

IT-Value Mapping: Justifying Investment in IT (A Study Conducted In NCR)

Dr. Deepika S. Joshi

Associate Professor (FCBM)
Amrapali Group of Institutions
Lamachaur, Haldwani, Uttarakhand, India
dsagta@gmail.com, 09899882346

Mr. Sanjive Saxena

Associate Professor
Jagan Institute of Management Studies
New Delhi, India
sanjive.saxena@gmail.com, 09868515570

Abstract: “IT is still considered more of expenditure rather than an investment”

Nowadays, we can't expect CFOs to easily get agreed on allocating a certain proportion of their finances to IT investments. In present timings, IT Managers need to give strong justifications for IT spending than ever. Top management requires being ensured systematically, and their decisive buy-in requirements to be taken before scheduled IT investment. This is where Return on Investment (ROI) analysis comes into existence and plays an important function. Another area where ROI analysis can be used is to analyze an investment after it has been made so as to measure whether IT rupees are being spent intelligently or not.

Conventionally, ROI is calculated by dividing net profits (after taxes) by total assets. Though, the above principle is not appropriate for IT investments. When IT executives talk about ROI, they are really looking for answers to the following queries:

- What will be the return against my investment on IT?
- After how much time I will be able to start harvesting the benefits of the investment I am making?
- Are the profits tangible and quantifiable? [5]

In other words, ROI analysis estimates the investment by balancing the degree and timing of predictable gain to the investment costs. As IT moved to this position of importance, so did IT budgets to a size that attracts attention. In most organizations, IT budgets are the single biggest expenditure. It is but normal to ask: what am I getting for this huge spending?

Keywords: BITA (Business IT Alignment), ROI, Tangible, Quantifiable, IT Spending.

I. INTRODUCTION

IT has advanced over the last few decades and has turned into a significant part of organizational assets. It is mingled into every activity of an organization through an action of an organization due to its quickness and elasticity. It is now feasible to use IT both as tactical gizmo and as a strategic collaborator of an organization.

No organization can attain triumph without an appropriate tactic. Tactic allows placement and use of all resources of the organization through a set of activities that adds in building the strategic lead for the organization.

IT has globally revolutionized the business and social surroundings of organizations. The effect of information

revolution can now be sensed in day-to-day life. Some outcomes of IT revolution are listed below:-

- The number of Computer users has increased approximately from 540 million in 2000 to three billion in 2010.
- The number of internet users doubled to 320 million in 2005 as compared to the year 2000. It got increased fivefold in 2011.
- E-business and e-applications have increased dramatically. E-Banking and e-transactions have become commonplace.
- There is a significant growth in wireless communication. It has increased reliability and has made any-time, any-place communication possible.[2]

II. OVERVIEW OF IT & BUSINESS ALIGNMENT

Nicholas Carr says, "IT doesn't matter," but consider this: Anybody with money can buy a guitar like Segovia's, but few can play it as he does. The same is true with technology: Anyone can buy it, but it's what you do with it that counts.

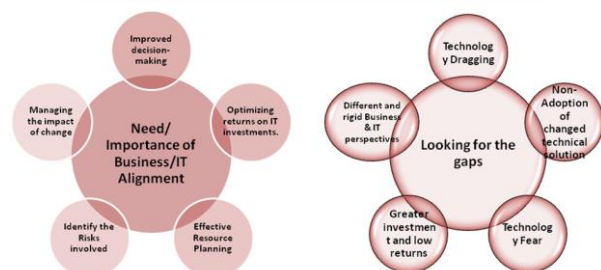
Doing the right things with IT means aligning IT capabilities closely with actual business goals. Well-aligned organizations make better profit margins than their industry rivals do.(CIO Panel Discussion TS 2003)

III. OBJECTIVES & METHODOLOGY

After going through various studies, it was found that there are only few Indian studies in the field of BITA. Similarly, there are studies on ROI of IT Assets but there are comparatively fewer studies on ROI on BITA & researches could not find any with reference to Delhi/NCR.

Thus, the present study has been conducted with the following objectives:

The two major areas of concern in study are



Keeping in view the above objectives, the present research was conducted using exploratory research design. For collection of primary data, a questionnaire containing 10 statements based on the objectives was constructed on a 5 point Likert scale. The questions were designed keeping in view the characteristics of a business using IT Implementation.

