

# COMMUNICATION PROBLEM, RISK AND LEADERSHIP ATTRIBUTES DURING TECHNOLOGY CHANGE INITIATIVE ON MULTINATIONAL ENERGY COMPANY

*Ahmad Murtadho*

Faculty of Computer Science, University of Indonesia, Indonesia

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## Abstract

In Multinational enterprise, new global system project will affect a wide variety of business process. Changes made to the system are, in effect, changes made to the business processes themselves and these processes fall down in the face of the increased complexity of today's business and technology environments. Most of the companies rely on the digital system and technology to support their business activities. A competitive business environment make companies have to upgrade one company information technology system and process continuously. During the technology upgrade process, change in the management and organization behavior happen. This research discover the problems that happen during technology change initiative within its risk and the top management attribute that can mitigate the problem during the change.

There are four main problems that discover during the research, which are lack of top management vision, failed to communicate vision and benefit of the change, negative attitude, and communication problem from internal project team. These problems lead to several potential risks for the project, which related to project budget, project schedule, project quality and project scope. Successful technology change within an organization on the change strategy addressing Leadership and top management attribute take critical role to contribute to successful outcomes in project implementation.

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**Keywords:** Organization Communication, Change Management, Organization Problem, Transformation Risk, Leadership

## I. Introduction

In today's corporate environment, companies cannot settle for incremental improvement; corporate have to periodically undergo performance transformation to get and to update with the latest business

condition. As Kotler said that change is the new normality, and one of the main reason this change is digitalization (Kotler, 2009). Most of the companies rely on the digital system and technology to support their business activities. A competitive business environment make companies have to upgrade one company information technology system and process continuously (Sherer, 2003). Information Technology (IT) system upgrade usually made less than one project, and this activity may lead to change in several business processes and activities. Organization/company that understands the value of change management processes is typically more successful in delivering information technology system applications (Forbath, 1997).

In a 2005 Survey, Computer economics interviewe nearly 200 senior IT managers regarding the effectiveness of their change management process (Computer Economics, 2006).

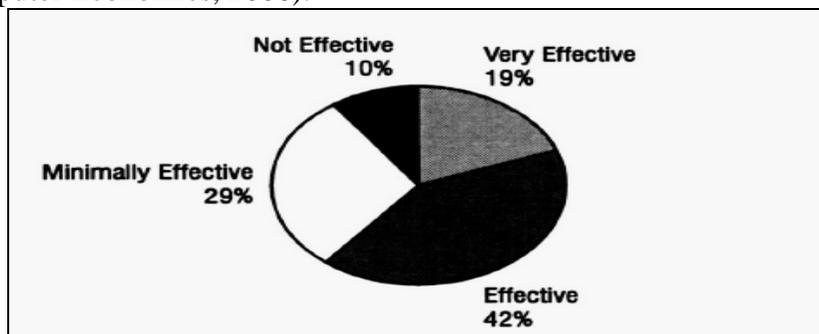


Figure 1. Change Management Effectiveness (Computer Economics, 2006)

One of the most consistent patterns in business is the failure of leading companies to stay at the top of their industries while technologies change. (Harvard Business Review, 1999). Nearly 40% of senior managers feel their ability to manage ths critical function is sub-par. Although 42% of the respondent consider their IT change management effecive, this may not be something to get excited about. The reason is simply that change management may be too important for organizations to settle for anything but a highly effective rating. It means that, effective rating is a minimum limit, so organizatins below this level are receiving a failing grade.

There are several research questions that appear related to the communication in regards to the new IT system project implementation, which are: 1) What are the communication problems that happen during IT system project implementation; 2) What are potential risks that could arise on the communication problems? And 3) How leadership and top management, as an organizational factor, could either contribute to or prevent successful change management?

Align with research questions, the purposes of this research is to analyze effective communications strategy to manage change process in IT project implementation, that elaborate and explore Communication Problem in Change Process that happen during change management process, that consist of Communication Problems and its Risk. It is also Identify how Leadership & Top Management Attributes contribute during the various stages of the change process for a change effort to succeed .

## II. Theoretical Framework

In term of communication change problem, this study will elaborate two sub points to answer research questions. These two main parts are communication problems and risk in change management (Ghosh, 2011). To elaborate these points, this study utilize interview in the data collection.

In term of top management and leadership attributes as an organization factor that contributes during technology change process, this study uses interview and observation in data collection method.

