

Analysis of communication challenges and potential solutions assignment

[Business](#), [Management](#)



This paper examines the communication challenges observed during the execution of a project to design and deploy a global Laboratory Information Management System (LIMS) to support worldwide research and development in a major pharmaceutical company.

LIMS applications are software components for the management, business process standardization and information sharing efforts of a large research organization that result in new modes of operational performance across the enterprise. Business operational processes, human resources for administration and the application software comprise the entire system. Worldwide Research and Development (WWRD) within the company is comprised of multiple functional areas, management lines and multiple locations throughout the world.

Variations in business operations have led to divergent business processes, inconsistent management and communication of scientific data. A team of individuals from key functional lines, such as Informatics (computing science team) and the various research organizations was assembled from the main sites located in Sandwich, England and the American sites of Connecticut and St.

Louis to create a virtual global team that would infrequently be collocated during the project. The team had the challenges of firm schedule deadlines and limited budget to harmonize global business processes, customize the LIMS software, deploy and assist in adoption of the system within global WWRD. The team was led by an American project manager that reported to

a Governance Board with members from the different sites and business lines.

The Project Manager (PM) had matrix-based authority over dozens of individual subject matter experts from the business and informatics lines represented at the sites. The overall structure of the team was a collection of separate sub-project work streams focused on the harmonization of individual research group processes into standardized global processes. The first challenge the project manager had to deal with was developing a productive virtual team environment of members spread across time zones and large distances.

Use of teleconferencing and videoconferencing to support initial meetings helped form general acquaintances and roles were assigned from the project manager to the members of the virtual team. Soon after the project started it became evident that there was great reluctance within the work streams to share ideas during the daily teleconferences, resulting in minimal project progress. This was an indication of low trust within team despite the frequency of meetings. “ Virtuality requires trust to make it work: Technology on its own is not enough” 1.

The Project Manager traveled to the various sites to meet and interview the multiple work stream members and determined that they were aware of the general global project goals, but that the primacy of business unit team goals in preserving their existing business practices were perceived to be of greater importance to them from an operations and individual career

advancement perspective. Coupled with a lack of open debate within the work streams over how they would achieve its assigned goals this contributed to the lack of effective communication within the work stream and greater project team.

The Governance Board had also issued directives enforcing high level business process changes that did not take into account the skills and capabilities of the distinct research units at the sites, which also contributed to communication problems. The team was failing to progress the project goals as a cohesive group. Analysis of the aforementioned factors indicated that a perceived lack of shared goals and the perceptions of power² within the team were affecting overall trust levels. The decision was made that this team would benefit from having cross-functional facilitators from other business groups lead business process harmonization efforts at the various sites to become better acquainted with different operational practices and the individual work stream members. These facilitators met face to face at regular periodicity to discuss their findings and decide the best way to achieve the harmonization goals. This resulted in a greater understanding of what would work best for the development of global processes as well as reducing the power differentials between teams as all now had an equal voice in decisions, leading to a greater sense of shared goals.

Social interaction between the facilitators and team leads also improved team interactions slightly by creating a more personally familiar and less formal environment. Issues still persisted, however, as many team members expressed through their actions the unwillingness to change from their

native groups processes and operations to the new processes developed between the facilitators, based on an aggregate of the individual group and site based practices.

Conflicts arose between members within the work streams when existing processes from different groups were implicated as being deprecated and outdated. This was perceived as face threatening by stream members that had been originally involved in developing those processes. Further analysis of this team dynamic is can be understood in terms of the factors shaping team dynamics described by Donnelon's³ thoughts on team dynamics, in effect, that the former is shaped by contributing elements of an individuals needs, experiences and organizational design, especially as related to reward mechanisms.

Many individuals in the project teams identified more strongly with the groups they belong to outside the project team context and when placed into a role in conflict with their nominal role began to experience a form of identity crisis anxiety. Differences were magnified by a lack of common syntax for key terms used to describe business activities. Project functional responsibilities also created situations in which leadership within the work streams developed that had not previously existed in the hierarchy before.

