



Exploring reasons for failure of High ROI based ideas

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Abstract

Every successful organization associates ROI with their new product ideas. However, in spite of ROI calculations, many times these ideas fail in the market. That can be explained by the fact that success of Technology Management in a profit based organization is based on several factors other than just ROI and technology. However, the Technology Management groups of most organizations do not measure these factors. Ensuring success of all the new product ideas makes the job of most of Technology Management Group a challenge which is difficult to address.

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What's New ?

Dear Members,

On behalf of the IEEE Technology Management Council Bangalore Chapter, it's my pleasure to share E-Zone June 2009 the second issue of Quarterly Newsletter of our Chapter.

The focus of most IEEE Societies and Councils Newsletters mainly technical stuff but TMC newsletter covers mainly management aspects which are so necessary to the success of technical operations. This newsletter seeks to connect up all the members of the IEEE community who are associated with the Bangalore Chapter. It aims to provide a forum to share ideas, developments in this space, new events, thought leadership articles and much more.

The newsletter would also foster us to be better connected and extend the benefits of technology & management expertise for the ecosystem that we live in. This includes Business, Industry, Academia, Government and Society.

In this News letter, we have also included, abstract of Tech Talks being organized by TMC Bangalore Chapter in the past and present quarter

I take this opportunity to extend a warm invitation to contribute, participate and volunteer in making a difference that we can all take pride in.

Thanks & Regards,

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This paper explores the factors that a Technology Management Group should consider when taking decisions on new product ideas that have to be released into the market. The principles proposed in this paper would also help run a Technology Management Group with better success.

INTRODUCTION

Almost all organizations that have a Technology Management Group is entrusted with the job of creating and managing new product ideas. These groups measure the ROI to predict their success. However, it is well known that new product ideas with high ROI do not necessarily ensure their success in the market. One good example of that is Orkut from Google which has underperformed in US and Europe. Another example, also from Google, is GoogleSheets. This is a motivation enough for us to closely examine the reason for failures of this kind.

This paper explains the situation for the need of the principle, introduces and explains the A-KIT principle (explained subsequently) in detail and provide examples to show correlation of practical examples with the principle. The author feels that all of this can help manage a Technology Group better and ensure that some factors other than technology and ROI which can affect the success of new product ideas.

THE SITUATION

Consider a scenario where the Technology Management Group of an organization is entrusted with the responsibility of creating prototypes for new product ideas. Generally, people in the Technology Management Group are expected to be master of the cutting edge technologies with strong urge to innovate. Another thing they do well is computation of the ROI of the new product ideas which is a commonly believed secret sauce for success. However, they are generally not equipped with expertise in the domain knowledge. They also do not measure the reduction in potential user group due to the problem of affordability of the technology. This can exacerbate an already existing problem in the industry of finding people with both good handle on technology and domain knowledge. Therefore, a group planning to create new product ideas in an organization would see a deterrent if either people with both domain and technology knowledge does not exist within the group or if the Technology Management Group does not have people complementing each other on these two knowledge areas.

Even if this problem is addressed by the formation of the right group, it is difficult to judge whether a new product idea really has the potential or not. At least in the cases mentioned above, the measurement of high ROI was shown to be not effective. This precisely is the problem that is addressed by the A-KIT principle elaborated below.

THE PROPOSED PRINCIPLE

Success of a new business idea in any domain is determined by the extent of Affordability (described later in detail), Domain Knowledge required for implementing the idea, Innovation content and Technology used. Success factor of the business idea can be measured using the following :

$$\text{Affordability(A)} * [\text{Knowledge(K)} + \text{Innovation(I)} + \text{Technology(T)}]$$

Where each of Affordability, Knowledge, Innovation and Technology are measured in a scale of 0 to 1.

This formulae is arrived at from experience of the author.

Reduction in Potential Users due to Affordability: This is the most important of all the factors mentioned. This factor measures the reduced percentage of potential users of the product idea due to the cost of the idea. This is crucial because this can drastically affect the ROI computation for the product idea. This is defined as the percentage of affected users (or organizations) who can afford the business idea. Affected entities are the total number of entities who can avail the benefit of the business idea without considering the cost. In other words, it is calculated as follows :

Number of entities who can afford the business idea with proposed cost

Total number of entities who can potentially benefit from the business idea

All the other three factors, viz. knowledge, innovation and technology as mentioned above are measure of strength of authoring organization and barrier to entry for the competing organizations. They are subjective measures and their measurement criteria have to be derived for the context of the organization involved.

Domain Knowledge : This factor considers the amount of domain knowledge involved in implementing the business idea. Measurement of this criterion should be dependent on the context of the domain.

The guideline for scoring on domain knowledge is as follows:

Scores	0.0	0.1	0.3	0.6	1.0
Guiding points	Initial	Basic	Advanced	Expert	

It should be noted that the guiding points are for guiding purposes only. Scoring can happen even between two guiding

IEEE TECHNOLOGY MANAGEMENT COUNCIL (TMC)

The Technology Management Council (TMC) of IEEE has several goals:

- Provide information for advancing the careers of technology and innovation managers,
- Reach out to technology professionals who consider transitioning to management, and
- Provide technology professionals with an understanding of management issues.