This is the visualization of conceptual framework of this research:

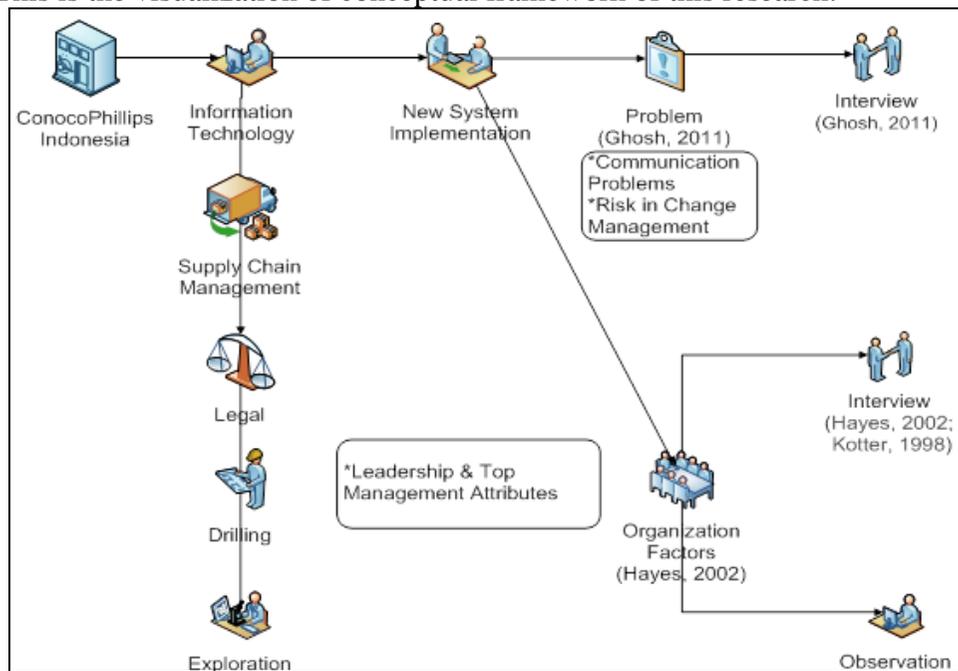


Figure 2. Conceptual Framework

### 2.1 Resistance to Change

Of the many studies on change efforts, the issue of change resistance has always been included as part of notorious impediments throughout the change stages. In fact, it is argued that employees do not resist all change, only change that they do not understand or that they see as psychologically

or economically threatening (Hayes, 2002). As such, they usually respond to contradictory messages with displeasure, frustration, confusion and anxiety (Stohl, 1995). Connected to that, the change resistance, which may occur during change efforts – reduction of productivity, work slowdowns, hostility and pessimism regarding goal attainment, can be attributed to several political, cultural, normative, and individual causes (Miller et al., 1994). As for understanding the notion of resistance to change, Hayes (1996) asserts that one needs to identify the factors underpinning such resistance. They are self-interest, fear, group pressures, and inertia.

In the work of Stoltz (1997), three categories of peoples' reactions to change are: quitters who disagree with change; campers, who simply sit things out, and climbers, who actively seek change. From his study, it shows that the majority of the employees fall into the 'campers' category, whereby the desire to remain status quo is initially prevalent. As for optimizing the change resistance, managers are required to observe employee readiness for change. Normally, their readiness emerges when the employees perceive little personal risk from change and feel highly dissatisfied with the status quo (Hellriegel et al., 2001). With this respect, resistance to change seems to be submerged. In addition, successful organizational adaptation is increasingly reliant on generating employee support and enthusiasm for proposed changes, rather than merely overcoming resistance.

Hayes (1996) proposes that resistance to change can be optimized by utilizing the following strategies:

- Participation and involvement
- Facilitation and support
- Negotiation
- Coercion

Because some employees will already have formed an ambivalence or an attitude toward the current point, they may be able to infer their attitude toward the proposed shift for change in accordance with the extant ambivalence. In other words, most employees' responses to a proposed change will involve some ambivalence.

## **2.2 Issues of Communication for Change**

Communication problems are commonplace when changes are not clearly identified (Lewis, 2000). Not only do they cause a drain on profitability, but also the effectiveness of management declines (Gilsdorf, 1998). In the work of Dawson (1996), many underlying reasons why communication often falls short of the ideals, which are "accuracy, reliability, validity, adequacy, and effectiveness," are addressed with some

