the likelihood of exceeding the goals. On the other hand, performance is hindered when team members work individually and separately because they can become disconnected from the rhythm of work life.

2.5 Motivational Considerations

Recognition is a powerful driver of employee engagement. Motivated employees tend to produce superior results because recognition boosts morale, inspires creativity, and encourages higher level of productivity. Individual contributors thrive on personal attention, public appreciation, and clear objectives. Most professionals derive a sense of satisfaction when their efforts contribute to the team's success. When managers fail to recognize employee accomplishments, this can disrupt team dynamics and promote employee departures. Recognition is critical in a virtual environment where there is limited engagement and communication is often constrained. Another area that requires attention is the encouragement of every team member to share their thoughts openly and confidently. This is essential for introverted individuals who feel uncomfortable sharing their ideas and identifying risks that could potentially jeopardize the team's success. The team leader should identify such individuals and inspire their active participation. Conversely, the extroverted individuals, who tend to take over the virtual meetings, must be coached to provide opportunity for everyone to share their views and to be inclusive. The objective should be to exploit full talent of every member of the team.

3 Driving True Collaboration

Collaboration is essential within and across business units to create value through effective execution, greater innovation, and improved customer experience. This approach does not necessarily mean that more collaboration is better, or desirable. However, like in applied sciences, when it is used appropriately and in right conditions, it can deliver excellent results. In terms of effectiveness, physical collaboration produces better outcomes than virtual collaboration, and synchronous collaboration is more productive than asynchronous collaboration because it forces people to perform in real-time and show commitment to the common goal. The leader should continuously assess the effectiveness and competencies of the team and make adjustments as necessary.

At the conceptual level, the following approach fosters a culture of collaborative behaviors:

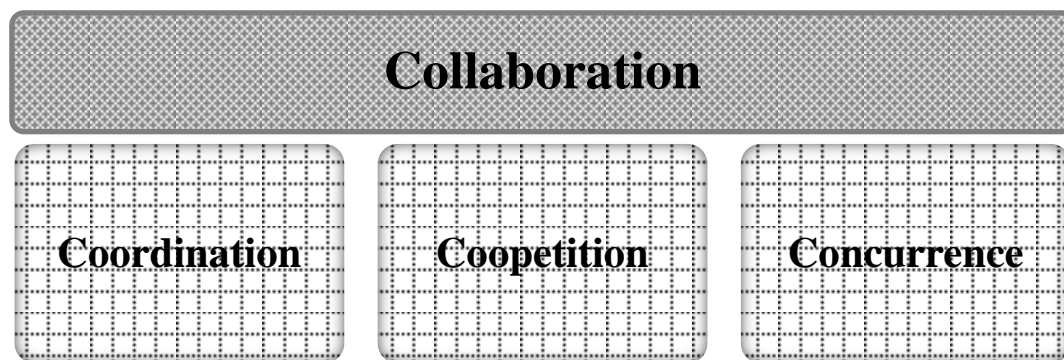


Figure 1. An illustration of how collaboration rests upon three pillars – coordination, coopetition, and concurrence

3.1 Coordination

The leader of a virtual team must lead not only from a strategic perspective, but also from an operational point of view. Administering and coordinating a group of individuals who may not have met or worked together previously, requires organization and synchronization. This teamwork is achieved through virtual handshakes, setting clear expectations, delegation of tasks, removing ambiguities, resolving conflicts, perseverance, and performance assessments. Every team dynamic is different; the leader must be emotionally and intellectually intelligent about when to provide the autonomy, trust and commitment.

3.2 Coopetition

Coopetition refers to “cooperative competition,” instead of pretending that individuals are not competing with each other, they should build trust and leverage each other’s strength to succeed. Dynamic interaction between individuals is extremely useful and is easy to achieve in mature, self-organizing teams. However, when one or more stakeholders assume their success must come at others’ expense, the collaborative efforts do not produce the desired outcomes. Coopetition, if promoted and managed properly, can be a very effective tool in exploiting the latent talent of every individual, and preventing the competing interests from affecting team’s success.

3.3 Concurrence

Concurrence and approval are used to denote the process of coincidence and agreement, but there is one key difference between them: concurrence refers to tacit agreement among the team members, while approval is a formal process of approving the agreement. Building consensus within a distributed workforce requires an effective governance model that relies upon openness, knowledge sharing, and equal access to information at all levels. However, one pitfall that must be avoided to enhance the prospects of a collaborative process is collision among team members. It is incumbent upon the leader to keep a tight vigil for signs of discontent and quickly address it.