The situation was ameliorated by addressing these key factors affecting the team dynamics. A common glossary of terms that group members defined and agreed to as a group was developed. Teams held brief, daily meetings to discuss issues and determine the most appropriate members to lead the

individual work streams during different phases of the project. This work stream empowerment helped to reduce self-interest based independent thinking and the establishment of a collaborative group identity, hence relieving some anxieties related to personal identity conflicts with the group.

The business unit experienced several large scale reorganization efforts through the course of the project. The initial change caused the elimination of entire work stream memberships due to attrition of key personnel which resulted in the need to reform these teams with new members and those from remaining work streams. Some new members within the work streams convinced the other members to allow them to take lead positions within the group. Overall project progress had suffered through the organizational change and most of the newly formed work streams struggled to produce their deliverables.

Complaints by members of the reformed groups were raised but often summarily dismissed by stream leads as they tried to assert their leadership of the respective work stream. This led to ever increasing negative comments within the streams and a significant lowering of overall project team morale. Review of work stream progress through meeting minutes and interviews with team members by the Project Manager gave rise to the source of the problems, essentially a lack of emotional intelligence as described by Cherniss⁴.

Members that rose to leadership positions had over estimated their ability to do the work and handle the stress that accompanies the responsibilities of

leading a work stream in an organization that was experiencing rapid changes and frequent restructuring of research units. There were specific individual stream leads tended to be very pessimistic that the project could succeed as a whole in this business culture of change which tended to seriously de-motivate those around them.

The management solution was to reassign these lead personnel to the role of individual contributor, a position that was neither leading nor part of a specific work stream however still contributed knowledge and information useful to the overall project objectives. Project progress improved measurably soon after. The reorganization also resulted in multiple team members temporarily relocating to different sites and a need for a greater amount of travel between sites to facilitate the new changes.

Some basic operational communication issues were addressed by this approach, but additional new communication issues began to surface. An example of which surfaced when an American team member was put in charge of an England based stream. The American Team Lead outlined the streams goals and individual team member roles. The English team members performed their individual duties as described although it was soon apparent that the stream was falling behind in its overall objectives.

Interviews were held with team members by the Project Manager to determine what the root cause issues were. It soon became apparent that there were pervasive intercultural differences in communication styles and site organizational culture, largely based around differing levels of cultural

context⁵. The American Team Lead gave broad objectives to English team members that to be successfully acted upon required activities not specifically defined to a granular level of detail in their roles.

The English team members executed all processes that fell within their roles but very few others that did not. Status reports from the English members were written from a perspective of compliance within their role and not to the progression of overall objectives as expected by the Project Manager. Communications from the American Team Lead in meetings were considered vague by the English team members, but no one brought this to his attention. In this case, the English team required more formal explanations of specific tasks rather than broader more ambiguous goals.

They interpreted the Team Leads direction's more literally than the Team Lead had intended. The difference of high contextual needs of the English stream members and less formal context of the American Team Lead gave rise to the communication issues and ultimately poor performance of the team. The issue was resolved via facilitation by the Project Manager to educate both team members and the Team Lead on the apparent differences in communication styles.

Team members were individually polled as to what level of detail they required to feel comfortable in the execution of their duties. The Team Lead was asked to review the formal listed roles the team members held and align more granular tasks specifically to them. This resulted in the team performing better to meet its objectives. Efforts to create a positive team

environment had an unintended side effect when established work streams became more cohesive and internally more socially familiar.

Interactions between streams with some overlap of goals became more conflict driven, from an individual membership perspective as well as from a broader stream context. Conflict⁶ in this example is best defined as “disagreement plus negative effect, or a difference of opinion between persons accompanied by feelings of dislike for the other” of which both of these elements were in evidence. Work streams began to be characterized by a reluctance to accept differing opinions and suggestions from other streams.

Within certain streams there seemed to be a reduced amount of open, creative discussion amongst members who were leaders in different operational areas. Debate and disagreement within some streams escalated to conflict levels occasionally leading to accusations between members of incompetence, unwillingness to cooperate and in one case the ostracism of a group member from any decision making. A neutral observer that was not a member of any stream was asked to participate in meetings to determine the genesis of these conflicts.