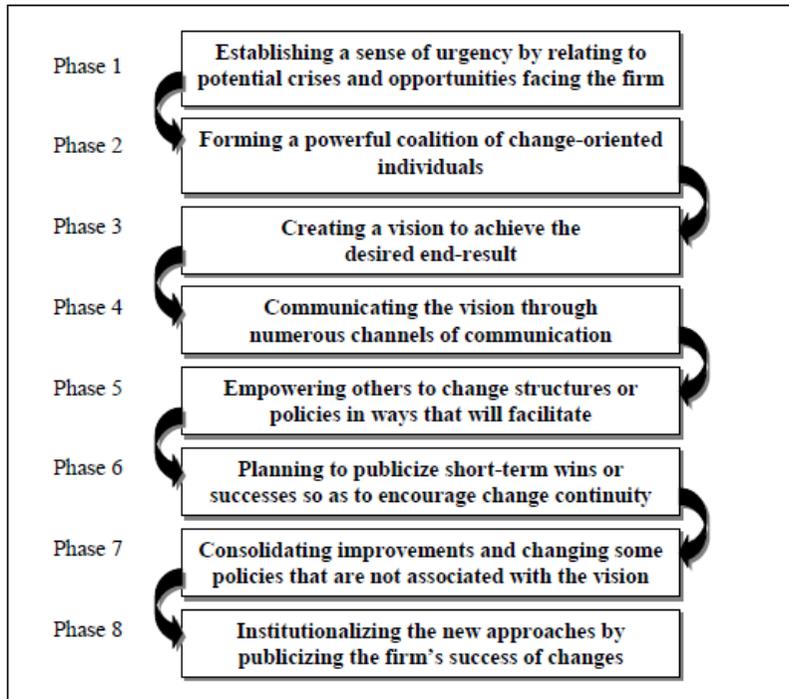
general issues within the relationship between information and communication in organizations.

According to Lewis (2000)'s research findings, the most frequently noted categories of problem encountered by the company in transition are "communicating vision" and "negative attitudes." If an organization's management does not consider which communication behaviors it wishes to foster for its success, the signals it sends to employees may be inconsistent or counterproductive. Thus, managers should consider conveying clear communication-behavior expectations as a fundamental element of strategy. In doing so, firms might pursue communication audits which involve ethnographic analysis, including observation and interviewing, to learn exactly what organizational policies are operating (Gilsdorf, 1998). Moreover, Gilsdorf moves on to argue that analysis of organizational culture should be conducted in order to help determine the communication strategy used to solve the problem.

### **2.3 Change Management**

Good strategic change should take place in the cultural beliefs and assumptions of the organization (Heracleous and Langham, 1996) leading to the cultivation of employee commitment (Unzicker et al., 2000). Ellis (1998) conducts research on a new role for the Post Office and reveals three underpinning dimensions for the strategic change: organizational culture, change management and technology-enabled change.

In order to formulate change strategies, a series of change stages needs to be closely scrutinized. To recapitulate the importance of change formulation and implementation, words and actions are indispensable to create images and meanings that will focus attention on the need for change, to establish an environment receptive to change efforts, to communicate change messages and to encourage participation in the strategies designed to achieve it (Witherspoon and Wohler, 1996). The formulation and implementation of change strategies could be perceived as a united entity and an ongoing process. Framing the change targets with comprehensive schemes or meanings of change is of radical challenges to overcoming the obstacle of organizational changes (Gilsdorf, 1998). On the ground of these facts, a communication tends to be considered as a bloodstream that helps transmit the change messages throughout both change formulation and implementation stages.



**Figure 3. Change Management Framework (Kotter, 1995)**

### III. Methodology

The objective in this research is to identify the communication problems and leadership attributes on Change Process on IT Project implementation. Case study methodology was selected since its providing both the richness and depth of information not usually offered by other qualitative methodologies, and as having the ability to capture many variables in order to identify how a complex set of circumstances come together to produce a particular manifestation (Hancock, 1998). Further, Yin (2003) finds the use of the case study methodology appropriate when organizational and managerial issues need to be examined.

A case study is defined as a study that ‘investigates a contemporary phenomenon within its real-life context especially when the boundaries between phenomenon and context are not clearly evident’ (Yin, 2003). Case studies can make an important contribution by providing a rich understanding of the context of research and the process being enacted as opposed to a reductionist-fragmented view that is often used (Saunders, 2003).

In this research, writer use Descriptive case studies. Descriptive case studies aim to provide rich, detailed description of a phenomenon from which observations are made a descriptive approach seemed appropriate for this study because the goal is to gain familiarity with a phenomenon and to

provide readers a common language about the topic in question. Descriptive case studies require a theory to guide data collection and this theory should be openly stated in advance (Yin, 2003).

The single case study is a proper design for this research project as more compelling and is thus believed to increase the robustness of the overall study (Yin, 2003). First of all, the case is relatively unique in context and contributing to theory-building through a number of unit cases within the firm. The single case is analogous to a single experiment in which various units of analysis may come into play. The research focus has been given to inducing a framework of how key persons of the management and of the internal communication team perceive and formulate communication strategies in light of change management processes. Provided that different executives from different work positions involved serve as major players of the case. Secondly, further insights of the phenomenon to be explored are revelatory.

