

AC Leonard

## Empirical support of the positive impact of an Intranet on communication in the working environment

### *ABSTRACT*

Organizations of all shapes and sizes have to embrace information technology to survive and thrive in an increasingly competitive environment. Consequently, the level of penetration and sophistication of information technology is growing rapidly, and with it a concomitant increase in the level of organizational impact. In this article the authors investigate the impact of an Intranet on organizational issues, such as communication.

The research study shows that technology like an Intranet, if used correctly, can have a very positive impact on an organization's communication culture and as such on various other important organizational issues. The research was conducted in an insurance company in South Africa ("The Insurance Company").

## 1. INTRODUCTION AND PROBLEMDESCRIPTION

The need for communication and information flow in any organization is essential. It requires technology that guarantees that the most recent and accurate information is delivered on demand, which ensures that the information can be held at a single source and allows information to be maintained by the people who would normally maintain and prepare the original information (Hermes, 2000).

In this regard it is important to note the work of Doherty and King (1998). According to them different issues in an organization could cause problems in terms of the smooth running of the different functions or systems within the organization. They define an organizational issue as any distinct area on the interface between a technical system and either the characteristics and requirements of the host organization or its individual employees, which could lead to operational problems of any information system in the organization. In this regard they refer *inter alia* to the culture of an organization. There is also recent evidence suggesting that organizational issues are becoming even more important and will also become more critical to the successful development and implementation of information systems such as Intranets.

Given the recognized importance of organizational issues, Doherty and King (*supra*) state that it is somewhat surprising that recent research suggests that organizational issues are still not properly addressed during the systems development process (Eason, 1988, Hornby *et al.*, 1992 and Lim *et al.*, 1992). This probably happens because the systems development process is still primarily a technology-driven process (Clegg *et al.*, 1997).

According to Damsgaard and Scheepers (1999) many organizations are in the process of adopting and implementing Intranet technology. They state that although some have great success, there are already some warning signs of Intranet failures (referring to the work of Romm & Wong, 1998). Several reasons are offered in the literature as to the cause of the poor use of Intranets (failure), all of which are related to soft issues rather than technical aspects.

Some publications detail the calculation of Return on Investment for this technology. Shephard (1998) provides a good method for the analysis of the cost benefit of Intranets within an organization. Fastrak Consulting provides an on-line Intranet cost benefit calculator (Shephard, 1998). However, as the value of the Intranet lies mostly in soft issues such as communication and collaboration, these characteristics are much harder to measure. The impact of the Intranet on these issues and how communication and collaboration are facilitated by the Intranet will ultimately determine the effectiveness of this technology within the organization. The tools mentioned do not measure the effectiveness of the Intranet. Therefore, the essence of the problem is that companies are implementing Intranet systems at great cost, without knowing whether they are contributing to communication, collaboration and change within the organization. Until recently, there was no method to measure whether the Intranet actually delivered on the expectation.

From the literature, communication and collaboration can be identified as the main issues that are important to measure (Murgolo-Poore *et al.*, 2000). Despite the obvious importance of the soft issues involved in evaluating the effectiveness of the Intranet, very few serious attempts have been made to measure them. Measurement is necessary to help management to determine whether their Intranet is effective or not. It should also be measured to determine whether employees of the organization perceive the system to be effective or not. Any measurement should be done using a reliable validated instrument. Such an instrument, called the *Intranet Effectiveness Instrument*, has been developed by the Curtin University of Technology, Perth, Australia (Murgolo-Poore *et al.*, 2000). They developed a generic measure of Intranet effectiveness. The intention was to develop a scale that would have a general applicability in the measurement of the construct of Intranet effectiveness. The process they followed entailed the reviewing of extant literature on Intranets, the development of the scale that included the generation of possible items for inclusion in the scale and the subsequent testing of these items by means of a survey. Thereafter the scale was purified and the reliability and validity of the instrument were established. To ensure the development of a psychometrically sound instrument, the approach followed by this study was as recommended by Churchill in 1979 (Murgolo-Poore, *et al.*, 2000).

The next section provides a brief background on the organization that has been chosen for this research project as well as the approach followed in this research study.

## 2. COMPANY BACKGROUND AND RESEARCH APPROACH

The unit of analysis for this research study was the Intranet users (approximately 949 people) that form a section of the employees of *The Insurance Company*. The said employees were chosen for this research project because they are active users of the company's Intranet and the management of the company needed to make a strategic decision about the future use of the Intranet in the company. The outcome of this decision was dependent on the research results obtained in this research study. The aim of the research study was therefore to demonstrate that the Intranet is effective in terms of improving and supporting communication and collaboration within the company, and could act as a catalyst for change.

