

NO CHANGE IS AN ISLAND: THE BIG PICTURE OF PROJECT MANAGEMENT

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Abstract

The trade press contains stories about technology project failure rate and the impact of the “soft” side of implementation. Researchers have cataloged the causes: the top technology implementation problems were people related. Lack of user involvement is a key reason for project failure. Communicating about upcoming change helps to avoid uncertainty and user resistance. This principle gets more lip service than actual practice. When introducing new technology, the key to launching successful change is a model that addresses both the mind and the emotions in a synergistic approach to change leadership. A positive outcome is based on the conviction that the process is as important as the product. Failed initiatives cost money, affect morale and lead to employee turnover. The willingness of management to share its information and address the concerns of its people is summed up in the principle that “No One Succeeds Unless Everyone Succeeds.” One always pays the “people price” – either upfront or at the back end. Getting early buy-in takes longer at the start, but it makes up for the time later when people need no convincing to initiate the adjustments that a change requires. Those who get insufficient input from users are hampered during implementation and may not ever recover. The result is disastrous, particularly in the area of Business Process Reengineering. Uninvolved users often find that critical issues have been ignored or misunderstood and they reject or find work-arounds for the new system. The recommendations in this paper stem from research, interviews and personal experience.

Keywords

Project management; project failure; change management; user involvement; user focused project management.

Description of the Problem: Literature Review

Technology project failure has been a problem that has intrigued academics and practitioners alike. The trade press is full of stories about missed deadlines, botched systems and cost overruns. Too much is at stake in terms of money spent, lost market share and consumer convenience/risk, for the outcome to be so problematic. This paper suggests that the answer lies in a more people-focused project management process. The following overview of primarily American research focuses on three different areas: project failures, change management and communication. After a discussion of suggested project management practices, four information technology implementations illustrate the concept. The basic practices of good project management are assumed to apply.

The examples in this paper come from the area of information technology (IT) and the problems that occur when organizations attempt to revamp processes through the increasingly generic descriptor (Teltumbde 2000^a; Ioannou & Papadoyiannis 2004^b; Watson & Schneider 1999^c) of enterprise resource planning systems (ERP) or other more specific types of automation software. The focus is on the lack of involvement of internal users when implementing projects in the United States. However, literature from the United Kingdom (UK) indicates that the IT professionals there struggle with the same issues as well, and the concepts and suggested practices are similar. Many of the same difficulties exist on a global scale when implementing ERP systems in multinational organizations (Kay 1998^d; Ioannou & Papadoyiannis 2004^e; Wang, Xu, Liu & Qin 2005^f), but these multicultural issues are not addressed in this paper.

Project failures

The IEEE journal, *Spectrum* catalogued thirty one high profile software implementation failures of many kinds culled from the American press in its September 2005 issue. Ranging from the travel reservation system abandoned by the consortium of Budget Rent-A-Car, Hilton Hotels, Marriott International and American Airlines in 1992, to Canada's Hudson Bay Co.'s \$33 million loss in 2005, the list is riddled with giants across the globe. Ford, HP, AT&T, McDonald's, CIGNA, Nike, and K Mart are some of the American victims in the 21st century. Major government undertakings such as the Internal Revenue Service (IRS), and the Federal Aviation Administration (FAA) both canceled projects after spending \$4 billion and \$2.6 billion

^a Teltumbde, A. (2000). A framework for evaluating ERP projects. *International Journal of Production Research*, 38(17), 4507-4520.

^b Ioannou, G. & Papadoyiannis, C. (2004). Theory of constraints-based methodology for effective ERP implementation. *International Journal of Production Research*, 42(23), 4927-4954.

^c Watson, E.E. & Schneider, H. (1999). Using ERP in Education. *Communications of the AIS*, 1(9).

^d Kay, E. (July 1, 1998). Going global with ERP. *Datamation Magazine*. [On-line] Available at <http://itmanagement.earthweb.com>

^e Ioannou, G. & Papadoyiannis, C. (2004). Theory of constraints-based methodology for effective ERP implementation. *International Journal of Production Research*, 42(23), 4927-4954.

^f Wang, C., Xu, L., Liu, X. & Qin, X. (2005). ERP research development and implementation in China: an overview. *International Journal of Production Research*, 43(18), 3915-3932.

respectively^g. Unmentioned is catalog giant Lillian Vernon which experienced an employee “revolt” that sank the installation of a digital asset management system (DAM).^h The UK has an equally dismal list of 16 government projects singled out in a House of Commons debate in 2004.ⁱ

The Standish Group’s Chaos study is a regularly produced report card on the state of technology implementations. In 2004, 29% of projects succeeded (on time, within budget with all features). This is a big improvement from the 16% in 1994, but quite a drop from the 34% in 2002. 18% were in the “failed” category (never implemented). Again, this is better than the 31% in 1994, but higher than the 15% noted in 2002. 53% of projects were considered “challenged” (late, over budget, with fewer features). This is identical with the figures for 1994.^j

Causes of failures

Researchers have identified a number of reasons for the high failure rate of technology projects. There are mistakes made in development such as coding errors and poor design. There are project management mistakes such as inadequate resources or unwise allocation, unclear specifications and poor reporting practices. The politics of the organization will create difficulties as will its culture.^k However, across the industrial and academic spectrum, researchers point to the impact of the “soft” side of implementation as a major culprit of failed technology projects regardless of the type. For instance, global ERP system implementations have encountered more people issues than technology ones (Kay 1998).^l

A Massachusetts Institute of Technology Sloan School program, *Management in the 1990s*, assessed management practices and maintains that “individual roles and culture, management processes, and structure” haven’t received sufficient attention (Benjamin and Levinson, 1993, p.28)^m.

The College of Business Administration at the University of South Carolina conducted a study of business process reengineering (BPR) in 1995 and found that the top five technology implementation problems were all people related. They are:

- (i) Need for managing change is not recognized

^g Charette, R.N. (2005). Why Software Fails. *IEEE Spectrum*. [On-line] (available at <http://www.spectrum.ieee.org>)

^h Paul, L.G. (2004). Time to Change. *CIO* magazine, December 1, 2004.

