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Increasing the Performance of Organization by Using Management Tool and Strategic

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Abstract: ***Traditional internal organizations with heavy competition, unbending functional silos and undue compartmentalization exhibit sub-optimal performance by preventing critical knowledge flows. Cross-functional teaming attempts to solve this problem by building organizational connections across functional silos. However, merely bringing members of formerly isolated departments together produces only marginal increases in performance. Any synergistic collaboration is likely to rise serendipitously and unpredictably. We propose a systematic approach for combining the principles of knowledge management and cross-functional teaming purposefully in ways that enhance knowledge flows and result in significant improvements in organizational performance as measured by cost, time and quality.***

Keywords: Knowledge management, Learning organizations, Resource allocation, Cross functional teams

1. Introduction

While there is an abundance of literature on the individual subjects of cross-functionality and knowledge management (KM), there is a notable lack of discussion regarding how the Two can be effectively combined. Each concept embraces different yet complementary solutions for the same set of organizational problems. The potential for interaction is obvious. The successful application of KM necessitates interaction among multi-disciplinary groups of people as a basic requirement. Cross-functionality cannot be effective without sharing knowledge among team members. In many organizations cross-functionality plays a significant role in binding organization units together and providing a superlative medium for competence gains and productivity enhancement. (Nikolenko, (1996)) argue that in a functional hierarchy of a vertically built company, individual jobs and information flow control are geared towards. The cross-functional horizontal teams of the company do not require the same level of formal managerial control because their work is aligned with customers' needs, and "controlled" by a judgment of the result. (Margaret Weber, 2002) concluded that as organizations move into the twenty-first century work challenges will continue to increase and the need for cross-functional teams (CFTs) will be great. Therefore, it is important for organizations to understand how to achieve maximum benefit from cross-functional teaming. (Stebbins, 1995) stated that collaborative knowledge teams give corporations an edge on creativity and innovation. Cross-teaming functionality is a special effort that generally leads to enhancement in efficiency and effectiveness of the process and multi-task reduction in lead-time and redundancies. However, few if any of these results have been directly linked to the KM, especially regarding the evolutionary progression of team dialogue. A few investigators such as Benson and Dresdow (1998), Barker et al (1998), and Fernandes and Raja (2002) mention the importance of knowledge sharing within the CFT structures, but not how knowledge is managed within these teams. The value that KM brings to mixed teams results from the potential for enhancing and leveraging knowledge flows among heterogeneous sources across space and time.

It is well established that knowledge in general does not obey the law of diminishing returns: the more it is dispersed and shared the more productive and effective it becomes. The main theme behind blending cross-functionality and KM is to achieve significant competitive advantage through constructing a whole with a value greater than the sum of its individual parts. This synergistic effect is especially feasible in the case of intangible capital, namely, the collective brainpower.

The best milieu for enhanced knowledge exchange is massive, enterprise-wide cross hierarchical and interdisciplinary teamwork. Such a complex and difficult system needs to be managed and guided purposefully. This is where the management component of KM comes into play.

2. Knowledge Management: A Four-Pillar Approach

Under the fierce competition of the current networked economy many organizations are searching for ways and means to improve their sustainability, effectiveness and innovation status through the structuring and restructuring of their workforces. As a result, the embedding KM and other collaborative strategies in their business process is becoming more important. In his KM conceptual framework professor Michael Stankosky of the George Washington University upholds KM on four well-built pillars, namely, organization, leadership, technology and learning (Stankosky, 2000). The same fundamental idea may be applied to CFT. Because of numerous dependencies on the business ecosystem in which the initiative is carried out, there is no generalized formula to determine the exact contribution of each of these pillars to the organization's competitive advantage. However, it has been generally accepted that each of these pillars must be operating to some degree for knowledge management to be successful.