4 Competency-based Model

The approach described in the previous sections was applied retroactively to six digital technology projects that were completed in a large, global corporation during 2013-2016 with a goal to validate the methodology. These projects were selected randomly with different triple constraints—project scope, time, and cost—and were executed by different virtual teams. The core technical resources were located mostly in India, and the subject matter experts and project managers were in the United States.

Each project was quantitatively assessed based on five sets of barriers to success, and a weighted average was computed. The results are shown in Table 1.

Table 1. Barriers to Collaboration – A Quantitative Assessment

Description	Project					
	#1	#2	#3	#4	#5	#6
Physical: Geographical separation and virtual collaboration	80%	90%	80%	70%	70%	70%
Cultural: Diversity in native language and organizational culture	20%	30%	30%	30%	20%	10%
Behavioral: Team dynamics, past associations, and mutual trust	70%	50%	30%	35%	10%	10%
Performance: Work experience, competencies, and competition	60%	45%	70%	40%	30%	20%
Motivation: Encouragement, personal attention and recognition	80%	80%	80%	50%	20%	10%
Weighted Average:	62%	59%	58%	45%	30%	24%

These projects were then qualitatively evaluated based on three imperatives – Coordination, Cooperation, and Concurrence using the criteria: 1 - Poor; 2 - Below Expectation; 3 - Meets Expectation; 4 - Exceeds Expectation; 5 - Significantly Exceeds Expectation. The results are shown in Table 2.

Table 2. Competencies to Successful Collaboration – A Qualitative Assessment

Category	Criteria	Project					
		#1	#2	#3	#4	#5	#6
COORDINATION	Leadership and project management competencies	2	3	4	3	4	5
	Team participation and employee engagement	2	4	3	4	4	5
	Performance assessments	2	3	3	3	4	4
COOPERATION	Maturity and self-organization	3	2	3	4	5	5
	Communication effectiveness	3	2	3	3	4	5
	Mutual trust and transparency	3	2	2	3	4	5
CONCURRENCE	Knowledge sharing and reciprocity	3	3	2	3	4	5
	Ability to build consensus	2	3	3	4	4	4
	Accountability	1	2	3	3	4	5
TOTAL:		21	24	26	30	37	43

It is fascinating to discover a direct correlation between the two assessments. Project #1 had the maximum numbers of barriers and scored poorly on the project outcome; whereas Project #6 had the fewest barriers, but it was the most successful in terms of meeting project objectives.

5 Conclusions

The world of virtual collaboration is very complex and is contingent upon a myriad of factors. It is inherently less efficient than physical collaboration, and its success depends upon how quickly and effectively the physical, intellectual and social gaps between the teammates are bridged. While it is impractical and impossible to co-locate the entire project team, it is possible to maximize its potential by involving them from the initiation and planning phases. Bottom-up collaboration can be complementary to top-down-initiated collaboration, and when well-orchestrated, it significantly enhances the overall success prospects. A successful collaboration is not about getting $1 + 1 = 2$; it is about creating a positive and productive environment that enables every team member to contribute more than one hundred percent and deliver $1 + 1 = 3$ outcome.⁵

References:

1. Based on the North American Industrial Classification System (NAICS), the knowledge-based industries (KBI) are categorized into two tiers:
 - a. Tier I - a narrow band of science and technology-based firms, composed of knowledge producers; and
 - b. Tier II - a broad band of "high-knowledge" firms that, based on measures of research and development and knowledge worker inputs, could be considered to be business innovators and high-knowledge users.
 - c. Source: http://www23.statcan.gc.ca/imdb-bmdi/document/2514_D2_T9_V1-eng.pdf.
2. "...there was an early period of skepticism and courting from the invasion of Poland to Pearl Harbor; once America was in the war, Churchill and FDR spent two years in a grand pageant of personal intimacy and diplomacy....But there is no doubt their friendship helped win the war."
 - a. Source: Jon Meacham, author of *Franklin and Winston: An Intimate Portrait of an Epic Friendship*, ISBN-13: 978-0812972825.
3. Greet Hofstede developed an index (PDI), giving numerical values to five cultural dimensions: power distance, individualism, masculinity, uncertainty avoidance, and long-term orientation (long-term vs. short-term values). Comparatively, the U.S. has a low PDI (40) compared to Mexico (80), France has a high PDI (68) vs. the UK (35), and Saudi Arabia's PDI (80) is higher than Iran (58) or Turkey (66).
4. Geisler, J. (2008, November 06). Four Barriers to Collaboration. Retrieved July 09, 2017 from <https://www.poynter.org/2008/four-barriers-to-collaboration/92553>.
5. Cabrera, M. (2014, November 01). Use Co-opetition to Build New Lines of Revenue. Retrieved July 09, 2017, from <https://hbr.org/2014/02/use-co-opetition-to-build-new-lines-of-revenue>.

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