ⁱ Cited in a background report by the Fire Brigade Union (2005). *IT Background Analysis*, [On-line] Available at www.fbu.org.uk/campaigns/outofcontrol/pdf/01_21_it.pdf and at www.publications.parliament.uk/pa/cm200506/cmselect/cmcomloc/872/87217.htm

^j Hartmann, D. (2006). Interview: Jim Johnson of the Standish Group. [On-line] Available at www.infoq.com/articles/interview-Johnson-Standish-Chaos

^k Charette, R.N. (2005). Why Software Fails. *IEEE Spectrum*. [On-line] (available at <http://www.spectrum.ieee.org>)

^l Kay, E. (July 1, 1998). Going global with ERP. *Datamation Magazine*. [On-line] Available at <http://itmanagement.earthweb.com>

^m Benjamin, R.I. & Levinson, E. (1993). A framework for managing IT-enabled change. *Sloan Management Review* 34(4). 23-34.

- (ii) Management's short term view and quick-fix mentality
- (iii) Rigid hierarchical structures
- (iv) Line managers unreceptive to innovation
- (v) Organizational resistance to change. (Jeong, Grover & Teng, 1995, p. 229)ⁿ

The study concludes that it is vital to invest the time in communicating the reasons for the change because otherwise the process becomes adversarial.

Looking at the conclusions of the Standish Group's Chaos study at four year intervals, it's clear that the 1994, 1998, 2000 and 2004 results show that lack of user involvement or lack of executive support regularly occupy the top spots of the Top Ten list.^o

Using the Chaos Study as a basis, Kasser & Williams (1998) conducted their own study and also found that most projects do not fail for technical reasons, but because of human factors.^p In 2006, the Institute for Operations Research and the Management Sciences (INFORMS) studied ERP implementation and found project management and social issues to be a problem. (Ferratt, Ahire & De, 2006).^q

Davis and Venkatesh (2004) observe that users come into a project too late to make a difference.^r *Computing Canada* reports that "personalities, politics and poor planning are more often the cause of failed enterprise resource planning implementations, not the technology (Hilson, 2001, p. 1)"^s

The failure of the Lillian Vernon catalog project has been traced to the fact that employees hadn't been involved in the project and, when the launch was imminent, didn't take the training seriously. They complained bitterly that their jobs had become more difficult.^t

Certainly it is true that without technical competence and awareness of potential "bottlenecks," there is no chance of successful implementation (Ioannou & Papadoyiannis, 2004)^u. However, the above issues are all people issues, not development ones and they must be addressed

ⁿ Jeong, S.R., Grover, V. & Teng, J.T.C. (1995). *Business Reengineering in Organizations: A Study of Planners' Perspectives*. University of South Carolina College of Business Administration

^o Hartmann, D. (2006). Interview: Jim Johnson of the Standish Group. [On-line] Available at www.infoq.com/articles/interview-Johnson-Standish-Chaos

^p Kasser, J. & Williams, V.R. (1998). "What Do You Mean You Can't Tell Me If My Project Is in Trouble?" *Department of Defense, Defense Technical Information Center Software Tech News* [On-line] (no longer available online)

^q Ferratt, T.W., Ahire, S. & De, P. (2006). Achieving success in large projects: Implications from a study of ERP implementations. *Interfaces* 36(5), 458-469.

^r Davis, F.D. & Venkatesh, V. (2004). Toward preprototype user acceptance testing of new information systems: Implications for software project management. *IEEE Transactions on Engineering Management* 51(1), 31-46.

^s Hilson, G. (2001). Human factor plays big role in IT failures. *Computing Canada* 27(6), 1,8.

^t Paul, L.G. (2004). Time to Change. *CIO* magazine, December 1, 2004.

^u Ioannou, G. & Papadoyiannis, C. (2004). Theory of constraints-based methodology for effective ERP implementation. *International Journal of Production Research*, 42:23, 4927-4954.

throughout the project. Many people have a difficult time with the uncertainty that change causes (Clampitt & Williams, 2005^v; Robinson & Griffiths, 2005^w) and so, effective change management is crucial. When done well, change management activities smooth the way for a change to become accepted. When done poorly, they encourage resistance and complaints.

Change management

Project managers are not unaware of the above realities and lay out complex Work Breakdown Schedules (WBS) that attempt to identify all the work necessary to bring the project to a successful conclusion. Underlying their actions is a vision of an organization that functions predictably and which will return to that state once their project has altered the way business is currently done. This recalls the work of psychologist Kurt Lewin who described an organization as the target of driving and restraining forces that, if equal, maintain it in a state of equilibrium. When one or the other becomes stronger, the organization changes and establishes a new state of equilibrium. He saw this as a three step process of freezing, unfreezing and refreezing.^x Though it sounds simple, the change process is anything but. There are two glitches in this linear picture: (i) these days, organizations rarely maintain a state of equilibrium because the market environment is in a state of continuous rapid change and (ii) the people who are involved in the change are not predictable.

(i) *Equilibrium*: Conner (1992, p.44) reports that 75% of executives envision nothing but “continuous, overlapping change” for the foreseeable future as opposed to only 5% who had that view in the 1970s.^y More than a decade ago, Dunphy and Stace (1993)^z noted the trend towards radical, “transformational” change and not incremental improvements. As Baby Boomers retire and Generation Y moves into position of responsibility, the expectations of the work force will change. (Giordani 2005).^{aa} Globalization and interdependence affect the world’s industrial and social structures and people and organizations in every sphere have been forced to adjust in response to rapidly changing circumstances (Friedman 2000).^{bb} Business methodologies must adapt. Project managers are breaking up large projects into smaller chunks to achieve faster payoff. Software designers are using Rapid Application Development (RAD) strategies such as XP and SCRUM which call for iterative design, quick turn around, daily builds and constant

^v Clampitt, P.G. & Williams, M. Lee (2005). Conceptualizing and measuring how employees and organizations manage uncertainty. *Communication Research Reports*, 22(4), 315-324.