2.1 Leadership

KM involves changes that may not easily gain the organization's acceptance unless leadership mobilizes the middle managers to provide an environment conducive to the widespread sharing of knowledge. Pan and Scarbrough (1998) report that management and leadership play a critical role in establishing the multi-level context needed for the effective assimilation of KM practices. The authors quote Bob Buckman of Buckman Laboratories, saying that: "The climate we create as leaders has a major impact on our ability to share knowledge across time and space ". They summarized the leadership role in KM and cross-functionality into two elements: overcoming resistance to change; and dismantling barriers to communication, both across the organization and between different levels of management. For cross-functionality and KM to work together, leadership needs to promote cross-functional relations that bring people together and reward them for taking shared corrective actions or reaching mutually valuable solutions. Leadership needs to stay away from meddling and forcing mechanisms, while at the same time foster the learning environment to motivate employees to experiment.

2.2 Organization

The organization pillar is critical in that it demonstrates how we must amalgamate the detached heterogeneous bodies of knowledge to work, interact and think in concert. Having said that, traditional organizations with heavy internal competition, rigid functional silos and undue compartmentalization may generate critical barriers that isolate various departments into disconnected islands with little beneficial communication between them. Such hierarchical organizations slow down change, lengthen the decision-making process and imprison innovation. Since traditional organizations are vertically structured around tasks and functions, they are not suitable for sharing knowledge at the organization level. Analogously, other elements of the hierarchical structure such as rigid adherence to organization charts hamper knowledge flow. Prior to the 1980s, the economy was built primarily on tangible assets, while the organization was fully stratified and duties were often rigid and inflexible. During that period, it was acceptable to the enterprise model using hierarchical organization charts.

2.3 Technology

While many consider technology as an end-solution, proper management knowledge treats technology as an enabler. This is especially critical as enterprise-wide CFTs become more geographically dispersed and declining budgets constrain travel and relocation. The George Washington University Institute for Knowledge Management is faced with this situation. IKM is managing and coordinating its highly diverse brain trust by configuring a suite of process driven tools that span the full project organizational life cycle, from initial planning to field implementation and dissolution (Murray and Katz, 2003).

2.4 Learning

CFTs must be well-informed and highly trained through involvement and education before they can work together effectively. For CFT to be successful all those who are involved in any project must pool their knowledge and skills to contribute to decisions across an organization's boundaries to generate better results in a shorter period of time. Given the importance of a strong organizational learning climate, leadership needs to take the initiative for sponsorship and support of the efforts in this direction. However, due to the diverse background of the team members, leadership should not assume that cross-functional thinking happens overnight, especially in organizations traditionally characterized by functional isolations, domain dissimilarities and centralized management.

3. Achieving effective cross-functionality

When communication collapses and employee morale goes down, the organization becomes ineffective, incompetent and in a state of confusion. Bringing people together to alleviate these symptoms will give them the sense of ownership, responsibility and accountability to figure out the proper solution. This is healthier than hiring a consultant to decipher the intricacies homegrown. Lack of communication results in minimal feedback and reduced double-loop learning that may eventually lead to an intellectually dead organization. This is typically a characteristic of rigid hierarchical organizations, where learning happens in one direction due to barriers that confine the information value chain path to a top-down relationship. This one-way path information mostly takes the form of instructions and commands from the boss, with no chance for a second opinion from subordinates. Therefore, strictly bureaucratic and hierarchical organization is antagonistic to the concept of learning and knowledge sharing. Such organizations will be log-jammed with procedures, policies, rules, regulations, instructions and commands that unquestionably leave no room for innovation. In most cases CFTs are built to bring together managers, workers, experts and facilitators, regardless of their titles, to tackle a project or to solve a shared problem for a finite period of time. Cross- functionality provides a platform and effective means of leveraging knowledge to solve problems or to make multi-disciplinary decisions.

The importance of establishing CFTs is not only to congregate the know-how, but also to identify who knows what from within and outside the CFT membership.