### **3.1 Case Selection**

Find a suitable cases for this research taken critical part since it will affect to the research result. In order to select the case, several criteria have been established :

- a) the type of business (Energy)
- b) Scope of the Business (Multinational)
- c) Size of the company determined by a number of employees (>2000 employee)
- d) Number of operational area (> 5 different location)
- e) International Interconnected IT Department
- f) Degree of changes indicated by forces for change

As a result, ConocoPhillips Indonesia was selected as a case of a large Energy company, and there are several IT Project Implementation that contain change management strategy on communication. Project implementation in ConocoPhillips Indonesia required effective and efficient communication change management that requires good coordination of change across communication, geographic, organizational, functional, and technological arena of IT implemented organization since it connected to other operation areas worldwide. ConocoPhillips is a multinational oil and gas company headquarters in Bartlesville, USA. ConocoPhillips Indonesia has two core production areas are in onshore South Sumatra and in offshore South Natuna Sea, that contain several block. IT Department in ConocoPhillips has Interconnected network across its Business Unit all over the world. IT Department also has several System Implementation project, globally and locally, that implies change on the organization.

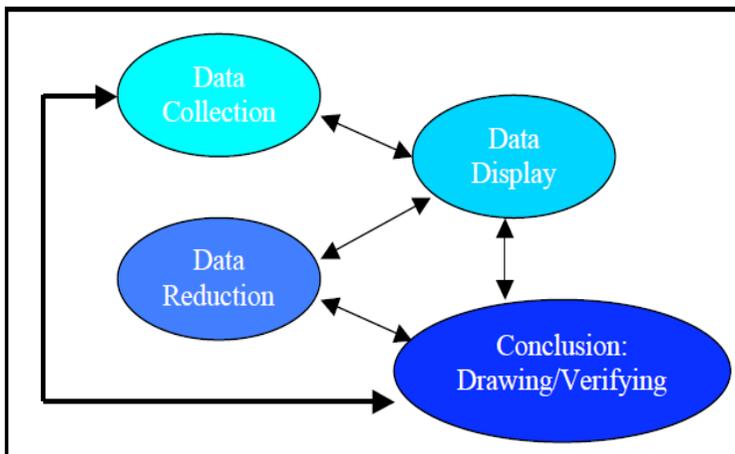
Interviews are one of the most important sources of case study information. A semi-structured interview approach was found suitable for this study because it can yield unexpected and insightful information, thus enhancing the findings (Hair, 2003).

Direct observation was thought of as providing an additional source of information about IT Project Implementation change initiative .As a method of data collection, it has several advantages: the researcher is able to ‘understand and capture the context within which people interact’, and the researcher ‘has the opportunity to see things that may routinely escape awareness among the people in the setting’ (Patton, 2002).

For the present study, documents from both company as well as oil and gas industry sources provided valuable information on contextual factors influencing the change, and presented a historical view of how the company envisioned the offshore initiative would be implemented. Documents that were analyzed include: Business Requirement Document, PowerPoint presentations, meeting minutes, standard operating procedures, annual reports, specialized reports of various kinds, electronic mail, organizational charts, and Change documentation among others.

In term of communication change problem, this study will elaborate two sub points to answer research questions. These two main parts are communication problems and risk in change management (Ghosh, 2011). To elaborate these points, this study utilize interview in the data collection.

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**Figure 4. Data Analysis (Miles, 1994)**

This technique helps to reduce the large volume of data, and involves developing case study write-ups that identify the different component parts

of a phenomenon and interpreting the relationship among these component parts. It involves telling a story of a situation and progress in a chronological order so that ‘we can construct a map and locate different elements and variables. Case analysis in this study attempted to combine data from all three sources (interviews, observations and documents) to produce detailed case descriptions and interpretations of the change process in ConocoPhillips.

### 3.2 Validity and Reliability

According to Yin (2003), there are four tests that are commonly used to establish quality in case study research. They are:

- 1) Construct validity;
- 2) Internal validity;
- 3) Reliability.

Construct validity, which requires the researcher to use the correct measures for the concepts being studied (Yin, 2003), was established in this study in two ways. First, multiple sources of data were collected for each case under investigation in order to increase construct validity. Second, the author engaged in peer consultations to gather feedback on draft case studies from the key informants in each case. This process provided the opportunity to verify that the author’s interpretation is an adequate representation of reality. Internal validity in case study research is concerned about whether the interpretations made by the researcher are correct when the event cannot be directly observed (Yin,2003). The last test, reliability, deals with the extent to which other researchers would arrive at the same conclusions if they were to use the same data and methods. Yin (2003) offers two strategies for increasing reliability in case study research: using a case study protocol, and developing a case study database.