^w Robinson, O. & Griffiths, A. (2005). Coping with the stress of transformational change in a government department. *The Journal of Applied Behavioral Science*, 41(2), 204-221.

^x Schein, E.H. (1999). Kurt Lewin’s change theory in the field and in the classroom: Notes toward a model of managed learning. *Reflections* 1(1)

^y Conner, D. R. (1992). *Managing at the speed of change. How resilient managers succeed and prosper where others fail*. NY: Villard.

^z Dunphy, D. & Stace, D. (1993). The strategic management of corporate change. *Humans Relations* 46(8), 905-919.

^{aa} Giordani, P. (2005). “Y” recruiting: new generation inspires new methods. *NACE Journal* 65(4).

^{bb} Friedman, T.L. (2000). *The Lexus and the olive tree*. (Revised edition). NY: Anchor Books.

communication with users (Larman & Basili 2003).^{cc} This has had an effect on the people who must adjust to the changes.

(ii) *People*: Change management experts have learned to respect the fact that people operate out of their needs (Maslow 1943)^{dd} and defense mechanisms (Argyris 2004^{ee}). Change is seen as a threat by some and therefore is to be resisted. New brain research reveals that it is actually a physical experience that stresses the body and mind.^{ff} Maslow's Hierarchy of five basic needs illustrates that change in the workplace is totally unsettling. Because learning something new involves a period of ineptitude, employees are concerned that they might lose their jobs (Physiological need). When internal politics rearranges priorities and alliances, they fear for their own place in the shuffle (Safety need). They fear organizational restructuring because their social networks will be disturbed (Belonging need). They might lose face (Esteem need). Finally, their self concept might be affected (Self Actualization need).

Rapid changes bring with them great uncertainty and some people are more comfortable than others in this type of environment. How individuals react to these disturbances in the status quo is quixotic; people bring their own past into the present. Therefore, people are the unknown factor in an organization's WBS. Their emotions are the key to behavioral change (Duck 1998)^{gg}. One longitudinal US study of 1,046 managerial and non-managerial employees measured personal attitudes towards uncertainty and employee perception of their company's attitude towards uncertainty. Using a matrix of four categories, researchers found that: 28.5% avoided uncertainty as did their organization; 22.2% disliked uncertainty, but needed to adjust to an environment that contained it; 22.6% were comfortable with uncertainty, but believed their organization to be hesitant about it; and 26.8% were comfortable with uncertainty and worked in organizations that pursued it.^{hh} Thus, slightly under half the workforce surveyed were under stress because of workplace uncertainty. The study cautions that "uncertainty can create a feeling of vulnerability or anxiety that may lead to actively distorting perceptions and information ... false dichotomies, resistance to change, rejection of relevant information, rigid categories and regression to old rule-of-thumb models of thinking." (p.316)

Reducing uncertainty is best accomplished through information that clarifies ambiguity about the present, past and future. Communication throughout the enterprise is crucial.

^{cc} Larman, C. & Basili, V.R. 2003. Iterative and incremental development: A brief history. *IEEE Computer* 36(6) 47-56.

^{dd} Maslow, A. (1943). A theory of human motivation. *Psychological Review*, 50, 370-396.

^{ee} Argyris, C. (2004). *Reasons and rationalizations: The limits to organizational knowledge*. NY: Oxford University Press.

^{ff} Koch, C. (2006). The New Science of Change. *CIO* magazine, September 15, 2006.

^{gg} Duck, J.D. (1998). Managing change: The art of balancing. In *Harvard Business Review on Change*. Boston, MA: Harvard Business School Publishing.

^{hh} Clampitt, P.G. & Williams, M. Lee (2005). Conceptualizing and measuring how employees and organizations manage uncertainty. *Communication Research Reports*, 22(4), 315-324.

Communication

McNish (2002) studied technology failures and found that a well informed staff was connected with success. A disinclination to keep them involved was associated with project failure.ⁱⁱ This suggests that communication is central to the success of an implementation (Rhodie 2000.^{jj}; Levasseur 2001)^{kk} Change management specialist John P. Kotter maintains “All successful cases of major change seem to include tens of thousands of communications that help employees to grapple with difficult *intellectual* and *emotional* issues (emphasis added)” (1996, p. 94).^{ll} Projects do not flounder because of miscues (though that certainly is a possibility), but because of lack of opportunity for those affected to receive information, give input, and get feedback. This affects everyone’s level of uncertainty, their defense mechanisms, their needs and their level of buy-in to the project.

In 2006, the Institute for Operations Research and the Management Sciences (INFORMS) advised: “Communicate expectations. Clearly and frequently communicate to management staff what will be occurring in the project (Ferratt, Ahire & De 2006, p. 462).”^{mmm} Canadian researchers found that “buy-in from users was especially critical for successful institutionalization of the ERP systems...(through) communication and demonstration...”ⁿⁿ (Kumar, Maheshwari & Kumar, p.521)

The UK’s Fire Brigades Union report (2005, p.12)^{oo} advises: “End-users must buy into the project. If a system is imposed on end-users the risk of failure is greatly increased.”

CIO Insight magazine researched companies that had installed Customer Relationship Management (CRM) applications and found that “a strong focus on customers, executive commitment and good communication between IT and business are the key drivers of success” (Finding 4). 63% of respondents agreed that this requires a major cultural change. Almost half the projects experienced end user resistance and the survey concludes that getting buy-in early on is key to success. “CRM projects need strong data architects and project managers who are terrific communicators” (Finding 5).^{pp}

ⁱⁱ McNish, M. (2002). Guidelines for managing change: A study of their effects on the implementation of new technology projects in organizations. *Journal of Change Management*, 2(3), 201-211.

^{jj} Rhodie, V. (2000). The relevance of change management lessons today: Key principles that still hold. *Journal of Change Management*, 1(2), 194-206.

^{kk} Levasseur, R.E. (2001). People skills: change management tools – Lewin’s change model. *Interfaces*, 31(4), 71-73.