4. Cross-functionality in Learning Organizations

The Merriam-Webster dictionary defines Leanne as "gaining knowledge or understanding of or skill in by study, instruction, or experience". Senge (1990) points out that the learning organization is where expand their capacity to create the results they truly desire, where people continually new and expansive patterns of thinking are nurtured, where collective aspiration is set free, and where people are continually learning how to learn together.

Learning in organizations takes place when the experiential awareness traverses across departmental boundaries and results in leveraging the strategically valuable knowledge to improve goods and services. The previous searches concluded that to become a learning organization, an organization must develop a wide range of knowledge, skills and characteristics. However, the beginning step is to develop the necessary structures to assist those within the organization, as well as the organization itself, to Learn and to change.

A dynamic strategic planning process, an empowered team-oriented environment and a culture of continuous improvement when combined with proactive visionary leadership and a commitment to experiential learning, are fundamental structures on which to build a Leaning organization. About the importance of teams in such Learning process. Spender (1996) found that learning at the collective level is the outcome of the interplay between the conscious and automatic types of knowledge, and between the individual and collective types of knowledge as they interact through the social processes of the collective, such as teamwork.

5. Virtual cross-functionality

Face-to-face contact is rarely questioned as a powerful mechanism for communication in general and as knowledge sharing vehicle. Face-to-face (non-Virtual) representation brings with it a rich anthology of empathetic communication actions and human behavioral patterns such as body language, brainstorming chemistry, human consciousness and social synergy. These intrinsic elements contribute to the contextual value of knowledge and reinforce the robustness of trust between communicators. However, due to physical, temporal and departmental constrain face-to-face convention and physical self-managed teaming are not always feasible.
that although the telecommunication system can't be a substitute for face-to-face communication, it would facilitate the development of commitments among virtual team members. Therefore, augmentation of cross-functional activities with technological solutions is imperative for the success of cross -functionality initiative. As a result, many collaborative network structures such as on-line communities, virtual cross-functional teams (VCF) and virtual knowledge repositories have been launched.
VCFT is a multi-disciplinary group of people with a shared vision and purpose who use technology across time, space and organizational boundaries to solve a shared problem or to reach a quick decision. Virtually distributed collaborative work has lately emerged to connect geographically dispersed teams' members, promote boundary-less organizations and save time by streamlining the process through automation and workflow.

Figure 1 Logical representation of organization functional departments, cross-functional teams (CFT), and the community of practice (front drawing) in relation to the simulation of ERP II modules (shadow) of the functional departments connected through module interface (MI) and business intelligence tools that binds all modules (dotted lines)