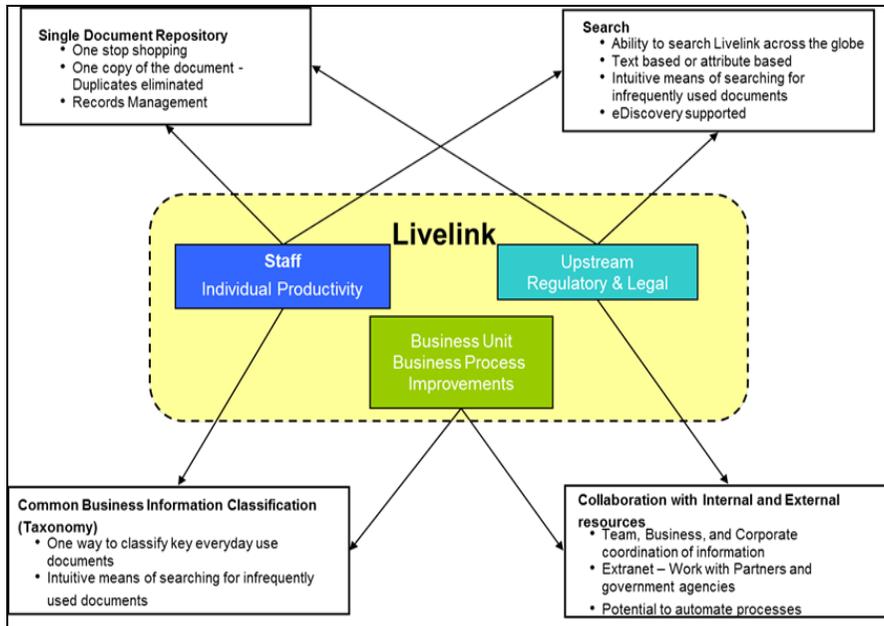
**Table 1. Validity and Reliability**

Test	Case Study Tactic	Technic Adopted in This Study
Construct validity	Use Multiple sources of Evidence	Interviews, observation and documents were used.
	Have Key informants review draft case study report	Peer feedback was obtained on all case studies.
Internal validity	Establish chain of evidence	Use of sufficient citations and quotes in the case studies
	Triangulate evidence	Use of different data sources in a convergent manner
Internal validity	Compare results with extant literature	Cross-case results compared with similar and conflicting Literature
	Follow replication logic in multiple case studies	Replication logic used to investigate all three cases.
	Analytic generalization	Cross-case results generalized to broader theories in Organizational

		<b>change management.</b>
Reliability	Use case study protocol	same data collection and analytical procedures followed for each case.
	Develop case study database	Transcribed interview and observation data were entered into database; corporate documents (electronic version) organized in the computer’s file system.

**IV. Research analysis**

An application of Knowledge Management system is need in order to facilitate these knowledge processes, therefore supporting the business processes (Lee, 2008). Knowledge technology can be supportive in knowledge application, by inserting knowledge into organizations processes and procedure. Thus information technology can enhance and provide a positive influence by integration and application with facilitating the capture a, updating and accessibility of organizational directives. In order to accommodate the business process and overcome information and knowledge management problem, the company will implement Knowledge Management system from OpenText, Livelink 9.7 to accommodate the process.



**Figure 5. Knowledge System Model**

**4.1 Communication Problems**

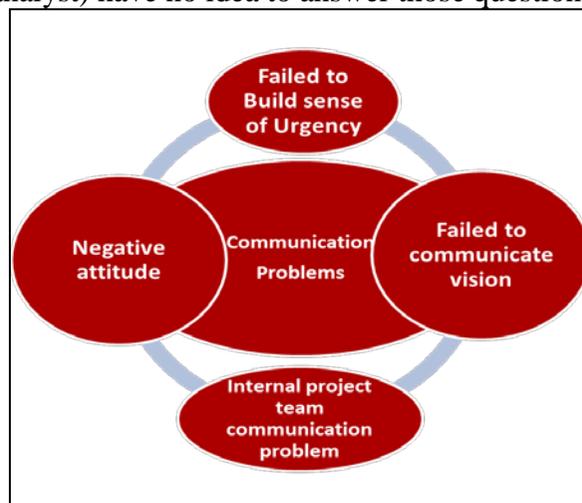
The main problem of change deals with how to maintain congruence of the organization components in the system during change implementation.

Employees did not feel that the communication adequately addressed their concerns about the impact of the change on them. Both the middle managers and the no-managerial employees stressed that a continuous focus on communication effort was necessary to avoid the problem.

Communication problems are commonplace when changes are not clearly identified (Lewis,2000). Not only do they cause a drain on profitability, but also the effectiveness of management declines (Gilsdorf, 1998). Many underlying reasons why communication often falls short of the ideals, which are “accuracy, reliability, validity, adequacy, and effectiveness,” are addressed with some general issues within the relationship between information and communication in organizations.

In this IT project implementation, communication problems are typical in situations where the new system will integrate several system that usually being used by end user. Communication problems also arise between technology groups when the change affects several technological parts of the product.