^{ll} Kotter, J.P. (1996). *Leading change*. Boston, MA: Harvard Business School Press.

^{mmm} Ferratt, T.W., Ahire, S. & De, P. (2006). Achieving success in large projects: Implications from a study of ERP implementations. *Interfaces* 36(5), 458-469.

ⁿⁿ Kumar, V. , Maheshwari, B. & Kumar, U. (2002). Enterprise resource planning systems adoption: a survey of Canadian organizations. *International Journal of Production Research*, 40(3), 509-523.

^{oo} Fire Brigade Union (2005). *IT Background Analysis*. [On-line] available at www.fbu.org.uk/campaigns/outofcontrol/pdf/01_21_it.pdf p. 12 and at www.publications.parliament.uk/pa/cm200506/cmselect/cmcomloc/872/87217.htm

^{pp} Editors (2004). CIO Insight Research Study. *CIO Insight* magazine, August 1, 2004.

The Solution: User-oriented Technology Project Management

The above literature survey indicates that people, not code, determine the success of a technology project. Thus, project management attitudes need to shift from a product oriented focus to a process oriented one, from a hardware/software oriented focus to a people oriented one. The ultimate goal of a technology implementation is not the writing of software code, but the accomplishment of the mission of the user. Therefore, the user and the process of serving the user must be paramount in the mind of the project manager. Admittedly, without good code, there is no chance of success. Without good reporting and good management of time and resources, a project is doomed.

However, it is equally true that without an involved internal user determining specifications and cooperating in prototyping and testing, prospects for full integration are bleak. Involving external users, e.g. customers or vendors, is more difficult because they are not as accessible as internal (staff) users, but, as the experience of those in other fields attest, their input could be very useful as well. Some manufacturing enterprises collaborate with vendors in the design process in order to integrate potential cost savings with possible design options (McIvor & McHugh 2000)⁹⁹. Intriguing as these possibilities are, particularly in the case of an IT system such as a vendor extranet that directly affects suppliers, this paper focuses only on internal users.

It is in the process of defining user requirements that their ultimate acceptance lies. It is in the process of guiding people through the hills and valleys of the change experience that their self confidence builds. It is in the process of communication exchange that loyalty and understanding are forged. It is in recognizing that an organization is always in process that the battle over the forces of discouragement is won. The following discussion is based on actual practice and reflects the authors' experience in leading change. This approach to project management can be summed up in two phrases: (1) No one succeeds unless everyone succeeds and (2) No change is an island.

(1) No one succeeds unless everyone succeeds: The change journey

After management has discerned that a technology change is in order, the first step in managing the change is to persuade the user community to participate in making the change happen. Researchers have described the process of motivation as a five step sequence (Dewey 1910¹⁰⁰; Monroe 1935¹⁰¹). Persuasion is based in (1) recognition of a problem and its urgency (2) an

⁹⁹ McIvor, R. & McHugh, M. (2000). Partnership sourcing: an organization change management. *Journal of Supply Change Management*, 36(3), 12-26.

¹⁰⁰ Dewey, J. (1910). *How we think*. Kila, MT: Kessinger Publishing.

¹⁰¹ Monroe, A. H. (1935). *Principles and Types of Speech*. Chicago: IL excerpted in Gronbeck, B.E., McKerrow, R.E., Ehninger, D. & Monroe, A.H. (1990). *Principles and Types of Speech Communication*. Glenview, IL: Scott, Foresman/Little, Brown Higher Education.

analysis of the causes (3) an analysis of the solutions and their consequences (4) identification of the benefits of each (5) choice/adoption. In technology project management, the failure literature has identified a real problem; the change management literature points to “people issues” as a major cause; the communication literature indicates that relational and information-based communication are central to the solution. The benefits are predictable in terms of money, time and user satisfaction. Therefore, adoption of user-focused project management by project managers would seem to be an obvious choice. It doesn’t work that way in practice.

The above information has been known for over twenty years and the Chaos studies keep showing the same results: projects need more user involvement and better communication. Many managers, however, are not changing their approach. They assume that everyone will get on board with a proposed change, and if they don’t, then management will coerce people to accept it. This builds resistance because people prefer to be in control of their own lives. When a change taps into their fears and people begin to focus on one of the levels of Maslow’s Hierarchy of Needs, they resist and the project runs into trouble. Therefore, in the sequence of persuasion, an intervening step between awareness of a problem and its analysis is needed: an acceptance of the responsibility to fix it. Unless a person has a stake in the problem, it is someone else’s to fix. For a project to succeed, a change management WBS that prepares the people to own the solution must be created. The goal is to assure that the user community feels concerned, informed, involved and respected. This WBS should include the following:

(a) Together, users and developers assess the need for change.

New technology is not always the answer to a business problem. The guiding question for upper management must be: can new automation help us to be better at what we do? If, after consultation with appropriate staff, the answer is yes, then the user community needs immediate presence in the planning phase of the project. If a decision to buy hardware/software has been made in the executive suite with only the input of the vendor sales representative, then the project is already off to a bad start. Upper management is usually sure that they know how the current system works, and a vendor will promise most anything to close a deal, but the users are the ones who have found the system glitches, designed the work arounds and complained about inefficiencies. Users are the most knowledgeable about how a current system *actually* works and they will have the best ideas about how the process should change to make it work better. They can see through the vendor’s sleight of hand to ask “how are you going to do that?” No successful technology upgrade/replacement can take place without them. Management defines the technology project goal, such as an improved product, decreased cost, serving new markets, improved productivity, but the users must be involved in working out the solution.