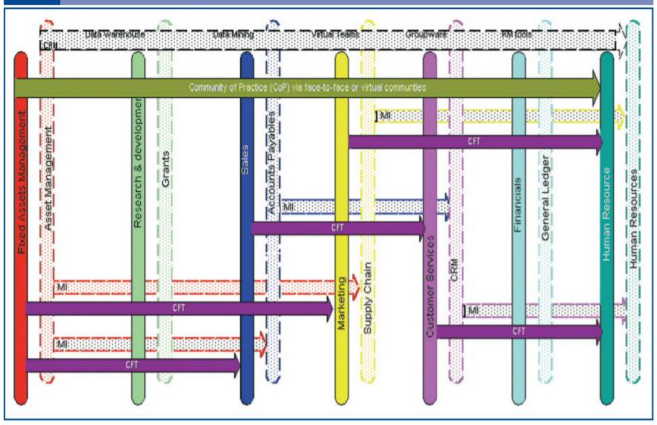

Figure 1: Analogy between ERP system and CFTs

The figure above illustrates the analogy between the ERP system (mirrored part) and CFTs (front part) Business intelligence tools, on the top of the figure, correspond to community of practice in the real word, which emerges as a result of CFTs conglomeration. So the business community already worked cross-functionally, but ERP systems amplify information transparency and speed the decision process.
Similarly, cross -functionality is not a new concept, but its implementation is revolutionized to tackle new problems such as aligning IT with the business process, which is the bedrock for successful implementation of ERP systems. It is natural form department in any organization to cross-disciplinary because the team-based approach is part of its core work where systems analysts, designers, network managers, system administrators, developers, quality assurance and security groups collaborator to deploy a system in various functional areas. While the business process in ERP systems is cross-functional in its nature. For a purchase order, which is saved in the system, will propagate through to most of the internal and external modules that extend from the shop floor to the supplier. The role of IT is to put this business process into work not only within the company barriers but also to establish interconnectivity and interoperability with other trade partners.

These two "bolt on " tools i.e. CRM and SCM provide full information about customers and the business process that serves them. This augmentation of the internal virtual space is critical for the exchange of know-how and the information transparency of the whole value network. In ERP can timely tap on the knowledge of the entire business value networks. For example, using the inventory management (VIM) the supplier connects to a factory ERP system, queries the database to determine how many parts are still in the stock and create replenishment requisition accordingly. On the other hand, a customer can log into the system and issue orders for products and track the shipment. This boundary spanning not only completes the cycle and connects trading parties to transfer knowledge and speeds the process, but also allows for better forecasting of customer requirements.

The new ERP ll is designed as KM tool that goes beyond the organization's internal knowledge to include the supplier, the

manufacturer, the customer, and many other business partners. This new cross-functional alignment between traders collapses the distance and time factors that directly affect the efficiency, profitability and innovation.

On the other hand, the standardization of the process is one of the main objectives for of ERP system in many companies; however, Standardization and innovation are not typical bedfellows. Following strict rules, policies, practices, standardization is deemed innovation prohibitive practices. Nevertheless, in the case of ERP there are business intelligence tools at the backend. These tools break the standardization code and perform analytical inference for the available data and information that lead to customer oriented actions. Companies that have implemented s successful ERP systems discovered that these systems liberated them from their legacy functional compartmentalization. But, to institute an effective communication conduit for a fully integrated business process companies need to open their doors not only for learning-through-partnership, but also learning-through-coopetition and tum this learning partnership through joint ventures into reality.

Figure 2 Knowledge transformation phases in relation to their corresponding dominant owners