To determine the effectiveness of the Intranet within *The Insurance Company* in terms of communication and collaboration, the Intranet Effectiveness Instrument was used. This instrument consists of a simple questionnaire. It is therefore a process that can be performed with relative ease. The evaluation is presented through statistical analysis and deductions, conclusions based on the results are provided.

The research approach phases involve the following steps:

- Literature study on the measurement of the effectiveness of Intranet and related topics. The emphasis was on determining the impact of the Intranet on social issues within organizations.
- Evaluation of the measurement techniques available, with specific reference to the Intranet Effectiveness Instrument.

- The conversion of the Intranet Effectiveness Instrument to a format suitable for email use.
- The gathering of information at *The Insurance Company* by means of electronic mail (email) and Intranet technology as well as hand-completed questionnaires for respondents in the geographical area in close proximity to the researcher. The questions posed to the respondents are identical in both instances.
- Statistical analysis of the information.
- The making of deductions and conclusions, which led to insight into the problem of whether the Intranet is considered effective by the employees of *The Insurance Company*. This will answer the following research questions:
  - Is the corporate Intranet effective with regard to communication within the company?
  - Is the corporate Intranet effective with regard to collaboration within the company?
  - What is the effectiveness, if any, of the Intranet as a catalyst for change in this organization? Can the Intranet be applied to bring about changes to the organization?

### 3. ORGANIZATIONAL ISSUES INVOLVED IN INTRANET USE

As stated earlier, Doherty and King (1998) define an organizational issue as any distinct area on the interface between a technical system and either the characteristics and requirements of the host organization, or its individual employees, which could lead to operational problems within the organization.

This is a generic definition and encompasses a wide variety of “non-technical” issues. Based on this definition it is immediately possible to classify organizational issues such as the impact of a system on an organization’s culture, working practices or performance, and similarly, and its impact on a user’s motivation or performance.

Organizations today are frequently fragmented and distributed over large geographic areas. This is especially true in organizations that operate globally. It is a challenge for management and workers to communicate over these distances. Other organizational functions such as training and collaboration must necessarily also take place over these distances. Businesses have become very complex, leading to the need for vast amounts of knowledge within the business environment. This knowledge must be managed and available when required by staff members. As the business and its internal and external environment change, these changes must be managed to ensure smooth transitions to new systems. This implies that organizations must become learning organizations in order to learn and change to gain a competitive advantage and achieve their goals. Business activities such as business process engineering and organizational innovation can be facilitated through the use of Intranets.

Kirsner (1999) reports that Intranets often fail due to three main elements: relevance and usefulness, speed of updating information and communication. Kirsner also advises companies to consider the following when implementing Intranets: relevance, updates, communication and gauging success.

It is thus clear that technical expertise and support account for only a small measure of the success of the Intranet, whereas the organizational issues determine the ultimate success and effectiveness of this technology.

The abovementioned discussion refers to the soft issue categories that are important to consider in measuring the Intranet as the communicative, collaborative and catalyst characteristics of the Intranet. These three elements overarch the soft issues that play a role in organizational functioning. They are intricately intertwined and impact on one another. Collaboration depends on communication; elements that act as catalysts depend on being communicated and collaborated.

The following section describes the reasoning and subsequent development of the Intranet Effective Instrument (IEI). It describes the dimensions to be measured as collaboration, communication and a catalyst for change.

#### 4. METHODOLOGY USED DURING THE IEI SURVEY

The Intranet Effectiveness Instrument is a validated tool that was developed to measure the impact of the Intranet on social issues within the organization. This section describes the methodology followed to implement this instrument in *The Insurance Company* in order to measure the perceived effectiveness of the Intranet within the company.

The Intranet Effectiveness Instrument as well as the documentation supporting the reasoning behind the development of this tool (Murgolo-Poore, 2001) were obtained from the Curtin University of Technology, Perth, Australia. This documentation also describes the technical development of the instrument.

##### 4.1 Literature study

A literature study was conducted to gather information on the use of the Intranet within organizations. The functions of the Intranet were determined and a search for ways to measure the effectiveness of the Intranet followed. As the importance of social issues in the use of technology such as the Intranet is highlighted in several publications, ways of measuring the impact of the Intranet on these issues were investigated. Specific emphasis was placed on identifying dimensions that should be measured to determine Intranet effectiveness. The paucity of literature in this regard was noted. The literature study indicated methods of quantifying the return on investment in financial terms, but very little is said with regard to social issues.

