



Critical Factors for Adoption of Collaborative Technologies

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In the spring of 2004, Collaborative Strategies (CS) had an internal research project focused on the different factors affecting the spread of collaboration technologies in an organization. Over the past 15 years, in working with both vendors and end-users of collaboration technologies, CS has seen a wide variety of implementations. Some were successful, i.e., the technology spread throughout the organization and value network in a relatively rapid period of time. In other instances, we saw a successful pilot project using collaborative technologies in a group or department go nowhere. We were curious as to what the critical differences were in these two situations, as the technology in both cases was often the same.

From March through June of 2004, Jeff Young and David Coleman interviewed eight different collaboration vendors, and each vendor gave us an average of two to three of their customers to interview. We asked to speak with not only customers that were successful with the vendor's product, but also customers where the collaborative technology had stalled or failed to proliferate. This paper is a summary of what we found from those interviews.

Methodology

We had separate questionnaires for vendors and end-users, and all the interviews were conducted over the telephone. Several hundred quotes were culled from all of the interviews. The quotes were then grouped into common themes so that viewpoints common to many organizations could be revealed. Within these themes, specific phrases were seen as key to identifying significant factors seen by both the vendors and users as being critical to the successful adoption of collaborative technology.

These factors for success were then compared to the CS assessment model, which looks at four key factors for organizational readiness for collaboration technologies. The four factors in our model are: technology, culture, economics, and politics.

Results

Since we elicited two points of view (vendors and users), each of the eight critical success factors derived from the interviews are listed in Table 1. The left column shows these factors from the users point of view, and the right column shows what the situation looks like from the vendor's point of view.

Critical Success Factor as seen by the User	Vendor's View of Adoption Challenge
1. Collaboration technology projects need to be tied to specific and important business needs felt by the actual users of the technology.	Their technology is in the organization but it never starts to proliferate.
2. The adoption project needs to be led by a single influential champion and have the active support of key executives.	The vendor has identified a need, but either the end-user does not see it as a collaboration problem or there is no influential champion for the technology.
3. Clear business processes exist, are well defined, and are compatible with the technology.	Technology was purchased by IT and is now in search of an appropriate business process in the organization to justify the technology.
4. There needs to be clear and meaningful metrics to measure success.	Usage is growing, but key decision-makers are not convinced of the effectiveness of the technology.
5. It is easy to learn how to use the new technology through: <ul style="list-style-type: none"> • Excellent up-front training and support, • Technology that is inherently easy to use, • Active involvement and support by IT, and • Small projects that take on more as competence with the technology grows. 	Although tied to a clear business need and a metric showing success where it is used, people who otherwise would use it are instead claiming they don't have time to learn how.
6. After a successful pilot, end-users effectively build upon and advertise their success to other groups.	A successful pilot should be followed by increase in seat sales but the end-user does not know how to do a successful deployment of collaboration technologies
7. User deployment plan places significant emphasis on addressing people and cultural issues.	IT has a deployment plan and has already run into stiff resistance. Their plan only takes into account technical issues and has a low chance of success.

Table 1: Critical Success Factors and the Potential Impact on Adoption

Analysis

The vendors and users we talked to knew about most of the success factors that were revealed in the research. When we did talk to a user who had not reached the level of adoption they were hoping for, they usually told us that it was because they missed only one or two of the success factors. Many vendor executives also held the belief that if they “built a better mouse trap” more people would use and adopt their collaborative technology. We found that both groups, vendors and users, underestimated the complexity of the adoption problem. Both groups also consistently over-estimated the technology aspects of the situation, and under-estimated the cultural, economic, and political aspects of the situation.

We have broken out some of the factors that effect adoption of collaborative technologies and discussed both the results and our interpretation and analysis of this data.

Technical Factors

In a few cases, we did find that bandwidth and infrastructure did hold back adoption. However the vendors saw this as an issue much more often than the end-users did.

A good example of this occurred at a large aerospace firm. They had a new CIO and he had a mandate to “get collaboration in” because this company was a government contractor and because of the savings and ROI that could be realized from leveraging these technologies. In this case, collaboration came in on the back of a six-sigma initiative. Unfortunately, the organization, in their haste to roll out the technology, failed to consider an archiving policy, and when the (asynchronous) collaboration technology became available, users put in hundreds of gigabytes of data into each of the team spaces, bringing the servers to their knees. This was compounded by the fact that the managers in the departments that got this new technology did not offer much in the way of training (training costs are a line item, whereas the costs of not training people never appear as a line item in a budget), and so a rollout that the new CIO thought would take six months is now in its second year. The organization is just getting around to the development of an archiving policy.