These assessment meetings should involve representatives of all stakeholders in the user community. Experience has shown that there is an obvious disconnect between those who have participated in the change process and those who have not. Those who have been out of loop become bottlenecks as the project unfolds. Sometimes, exclusion is a matter of their choice and every effort must be made to motivate them to reconsider. They often don’t see the importance of their participation and don’t have the time to get involved in “IT’s problem.” Unfortunately, at implementation, everything is then “IT’s fault.” Everyone’s participation develops a sense of

responsibility for the outcome. It is up to this team to gather input from their colleagues, thus widening the circle of responsibility. Additional money to replace staff borrowed from the user community for the project team must be allocated in the project budget or there will be no motivation to get involved. Employees selected for the project team also need to be the “best and brightest,” not the “leftovers.” In any group endeavor, communication practices that make people feel safe and respected are the key to generating the best ideas. Rather than the more usual “majority rules” when making committee decisions, the process of consensus assures that the outcome is a win-win for all. Consensus means that the outcome is one that everyone can live with, not necessarily heartily endorse (Fisher, Ury & Patton 1981^{tt}; Sager & Gastil 1999)^{uu}. Consensus means seeking out all points of view and listening without automatically dismissing the disagreeable ones. Consensus means that the opposing views are debated, not pushed underground to emerge as obstacles during implementation. By agreement, in case of deadlock, decisions are left in the hands of a trusted third party. Consensus takes more time at the beginning of the project, but makes up for it at the end when implementation rests on the foundation of the issues worked out during the early stages of the project. All teams need to be trained by an expert in consensus decision making.

Though an important focus, users are not the only people who need to succeed in the project process. Management needs a voice as well. A Steering Committee composed of high level executives who champion the project during all its phases gives management both oversight and a voice in the proceedings. This committee is a forum for sharing information, negotiation, setting policies and priorities, standards and goals, dealing with problems that the project team is unable to solve and resolving political conflicts. They, too, engage in consensus thinking, so that no one leaves the process feeling as if they are un-empowered. This may take an attitude change on everyone’s part because the power play is a very tempting alternative to consensus. However, it doesn’t work because the project becomes a pawn in a larger political process.

One last group also needs to succeed: the vendor. This may not seem obvious, but a technology project is bound to suffer unforeseen events. If a true partnership exists between vendor and buyer, these events that are not covered by “The Contract,” will be handled smoothly because all parties have their eyes on achieving the goal of a finished system. If the relationship is adversarial, then the vendor is not likely to “go the extra mile” for the client. Too often, the relationship breaks down before the project even starts because of wrangling over contract wording and price. Neither side exhibits any trust of the other and the lawyers give no ground. A project of many years duration is a bit like a marriage and if the vendor or client feels “taken” at the start, acrimony isn’t far down the road.

(b) Together, users and developers experience change training:

All need to know that change is coming and that it is going to be an emotional experience. There are predictable phases to the change process (Hoekstra, Carew, Parisi-Carew, Stoner & Zigarmi,

^{tt} Fisher, R., Ury, W.L. & Patton, B. (1981). *Getting to Yes. Negotiating agreement without giving in*. NY: Penguin Books (2nd.ed.).

^{uu} Sager, K.L. & Gastil, J. (1999). Reaching Consensus on Consensus: A study of the relationships between decision-making styles and use of the consensus decision rule. *Communication Quarterly*, 47(1), 67-79.

2004^{vv}; Larson, Carnell 2000^{ww}). They go by varying names and there is some disagreement about the precise number of stages, but, at its simplest, the authors find a four stage model to be most helpful: (1) Enthusiasm tinged with Concern (status quo) (2) Irritation (3) Fear (“murky middle”) (4) Confidence (success). The fact that these stages exist should be comforting: people in the middle of a change event may feel off course, but, in truth, they are right on track. However, the path is crooked and not everyone follows it in the same way. Some stay longer in one state than another and revisiting the same stage is common. The comfort comes from knowing that the ground has been traveled before and one needn’t give in to despair. Over the course of an implementation, this message must be heard regularly. See Figure 1.

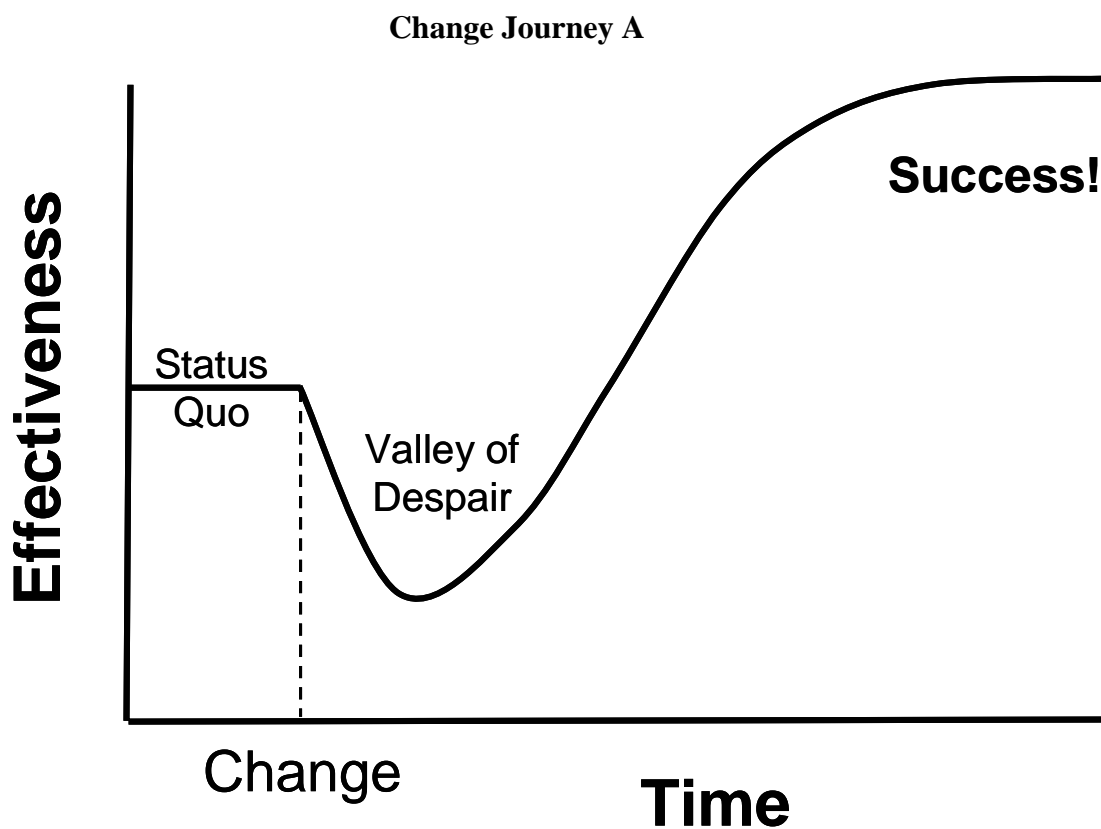


Figure 1. Change Journey A

^{vv} Hoekstra, J., Carew, D., Parisi-Carew, E., Stoner, J. & Zagarmi, P. (2004). *Leading organizational change. From haphazard art to predictable science. Participant field guide*. Escondido, CA: Ken Blanchard Co..