##### 4.2 Analyzing the results

A total of 124 questionnaires were returned, six (6) of which were incomplete and not taken into consideration for analysis. This represented a response rate of 16.5% (of the 750 members who received the questionnaire). The contents of the 118 completed questionnaires (15.73% of the total sample) were transferred to an Excel spreadsheet and emailed to the Curtin University for statistical analysis. The statistical analysis was conducted by computer and the results were returned to the researcher electronically.

## 5. RESEARCH RESULTS

The data collected through the implementation of the Intranet Effective Instrument was analyzed by specialised software. The factors analyzed were reliability, validity (construct, convergent and nomological validity) and principal components. This questionnaire also contained questions about time spent using the Intranet and the self-perceived computer expertise. It was also analyzed for the relationship between these factors. For interest's sake, the data was also analyzed to determine whether the time spent on the Intranet influenced the individual's perception of the effectiveness of the Intranet.

### 5.1 General evaluation, means and standard deviations

In the table below, the *means* and *standard deviations* of all the IEI items are shown. Individual items were measured on a seven point scale, with the lowest score indicating that the member disagreed strongly with the statement made and the highest score indicating that the member agreed strongly with the statement made. The median score would thus be 3.5, indicating that the opinion was rather neutral and that the respondent felt neither strongly for nor against the statement. Any measurement above the median can be regarded as positive towards the statement made and any measurement below the median can be regarded as negative towards the statement made.

The standard deviation measures the variation in the opinions provided and gives an indication of how tightly clustered the opinions are around the mean values.

Item	Mean	Std Dev
1. Our Intranet is the solution for bringing people within the organization together.	4.78	1.39
2. The Intranet provides a major cultural revolution in our organization in the way people work, think and communicate.	4.80	1.19
3. An Intranet is a vital tool to bring a company together and give its members a strong sense of common purpose.	4.87	1.29
4. Our Intranet has changed the way our organization communicates internally.	5.19	1.29
5. The Intranet in our organization has truly allowed a global community to develop.	4.64	1.32
6. The Intranet in our organization fosters collaboration.	4.29	1.13
7. The Intranet in our organization allows us to effectively implement business strategy.	4.36	1.24
8. The Intranet in our organization is a very effective way of saving resources, such as time, facilities and money.	5.14	1.23
9. The Intranet within our organization has become an integral part of the way we operate.	5.03	1.12
10. The Intranet within our organization brings us together and helps us work more effectively.	4.69	1.19
11. Many people within our organization talk about the impact the Intranet has had.	3.69	1.36
12. The attitude of most people toward the Intranet in our organization can be summed up by the statement, "I don't know how we got along without this."	3.94	1.33
13. The Intranet in our organization helps our people to bring products and services to market much quicker.	4.79	1.36
14. Our Intranet is a way to collaborate, design, develop and deliver new products and services.	4.73	1.36
15. The Intranet in our organization gives employees the opportunity to feel like a significant part of our company.	4.63	1.18
16. The overall effect of the Intranet within our organization has been to make members of our organization better communicators.	4.45	1.36
17. The Intranet in our organization has meant that many employees now communicate with fellow employees with whom they had not communicated before.	4.53	1.27
18. The Intranet within our organization has enabled managers to more quickly learn of problems that cause anger and frustration than was previously the case.	4.03	1.44
19. The Intranet in our organization has changed the nature of the interaction between supervisors and subordinates.	3.97	1.37

In general, the results indicated positive perceptions regarding the statements made. The areas where the Intranet is perceived to have major impact are:

- Changing the way the organization communicates internally.
- Cost saving with regard to resources such as time, facilities and money.
- The Intranet has become an integral part of the way the organization operates.

The areas where the Intranet is perceived to have a large impact are:

- As a solution for bringing the people within the organization together.
- As providing a major cultural revolution in the way people work, think and communicate.
- As a vital tool to bring the company together and give members a strong sense of purpose.
- As allowing a truly global community to develop.
- To foster collaboration
- To allow the organization to effectively implement business strategy.
- To bring the members of the organization together and help them work more effectively.
- To help bring products and services to the market much quicker.
- As a way to collaborate, design, develop and deliver new products and services.
- As a way to give employees the opportunity to feel like a significant part of the company.
- To change members into better communicators.
- To enable communication with fellow employees with whom there was no communication before.
- To enable managers to learn of problems without delay.

The areas where the Intranet's impact has been less significant are the following:

- People in the organization do not really talk about the impact that the Intranet has had.
- People in the organization do know how they managed without the Intranet
- The Intranet has not changed the nature of the interaction between supervisors and subordinates.

## 5.2 Reliability

The IEI was once again analyzed for reliability. Reliability means that the instrument has internal consistency allowing it to be used under similar circumstances and obtaining similar measures. This was done by calculating Cronbach's alpha. In this case this measure was 0.9, which is high and thus means that this instrument is reliable. Values under 0.5 would indicate unreliability and a desired value would be over 0.7.