When we talked with the end-users, just having better technology was usually not the issue. In those cases, it really turned out to be policy and behavioral issues, rather than limitations of the technology, but, since the technology is the most tangible and visible, the vendor was blamed.

Too Much Collaborative Technology

In many cases, increased adoption of one collaborative technology might be hindered by the fact that other departments in the same enterprise are already using similar technologies from a different vendor. In a recent interview with Oracle, they revealed that, two years ago, they were using over 12 different real-time collaboration (RTC) solutions at Oracle. They currently use one, their own (see write up of Oracle case study in the CS newsletter at <http://collaborate.com/publication/newsletter2/nl0704.html#guru>).

This was also a trend we saw in talking to end-users in large enterprises. Line of business (LOB) was getting the collaborative technologies they needed, and IT was left to support them. In cases where there was a strong CIO, s/he would eventually begin to track the costs for this support, become appalled and demand that the enterprise consolidate to one or two collaboration vendors. This usually resulted in some sort of committee being formed by IT to include many of the stakeholders to help to determine the set of requirements needed by the whole organization (instead of just groups or departments). This often became a political battle, and which ever vendor that could meet most of the organization’s requirements and had the champion with the most clout, ended up becoming the corporate standard.

This trend towards collaborative consolidation was more apparent in larger organizations that had some maturity with collaborative solutions. Their biggest issue was finding technologies that would meet the diverse collaborative requirements of various groups of end users, and to see if they could get this solution from one vendor at a much lower price than they were now paying.

Training, maintenance, support, and total cost of ownership (TCO) were also factors in selecting a collaboration vendor during this consolidation phase.

Cultural Factors

After quite a few interviews, patterns began to emerge. As we stated earlier, both vendors and end-users underestimated the complexity of the adoption problem for collaborative technologies. Both groups were aware of the cultural/behavioral impact these technologies could/did have. However, very few interviewees in either group knew how to deal with these issues successfully to help drive adoption. A number of sub-issues in this area were identified and are characterized in the following quotes:

- *People are used to doing things in person and people are used to picking up the phone, so they just go back to doing things the way they used to.*
- *Some companies want to travel and wine and dine. It is a company cultural thing and negates the major benefits of collaborative technology.*
- *We are changing the culture in the way they are going about doing their business. It is hard to get a subset of people to change their behavior.*
- *We have a cultural norm of people wanting to physically attend meetings that are in the same physical location.*
- *There is a perception that Web conferencing is for special events only.*
- *We started having problems in our business revenue and the resistance grew out of a sense that people didn't have time to change, just get busy going after more revenue.*
- *If there is something that has worked for them in the past, it is very hard to get people to stop using it.*

These were the cultural sub-issues that the vendors and end-users didn't have an answer for. They are not effectively addressed by selling and just trying to convince people of a "better way to work by using technology." While many vendors indicated a belief to us that if they "build a better mouse trap" people will use it, widespread success is not possible without addressing the deeper cultural issues. No matter how good the feature set, how easy it is to use, how compelling the ROI, there are deep expectations and preferences about how people want work together.

In all organizations there are cultural norms such as these, into which the technology must fit. These issues are usually hidden, difficult to address, and boil down to not only changing the technology, but also creating changes in the organizational culture simultaneously with the introduction of collaborative technology.

Here are some questions that we thought would be useful for end-users to answer as part of that larger cultural change.

1. How do we get people motivated to use the technology?
2. How do we get people to see personal benefit from the technology?
3. How do we initiate behavioral change?
4. How do we sustain behavioral change?
5. How do we institutionalize the changes?

Economic Factors

Budget was an issue identified by both the vendors and end-users as a factor that limited the adoption of collaborative technologies. In several cases, it really seemed to be a pricing issue on the part of the vendor. Where the vendor offered a named or concurrent license, which limited the proliferation of the technology, it often maximized revenues for the vendor (in the short term) but limited revenues (by limiting adoption) in the long term. In several instances, vendors realized this and offered new pricing models that often were the “all you can eat” kind for a flat fee, which did encourage use, and there was a corresponding jump in usage as that model was put in place. In other cases, competition drove down prices, allowing more users access.

Political Factors

In many cases, end-user organizations had taken matters into their own hands and developed their own internal applications. Often these applications were widely used and successful. The problem came in support costs and resources for technology advancement. In the case of the aerospace organization cited above, it was these two factors that caused them to move from their own home-built collaborative system to one from a commercial collaboration vendor. However, in some cases, collaborative technology adoption was slowed or halted because of these homegrown tools and some of the special features they have. In the aerospace company, the group that was working with the federal intelligence community was still using the homegrown tool, and had a requirement of 100% uptime, which the commercial tool could not meet (99.7% uptime currently).