^{ww} Larson, V. & Carnell, M. (2000). *Developing Black Belt Change Agents*. Surviving “Pity City” and the “Valley of Despair.” [On-line] Available at www.isixsigma.com/library/content/c020812a.asp

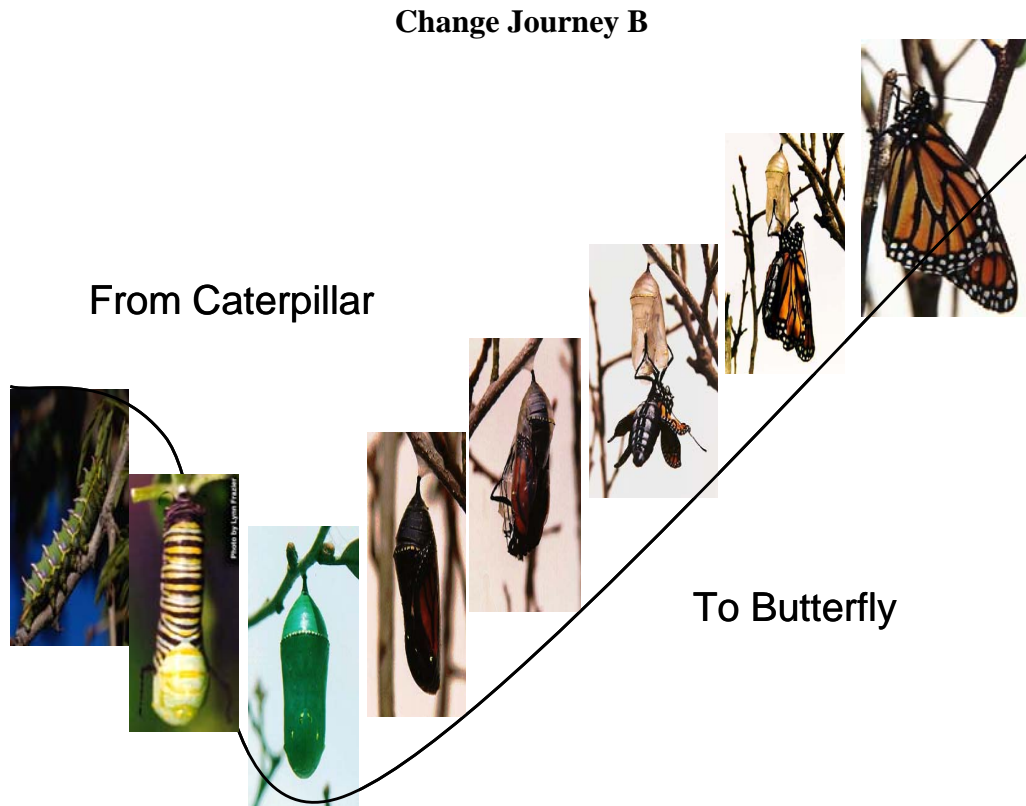


Figure 2. Change Journey B

It isn't sufficient to simply send out a memo about this process. Figures 1 and 2 represent two ways of communicating about the change journey. They represent a fundamental awareness: people process information differently. Researchers have categorized as many as seven different approaches, but there are four that appear on everyone's list: visual, auditory, spatial and kinesthetic (Gardner 1983, 2004).^{xx} When a vendor verbally describes how a piece of equipment operates, the auditory learner finds it easy to follow, but the visual learner needs to look at a picture or the spatial learner needs a schematic to make the leap to a three dimensional model. Still others want to manipulate the model itself to make sense of it all. Therefore learning preferences have an impact on the way a change project is managed. It should guide the decision to prototype or not, with the preference given to concrete modeling so that customer has a better idea of how the software might behave. The choice of communication media changes the way the message is received. Whether a manager calls a meeting, sends a memo, has a vendor make a PowerPoint™ presentation, sits everyone down at a terminal, engages a trainer to demonstrate screens from a podium or brings in technical staff to work with individuals at their workstation, the choice of medium affects the message's influence. The experience will appeal to some and

^{xx} Gardner, H. (1983). *Frames of mind. The theory of multiple intelligence*. NY: Basic Books (2nd paper edition); Gardner, H. (2004). *Changing Minds*. Boston: Harvard Business School Press.

not to others. Therefore, many approaches must be utilized throughout a project. This variety of modalities is necessary when communicating to wider audiences such as users not on the project team and other staff throughout the enterprise. These include not only memos, newsletters and speeches at town meetings, but signs in the hallways and break rooms that advertise the new system, and small office supply items embossed with the project name and logo. If a manager is not thinking in terms of individual behavioral inclinations and learning styles, then much time and money could be spent communicating about change with little to show for it. Acquainting people with the stages of the change journey is best done in interactive training workshops that address all of the learning styles and involve all the people who will be affected.

Another interactive process which communicates coming change and also improves consensus decision making skills is to hold an enterprise wide contest to name the new system. Through the contest, the organization learns about how it will be affected. Training in the cycle of change and exposure to the project vision guards against negative or fearful attitudes. *Everyone* needs to be trained so that those who are unfamiliar with the stages of the change don't become flashpoints that ignite rumors of disaster as the project experiences its normal ebb and flow.