The middle managers believed that the senior management had the responsibility to clearly communicate the objectives of the change and to set realistic goals for the organization. If senior management failed to maintain good communication, this issue could cause a serious communication problem, especially in the big project. If the communication within the internal project team is not going well, how we can initiate this new system to the user. The communication problem could be drive by unclear job responsibilities of each person in the project team, the segregation of duties in the project. And also, the issue in the high level sometimes do not disseminate to the analyst level, so while user/Manager ask about those issue, we (the analyst) have no idea to answer those question.



**Figure 6. Communication Problems**

According to Lewis (2000)'s research findings, the most frequently noted categories of problem encountered by the company in transition are "communicating vision". Good vision of the project should have good analytical background and project requirement. In this project, there are several system functionalities that didn't have clear requirements. Unclear requirement of the system may lead to the unclear system design. End user employee responsibilities would also be unclear for the new system. If project team does not consider which communication behaviors it wishes to foster for its project success, the signals it sends to employees may be inconsistent or counterproductive.

Although IT project team have created communication plan, define communication strategy, utilize communication channel and design change communication change network, some ignorance from end-user still found. According to Lewis (200b)'s research findings, this problem categorized named "negative attitudes." It is a problem, because project team assumes that user already known about the timeline and about their responsibility in the project, but it happened in different manner. The project team had to spend some times only to take care of this problem. In doing so, project team pursue communication audits which involve ethnographic analysis, including observation and interviewing, to learn exactly what communication problem exist in the grass root.

Cause of communication problems not only come from top management or end-user employee, but also from the member of IT project team itself. When IT project team didn't implement the communication plan, it will lead to communication problem. Project team should be the one that really proactive to give updates information about project. While implementing communication plan, project team member has to assume that end-user know nothing about their responsibilities, so that project team need to stick to the communication plan and implement it within available communication channel.

#### **4.2 Risk in Change Management**

Although the project is not ended up yet, but several communication problem have been revealed by the project team. These problems lead to several potential risk for the project. One supervisor in ConocoPhillips stated that risk could be related to four main factors, which are budget, quality, time and the scope of the project. These factors should be monitoring continuously, if communication problem still persist, it could lead to the project failure.

Another team lead and supervisor also stated the same thing, but this time she focuses the risk on the schedule. Also, one analyst that deal intensively thought that communication problem could also related with the

technical deliverable. Although the quality of the system is perfect, if the communication problem persists, the value for the system will be decreased. In order to mitigate the risk, project manager have to work hard to solve the problem immediately. If not, project manager will need to align project plan that might impacted to the time and budget allocation.

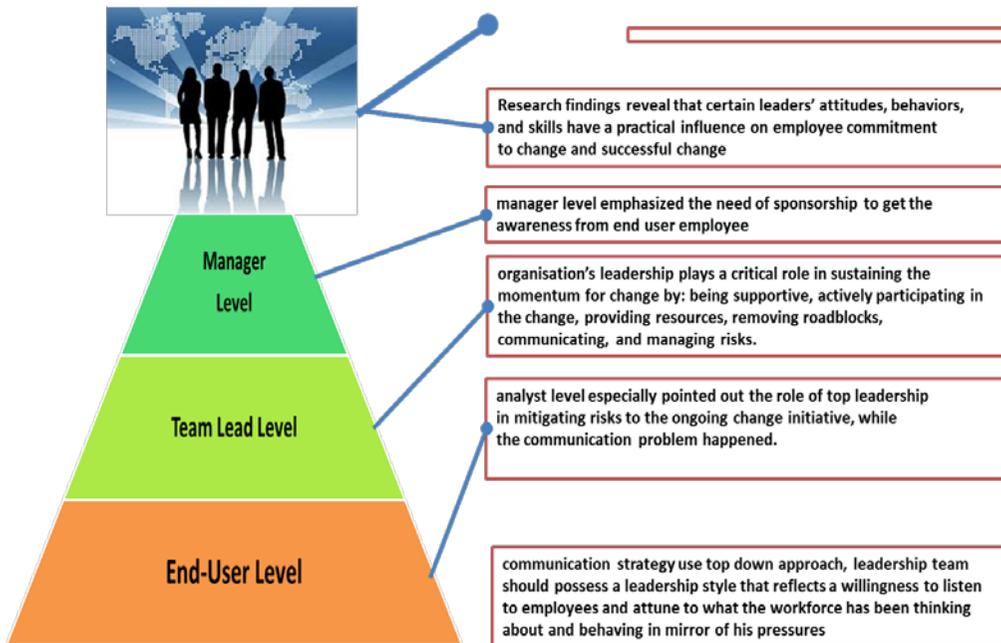
Furthermore, if the risk could not be prevented in the future, it could lead to the project failure. This failure may not relate anymore to the technical area, but more on the management aspect. If the reluctant level is really high due to communication problem, end user employee up to top management level won't use the system that might have been deployed in the future.