Educational Factors

A number of vendor executives recognized that education was one of the greatest barriers to adoption. Often, end-users did not know what the technology could do for them, and so did not use it. Just as often, IT people did understand the technology but could not convey the benefits within the context an LOB would understand.

In organizations where there was a champion that went around and helped to show everyone what the technology could do, and the specific benefits to them, a specific process or LOB, there was much more rapid uptake and increased use of the technology.

The other issue that came up in this area occurred when the technology was seen as appropriate for one specific solution, and only used for that. Almost all the collaborative vendors we talked to claimed that their solutions could have been used for a wide range of processes if the end-users had been educated about this.

Conclusions and Recommendations

In all, we were able to collapse most of the issues down to six unique and solvable issues that both vendors and end-users had for collaborative adoption.

1 - Collaboration technology projects are not tied to specific and critical business processes and goals.

2 - *There is a clear business need for collaboration, but there is no champion to drive adoption through the organization.*

3 - *Business processes are non-existent, ill defined, or not compatible with the technology.*

4- *There are multiple collaborative solutions throughout the enterprise requesting common resources.*

5- *After a successful pilot, end-users often don't know how to deploy collaborative technologies successfully.*

6- *The user deployment plan is not comprehensive and has run into roadblocks.*

We believe that in about 80% of the cases, cultural-behavioral issues like these are the cause of slowing or stopping the adoption of collaborative technologies. A few of the collaboration vendors we talked with were looking at beefing up their professional services groups to try to handle some of these issues. Others wanted to partner with third parties or consultants who had expertise in cultural and organizational issues, as it is far outside the comfort area for most software vendors.

It was clear to CS from doing this research that collaborative technologies are more popular than ever, but that successful deployment of these technologies is still a challenge. It is a challenge that neither IT, the collaborative tool vendor, or the end-user have the experience and knowledge to deal with, and so a large number of implementations of collaboration technologies are sub-optimal and do not meet their initial goals, or do not help a specific initiative move forward. In our opinion, it is not better technology that will solve this problem (although it could make it a little better), but rather the ability to deal with organizational behavior and culture. Those organizations that had a plan, a champion, and someone to “hold their hand” through the process got the highest adoption rates and the greatest value from collaboration technologies.

Based on this research, and our 15-year history with collaboration technologies, CS has formulated some new service offerings to help both vendors and end-users with adoption issues.

Solutions and Service Offerings

CS can't solve all of the adoption problems and issues raised by this research. However, we have crafted several service offerings to deal with issues that commonly arise.

- **Champion Development:** The end-user is struggling with collaboration technologies because there is a clear business need for collaboration but there is no champion to drive adoption through the organization. The CS five-part solution starts with assessment, identification and mapping of critical business processes, identifying points of collaborative leverage and potential champions, testing and training the champion(s), and providing ongoing support and coaching to the champion for continued success.
- **Creating Collaborative Value:** The end-user is having problems generating an urgent need for introducing collaborative technology throughout the organization. The CS solution to this problem involves four steps, starting with assessment and the development for an initial ROI for the end-user scenario. This scenario is then refined through mapping of critical business processes, and the selection of one or two processes

with collaborative leverage to use in a final ROI scenario that is reflective of the end-user organization's use of collaborative technology.

- **Overcoming Organizational Resistance:** The adoption rate for the end-user organization has dropped and it is not immediately clear what is causing the resistance. It is possible for the end-user to have a clear champion, clear business reasons for the technology, a clear ROI, a single, focused solution, a clear technical plan, and still run into organizational resistance. The hardest issues to overcome in adopting collaborative technology are the people and organizational resistance because there is usually not a single simple solution that can easily be identified. The CS solution, in this case, has five parts, starting with interviews of process stakeholders to determine the causes for resistance. The second step requires mapping of the critical business processes with collaborative leverage and identifying the stakeholders, current status, and outcomes. The next step often requires conflict resolution, facilitated work sessions, additional action research to resolve the causes for resistance. The next step requires the development of additional materials to help overcome resistance and increase adoption. The final step provides ongoing support and coaching to the stakeholders or champion for continued success.

If you are a vendor of collaboration technologies and a significant portion of your end-user population is slow to adopt your technology, we would be glad to discuss these new offerings with you, and tell you how we can help to deal with this challenge and help to drive adoption. Please contact Mike Dressler at miked@collaborate.com or 650-378-8520.

If you are an end-user organization, have some of the issues seen in Table 1, and would like help in creating a successful collaborative strategy and implementation, so you can get the most value out of this technology, please contact Mike Dressler at miked@collaborate.com or 650-378-8520.