It was observed that in at least one stream the differences of opinions between members were allowed to escalate past the “spirited debate” stage to become more akin to personal attacks on others credibility. This was dealt with by establishing standard meeting practices in which the expectations of individual conduct during discussion of disagreements complied with

corporate Human Resources policies of professional conduct and educating this particular stream on the undesirable outcomes that would be associated with non-compliance. This dealt with the immediate issues at hand concerning conflict, but overall morale was impacted negatively by generating an undertone of potential punitive action by management. A few groups were characterized by containing one or two individuals with domineering personalities which gave rise to additional communication issues. When these individuals proposed solutions it was almost always taken as the correct course of action for the stream by its members.

However, discussions with individuals in the stream bore out the fact that there was always at least one person in each stream that did not dissent even when they did not agree with the proposed course of action. This “consensus seeking” fit very clearly into the model of “groupthink” proposed by Irving Janis⁷ where in peer pressure can lead to an “illusion of unanimity”, or more simply, that all members agree with the team decisions when that is not the case.

Activities to remedy the situation involved moving key personnel to other streams to participate as contributors rather than leaders. Facilitators external to the team were brought in to assist in improving team member interactions. There was a re-training of members to respect each others decisions by creating the concept of a low risk open forum within the teams to critique each idea no matter the source. Each team member was assigned the responsibility for thoroughly critiquing the potential benefits and detriments associated with ideas presented in the formal team meetings.

This greatly reduced the incidences of conflict and created an environment of “ open disagreement”, wherein differences of opinion were used as vehicles for continual process improvement. Re-organizing the teams and moving towards the aforementioned system also eliminated the immediate consensus of one idea, effectively breaking the “ groupthink”. The project team was comprised of a diverse range of individuals with different educational backgrounds and communication styles.

Many of the stream members were highly educated (Masters or PhD level), while some were highly experienced in operations at a high school level of education. An example which illustrates this involved a team member that created tablet design press dies that would be used to stamp the company logo onto tablets. This person was the eldest in a particular work stream concerning branding information and was viewed by other team members as being blunt and uncooperative in meetings.

When asked what he thought of his interactions with the other team members he stated that they were “ all talk and no common sense”. When other more educated members of the team such as scientists serving as subject matter experts were asked the same question regarding the previously mentioned gentleman they responded that “ he’s rude and doesn’t seem to get what we are trying to do”. These individual communication differences in part could be described in accordance with O’Keefe’s model of message design logic⁸.

One of the basic premises of this model is that individuals communicate and receive messages based on the way they construct their own messages.

Observation of communication profiles within certain streams indicated that individuals communicated and received communications differently based not only on their respective individual message design logic approaches but also on their predisposition to the other communicator, their contextual references and affinity (or lack of affinity) for the other people they are communicating with.

The previous example of communication experience between the die maker and the scientists very closely mirrors that of expressive and rhetorical message design logics being employed, where the former lacks the ability to perceive more subtle aspects of a message and the former perceives a level of inconsiderateness and obstinacy. Despite the various communication issues and delays, the software was customized and deployed centrally in Groton to be utilized globally by the sites.

A final key goal for the project was the initiation of adoption and uptake by the numerous groups and users at the sites. Actual adoption rates, however, varied between sites. The St. Louis site was eager to work with and adopt the system. They applied appropriate human resource and time to develop an expertise with the software and put the globally established processes to use. The Sandwich, England, site was more reluctant to shift into the new mode of operation even though it appeared contrary to the leadership role they had taken during the course of the project.

Moderate resources were applied and marginal time was allocated to enhance adoption efforts. The Groton site was the least willing to adopt. They looked to the other sites adoption activities, successes and failures, prior to committing resources and time to integrate the global processes in to their local Groton efforts. An interesting parallel can be drawn to the various “adopter categories” established by E. M. Rogers⁸. The St. Louis site could accurately be described as “innovators”, or those willing to deal with a great amount of ambiguity and uncertainty.

The Sandwich site could be described as the “early majority”, adopting with deliberate willingness and modifying patterns of usage after they are attempted by other sites, in this case, primarily the St. Louis site. Groton would be described best by the “laggard” category. They preferred to continue with business processes no longer considered global, thereby isolating themselves from the global LIMS user community. Additionally their interaction with the other sites indicated a lack of trust and suspicion in the intended use of the system as a means to supplant the historically lead role the Groton site had played in research activities.