The field of interest of the Council encompasses the management sciences and practices applicable to individuals engaged in or overseeing the management of engineering, technology, innovation, and strategy in a global environment.

The TMC provides access to management theory and practice for managers and technology professionals to advance their careers. Our publications, the *Engineering Management Review* and the *Transactions on Engineering Management* provide sources of information to bring you up to date on management issues. Our conferences, website, and virtual community offer timely information related to achieving a successful career as a manager or technology professional.

points like 0.2 for example. The guiding values do not have uniform value increase since basic values contribute much lesser value than the advanced values.

For ease of use of guiding points, meaning of each guiding point is elaborated below. However, it should be noted that these are more fuzzy meanings and can be concretely defined only for a given context and organization:

Initial : Only a faint touch of the domain knowledge needed in the implementation of the business idea. One example of this could be the formulation of new pricing model for telecom by a telecom provider. Here the telecom domain knowledge used is of minimum level.

Basic : Uses the domain fundamentals for implementing the business idea. An improvisation of usage of an existing technique could be an example for this.

Advanced : Uses advanced knowledge for implementing the business idea. For example, the retail chains going for retail model like Subhiksha. The retail domain knowledge is of advanced nature.

Expert : Uses the front end technologies for implementing the idea. In some cases, it could also have discovered or invented new concepts in the domain for the implementation of the business idea. An example of this could be search engine algorithm for the Google search paradigm.

Innovation : This factor measures the innovative measure of the business idea. In other words, it measures the novelty of the idea in the context of domain of the business idea. Innovative measure does not necessarily mean the measure of technology innovation. An innovation could also be completely unrelated to technology.

The guideline for scoring on innovation is as follows:

Scores	0.0	0.1	0.3	0.6	1.0
Guiding points	Initial	Basic	Incremental	Breakthrough	

Scoring can happen even in between the guiding points. For example, a score of 0.5 is perfectly normal. The lower guiding values contribute much lesser value than the advanced values and hence the non uniformity of the values.

Like mentioned for domain knowledge, the innovation guiding points should also be used for guiding purposes only.

Meaning of each guiding point is elaborated below. However, it should be noted that concrete definitions are possible only for a given context and organization:

Initial : As the name suggests, this is a case of very limited innovation. One common example of this is the service

organizations of IT industry. Here the innovation in the field of IT is very limited.

Basic : When the innovation is there but of limited nature it would be categorized in this section. A classic example of this could be a user interface change in existing software to make it easier to use or to make it more effective.

Incremental : For innovation that is substantial but does not open up a complete new opportunities, it would fall in this category. One example of this could be the use of undo button on various software systems.

Breakthrough : This type of innovation could bring in complete change in terms of opportunities available. One good example of this could be a cancer drug if invented for example. Another example could be Google search based business model.

Technology : This factor measures the appropriateness of the technology used for implementing the business idea. More often than not, it would be easure of cutting edge technology. It should however be noted that this is disjointed from the Innovative measure of the business idea.

The guideline for scoring on technology is as follows:

Scores	0.0	0.1	0.3	0.6	1.0
Guiding points	Initial	Basic	Advanced	Cutting Edge	

Although the score guidelines are mentioned, a score of 0.4 would be normal since it is fine to have a score in between two guiding points. The non uniformity of guiding values is due to non uniform contribution of lesser value than the advanced values.

Like mentioned for domain knowledge, the technology guiding points should also be used for guiding purposes only.

Purport of each guiding point is described below. However, it should be noted that concrete definitions are possible only for a given context and organization:

Initial : In this case, the technology needed for the business idea needs very little technological help to make it fly. One example of this is retail chain business case like that of Subhiksha.

Basic : A business idea with limited use of technology with respect to the contemporary ideas would fall under this category. One example of this is a Visual Basic technology based software solution for automating operation of hotel industry.

Advanced : A business idea with considerable use of technology would be categorized here. One example of this could be fly-by-wire technology for the aircraft operation.

Cutting Edge : When the technological need becomes so crucial for the success of the business idea that it needs to use fore front technologies. One example of that is recently invented cyber knife for treating cancer patients.

Comparison-with-Traditional

Methodologies

Most traditional methods of evaluating business ideas stop at detailed evaluation of Return Of Investment (ROI). While this paper does not undermine the importance of ROI measurement, it shows that it is an inadequate measure to make the idea successful in practice. One such example is included in the reference which is used by State of Missouri in United States of America. The disadvantages of evaluating only ROI for evaluating business ideas is already highlighted in this paper. Therefore, spending more time on this aspect is unlikely to yield more results.

Examples

Let us consider a few examples to see how can the principle be applied to the examples discussed earlier and with some others.