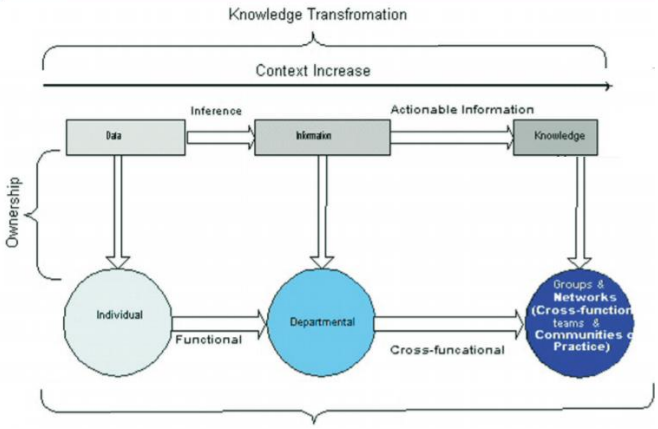

Figure 2: Transformation phases and the ionosphere

Figure 2 depicts knowledge transformation phases and the ionosphere ownership, where knowledge as it transforms through its life cycle transfers between individuals and communities. The progression from data to information to knowledge results from adding context and value to the process. For instance, the social security number of students in a university roster are just data that can be used for different purposes. If the university administration associated with these social security numbers, names and grades and then compare these grades with other competing universities then that will result in information. Furthermore, if the university used the resultant information to reward the top 10 percent for their exceptional performance, then that is knowledge. This is because data morphed into decision-making means or turned into actionable information. Data is the germ-cell for knowledge as an individual is the microcosm for communities. Data can be classified as structured or un-structured, but all instinctively exist in an isolated non-contextual discrete format. Therefore, the best usage of data can only come from individuals who own or create that data. But, the likelihood of a group having the same interpretation of set of data is minimal, unless a predetermined quantitative model or metadata solution governs the interpretation. In data warehousing this is eminent problem where data may be syntactically and semantically invalid unless the owner adds value by carrying out data cleansing or interpretation. On the other hand, the existence of unstructured data is always debatable, because linguistically unstructured data does not make any sense, if it does then it is qualified to be information. Information is data with context momentous structured into patterns. For instance, the discovery of Patterns in a data warehouse or data marts results in information. However, using intellectual insights to draw actionable decisions from these patterns is knowledge.

About unstructured data, individuals discover knowledge and tacitly possess it. But, this is not totally true because knowledge is socially constructed process i.e. individuals discover knowledge through interaction within communities. Very minor breakthroughs in knowledge discovery alone exist from an individual such as inventions that results from an abrupt paradigm shift within the individual thinking. However, even in this case the driving force comes from the need of the community for that invention. Bhatt (2001) argued that conversion between information and knowledge is best accomplished through social actors, but social actors are slow converting data to information.

5.1 The bottom line

Teams in general are fundamental learning units whereas the CFT is the nucleus for a healthy CoP with heterogeneous knowledge. The real differentiating factor for any organization conducive to cross-functionality is how knowledge can be leveraged to improve the process in question and to transform it into tangible value. This requires KM managers to get involved in teaming efforts and facilitating knowledge sharing from within the CFT and across the organization. The most mandating task for the KM practitioner is to convince the team and the management with the real return of investment (ROI) as a result of implementing KM principles.

The intelligence of a team in solving problems is multifaceted entrenched in how the team amalgamates the collective tacit knowledge of its members. The role of the knowledge manager here is not only to organize what the organization knows, but also to achieve synergetic collaboration, i.e. Coalescing of the intellectual capabilities results in more than the sum of what the organization possesses. The KM manager needs to consider the heterogeneity team as a source for synergetic collaboration and a basis for paradigm because people with different backgrounds and diverse thinking can totally eccentric inject ideas into the process.

Cross-functional teams are a welcome break from tradition, and have produced many positive benefits. Yet much room for improvement remains. For example, there is often an abundance of free-flowing communication within CFTs present. However, communication back to the enterprise is limited and is comprised mostly of industrial age reporting and documentation. Very little collective knowledge is

captured and retained at an institutional level. When a CFT disbands, the collective wisdom and experience of that the team rapidly dissipates.

The KM manager does not have to inject KM principles in the CFT intellectual paradigm. Following a learning model that fits the various arenas in the team environment might work better than a validated model that is a product of another KM initiative with completely different settings, dynamics and momentum. This is because the generalizable Learning model should be a delicate balance between the CFT team members learning model. This will make it easier for members to learn and to assist others to learn and to leverage the team knowledge for the benefit of the organization.

Remaining competitive in today's market requires enterprise-wide performance improvement, and rapid response to change. The biggest challenge for managers using or contemplating the use of CFTs is to ensure that the collective experience of each of CFT is captured, retained and re-applied across the entire enterprise.

This in fact presents a double opportunity. Applying KM on a large scale has always proven difficult. Most KM successes have started at the project level, with incremental expansion to larger groups, divisions, and ultimately, the entire enterprise. Communication flows need to be established and encouraged that run not only among the team members, but to and from each team member's functional organization.

Over time, the practice of using CFTs to enhance organizational learning will increase the speed and the performance of new CFTs. CFT members will not only draw from their own individual knowledge and experience, but from that of their functional group, and the enterprise. Performance in terms of efficiency, effectiveness and innovation will be enhanced for the individual, the CFT, the functional groups, and the entire enterprise.