Viewed in the context of Rogers “Stages of Adoption”⁹, the “knowledge phase” in which familiarization with the impending change is made available, was addressed by training on the software, iterative refinement of requirements and software customization prototypes shared with the individual business units to set expectation levels. This seemed sufficient and well accepted over the course. The “persuasion phase”, however, was not addressed in a successful way. Use of the system was mandated by

upper management rather than subject to site management agreeing to adoption processes and efforts.

This led to feelings of “lack of choice” and impeded efforts to motivate change. The “decision stage”, which could also be referred to as the “adoption phase”, proceeded with open agreement to use the new system and processes globally, but in actuality the differences in adoption described previously occurred. It was clear that at this stage not all sites had decided to adopt and change in actuality. The system is still in its implementation phase involving putting the new system into operational use at all sites. Overall global adoption efforts are progressing, but not at the rate initially planned for or expected, largely due to the manner in which communication issues were allowed to develop and were managed. It is clear that communication plays a central role in the success of projects within large organizations and that formal communication training and planning would have led to more efficient use and management of resources. Communicative context is critical to understanding the nature of virtual relationships requires a much higher level of trust and oversight than do conventional hierarchically controlled settings.

Understanding trends in team dynamics and close observation of a specific team’s interactions is important to ensure efficient exchanges of information and knowledge within the broader context of organizations. Emotional intelligence and self awareness are indeed key elements to successful communication of ideas and concepts, especially in a team setting. One must also account for intercultural differences in communication styles and

preferences in order to facilitate correct assignment of meaning in messages and directives within teams made up of international membership.

Additionally, conflict must be avoided wherever possible as relationship damage within teams will affect productivity. Establishing an environment of open debate and free exchange of ideas is a key strategy to improve organizational capabilities to solve problems, express new ideas and foster innovation. Understanding the symptoms of groupthink and its effect on retarding innovation is critical to reducing the pattern of similar ideas constantly re-circulating in an organization and preventing the development of an environment where all ideas are heard equally and the optimal ones are chosen.

It is also important to realize that different people utilize different mental constructs for creating and perceiving messages within communications and managers should tailor communications according to the target audience to maximize the efficiency of the communicative exchange. An ancient Chinese proverb states “ A single conversation with a wise man is better than ten years of study. ” Communication is the primary conduit through which we understand the world around us, our roles and purpose.

The attainment of knowledge, within or without and organizational context is pivotal to the development of self awareness and the ability to express ones thoughts, beliefs and ideas. In conclusion, it is imperative that individuals educate themselves and their respective organizations in the various models and methods concerning the nature of communications to achieve the

highest level of common understanding and shared insights possible to foster creativity, innovation, new solutions and understanding. References 1 = Handy C. (1995), " Trust and the Virtual Organization", Harvard Business Review, May-June, 40-50, p. 4 2 = Tucker R & Panteli N (2003), see in particular p. 91 of " Back to Basics: Sharing Goals and Developing Trust in Global Virtual Teams". In N. Korpela, R. Montealegre & A. Poulymenakou (Eds), " Organizational Information Systems in the Context of Globalization", IFIP 3 = Donnelon, Anne, " Team Talk: The Power of Language in Team Dynamics", Harvard Business School Press/McGraw Hill (1996) 4 = Cherniss, C. , Ph. D. Rutgers University " The Business Case for Emotional Intelligence" (1999) Prepared for the Consortium for Research on Emotional Intelligence in Organizations = " Hall's Model" excerpt from " Intercultural Communication Lecture" (Mundorf) 6 = McCroskey, J. C. & Wheelles, L. R. (1976) - " An Introduction to human Communication", Boston, MA; Allyn and Bacon 7 = Janus, I. L. , (Nov. 1971), " Groupthink". Psychology Today, 43-46, 74-77. 8 = O'Keefe, B. J (1988) " The Logic of Message Design: Individual Differences in Reasoning About Communication". Communication Monographs, 55, 80-103 9= Rogers, E. M. , & Agarwala-Rogers, R. (1976). " Communication in Organizations". New York: The Free Press