Take the case of MingleNow. MingleNow was a virtual nightclub meant for the shy people feel a little more at ease to socialize online. BlueLithium founded it in 2005, and later was bought over by Yahoo!, the community enabled users to connect with others who frequented the same venues. Technology value for this is 0.0 since there is little or no technology associated to it. The point for knowledge would be “Initial” since social networking does not need too much of domain knowledge. Further, the innovation content is also “Initial” since it was not the pioneer in the area. However, Affordability is high since it is free. Therefore, overall score of MingleNow is

$$1.0 * [0.0 + 0.1 + 0.1] = 0.2 \text{ against the maximum score of } 3.$$

In case of Orkut, the value for technology is 0.0 since there is not much technology needed for the solution. The value for knowledge is also “Initial” since not much of the domain knowledge of social networking is used. This is more so because they lack the basic feature of deleting a friend in Orkut. When Orkut was launched, social networking was already introduced by others and hence the innovation value is also “Initial”. Affordability, however is high since it is a free initiative. Therefore, overall score of Orkut is

$$* [0.0 + 0.1 + 0.1] = 0.2 \text{ against the maximum score of } 3.$$

Letter from the Chair

Dear Friends,

Economic recession has been a great ‘boon’ to the global businesses! It has allowed us to do more with less, it has exposed chinks in our armors, and it has ensured that human greed doesn’t get the better of human needs. Of course, this painful learning comes at a great price, but probably, the chronic the malady, the bitter needs to be the pill.

Very soon we will be step into second half of the year, and there are hopes, both at home and beyond that an end to economic slowdown is in sight – most economists think that economy could start climbing up by year-end. I think it might take another three to four quarters to actually get to its new peak (“the new normal”) but at least we should bottom out this year and start upwards.

The most interesting part of any post-slowdown era will be the so-called ‘new normal’ – we can’t really expect the business, economy, consumer demand, production supply, or generally anything else to really climb back to pre-slowdown levels. The system will not allow excess flab to be accumulated, at least not in the near future. So, while economy bounces back, the real challenges for companies will continue to be issues like innovation on a shoestring budget, achieving not just a cost leadership but even a value leadership (for example, Tata Nano being a case in point), achieving business efficiencies at low or variable production levels, tighter integration of innovation methods to flexible consumer demands, mass customization, and a faster time to market. Most experts believe continuing investments in the innovation strategy during these times will be key to play the ‘new normal’ game successfully.

These are great times! Are you ready for the future ?

Thanks and warm regards,

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Chair IEEE TMC Bangalore Chapter, 2009-10

Vice Chair PMI New Product Development SIG, 09-10

Let us now consider the case of Google Search. The technology value is “Cutting Edge” since they have a proprietary advanced algorithm for ranking pages and crawling pages. The domain knowledge is also at the “Expert” level since they are one of the best sources of knowledge in search engine domain. Further, this initiative would be rated “Breakthrough” for innovation as is discussed before. Finally, this would also have high affordability of 1.0 since it is a free initiative for the end users thereby making the total score as

* [1.0 + 1.0 + 1.0] = 3 against the maximum score of 3.

Finally, let us consider the case of Googlesheets. The technology value is “Initial”, Innovation is 0.0, knowledge is “Advanced” and affordability is 1.0. Therefore, the final score is

* [0.6 + 0.0 + 0.1] = 0.7 against the maximum score of 3.

Therefore, there seems to be good correlation between the score obtained and final performance in the market.

CONCLUSION

Measuring the probability of success of a business idea is not a trivial task. This paper proposes a methodology for predicting the success factor of a business idea. The proposed methodology has to be fine tuned for the specific context and organization to make it more accurate.

REFERENCES

- Evaluating Your Business Idea – University of Missouri, University Outreach and Extension Office or Small Business Development Center. This methodology is used in State of Missouri. Available at URL : <http://www.utahsbdc.org/DocumentMaster.aspx?doc=1107>

Cost Factors of Offshore Delivery Center - An Analysis

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Abstract

Offshore cost centers are viewed as "low cost" destination for software development. This research has analyzed the few company owned (captive) [1] offshore establishments, the associated cost factors – both direct wages cost and indirect non-wages costs. Some trends have been found. Trends are very different for software development and R&D establishments. The cost factors vary widely for startups and matured centers.

Introduction

In early nineties, companies in North America looked for low cost manpower in IT and opted for staff augmentation through low cost [2] onsite (US) contractors of Indian origin. Companies over time realized that the saving is more if they opt for India-based i.e. offshore contractors, rather than US-based contractors. Depending on the priority, criticality and complexity of the job, companies started off-shoring work to India. In that model they used to offshore low priority testing, bug fixing and mundane development jobs.

The next stage of maturity was full life cycle project implementation. This transition was not an easy one. There were various different implementation models for the same and first time the companies realized that a strongly coupled and quality process-based project life cycle was needed for a successful offshore full life cycle development.

Looking into the overall business dynamics [3],[4] cost – benefit analysis and control of the core IT processes and security, companies started experimenting on creating insourcing models i.e. an IT subsidiary at the low cost location. The success of this model will have a disruptive effect on the IT consulting market in India and such low cost locations. Some of the captive IT centers have gone to the next level of maturity. This is true mostly in the high tech and semiconductor industry. Texas Instrument India is one of the most successful captive IT centers, currently having a significant contribution in the digital signal processing initiative of Texas Instrument, Dallas. Similarly Motorola,

Intel, IBM, FreeScale, Adobe, SUN Microsystems, Microsoft IDC, National Semiconductor, Samsung and Sharp are also seeing the success of this model.