Secondary data was collected through journals & internet. The universe of the study is India & the researchers have drawn 200 respondents trying to cover Delhi/NCR Industries only. The analysis was done on SPSS by applying Chi Square and Regression Analysis.

IV. ALIGNING IT WITH BUSINESS OBJECTIVES, WHY?

Though there are countless valid reasons behind BITA but this study got conducted to emphasis mainly on “Optimizing Returns on IT Investment”.

Conventionally, when IT experts and Top-Management discuss the ROI of an IT speculation, they were mostly thinking of “financial” benefits. Today, industry leaders and technologists also consider the “non financial” benefits of IT investments. [8]

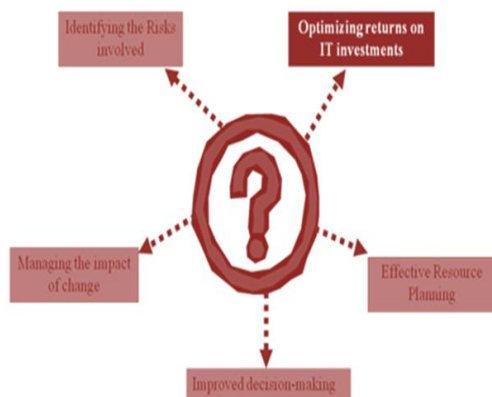


Figure 1: Reasons for Business/IT Alignment (BITA)

IT Value mapping is based upon the following tenets:

Any organization can be modeled using a single framework that links all its capabilities – from business to IT Business and IT Capability can be quantified and visually depicted.

Business model is the focal point of any organization – everything it does must be driven by it and should be to enable it.

IT is a “service business” internal to the organization it serves

IT Capability has two interrelated but distinct dimensions – alignment and value

There are three imperatives for value creation, namely, strategic alignment, process coverage and asset productivity.

IT Value must be measured using metrics specifically tailored for the purpose, with little emphasis placed on dollar denominated ones

- IT Capability is built iteratively using multiple “learn and do” cycles
- All IT decisions are subordinate to IT Alignment and value
- The need to make better IT decisions must drive any analysis of IT’s capability

IT Value mapping results in substantial benefits to the business:

Better ROI

- Reduce Costs: Our analysis and experience lead us to believe that over 10% of IT investments are not in alignment with business imperatives. By eliminating these one can shave 10% off IT budgets
- Improve returns: The remaining 90% are not in perfect alignment or not delivering the desired value. Hence, fine tuning IT decisions, can result in greater returns on these investments[6]

Better IT decisions:

- Assessing their impact, across all interrelated dimensions, prior to any investment being made
- Measuring results against plan throughout initiative lifecycle thereby making timely mid course corrections

ROI of BITA

As IT moved to this position of importance, so did IT budgets to a size that attracts attention. In most organizations, IT budgets are the single biggest expenditure. It is but normal to ask: what am I getting for this huge spending?

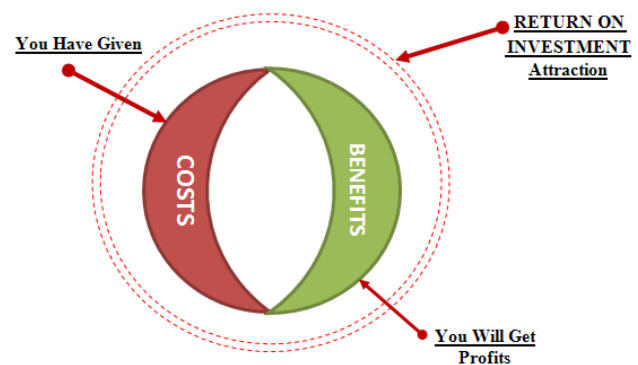


Figure 2: IT/Business Alignment Costs & Benefit Paradigm

IT ROI CATEGORIES

Financial Benefits include impacts on the organization's budget and finances, e.g., cost reductions or revenue increases.

Non Financial Benefits include impacts on operations or mission performance and results, e.g., improved customer satisfaction, better information, shorter lead-time, quality & green environment [7].