## 5.3 Validity

Validity has to do with whether the measure is a true measure, and this instrument was analyzed for validity. Several assessments were undertaken on this data to determine the validity of the instrument.



### 5.3.1 Construct validity

Construct validity is indicated where the instrument assessments are related to other independent assessments of Intranet effectiveness. A simple table of the overall evaluations of the Intranet (question 20) was constructed, with question 20 as the column, against the average assessments in the dimensions of the IEI as rows. The expectation is that those respondents who rated overall Intranet effectiveness as low would also rate the Intranet effectiveness as low and vice versa.

OVERALL EVALUATION	n	COLLABORATION	CATALYST	COMMUNICATION
Very unsuccessful	1	2.33	1.42	2.00
Unsuccessful	13	3.69	3.47	2.71
Successful	94	4.93	4.70	4.36
Very successful	10	4.76	4.52	4.13

Generally, it can be accepted that the IEI possesses construct validity. The average evaluations by dimension seem to increase as the overall evaluation increases. Unlike the original development of the instrument, however, in the case of those who evaluate the Intranet as Very Successful, their evaluations by dimension are a little lower than those whose overall evaluation is Successful. This may simply be because of the small number of respondents who rate the Intranet as Very Successful and may not be significant.

### 5.3.2 Convergent validity

Convergent validity is indicated where the IEI assessments are significant to other independent assessments of Intranet effectiveness. This was measured by using a multiple regression on the overall evaluations of the Intranet (question 20) as the dependent variable, with the average assessments on the dimensions of the IEI as the independent variables.

The instrument is said to possess convergent validity as the Rsquare is high at .34, and this is significant ( $p < 0.01$ ). Of the dimensions, however, it is only communication that contributes significantly to the regression.

Response: OVER  
Summary of Fit

RSquare	0.343967
RSquare Adj	0.326703
Root Mean Square Error	0.392628
Mean of Response	2.957627
Observations (or Sum Wgts)	118

Parameter Estimates

Term	Estimate	Std Error	t Ratio	Prob> t
Intercept	1.732476	0.186524	9.29	<.0001
COLLAB	0.0286194	0.044828	0.64	0.5245
CATALYST	0.0711446	0.074814	0.95	0.3436
COMM	0.1792035	0.061835	2.90	0.0045

Effect Test

Source	Nparm	DF	Sum of Squares	F Ratio	Prob>F
COLLAB	1	1	0.0628314	0.4076	0.5245
CATALYST	1	1	0.1394046	0.9043	0.3436
COMM	1	1	1.2947637	8.3990	0.0045

### 5.3.3 *Nomological validity*

Nomological validity is indicated where, in a factor analysis, all the IEL items load on to the same factors as they did in the original IEL. A principal components factor analysis of the 19 items was conducted. Using the Eigenvalues > 1 cutoff rule, 15 components were extracted, which together account for 78.12% of the variation in the data. As can be seen in the “rotated components” part of the table below, the items generally load together as expected, especially on the collaboration and communications dimensions, although the pattern on the catalyst dimension is generally more scattered.

The results of the Principal Components/Factor Analysis are provided in Appendix A.

Rotated Components

Rotated Factor Pattern					
Q1	0.4244061	0.8071579	0.1734562	0.0351601	-0.086547
Q2	-0.066119	0.6963614	0.4028283	0.1738985	0.2505860
Q3	0.2989953	0.7575822	0.0630633	0.3191372	0.2990648
Q4	0.1088430	0.3088849	0.2902519	0.1228062	0.7865151
Q5	0.4490414	0.5296146	0.1944737	0.4051883	0.3453246
Q6	0.5672283	0.3108215	0.3264137	0.3088663	0.1257223
Q7	0.6365563	0.1267641	0.5151416	0.1950664	0.1915295
Q8	0.7917186	0.1179872	0.2054827	0.0042830	0.3238106
Q9	0.4746166	-0.096978	0.1207750	0.2470507	0.6492202
Q10	0.6025307	0.2997746	0.1955511	0.4612983	0.2074085
Q11	0.1284036	0.2037502	0.2496879	0.8582925	0.0674125
Q12	0.2341225	0.0530567	0.3345739	0.7729994	0.2420602
Q13	0.4659862	0.2933748	0.0923701	0.5550017	0.4598034
Q14	0.7130882	0.2122520	0.2475406	0.2643216	0.1719732
Q15	0.6086697	0.3187481	0.0897145	0.4896541	0.0295331
Q16	0.4515962	0.2538551	0.0631253	0.5025221	0.5137689
Q17	0.2342994	0.1976418	0.6292493	0.0538643	0.4855407
Q18	0.4258304	0.1690879	0.7271475	0.2800933	0.0728640
Q19	0.1723956	0.2106115	0.7672904	0.3146515	0.1455662