The current research analyses 300 companies in India on the cost factors of running low cost captive centers. We have selected a representative sample of 4 companies and analyzed the data to derive conclusion.

Sample Description

We have analyzed around 300 (three hundred) wholly owned captive centers. The representative sample for data analysis is 4 as we pickup 4 different types of services including professional services, research and development, support and custom software development.

Company 1: This wholly owned captive center is a product company with head quarter in Europe and present across a large number of countries. Starting in the year 2004, this company has a team of around 400 software engineers working providing professional services on their product across the globe.

Company 2: This Captive Center is a wholly owned subsidiary of a software product company based out of USA. The main activity here is research and development of software product. This organization started in the year 2003 as a wholly owned subsidiary. The staff strength is around 250 engineers.

Company 3: Company 3 is a captive center of an USA based software and hardware Product Company. They are providing technical and market support from this center. Started in 2004, the staff strength is around 20. The whole of Asia pacific region is serviced from this centre.

Company 4: This Company is into software development of Fund Management. Started as a wholly subsidiary of a wall street based company in 2005, they work on the research and development as well as full life cycle software projects. They have grown up to 130 in last one year.

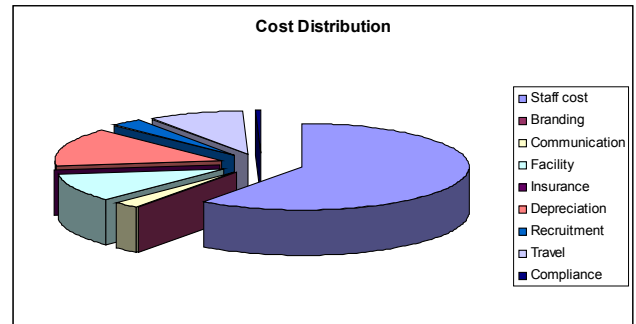
The choice of the representative sample was done to cover all the above category of companies. We have also not selected very matured organization such as Texas Instrument. We have mostly covered companies created in last five years.

Sample Data and Statistical Analysis

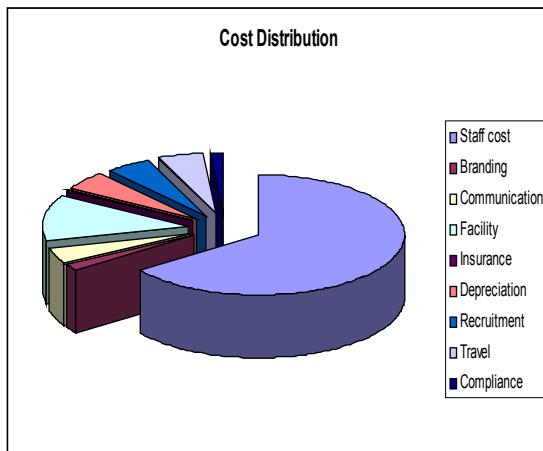
We have collected data from these organizations keeping in mind the confidentiality and hence we are not in a position to share the identity of the organization.

Data for Company 1

COST ELEMENT	% Cost
Staff cost	65.00
Branding	2.00
Communication	4.20
Facility	12.00
Insurance	0.30
Depreciation	5.00
Recruitment	5.00
Travel	5.00
Compliance	1.50
TOTAL	100.00



Percentage Distribution of the total cost in a pie chart:



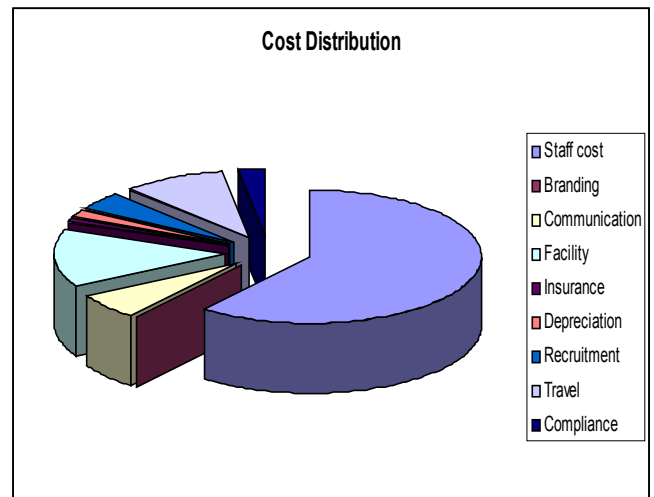
Data for Company 3

COST ELEMENT	% Cost
Staff cost	60.62
Branding	0
Communication	6.35
Facility	13.91
Insurance	0.75
Depreciation	1.81
Recruitment	4.36
Travel	9.62
Compliance	2.57
TOTAL	100.00

Percentage Distribution of the total cost in a pie chart:

Data for Company 2

COST ELEMENT	% Cost
Staff cost	59.95
Branding	0
Communication	2.47
Facility	10.37
Insurance	0
Depreciation	14.41
Recruitment	2.99
Travel	9.33
Compliance	0.48
TOTAL	100.00



Percentage Distribution of the total cost in a pie chart

Data for Company 4

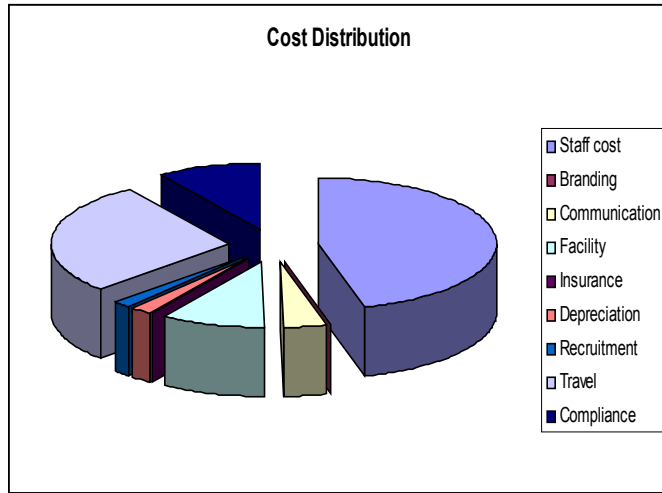
COST ELEMENT	% Cost
Staff cost	45.83
Branding	0
Communication	3.94
Facility	9.44
Insurance	0
Depreciation	1.83
Recruitment	1.64

Travel	27.82
Compliance	9.49
TOTAL	100.00

It is also observed that the Staff Cost and Facility Cost have the following correlation:

CORREL 0.66

Percentage Distribution of the total cost in a pie chart:



Trend Analysis

Analysis of the cost percentage for the representative companies clearly suggests the following:

- 50% of the cost of running a captive center is due to the staff cost or staff wages
- Facility cost is around 10% being the second most spend
- Travel is also a significant cost – range of value varies between 5% to 27%(first year of operation)
- It is also interesting to find that (analyzing the data of company 4) the cost of travel and statutory compliance is quite high during the first year of operation
- It is also strange to find that companies are not spending any significant amount of \$ on branding except for the organization which needs to hire professional services / IT services skilled employees. This company (Company 1) probably spends a significant \$ to attract resources from the established Indian players like Infosys, Wipro & TCS etc.
- Company 2 seems to be the most matured organization with low cost of communication and recruitment.
- The cost of travel is high for Company 2 as they need to collaborate a lot with other R&D centers in different locations.
- Company 1 is spending high on staff, probably for the same reason as they need to attract professional services talent.

Overall Data shows certain trends

Cost Element	Co. 1	Co. 2	Co. 3	Co. 4	Average	Low	High
Staff cost	6	59.	60.	45.83	57.	45.	65.0
Branding	5.00	95	62	0.00	85	83	0
Communication	2.00	0.00	0.00	0.00	0.	0.00	2.0
Facility	4.20	47	35	3.94	4.	2.	6.3
Insurance	1	10.	13.	9.44	11.	9.	13.9
Depreciation	2.00	37	91	0.00	43	44	1
Recruitment	0.30	0.00	75	0.00	0.	0.00	0.7
Travel	5.00	41	81	1.83	5.	1.	14.4
Compliance	1.50	48	57	1.64	3.	1.	5.0
	5.00	99	36	1.64	50	64	0
		9.	9.	27.82	12.	5.	27.8
	5.00	33	62	9.49	94	00	2
		0.	2.	9.49	3.	0.	9.49
	1.50	48	57	1.64	51	48	

Conclusion

Captive software development (professional services and research & development) organizations spend a large share of the overall cost on the staff cost. Travel is also a significant cost factor. Communication becomes an essential tool for a multi-location based research and project delivery.

We have observed the cost factor contributing maximum is the Staff Cost

When the organization becomes matured after around three years of existence the cost on recruitment and facility (with increasing occupancy and utilization) significantly comes down .

We examined our data set with respect to the statistical factors such as:

The typical absolute cost of a resource inclusive of all direct and indirect cost is around \$18/hour which is around 3X factor lower than the similar cost in USA or Europe. Out of 18 hour, the cost of wages is around \$8/hour, rest \$10/hour is essentially spent creating asset for the organization.

SDEV	8.32
SKEW	-1.55
KURT	2.89

So the above result interprets that the dataset is negatively skewed and sufficiently peaked.

In fact this \$8/hour is essentially an investment towards creating a reusable knowledgebase owned by the parent company.

References

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2. Cost Factors (http://www.international-outsourcing.de/CSF-Tool/docs/CISTM2005_CompletedResearchPaper_ITOffshoring-ACostOrientedAnalysis_Amberg_etal.pdf)
3. Driving Factors of offshore outsourcing (<http://www.quality-web-solutions.com/offshore-outsourcing-driving-factor.php>)
4. Key Factors Driving Offshoring of R&D (<http://www.kauffman.org/items.cfm?itemID=678>)

We are defined by the opportunities even those we miss

According to Goldman Sach ' report 2003, the largest growth will come from emerging economies in Brazil, Russia, India and China so called BRIC countries and that by 2040 India will be amongst the three largest economies of the world others two being USA and China

INNOVATIONS IN E-BUSINESS STRATEGIES

Professor Dr Ms. Sangita Gupta &

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E-business strategy to be considered for bricks-and-mortar company to becoming a Business-to-Consumer (B2C) or Business-to-Business (B2B) company, through e-enablement.