### **4.3 Leadership & Top Management Attributes**

Even though leadership is not the focus of the research, but leadership is related with the communication change management in IT project implementation. Research findings reveal that certain leaders' attitudes, behaviors, and skills have a practical influence on employee commitment to change and successful change. This implies that those assuming a leadership role should promote an environment in which the different elements of the system are able to interact in order to create new forms of reality, guided by the overarching vision and rules (Keene, 2000).

Change starts from the top of the organization and descends to the operational level. Along the chain of command or authority, a question "to which degree would the top management and employee commit to change?" has arisen. Understanding change and commitment to change seems to convey the psychological mentality at different levels. In terms of communication strategies, according to the statement of Team Lead of IT, even the communication strategy use top down approach, leadership team should possess a leadership style that reflects a willingness to listen to employees and attune to what the workforce has been thinking about and behaving in mirror of his pressures. Fundamentally, the leadership attribute needed for change is the ability to paint the picture for people, make them understand the issue, and get them to follow.

Statement from team lead of IT state the importance of leadership to achieving change and describe the executive as 'a critical actor in the drama of organisational change'. At the same time, while the manager level emphasized the need of sponsorship to get the awareness from end user employee, analyst level in IT project which belong to the non-managerial employees, especially pointed out the role of top leadership in mitigating risks to the ongoing change initiative, while the communication problem happened.



**Figure 7. Leadership Roles in Management**

Given the need for change, the vice president level along with senior manager as leadership team should determine along a training-and-development program is adequate to help employees acquire the necessary competencies, or whether the organization should bring in outsiders with specialized expertise. Leadership team also should acknowledge the allocated resource from each department that will act as change agent. These decision need to be done by leadership team since both of decisions related to the effective man hour during normal work time, because employee have to spend their time to join the training.

The managerial and non-managerial employee of IT department indicated that the IT organization's leadership plays a critical role in sustaining the momentum for change by: being supportive, actively participating in the change, providing resources, removing roadblocks, communicating, and managing risks. This outcome reinforces Kotter's (1998) notion that it is important to develop the means to ensure leadership development and succession to anchor the change.

## **V. Conclusion**

In term of Communication Problem, the research findings also highlight some communication problems that exist during technology change process. The main problem of change deals with how to maintain congruence of the organization components in the system during change implementation. There are four main problems that discover during the research, which are

lack of top management vision to build sense of urgency problem in top management to build sense of urgency, failed to communicate vision and benefit of the change, negative attitude, and communication problem from internal project team.

Related to Risk in communication change problem, communication problems lead to several potential risks for the project, which related to project budget, project schedule, project quality and project scope. Furthermore, if the risk could not be prevented for long period of time during project, it could lead to the project failure.

In regards to Leadership and Top Management Attributes, Based on the analysis of the information technology system implementation in ConocoPhillips, this study concludes that organizational factors in combination are necessary for successful management of change, which is leadership and top management attribute. With the implementation of change, leadership and top management attributes including transition management, communicate the vision and top management directive contribute to successful implementation. On the other hand, failure to effectively communicate the vision, the directive (top-down) implementation approach, the lack of strategies to manage employee resistance, and the lack of plans to develop a fit between the change and the organizational culture appear to present significant barriers to change implementation.

This study discover four main communication problem in change process, which are lack of top management vision to build sense of urgency problem in top management to build sense of urgency, failed to communicate vision and benefit of the change, negative attitude, and communication problem from internal project team.

In order to solve the problems, researcher think building commitment within the organization is an important part of any change initiative It starts with communication from the executive leadership explaining the need for change and the communication must aim to sensitive employees and other stakeholders to the contextual factors, both internal and external, that have led to the consideration of the change.

The employees and other stakeholders must understand why the organization is embracing technology change and how the change will affect them. When they understand that IT system implementation driven by legitimate business drivers, they are more likely to accept it. Without a clear understanding of these business drivers, they may come to view the change as unjustified and burdensome, thus increasing the likelihood of resistance to offshore outsourcing initiatives. The top leadership will need to develop an effective communication strategy to address the concerns of the employees and other stakeholders, without which these concerns can lead to change resistance.

This study sees that the communication problem that exist in change initiative, will lead to several risk to project itself directly or indirectly. The extensive of budget, schedule and scope are some example of the risk. If the risk could not be prevented for long period of time during project, it could lead to the project failure. This study recommends that all communication that evolved should be analyzed and solve immediately. Moreover, all the issue and defect related to the communication should be listed down in a database. Thus, if similar case happens in the future, risk in change management caused by communication problem could be minimized.

Top executives can play a crucial role in successful change management by actively participating throughout the change management process. Through the sponsorship of specific projects or initiatives, these executives can not only demonstrate their commitment to the change, but can also show that the proposed change aligns with the business objectives. Getting the projects or initiatives incorporated into the sponsors' objectives gives them the incentive to make change the work.