6. Conclusion

In summary, improve long-term performance of your organization, at dramatically reduced risk based on the methodology applied, if your organization is not currently using CFTs, you should consider starting immediately, if you are using CFTs, consider using them as a catalyst to kick-start your enterprise into becoming a true knowledge-sharing organization.

Also, using strategic planning to renew the Organisations for the next several years implementing Strategic planning can increase the performance of Organization, by detecting to focus and find on the handful of big issues facing organizations.

References

[1] Bhatt, G. D. ((2001)). Knowledge management in organizations: examining the interaction between technologies, techniques, and people. Journal of knowledge management, 5(1), 68-75.
[2] Margaret Weber, M. (2002). Measuring supply chain agility in the virtual organization. International Journal of Physical Distribution & Logistics Management, 32(7), 577-590.
[3] Nikolenko, A. &. ((1996)). Global trends in organizational design. Work Study, 45(7), 23-26.
[4] Stebbins, M. W. (1995). Organization design and the knowledge worker. Leadership & Organization Development Journal 16, 23-30.
[5] Gamon, J. A., Field, C. B., Goulden, M. L., Griffin, K. L., Hartley, A. E., Joel, G., ... & Valentini, R. (1995). Relationships between NDVI, canopy structure, and photosynthesis in three Californian vegetation types. Ecological Applications, 5(1), 28-41.
[6] Robinson, H. S., Carrillo, P. M., Anumba, C. J., & Al-Ghassani, A. M. (2001, September). Perceptions and barriers in implementing knowledge management strategies in large construction organisations. In Proceedings of the RICS COBRA Conference (pp. 451-460).
[7] Schwarz, H., & Koch, A. L. (1995). Phase and electron microscopic observations of osmotically induced wrinkling and the role of endocytotic vesicles in the plasmolysis of the Gram-negative cell wall. Microbiology, 141(12), 3161-3170.
[8] Benson, J., & Dresdow, S. (1998). Systemic decision application: linking learning outcome assessment to organizational learning. Journal of Workplace Learning, 10(6/7), 301-307.
[9] Acheson, D., & Barker, D. (1998). Independent inquiry into inequalities in health: report.
[10] Jude Fernandes, K., & Raja, V. (2002). A practical knowledge transfer system: a case study. Work Study, 51(3), 140-148.
[11] Stankosky, M. (2005). Creating the discipline of knowledge management: the latest in university research. Routledge.
[12] Nikolenko, A., & Kleiner, B. H. (1996). Global trends in organizational design. Work Study, 45(7), 23-26.
[13] Gustafson, K., & Kleiner, B. (1994). New approaches to team building. Work Study, 43(8).
[14] Swan, J., Newell, S., Scarbrough, H., & Hislop, D. (1999). Knowledge management and innovation: networks and networking. Journal of Knowledge management, 3(4), 262-275.
[15] Gustafson, K., & Kleiner, B. (1994). New approaches to team building. Work Study, 43(8).
[16] Proehl, J. A. (1996). Linear stability of equatorial zonal flows. Journal of physical oceanography, 26(4), 601-621.
[17] Senge, P. (1990). The fifth discipline: The art and science of the learning organization. New York: Currency Doubleday.
[18] Mazany, L., Roy, N., & Schrank, W. E. (1996). Multi-product allocation under imperfect raw material supply conditions: the case of fish products. Applied Economics, 28(3), 387-396.
[19] Spender, J. C. (1996). Making knowledge the basis of a dynamic theory of the firm. Strategic management journal, 17(S2), 45-62.

[20] Nonaka, I., & Takeuchi, H. (1995). The knowledge creation company: how Japanese companies create the dynamics of innovation. New York.
[21] Lev, B. (2000). Intangibles: Management, measurement, and reporting. Brookings Institution Press.
[22] Swanson, R. A., & Holton, E. F. (2001). Foundations of human resource development. Berrett-Koehler Publishers.

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