To start with, bricks-and-mortar companies are traditional companies that make use of non web channels in order to sell their products or services. The use of e-business strategy will facilitate bricks and mortar companies to be competitive in market by allowing them to serve large customer base and also target specific customer groups more efficiently. On using e-enabling technologies there are various other advantages such as effective marketing methods can be developed by making use of smooth information flow between retailer and customer as well as this information can be stored, analysed and accessed both by marketers and consumers.

In order to transform bricks-and-mortar companies into Business-2-Business (B2B) or Business-2-Consumer (B2C), it is required to follow e-business strategy. E-business strategy will allow deploying e-enabling technology into firms successfully. But there is always a question to be answered in this regard, i.e. whether or not e-business strategy is required to implement e-enabling technology. It usually depends on individual company, i.e. a company like Amazon makes use of e-business strategy to deploy e-enabling technology, because their main strategy is to sell their products online with a need for a physical store. Whereas some company like Application Service Provider (ASP) it is different. However in either case, if proper strategy is not followed it becomes difficult to implement e-enabling technologies into firm.

Some of e-business strategy to be followed in order to transform bricks-and-mortar companies into B2B and B2C are as follows:

Vision

The most important Strategy the company must consider is to setup a clear vision in order to transform its traditional business into e-business. The company must review its capabilities and resources required for their business transformation. It is also required to consider how the e-business system will affect the working of the existing business system and also know how e-business will help them to achieve their expectations. The vision of the company should include company organizations structure, customers, workflow and culture of company etc.

Cost Leadership Strategy

E.kim et al, 2004(2) mentioned that according to survey conducted by (Kim & Kim, 2000) in Korea, 71 percent of first-time online shopper consider cost be main consideration factor. Therefore cost leadership strategy becomes an important strategy for the firms to successfully run in an e-business environment. It is essential for company to maintain lower prices of their product in the beginning stage of development as it is key selling point. This strategy will help the firms to maintain competitive pricing such as it provides flexibility in pricing etc in order to attract large customer base. By utilizing e-business technology firms that involve in e-enabling their business process provide consumers with various services such as price comparison etc. Using this facility internet user can get the required information with no cost involved.

Differentiation strategy

In an e-business environment it becomes important for the firms to show that they are different from their competitors in terms of customer service offered, brand image, features of product, design, reputation of firm etc in order to avoid customer switch to other firms. Differentiation strategy is also important because, customer in e-enabled environment has access to wide range of information using which customer can compare products or any kind of service offered with products of other firm with just a mouse click. Due to which possibility of customer switching their choice to competitors is more.

Other than products and customer service offered, the company must differentiate themselves by providing improved distribution mediums and highlighting factors such as secured transaction, speed of delivery, convince etc. Most of customers are ready to compensate on cost of products, when quality of service and convenience are offered. E.kim et al, 2004(2) has mentioned that according to survey conducted by Reichheld and Schefter top priority of online customer is convenience and service offered and these customers are not concerned about price and are ready to pay more for greater convenience

Focus strategy

It is important for firm to focus its attention towards smaller market segment, because customer usually prefer companies that operates in niche market as it becomes easier for customer to search for these firms through internet. In an e-business environment focus strategy provides higher level of customization. Using this strategy firms can focus on a particular customer by providing customized product or services. Through internet it is possible for the firm to keep track of customer and meet the specific needs of the customer. Focus on customer and retaining them becomes important

factors for maintaining customer loyalty and also successfully run a firm in an e-business environment. According to E.kim et al, 2004(2) focus strategy is an important or necessary condition for successful e-business competitive strategy.

Create Industrialized Environment

In order to e-enable a traditional or bricks-and-mortar firm, it becomes important for the firm to reconsider its working environment, i.e. the firm should work in entrepreneurial or industrialized environment in order to stay ahead from the online competitors. It is also important for the firm to change or adapt different business processes and decision-making approaches in order to keep up pace with the flexibility and speed of online competitors and also to be successful in an e-business environment.

The firm should work fast to gain competitive advantage in an e-business market, otherwise its competitors will acquire the market. A.Enders & T.Jelassi, 2000(1) mentioned that a book company called Bertelsmann AG, delayed launch of its internet-based book company (BOL.de), because the company was not able to make proper decisions regarding speed and flexibility of internet-based working for nearly two years. Due to which its competitor Amazon.com had taken over the market. Therefore it becomes increasingly important for the company to adapt to fast pace of working in order to stay ahead of its competitor.