The importance of communicating a vision from leadership and top management during a significant change effort in technology change cannot be overstated. In communicating the vision, leadership and top management not only establish credibility with employees, but also minimize employee resistance to the change, address key challenges, managing resistance, and help IT project team to achieve buy-in from stakeholders, which often stems from fear and uncertainty.

### **References:**

- Philip Kotler & John A. Caslione.(2009).CHAOTICS: The Business of Managing and Marketing in The Age of Turbulence. research methods. Hoboken, NJ: John Wiley and Sons.
- Sherer, Susan; Kohli, Rajiv; Baron, ayelef.(2003). Complementary Investment in Change Management and IT Investment Payoff. Information System Frontiers 5:3, 321-333.
- Forbath, Theo (1997). Uncertainty In The IT World Requires Change Management. CommunicationsWeek 654: 49.
- Computer Economics Report; Oct 2006; 28,10; ProQuest Computing. Page 15
- Harvard. (1999). Harvard Business Review on Managing Uncertainty. Harvard Business School Publishing, Boston.
- Ghosh, S. M. Sharma, H. R, Mohabay(2011) V. A Study of Software Change Management Problem. International Journal of Database Theory & Application,Vol. 4 Issue 3, p39-48, 10p.
- Hayes, J. (2002) The theory and practice of change management. New York, NY: Palgrave.

- Stohl, C. (1995). "Organizational Communication: Connectedness in Action." Sage.
- Miller, V. D., Johnson, J. R. & Grau, J. (1994). "Antecedents to Willingness to Participate in a Planned Organizational Change." *Journal of Applied Communication Research*, vol. 22.
- Stoltz, P. G. (1997). "Adversity Quotient: Turning Obstacles into Opportunities." John Wiley & Sons.
- Hellriegel, D., Slocum, J. W. & Woodman, R. W. (2001). "Organizational Behavior." Ninth Edition. South-Western College Publishing.
- Lewis, L. K. (2000). "'Blindsided by That One' and 'I Saw That One Coming:': The Relative Anticipation and Occurrence of Communication Problems and Other Problems in Implementers' Hindsight." *Journal of Applied Communication Research*, vol. 28, iss. 1.
- Gilsdorf, J. W. (1998). "Organizational Rules on Communicating: How Employees Are – and Are Not – Learning the Ropes." *The Journal of Business Communication*, vol. 35, no. 2, Apr.
- Dawson, S. (1996). "Analysing Organisations." Third Edition. Macmillan Business.
- Unzicker, D., Clow, K. E. & Babakus, E. (2000). "The Role of Organizational".
- Ellis, S. (1998). "A New Role for the Post Office: An Investigation into Issues behind Strategic Change at Royal Mail." *Total Quality Management*, vol. 9, no. 2&3.
- Witherspoon, P. D. & Wohler, K. L. (1996). "An Approach to Developing Communication Strategies for Enhancing Organizational Diversity." *The Journal of Business Communication*, vol. 33, iss. 4, Oct.
- Hancock, B. (1998) *Trent focus for research and development in primary health care: an introduction to qualitative research*. England: Trent Focus.
- Yin, R.K. (2003b). *Case study research: design and methods*. 3rd ed. Thousand Oaks, CA:Sage.
- Saunders, M., Lewis, P. and Thornhill, A. (2003) *Research methods for business students*. 3rd ed. New York, NY: Prentice-Hall.
- Hair, J.F., Babin, B., Money, A.H. and Samouel, P. (2003) *Essentials of business*
- Patton, M.Q. (2002) *Qualitative research and evaluation methods*. 3rd ed. Thousand Oaks, CA: Sage.
- Ghosh, S. M. Sharma, H. R, Mohabay(2011) V. A Study of Software Change Management Problem. *International Journal of Database Theory & Application*, Vol. 4 Issue 3, p39-48, 10p.
- Miles, M. B. and Huberman, A. M. (1994). *Qualitative data analysis*. 2nd ed. Thousand Oaks, CA: Sage Publications.

Lee, M.-C. (2008). International on Convergence and Hybrid Information Technology 2008, 407 - 412.

Lewis, L. K. (2000). ““Blindsided by That One” and “I Saw That One Coming:” The Relative Anticipation and Occurrence of Communication Problems and Other Problems in Implementers’ Hindsight.” Journal of Applied Communication Research, vol. 28, iss. 1.

Giltsdorf, J. W. (1998). “Organizational Rules on Communicating: How Employees Are – and Are Not – Learning the Ropes.” The Journal of Business Communication, vol. 35, no. 2, Apr.

Keene, A. (2000) Complexity theory: the changing role of leadership. Industrial and Commercial Training, 32 (1), p.15-18.

JP Kotter, (2008)LA Schlesinger - Harvard business review, - graygilliam.com