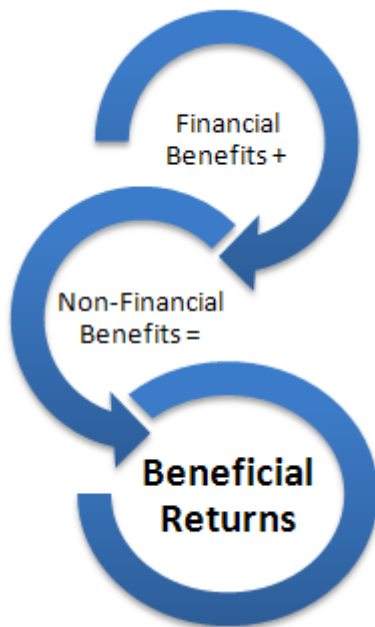


Figure 3: IT Returns

Conventionally, ROI used to measure only financial paybacks (for example, increase in revenues or decrease in costs) of IT investments. However, ROI methodologies have evolved with time and now include the non-financial paybacks as well. These non-financial benefits (also known as 'intangibles') include increase in customer satisfaction, increase in employee productivity, and faster and more accurate availability of information. These new metrics go beyond the traditional measures that focus on cost analysis and savings [6].

In fact, many IT professionals believe that these 'intangibles' are the most important ones although they are very difficult to quantify. The problem in the case of non-financial measures is dual in nature: what to measure and how to measure. And the problem is compounded by the fact that IT is inextricably linked to all aspects of a business. One of the benefits of considering intangibles is that it helps to connect IT with what's really important to top management—the achievement of strategic business goals.

One of the pre-requisites of any ROI analysis is to understand the context of the IT investment. This will involve listing the costs and benefits in each of the following areas: technology infrastructure, business processes and organization [1].

Tangible benefits

ROI ought to be considering tangible (or hard) paybacks. Few examples of tangible benefits due to IT/Business alignment are:-

- Reduced Travelling because of (online meetings replacing face-to-face meetings) & (remote support replacing onsite support)
- Time Saving (Improved output and decrease in time to complete jobs, compact duration / figure of consumer service calls, reduced numbers of errors, improved system reliability and having less maintenance or fewer problems to resolve, improved software vendor support, quicker responses, faster fixes) [3].

Intangible benefits

Intangible (or non-financial) paybacks are not being included within ROI calculations. Though they are as important as tangible benefits in case of IT/Business alignment ROI calculations, they are very difficult to financially quantify. Examples of intangible IT/Business alignment benefits include:

- Increased customer satisfaction
- Improved customer service and support
- Increased usability leading to increased sales
- Increased user satisfaction
- Improved / automated business processes that the new system supports and enables
- Faster and more accurate information
- Improved analytical solutions
- Better forecasting
- Better controls to improve data input accuracy
- Improved software vendor support and service, improved communications, better knowledge of software, system set up [5]

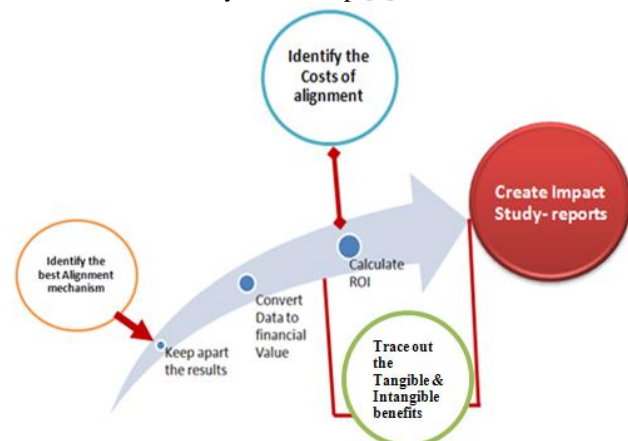


Figure 4: Cost to Value Conversion of IT Investments

Business Value of IT in terms of Benefits

Business Value is the standard measure of value used in business valuation. IT organizations struggle with business-IT alignment and business service management.