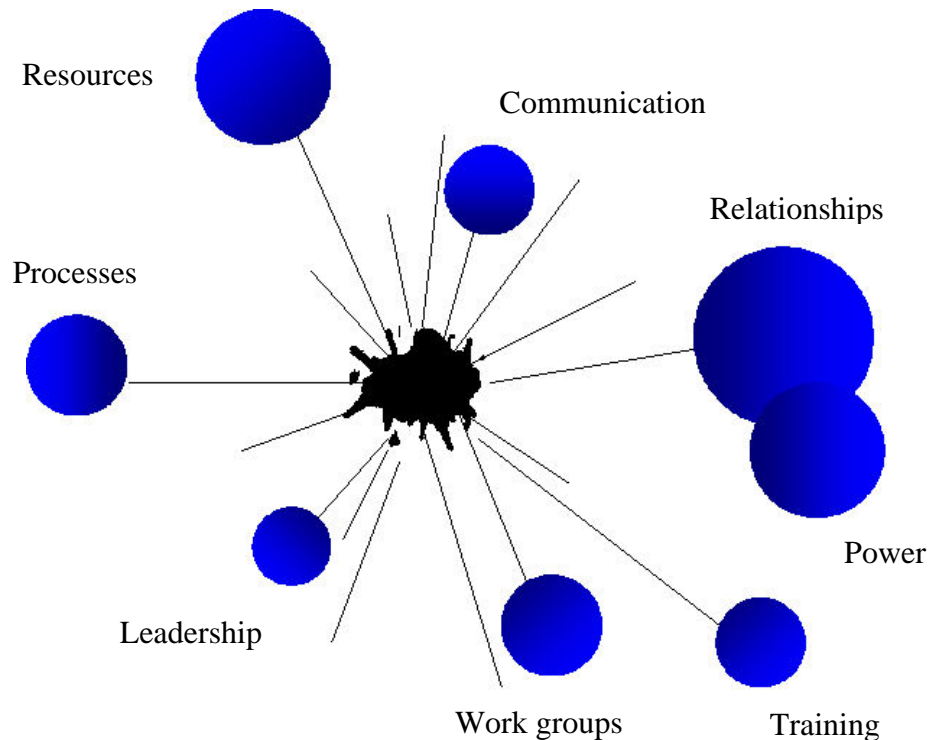


Figure 3. No Change Is An Island

2. There are no silos: No change is an island^{yy}

A user-focused technology project affects the network of allied forces in an organization. (See Figure 3). New technology affects everyone in the organization, not just those utilizing the hardware/software. For instance, a decision to add web-based product sales involves (at least!) the following: Web designers who must interface with marketing, which needs input from manufacturing, which needs input from shipping, which needs input from sales, which needs input from vendors, who need input from accounting, which needs input from C-level executives, who need input from marketing – and this does not include HR which must staff and manage an order center, which impacts the dynamics of the social and professional relationships within the company (particularly if there is a salary differential between those serving web-based customers and those in a call center), purchasing which must equip the center and procure hardware/software, lawyers who negotiate the contracts, help desk training for the staff who need information from vendors, shipping and manufacturing and tech support, bankers who arrange for credit card transactions, and contractors who will design and maintain the workspace.

Admittedly, this is a major effort, but even an upgrade to existing software affects the organization. The requirements document involves discussions among many different departments and an implementation schedule affects routines across the board. The learning effort lowers morale and some work will not get completed as fast or as well until everyone develops new skills. Unless management softens deadlines, employees will become stressed, irritable and fearful for their jobs. A technology project is a potent means of helping everyone to realize that success is not defined in terms of one's separate function in the larger organization, but rather in the accomplishment of the larger mission of the company. The web-based sales initiative would increase the bottom line by tapping into a new outlet for a company's products. Even an upgrade creates new capabilities and new efficiencies that might release additional capital. In either case, each department has a part to play, but if they are competing against each other, then the broader corporate vision is compromised and, ultimately, the viability of the company. To encourage more supportive interactions between departments, the reward system will need to change accordingly. The entire culture is affected – in this example, because someone thought that expanding the web presence would be a good idea. Technology touches everyone and a project, no matter the size, reveals all of an organization's relational connections if one is alert to their appearance throughout the project life cycle.

A user-focused approach to project management means that the user community takes on the task of thinking organizationally and not just departmentally. To use a sports analogy, the goal is not to send some individuals to the all-star game, but for everyone to win the championship. Leadership must preach this message and reward it accordingly.

Communication with all affected parties does not take place in a vacuum. Included are the internal client/external vendor, internal client/internal constituencies, internal client/external

^{yy} No Change Is An Island[®] is a registered trademark of Christopher Technology Consulting LLC.

constituencies. For the life of the project, they are in a deep relationship with each other and all are under the same pressures of budget, schedule and political realities. It's important to understand the goal of each and every conversation: is it about understanding, evaluation or decision making? Everyone needs to be clear about the purpose. If one person is seeking clarification while another is evaluating, their goals will clash and result in conflict.

Communication itself is a multifaceted experience of verbal and nonverbal cues that can determine how well an encounter proceeds. Participants should be aware that time of day, content, gender of the speakers, age, race, tone of voice, vocabulary, place, body language, prior feedback, prior events, subsequent events and the communication media being used all impact both the sender and the receiver of a message. Many times when parties are at odds, one of these factors is the cause and not the supposed issue being discussed. Communication training at the start of a project can provide a common vocabulary to address these overarching concerns.

Examples of User-focused Project Management

Each of the following four case studies illustrate an aspect of user-focused project management in action. The information comes from personal experience or interviews with participants. Identifying information has been disguised, but the events and outcomes are real.

(i) Government: Users are the key

Involving internal users is not a new idea. Back in the 1970s, the Federal Aviation Administration (FAA) ran a procurement to automate the Flight Service Stations (FSS) throughout the US. These stations provide air traffic control clearances and inform pilots of hazards and weather. A large computer services firm drafted the design specifications without sufficiently consulting the FSS front-line operations personnel. The job was awarded to a major enterprise in the IT world.