Maintain separate online division

In traditional bricks-and-mortar company employee's work in traditional manner, implementing or bringing in change in the way they work is a critical problem as well as very expensive task. It also difficult for the traditional companies to employ additional employees in order to work in a e-business environment. Because company needs to pay high salary as well as these new employee will have problems working with traditional or old persons. In order to avoid these problems company must maintain a separate online division in order to operate successfully in an e-business environment. By maintaining separate online division company can also focus on developing further in engineering, programming and web-marketing rather than its traditional corporate environment and also company can estimate the performance of online division separately instead of mixing it up with profit and loss of parent company.

Online Virtual communities

It becomes important for traditional companies to maintain online virtual companies in order to enhance or develop relationship with customer and also maintain two communications with the customer. The virtual communities

help the firm to bring in customer with same interest together at one place. Therefore by making use of these communities companies can increase its sales as well as customer loyalty. Because selling of products to customer with same interest is easier than selling products to large customer base.

Transformation of traditional bricks-and-mortar business into e-business environment cannot be done in single step. It is a step by step process that progress in an increasing fashion. Therefore it is required for the traditional companies to follow some of the above mentioned strategies in order to gain competitive advantage in the e-business environment or market. If the firms does not follow appropriate strategy in implementing e-business or e-enabling them, there are chances that company may fail to achieve their goals.

Key drivers

Some of the key drivers for changing traditional bricks-and-mortar business into e-business are as follows:

Enhanced Customer Relationship: E-enabling facilitates companies to improve their relationship with their customer by providing various services. Customer can effectively request for their desired service online through single point of contact. Whereas company can respond to requested service of the customer with creating a communication gap which further enables company to gain confidence of customer. E-enabling also enables firms to offer wider range of service to customer. Customer will be provided with personalised product related information that enables online customization of products. Further it also provides online order tracking facilities and online payment etc, that helps the company to gain competitive advantage in the market.

Enhanced Supplier Relationship: It is possible for the companies to enhance their relationship with suppliers by e-enabling their supply chain process. E-enabling helps firms to maintain profitable relationship with suppliers by successfully establishing electronic linkage with them. The automated supply chain process will enable sharing wide range wide range of information such as quality, customer feedback, defects and product failures, production schedules, demands, inventory etc. Companies can also place their orders online and get order status as well as procurement order status through e-enabled system such as Material Resource Planning/ Enterprise Resource Planning MRP/ERP. These facilities will enable firm to maintain smooth and beneficial relationship with their suppliers

Reduced Cost: Reduction in cost is one of the key drivers in e-business transformation. By e-enabling business process of a firm various cost can be reduced such as cost involved in serving customer, supplier cost and cost of introducing new customer etc. As discussed earlier customer cost is reduced by automating almost all the services related to customer. For e.g. in traditional based business process it is necessary for the sales person to visit each customer individually in order to sell

the product, in this case using e-business company can sell its product online and also provide online services such as online order tracking system, online payment system etc. Similarly it is necessary for supplier to check availability status of each product individually in order to smoothly proceed with production work and then place an order for required material. But now with the help of e-business technology supplier can track the availability status of the product and can deliver the required product based on the demand in the market. Cost of introducing a new service in the market is also reduced. When company thinks of introducing a new service into the market it can be done with minimal cost, i.e. only cost involved will be for setting up a new server etc. Whereas in traditional based business it requires huge investment in order to introduce new service into the market.

Wider Reach: In the present world since internet is available 365 days and 24/7 it is easier for the firm to reach wide range and any kind of customer base. By e-enabling a firm it can sell its products to anyone in this world where internet is available and any point of time. In case of traditional business there is always a restrictions by the law or government on opening and closing times due to which firm cannot sell the products based on customer availability time. But in the case of e-business environment customer can purchase product in their own leisure time.

Similarly there is always a limitation on geographical range a company can reach in order to sell its products. In this case e-business will help the firm to reach any geographical area at any point of time. Lastly company can also reach wider market through advertising its product online which is not possible in traditional business. Also it is possible for the company to expand to new market with just an addition of computer server to its computer infrastructure.

Offer Wide Range of Products: By e-enabling a firm it can sell wide range of products to its customer. In traditional business selling wide range of products is difficult task as it requires large physical area in order to display the products and also in some cases there possibility that customer may not be interested to visit the store directly. In this case e-enabling comes in handy for the company in order to serve their customer in a convenient manner. Therefore by e-enabling technologies company can offer wide range of products online. For e.g. Amazon.com sells a large range of products online.

The above mentioned are some of the key factors that are driving traditional bricks-and-mortar company to transform itself into e-business environment through e-enabling technologies

Conclusion

The traditional business model of bricks-and-mortar companies has changed after implementing e-enabled

technologies into their business process. These technologies have completely changed traditional way of doing core business that is profitable in most cases. For instance by implementing web-based technologies companies can eliminate physical or geographical boundaries i.e. distance and time and now companies able to reach their customer efficiently. Moreover in a traditional business model communication between company and consumer was one way because of which the service levels of the firms was affected. In case e-business model there is two way communications between customers and firm that helps the firm to gather information. The information obtained can be used by the firms to focus on specific customer based on their interest that enables firm to provide reliable service to the customers. In brief most of the transaction between the consumer and the company has become electronic due to implementation of web-technologies. In traditional based business model there is a face-to-face interaction between customer and company through sales persons or some other employee of the company. But web technologies have replaced face-to-face interaction with a web-based user interface screen that is convenient for most of the customers. Furthermore in traditional business model advertisement was done physically with help of banners and posters which is now replaced by electronic banners and posters. Also traditional way of interacting with suppliers has also changed. There many technologies that e-enable the complete supply chain of the company. Overall impact of e-enabled technologies has changed the entire core business functioning of the traditional companies.