## 6. OTHER OBSERVATIONS

### Association between perceived Intranet effectiveness and computer expertise

Question 20 was introduced into the IEI to determine the respondents' perceived computer expertise, and an analysis was performed, by using multiple regression, to evaluate whether an individual's perception of the effectiveness of the Intranet is related to his/her computer expertise. The expertise was taken as the dependent variable and the IEI dimensions were taken as predictors. It was found that there is no significant relationship between expertise and perceptions of Intranet effectiveness.

Response: EXPERT

Summary of Fit

RSquare	0.019999
RSquare Adj	-0.00579
Root Mean Square Error	1.000819
Mean of Response	5.194915
Observations (or Sum Wgts)	118

Source	Nparm	DF	Effect Test Sum of Squares	F Ratio	Prob>F
COLLAB	1	1	0.31519105	0.3147	0.5759
CATALYST	1	1	0.00485956	0.0049	0.9446
COMM	1	1	0.17813642	0.1778	0.6740

#### Whole-Model Test

Source	DF	Sum of Squares	Analysis of Variance Mean Square	F Ratio
Model	3	2.33022	0.77674	0.7755
Error	114	114.18673	1.00164	Prob>F
C Total	117	116.51695		0.5100

### Association between time spent on the Intranet and perceived Intranet effectiveness

The purpose of this test was to determine whether the time a person spends using the Intranet is related to his perception of the effectiveness of the Intranet. This was done by means of multiple regression, with time spent as the dependent variable and the IEI dimensions as the predictors. It was found that no significant relationship exists between time spent using the Intranet and the perceived effectiveness of this technology.

Response: TIME					
Summary of Fit					
RSquare			0.014256		
RSquare Adj			-0.01169		
Root Mean Square Error			1.052881		
Mean of Response			1.711864		
Observations (or Sum Wgts)			118		
			Effect Test		
Source	Nparm	DF	Sum of Squares	F Ratio	Prob>F
COLLAB	1	1	0.0000015	0.0000	0.9991
CATALYST	1	1	0.1721070	0.1553	0.6943
COMM	1	1	1.0982776	0.9907	0.3217

Whole-Model Test

Analysis of Variance					
Source	DF	Sum of Squares	Mean Square	F Ratio	
Model	3	1.82762	0.60921	0.5495	
Error	114	126.37577	1.10856	Prob>F	
C Total	117	128.20339		0.6495	

The results are examined and interpreted in the next section. Conclusions are made regarding the effectiveness of the Intranet on the social issues within this organization.

The different dimensions of communication, collaboration and catalyst are considered separately.

7. INTERPRETATION OF RESULTS AND RECOMMENDATIONS

The results of the survey show that the Intranet is considered to be successful by the respondents. Only one of the 118 (0.8%) respondents felt that the Intranet was Very Unsuccessful and 13 (11%) felt that it was Unsuccessful. A total of 94 respondents (79.6%) rated the Intranet as Successful and 10 (8.4%) felt that the Intranet was Very Successful. In the rest of this section the three research questions are addressed in terms of the Intranet's value/effectiveness on communication, collaboration and its role as a catalyst for change.

7.1 Communication

Communication has been defined as playing key roles in providing and obtaining information, creating understanding and building ownership. No collaboration or change (catalyst) is possible without communication. Therefore, this dimension is crucial in supporting goals that rely on the catalyst and collaboration dimensions of the Intranet.

The data was analyzed and purified by using recognized procedures. It resulted in the elimination of certain items culminating in a 19-item IIE scale. Thereafter, the reliability of the instrument was determined. The researchers used a rotated factor matrix to load items onto three different factors. These factors were labelled the "three Cs" of Intranet effectiveness.

Four questions in the IEI were loaded onto the dimension of communication. In the case of the other two elements, the average evaluations of these dimensions increase as the overall evaluation increases.

It was determined that the Intranet contributed significantly to communication with fellow employees with whom members had not communicated before. It was also the respondents' perception that the Intranet contributed towards making the members of the organization better communicators. It was found, however, that the Intranet had a small impact on the time managers took to learn about problems causing anger and frustration. The Intranet had very little impact on the nature of the interaction between supervisors and subordinates. This may be positive in the sense that the nature of the interaction between supervisors and subordinates did not rely on a relatively impersonal communication tool such as the Intranet.

It is perceived that the Intranet is successful in terms of the dimension of communication.