In the meantime, the FAA hired a small company to design and implement a prototype to aid FSS staff until the final system was in place. After 15 years of effort, the FSS's still were not automated and the prototype, which had been a stopgap measure, was still in use. The difference lay in the approaches of the companies involved. The small firm had solicited input from the FSS internal users and designed a system that accommodated the way they actually performed their jobs. The larger company worked from complex requirements worked out in the Boardroom, not onsite. Involving the users resulted in a working system while ignoring them cost the government millions of dollars and the benefits of computer-aided decision-making.

(ii) Government: Leadership makes a difference

A Northeastern state government purchased a customizable payroll system and worked with an accounting vendor to install it over two years. Business requirements dictated the design of the system and consultants made all the decisions. Implementation was a nightmare. Development

had taken so long that there was no time left for training. Users were working nights and weekends to complete payroll because it took twice as long to do their jobs. For instance, one task involved access to a prior history of transactions, but this necessitated opening multiple screens and the process was lengthy. When the users angrily protested, the system was altered to display more data on fewer screens.

To rescue this project, a new Director was hired who followed a user-focused collaborative methodology. In the words of one participant, “ It took his guidance to get us thinking in the right way. You can see the vision if you sit back and let go of the power. Training is the key; communication is the key.”^{zz} IT began to ask the Payroll User’s Group (which actually enters the data) for input on design guidance as to which option would be easiest to use. IT also queried agencies such as the unions, the Division of Budget, and the Civil Service about what they wanted to see in the system. Relationships, which had been adversarial, improved. The Director continues to hold interactive dialogues with the staff, providing updates and asking for input.

(iii) Hospital: Training makes a difference

The outcome of this user-focused methodology is a project that came in a million dollars under budget. A Hospital in the Southeast merged with a medical group and replaced its 20 year old system with that of the parent company. What is particularly noteworthy is the way the actual conversion was handled. Throughout the project, the manager had involved users at every step. At the end, it was important to manage their expectations, as well. They were told that training on the new system was crucial: “no training, no work” and that it would be like “working two jobs” while the conversion took place.^{aaa} The project manager set up training on the new system for “Super users” and assigned them to every area in the hospital. Leadership imported two hundred people, including programmers, network engineers, analysts and medical personnel from other hospitals in the chain, to mentor the hospital staff. The project budget was used to feed and house them for a week. They wore special shirts that identified them as project conversion trainers, so that they wouldn’t be asked to work their normal job. They had access to TV’s, VCR’s and computers so that their off hours could be more pleasant or productive. Additional training was made available for the new users who needed more help. The IT Help Desk was temporarily located at the hospital so that people could be physically dispatched to the caller if needed. There were daily “huddles” to monitor the progress of the implementation. The system was installed piece by piece over a two week period. At the end of that time, the hospital was functioning normally.

(iv) Association: Not participating makes a difference

This association replaced its Constituent Relationship Management (CRM) system and the

^{zz} Participant, Personal interview, October 2004.

^{aaa} Ewing, T., Personal interview, August 2004.

project manager involved users in vendor selection, established user/developer teams, chose a strong executive Champion, worked with each area to overhaul its business processes, and trained users in change management principles. However, one key group of users (Team X) did not fully participate. Its representatives missed meetings, failed to share and seek information from others in their area and were sketchy in describing both their current procedures and future requirements. As the project was coming to an end, others in the organization were testing their parts of the system and were up to speed on what it could do for them. Team X, however, was upset at the way the system worked and demanded changes and upgrades at the last minute. They were resistant to anything that did not resemble what they were familiar with and they exhibited the emotional reactions expected at the start of the change process, not the end. The upheaval in that area caused a ripple effect throughout the project. Others began to get fearful about the decisions that they had made and wanted to change back to the old processes or make changes to the new. For Team X, the “murky middle” became the “muddy end.” They made the conclusion of the project more difficult than was necessary.

Discussion

These examples show the importance of leadership, training and participation—in that order—when managing a technology project. Leadership is the key to everything that follows. One *manages* the scope, cost and time of a project, but one must *lead* the people and give them vision. A user focused methodology acknowledges the enormous wealth of knowledge held by the people who staff an organization. It gives them the opportunity to own the solution that will be theirs to implement. This is not just a nice thing to do; it affects the bottom line. A Gallup survey revealed that the innovative ideas of what it calls the “engaged employee” makes a company more successful. The “not engaged” and “actively disengaged” drain the economy of hundreds of billions of dollars.^{bbb}

Training is crucial because most employees do not know how to work cooperatively on a team, make decisions by consensus, listen actively and learn new technology efficiently. In many implementations, the training budget is usually the first thing to be cut and last thing to be scheduled. Training must be an ongoing process to take advantage of the cycles of the change process.

Participation is an enigma because it depends on the power of personal persuasion to combat the pull of organizational politics and inertia. When a problem group arises, it needs an individualized campaign to encourage their participation from the start. Meetings that lay out the web of effects that their absence will set in motion might help. Those who call these meetings must be good communicators who do not create defensiveness in the people involved.

^{bbb} Gallup Management Journal (2006). *Gallup Study: Engaged Employees Inspire Company Innovation*. [On-line] Available at <http://gmj.gallup.com/content>.

Leading, training and encouraging the participation of the affected staff is critical because implementation success rides on these people. The process of installing new or upgraded systems is more successful when these systems are not imposed by others, but grown by the affected users. Even a system forced on the staff lingers along until they devise the work arounds and tricks that make it useful. Consistent, effective involvement by the user community leads to immediate ownership of the new capabilities.

User focused methodology has great potential to shape an organization. A change leader inspires others to accept the invitation to be empowered. A change leader provides the training that makes that empowerment possible. This is the call of the change leader: to change the way business is done by changing the people, one project at a time. In the process, they find out who they are and who they can be and are changed forever. In this way, IT change leaders change the world. At the very least, they save a company from throwing millions into the black hole of technology failure and that's not a bad reason for giving it a try.

The people are waiting.

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