Challenges are that IT organizations often cannot accurately define what they do, and IT may not understand the priority of IT projects to the business. IT managers are today required to demonstrate the value IT is providing to the organization. [4]

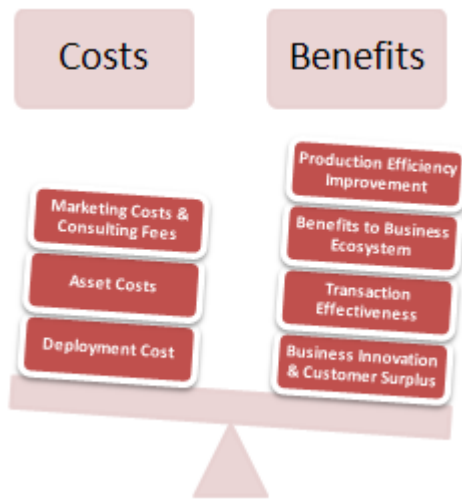


Figure 5: Scaling Business Value of IT

V. DATA ANALYSIS & FINDINGS

Comparison of the profitability of various projects / proposals gives an indication about the best project to be selected. ROI is responsible for convincing the corporate executives and shareholders / stakeholders, that a particular investment is profitable for business.

A project is more apt to continue with if its ROI is elevated – the higher means the healthier. For example, a 200% ROI over 4 years indicates a return of double the project investment, over a 4 year period.

Fiscally, it makes logic to select plans with the peak ROI first, then with lower ROI's. Although there are exceptions, if a project predicts a downbeat ROI, it is dubious if it should be endorsed to proceed.

Let's see the glimpse of our research survey

Table 1 Success of IT Implementation

declared as unsuccessful because of extreme Time & Cost spending at the cost of no returns.

A Separate question set have been prepared for those which were successful & one for those which were unsuccessful or in stretching stage to do the root cause analysis behind the success and failure of these IT Project Implementation.

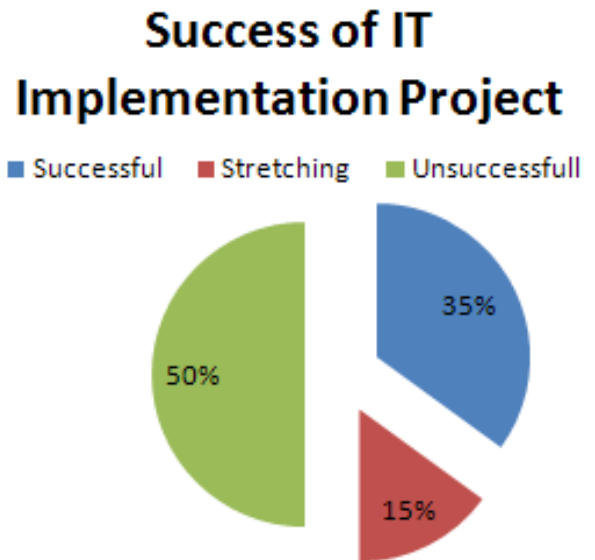


Figure 6: Measuring Success of IT Implementation

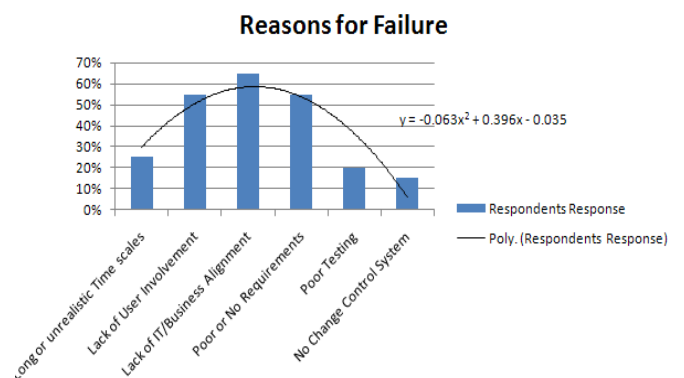


Figure 7: Reasons for IT Implementation Failure

Q. Was IT Implementation Project ?	
Successful	30%
Unsuccessful	30%
Stretching	40%

R
esear
cher
then
tried
to
find
out

About 300 Companies surveyed for the successful completion of IT Project Implementation in their organization. Where, to our surprise we came to know that about 40% companies have reported that their IT projects are still stretching and now they are in a position to be

the reasons for the stretching and/or failure of IT Implementation & 70% of above sample (Unsuccessful & Stretching) companies participated and again the results were astonishing. The 3 major factors which contributed most as the hurdles in success path of an IT Implementation were Lack of User Involvement, Lack of