## 7.2 Collaboration

The Intranet as a technology possibly has the highest influence on collaboration within an organization. Effective collaboration was stated to mean that employees use the knowledge management systems and become contributors thereto to enhance the content and its value. Several collaborative functions were cited in a previous section of this report. Literature has shown that this is the dimension that facilitates business results in an organization. It is thus important to gauge the impact of this specific dimension closely during the process of measuring the effectiveness of the Intranet. The Intranet Effectiveness Instrument loads 12 of the 19 questions onto this dimension. Most of the responses to questions under this dimension were indicative of high effectiveness of the specific dimension. As in the case of the Catalyst, the average evaluations of these dimensions increase as the overall evaluation increases. However, in the case of those who evaluated the Intranet as Very Successful, the evaluations are a little lower than those whose overall evaluation is Successful. This may be attributed to the small number of respondents who rated the Intranet as Very Successful.

From the results the Intranet is perceived to have the greatest impact on the way the organization communicates internally, which of course contributes to collaboration within an organization. The question is specifically related to change in this function. The Intranet is also considered an integral part of the operation of the organization. The perception is that the Intranet is very effective in saving the organization resources such as time, facilities and money. It is perceived that the Intranet brings the members of the organization together and helps them work more effectively.

The Intranet mission states that the Groupnet will focus on "collaborative communication". The goals of the Intranet in the organization are being shifted to service more Human Resources functions and it is here that collaboration is of the utmost importance. The success of Human Resources functions will rest solely on collaboration within the Intranet environment.

It can be deduced from the responses that the Intranet succeeds in its goal to contribute greatly towards collaboration in the organization. It is interesting that the members within the organization do not actually credit the Intranet for contributing to collaboration within the organization. The two questions determining whether the members actually realize the contribution of the Intranet and talk about it were graded such that it is clear that the Intranet and its contribution is not the topic of many discussions in the organization. This could be interpreted as either a good or a bad sign. Different experts have different opinions. John Kessling (Gerstner, 1999) says that an effective Intranet causes people to comment that they do not know how they managed without it. In contrast, Jerry Stevenson, in the same publication, says that an Intranet is truly effective when people stop noticing it. In this case, it is important to determine whether the Intranet is not being noticed due to its effectiveness and the fact that it is fully integrated into the working lives of the employees or whether the Intranet is not being noticed because it does not play a big role in the working lives of the employees. It is clear from the responses that most members feel that the Intranet is successful as a medium for collaboration. The conclusion is that the Intranet fulfils its expectation and is therefore not noticed due to its integrated nature.

### 7.3 Catalyst

The first three questions of the questionnaire load onto the Catalyst factor. The average evaluations of these dimensions increase as the overall evaluation increases. However, in the case of those who evaluated the Intranet as Very Successful, the evaluations are a little lower than those whose overall evaluation is Successful. When considering the means of these factors, it is clear that the respondents believe that the Intranet is the solution for bringing people within the organization together, and that the Intranet provides a major cultural revolution in the way the people work, think and communicate. They also indicated that they consider the Intranet as a vital tool to bring a company together and give the members a strong sense of common purpose.

This dimension has been identified as an important characteristic of the Intranet, as it facilitates employee acculturation, training and communications while lowering business costs. The results of the survey indicate that it will be an effective medium for realizing the goals of the organization.

The vision states that the Intranet must act as a “change agent” within the group. Considering the rating received on the Catalyst, the Intranet is successful as a change agent and will contribute to the success of the planned initiatives within the organization.

## 8. CONCLUSIONS

The goal of the Intranet is to make employees more effective in their jobs. The measure of success of an Intranet should thus not only be in hard financial terms considering only the start-up and maintenance costs of the technology. The measures of success should be measures that determine whether the individual and working community have improved the quality of the workplace and thus improved quality of work. Intranets should not only

contain information that is convenient to have. They should include data, information and knowledge that are easily digestible, essential for decision making and vital for daily work. The system should allow for individualized interactions and the technology used must be agile. Intranets should be developed consistent with the organizational goals.

At *The Insurance Company*, the Intranet has been developed to provide a host of functions to support and enhance business processes. The technical and hard financial aspects can be measured by using technical standards and financial analytical techniques. The soft issues that drive the success of the Intranet are more difficult to measure. These soft issues are communication, collaboration and catalyst for change. By using a valid, reliable instrument, the Intranet Effectiveness Instrument, it was possible to measure these soft issues at *The Insurance Company* Employee Benefits.

It was determined that the Intranet at *The Insurance Company* can be considered effective as the impact of the Intranet on the soft issues is positive. The research questions are answered as follows:

- Communication through the corporate Intranet at *The Insurance Company* Employee Benefits is considered effective.
- Collaboration as facilitated by the corporate Intranet is effective.
- The corporate Intranet is effective as a catalyst for change in the organization. It can thus be applied to bring about changes in the organization.