The impact has always not been positive for the companies. In some cases there is always a need for physical activity to take place. For example, when customer places a order online, the product has to be delivered to customer via some physical distribution channel. In this case company should also invest on improving its distribution channel. Because customer will be satisfied only after the product has reached to him but not on the information provided. Therefore the company must take foremost care to delivery products to customer which is only possible through improving distribution channel. It also becomes important for the company to ensure that suppliers are ready to integrate with them through e-enabled technologies otherwise it will lead to conflict between supplier and the company that further leads to many other problems.

The entire process of e-business transformation is termed as a strategic development because as mentioned earlier transformation is not single step. It is a step by step process that progress in an increasing fashion. Therefore it is required for the traditional companies to follow some of the above mentioned strategies in order to gain competitive advantage in the e-business environment or market

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How are we doing?

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*Send an email to the VC Publications
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From Vice Chair (Tech Talk) Desk

Dear Members

We started our chapter with the promise to hold a technical talk every two months, and we have held to that promise - well, almost. Our first talk was by Dr Mehendale, a Fellow at Texas Instruments, delivered as a keynote during the inauguration of our chapter in November. Due to the subsequent vacations, we skipped one session, and resumed our lecture series in March with Dr Gopalakrishnan talking on the business side of innovation, and then by Dr Rao in May on the topic of global warming and what we can do about it. These three lectures provided very different perspectives on sustainability and innovation; Dr Mehendale's talk discussed the circumstances in which different innovators have performed, thus showing that the environment is not a barrier to sustaining creativity; Dr Gopalakrishnan showed that to sustain innovation, it has to be tied to a business angle and this serves to enhance the value of the innovation; and finally Dr Rao's very moving talk on sustaining our Earth through innovative and proactive steps.

On behalf of the Executive committee, I would like to sincerely thank our volunteers and the participants who have supported these lectures, and also extend a very special thanks to Kiran Rudrappa of Schneider Electric, who provided their auditorium for our third lecture. We request the volunteers to help us with identifying other such venues where our lectures can be held. If any of you would like to provide your office (or other) facilities for these lectures, please let us know.

We also need help from the volunteers and participants to identify topics of interest and invite renown speakers in these domains. If you know an eminent personality whom you can invite to speak on a topic related to "Sustainable innovation", please let us know.

Finally, each lecture entails a cost, even if held at an office auditorium. We will need help in identifying sponsors for these lectures, and also advertisers in our newsletters to gather funds. All help towards building up the Chapter's funds will be very much appreciated.

Adieu, and looking forward to your continued support and seeing you all at the future lecture programs!

Thanks and warm regards,

Dr. Raj S. Mitra,
Vice Chair (Tech Talks) IEEE TMC Bangalore Chapter,
2009-10

Tech Talk Abstracts

"Some perspectives on Innovation",

Dr Mahesh Mehendale, TI Fellow,

Keynote Address at the Inauguration of TMC Bangalore chapter 29 Nov 2008

The Bangalore chapter of TMC was inaugurated this weekend, and the keynote speech at this session was aptly presented by Dr Mehendale, a noted innovator at TI. Not surprisingly, his talk started with excerpts from the Nobel Laureate, Dr Jack Kilby, and Dr Mahendale took time to introspect on the circumstances under which this sage created his innovations and his personal motivations for doing them. He also sought to dispel the myth that innovation is done only by entrepreneurs - he explained by showing "laws of entrepreneurs" that innovation can be done within an existing organization too. His speech was interspersed with video clips of other innovators in action, notably those of Prof Randy Pausch, J K Rowling, and Robert Lang, and this created a very lively atmosphere.

"Innovation that matters",

Dr P GopalKrishnan, VP IBM India Software Lab,

Park Central Hotel 26 March 2009

Dr GopalKrishnan talked on a very pertinent topic, viz., driving innovation that delivers business value. He discussed how organizations could identify opportunities where innovation could maximize business performance.

"Climate Healers - Healing Earth one acre at a time",

Dr Sailesh Rao, CEO Climate Healers,

Schneider Electric Auditorium 4th May 2009

Dr Rao talked about a very important topic of today - global warming and what we can do about it. He started the presentation with a vivid description of the problem, showing graphics and video clips to show the great magnitude of the problem. He said that being an engineer, he was interested in finding a solution instead of just talking about it, and then he described his very innovative solution to the problem, which he is currently executing in different places in India. He showed pictures to show that his method is working - how the land is growing green again. The auditorium's excellent facilities were kindly provided for this lecture by Kiran Rudrappa.