IT/Business Alignment & Implementation of solution which is not exactly required

IT Implementaion Success Factors

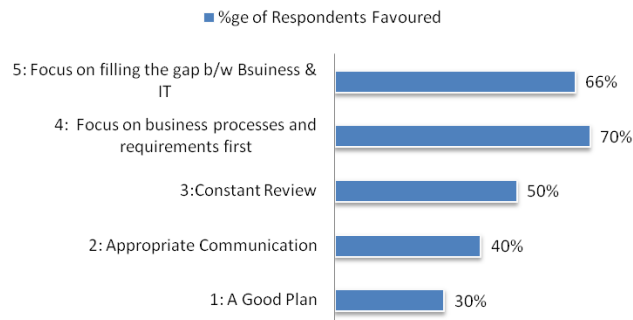


Figure 8: Success Factors for IT Implementation

If we closely analyze success factors and correlate these success factors with failure factors, it seems to be very clear that few factors contribute largely in both success and failure of IT Implementation. In the table 8.6 factor 4 & 5, when summed are contributing more than other factors affecting the success of such Implementation, Which indicates the Supremacy of business goals and their dependency on IT (i.e. BUSINESS/IT ALIGNMENT)

HYPOTHESIS

H₀: Aligning IT with business objectives doesn't improve the profitability of an organization.

H₁: Aligning IT with business objectives improves the profitability of an organization

Tabulated statistics: What is the current annual turnover of your company, how would you rate IT/Business Alignment of your company

Rows: What is the current annual turn Columns: How would you rate IT/Business

	Excellent	Fair	Good	Poor	All
>300 Million INR	11	0	0	0	11
0-50 Million INR	11	14	13	11	49
101-300 Million INR	0	22	33	0	55
51-100 Million INR	10	49	130	1	190
All	32	85	176	12	305

Cell Contents: Count

Pearson Chi-Square = 176.998, DF = 9

Likelihood Ratio Chi-Square = 122.484, DF = 9

Tabulated statistics: What is the current annual turnover of your company, How would you rate IT/Business alignment in your company

Rows: What is the current annual turn Columns: How would you rate IT/Business

	Excellent	Fair	Good	Poor	All
>300 Million INR	1.15	3.07	6.35	0.43	11.00
0-50 Million INR	5.14	13.66	28.28	1.93	49.00
101-300 Million INR	5.77	15.33	31.74	2.16	55.00
51-100 Million INR	19.93	52.95	109.64	7.48	190.00
All	32.00	85.00	176.00	12.00	305.00

Cell Contents: Expected count



Figure 9: Chi square Curve

At the 5% level of Significance with 9 degree of freedom, the critical value of the chi-square statistics is 16.919. The Calculated chi-square statistics had a value of 176.989. Because this is greater than the critical value, the null hypothesis of no association is rejected indicating that the association is statistically significant at 5 level of significance.

VI. Conclusion & Recommendation

Alignment is a prerequisite to value creation. However, it is a necessary but not sufficient condition for optimal value creation. The other factor in the equation is asset utilization. Together, they determine value creation.

As Per the Survey & Literature review:

- 15% of companies fabricate an integrated policy that aligns business objectives with IT.
- 75% of IT firms have an IT plan but fail to “match” their plans with the business
- 10% of IT organizations do not have an IT strategic plan at all.

- Businesses that have IT aligned with Business there IT strategy are 87% more likely to produce More Profits than peers in their industry
- Companies that do not have an IT strategy at all are 82% more likely to produce Less Profits than peers in their industry

Recommendations

- Directly correlated with business profit and success
- Integrates business objectives with IT capabilities
- Shows a clear path from the current state to the future state
- Patience is also important. Alignment is a dynamic, complex process that takes time to develop and even more effort to maintain.
- Companies that have achieved alignment may contribute to the strengthening of strategic competitive advantage that will provide them with improved visibility, efficiency and profitability in order to compete in a changing market today.

REFERENCES

- [1]http://www.axia-consulting.co.uk/html/basic_roi_calculation.html
[2]<http://www.trainup.com/TrainingDetails/232007/How-to-Define-and-Value-IT-Services>
[3]<http://www.globalknowledge.com.sg/itil/7.pdf>
[4] http://www.globalknowledge.ae/courses/itil_and_service_management/service_management/2771.html
[5] <http://www.networkmagazineindia.com/200612/analyst%27scomer01.shtml>
[6] <http://www.startsmarts.com/downloads/ITValue Mapping.pdf>
[7] http://www.rms.net/lc_faq_other_roi.htm
[8] <https://dandriani.wordpress.com>