The article concludes with applications of the research results on the business unit as well as recommendations for consideration in the business unit and the company as a whole. Used as base-line information, these survey results are valuable in establishing a point of departure for future measurements. They should also be used as comparison with other business units to determine where improvement and marketing of the Intranet are necessary. At the very least, this survey was valuable in determining the perceptions of the respondents and evaluating the viability of the intended role of the Intranet within the organization.

## References

- APRIL, K.A. 1999. Leading through communication, conversation and dialogue. *Leadership and Organizational Development Journal*, 20(5): 231-242.
- CAIRNCROSS, F. 2000. Inside the machine. *The Economist*, November 9, 2000.
- CECEZ-KECMANOVIC, B., MOODIE, D., BUSUTTIL, A. & PLESMAN, F. 1999. Organizational change mediated by e-mail and intranet. *Information Technology & People*, 12 (1): 9 - 26.
- DAMSGAARD, J. & SCHEEPERS, R. 1999. Power, influence and intranet implementation: A safari of South African organizations. *Information Technology & People*, 12(4): 333

- DU PLOOY, N.F. 1993. The social aspects of information systems. Working paper series. Department of Informatics. University of Pretoria. Pretoria
- DYER, G. 2000. Collaboration is the path to raging knowledge. *Computerworld Custom Publishing*, December 4, 2000.
- HERMES GROUP 2000. Accessing the impact of intranets on the business environment. *Computerworld*, September 14, 2000.
- GERSTNER, J. 1999. The promise of intranets: Expectations and Effectiveness. [Web:] <http://www.iabc.com/events/intra.htm>.
- GONZALEZ, J.S. 1998. The 21st-Century intranet. New Jersey: Prentice-Hall.
- GROUPNET PRESENTATION. 2000. *The Insurance Company*.
- GUPTA, U & HEBERT, F. J. 1998. Is your company ready for an intranet? *S.A.M Advanced Management Journal*, 63(4): 11- 19.
- KIRSNER, S. 1999. Intranet marketing 101. *CIO Web Business Magazine*, December 1999.
- LOZIER, K.R. & WARNER, P.D. 1997. The internet and intranet in the workplace. *CPA Journal*, 67(2): 72-76.
- MURGOLO-POORE, M.E., PITT, L.F., EWING, M.T., AND BERTHON, P.R. 2001. The Intranet as an Internal Marketing Medium: Towards a Measure of Effectiveness Proceedings of Academy of Marketing 2001 Annual Conference, ed. Strong, C., Academy of Marketing: University of Cardiff, July
- SHEPHARD, C. 1998a. Assessing your communication options. [Web:] <http://www.fastrac-consulting.co.uk>
- SHEPHARD, C. 1998b. Assessing intranet cost-benefits. [Web:] <http://www.fastrac-consulting.co.uk>
- SHEPHARD, C. 1998c. Why training needs the intranet. [Web:] <http://www.fastrac-consulting.co.uk>
- STODDART, L. 2001. Managing intranets to encourage knowledge sharing: opportunities and constraints. *Online Information Review*, 25(1): 19-29.
- STUART, A. 1997. Under the hood at Ford. *Webmaster Magazine*, June 1997.
- YEN, D.C. & CHOU, D.C. 2001. Intranets for organizational innovation. *Information Management & Computer Security*, 9 (2): 80-87.



## APPENDIX A

Principal Components / Factor Analysis  
Principal Components

## Eigenvectors:

Eigenvalue:	10.3945	1.2895	1.1488	1.0958	1.0043	0.5987	0.5406	0.4842	0.4006	0.3260	0.3043	0.2849	0.2589	0.2378	0.2004	0.1564	0.1403	0.1180	0.1064
Percent:	54.2343	6.7871	6.0453	5.7061	5.2860	3.1511	2.8454	2.5485	2.1085	1.7156	1.6015	1.4993	1.3625	1.2517	1.0546	0.8229	0.7386	0.6212	0.5599
CumPercent:	54.2343	61.0214	67.0667	72.8327	78.1187	81.2699	84.1153	86.6638	88.7723	90.4879	92.0894	93.5887	94.9512	96.2028	97.2574	98.0804	98.8180	99.4401	100.0000
Eigenvectors:																			
Q1	0.19656	0.32156	-0.15072	-0.29428	-0.09688	0.07328	0.19852	-0.08889	-0.23631	0.07382	-0.11011	-0.18959	0.13721	0.03458	0.11359	0.54985	0.02440	-0.15736	0.21335
Q2	0.18084	0.48741	0.23065	0.13755	0.13904	0.02970	-0.11679	0.50931	0.49210	-0.07386	-0.07427	0.06127	0.01078	0.21184	0.13421	-0.08163	0.16064	0.05744	0.09164
Q3	0.23769	0.37104	-0.17381	-0.01152	0.25250	-0.12869	-0.11108	-0.20429	-0.03486	-0.14872	0.15292	0.08527	0.96679	-0.02900	-0.24780	-0.11241	-0.43716	0.34879	-0.35817
Q4	0.20374	-0.00378	0.33910	0.02975	0.51305	-0.18307	0.10138	-0.21225	-0.33973	-0.03316	0.19421	0.34989	0.11477	0.05493	0.24400	-0.07479	0.29325	-0.20132	0.07767
Q5	0.26836	0.13383	-0.11226	-0.00431	0.13444	0.20125	0.14066	0.20118	-0.05013	0.23779	-0.05096	0.03816	-0.35154	-0.37112	-0.19434	-0.18929	-0.04794	-0.50859	-0.34511
Q6	0.23917	0.01017	-0.05868	-0.11537	0.16649	-0.01451	-0.66167	-0.07839	0.00729	0.05733	0.55232	-0.02372	-0.27873	0.01780	-0.04768	0.16195	0.18357	-0.05722	0.03866
Q7	0.24255	-0.14171	0.14229	-0.20454	-0.24476	-0.30192	-0.16409	0.13675	-0.16854	-0.41738	-0.31461	0.09471	-0.07668	0.35688	-0.03450	-0.03022	-0.29581	-0.34714	-0.09122
Q8	0.21827	-0.22038	-0.01431	-0.46219	-0.00240	-0.03749	0.38426	0.16944	0.20143	-0.05807	0.13991	0.39757	-0.13318	-0.01945	-0.33288	0.17948	0.11091	0.29034	0.11591
Q9	0.19784	-0.41720	0.06857	-0.07653	0.30298	0.48047	-0.14368	0.26304	-0.00790	0.12486	0.05539	-0.18439	0.42033	0.19252	-0.04019	0.22129	-0.16152	-0.07761	-0.08342
Q10	0.21168	-0.01014	-0.18414	0.55276	-0.16088	0.07870	-0.04876	-0.11441	-0.11587	0.10559	-0.25946	0.27633	0.10488	0.25426	-0.44262	0.15620	0.32705	0.00665	-0.00633
Q12	0.22969	-0.18634	-0.04817	0.45140	-0.10635	-0.23078	0.18578	0.04943	0.22707	0.01602	0.18671	0.15288	-0.04814	-0.18878	0.37727	0.43802	-0.34272	-0.04764	-0.06877
Q13	0.26487	-0.11106	-0.17700	0.11043	0.20701	-0.30585	-0.06285	0.07341	0.02228	0.03695	-0.05657	-0.27200	0.07683	-0.22837	-0.23898	-0.20452	-0.14547	-0.07288	0.08116
Q14	0.24157	-0.11968	-0.11715	-0.23239	-0.13938	-0.42357	0.00819	-0.06411	0.19821	0.56567	-0.13385	-0.11545	0.25424	0.13358	0.18657	-0.18183	0.20725	0.03137	-0.26689
Q15	0.23224	-0.01113	-0.34113	-0.03128	-0.15865	0.39761	0.19497	-0.33966	0.25380	-0.15556	0.15912	0.12138	0.03496	0.26808	0.25593	-0.38831	-0.07175	-0.17254	0.19364
Q16	0.25239	-0.14547	-0.15137	0.08271	0.26656	-0.04926	0.15735	-0.10542	0.04438	-0.39180	-0.09155	-0.53854	-0.31211	0.09474	0.08979	0.09284	0.33128	0.18388	-0.24673
Q17	0.20854	-0.01715	0.48896	0.06215	0.19520	-0.14956	-0.14956	0.26382	0.18861	-0.38428	-0.00498	-0.24654	-0.09732	-0.03435	0.09877	-0.18982	0.12252	0.09440	
Q18	0.23547	-0.01438	0.28307	-0.00251	-0.39598	0.08764	0.01838	-0.05000	0.05388	-0.34075	0.03854	-0.09549	0.44937	-0.52296	-0.04838	-0.09114	0.26903	-0.03774	-0.08905
Q19	0.21451	0.07133	0.39815	0.17556	-0.29335	0.05318	0.32334	0.11681	-0.32935	0.22041	0.31642	-0.28695	-0.14380	0.25851	-0.09259	-0.20682	-0.16113	0.21582	0.03964