HOW SUCCESSFUL FIRMS GO BEYOND ALIGNING THEIR IT STRATEGY WITH BUSINESS OBJECTIVES

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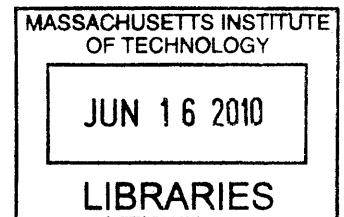of the Requirements for the Degrees of

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Abstract

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business objectives.

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Information technology (IT) is vital to growth of all organizations. But getting value out of IT has been challenging. The companies, which fail to align their IT strategy with business objectives struggle with low or mediocre return on their IT investment. On the other hand, the companies that achieve strategic alignment realize higher economic benefits. Successful companies go one step further and use IT to enable business. They differentiate themselves from their competitors using IT and forge alliances. But is there any formula for achieving strategic alignment? The research of past decade seem to suggest that there indeed is a trend among companies, who manage to achieve strategic alignment. The successful companies recognize IT's unique value and ensure that it generates

value like other assets do. IT is not a mere support function in such organizations. IT not only serves the internal businesses of the company but it acts like a business in dealing with suppliers. The framework of Strategic Alignment Model (SAM) identifies this as the balance of internal and external domain. The model asserts that IT should be judged both in terms of external domain, which determines how the firm as whole is positioned in the market place and internal domain, which constitutes IT's internal policies and structures. In the internal domain, the emphasis is more on technology than on business, management or organizational issue. The effective utilization of IT requires alignment of IT strategy with business objectives. This assertion is validated by a case study of a three companies, who successfully achieved strategic alignment.

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List of Acronyms

BAA	Business Application Architecture
BIM	Business Information Model
CIO	Chief Information Officer
COBIT	Control Objectives for Information and related Technology
EA	Enterprise Architecture
ERP	Enterprise Resource Planning
IT	Information Technology
ITIL	Information Technology Infrastructure Library
SAM	Strategic Alignment Model
SDL	Swiss Re Data Language
SOX	Sarbanes Oxley Act

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1 Introduction

In the last decade, information technology (IT) departments have evolved from an administrative support role to vehicle of business transformation. IT not only boosts productivity and helps companies achieve high performance but also enables companies to implement new business strategies. But as IT's clout has increased, so has the increasing scrutiny of returns on IT assets.

IT leaders are constantly assessing whether the ROI from the IT investments are meeting the benchmarks. But focusing on cost alone does not create value. It is important to analyze the business performance improvement areas and make smart investment in order to achieve strategic alignment between IT strategy and business objectives. The companies that significantly outperform their peers understand the potential of IT and use it to leverage their position. They leverage their position by aligning IT with business strategy. In the flip side, inability to align IT with business strategy keep the firms from realizing value from their IT investment. It is no wonder why the issue of IT business alignment received top rank in the survey of IT leaders when they were asked to rate their concerns regarding IT.

But is alignment enough? Successful companies go beyond alignment by developing a culture where IT and business strategy is not only on the same

page but also IT goes an extra mile to enable business. These companies use IT capabilities to impact new product and services. They use IT to differentiate themselves from their competitors and also forge new form of relationships inside and outside the enterprise.

My thesis began with quest to learn what strategic alignment was. I have explored the issue of strategic alignment between IT and business objectives. I started by looking into the research reports from Gartner, McKinsey and other online sources to fathom how business leaders view this situation in the industry. The next step was to understand the strategic alignment from the theoretical perspective. I felt it was important to know what the formal definition of strategic alignment really was. I reviewed literature to understand whether there is a consensus among the researchers about the definition of strategic alignment.

I also looked at various dimensions of strategic alignment. A thesis on strategic alignment can't be complete without giving an overview of various models and tools available to measure alignment. While exploring the models, I came across a model: Strategic alignment model (SAM) model, which is widely quoted in literature. I studied the model and applied suggested frameworks to a set of companies for evaluation of their IT business strategy alignment and also assessed whether the framework correctly predicts the level of alignment.

Finally, I have looked into IT transformation of three companies in three different industries and tried to formulate a common theme that underscores their success.

2 Does IT matter?

2.1 Information Technology

Information Technology (IT) has become a strategic tool for business. IT is not just a functional unit anymore. It truly has become the backbone of a company. Some companies such as Walmart, UPS, Zara, and CVS see the strategic potential of IT and use it to create value rather than provide support to business. They not only manage to decrease cost through automation but also meet business and mission needs, create new revenue streams and value, improve productivity and performance and build important competitive advantages and barriers to entry. The companies that manage their IT investments most successfully generate returns that are as much as 40% higher than those of their competitors [23].

Yet, it is not too difficult to come across companies that see their IT as a mere order taker. IT units in such companies do faithfully serve the business units. But along the way they end up building isolated, compartmentalized system, which become unsustainable at some point. Just spending on IT does not promote strategic alignment. The IT investment should be smart and align with business objectives. Similarly, viewing IT as only a cost center and senseless cost cutting or outsourcing to reduce cost without proper planning may increase short term profitability. But it may cause long term damage to strategic growth of the

company. It is very important to focus on the increasing business value through IT. Successful companies align their IT strategies with business objectives. In the era of constant technology changes, it is also important that IT strategy be flexible if needed.

2.2 IT: a utility or an organization?

IT was seen quite favorably till 1990s before the pre dot com euphoria. But in the post dot com bubble burst, many researchers started questioning the staggering expenditure and whether there were any needs to have an IT department. One school led by Nicholas Carr [11] seems to view IT as just another utility. Carr argued in his article that since IT had become quite inexpensive and any company can access IT, there is no competitive advantage in investing in IT. He further drew analogy of Railroad and Telegraph, where the benefit of infrastructures is available to all and does not create any competitive advantage.
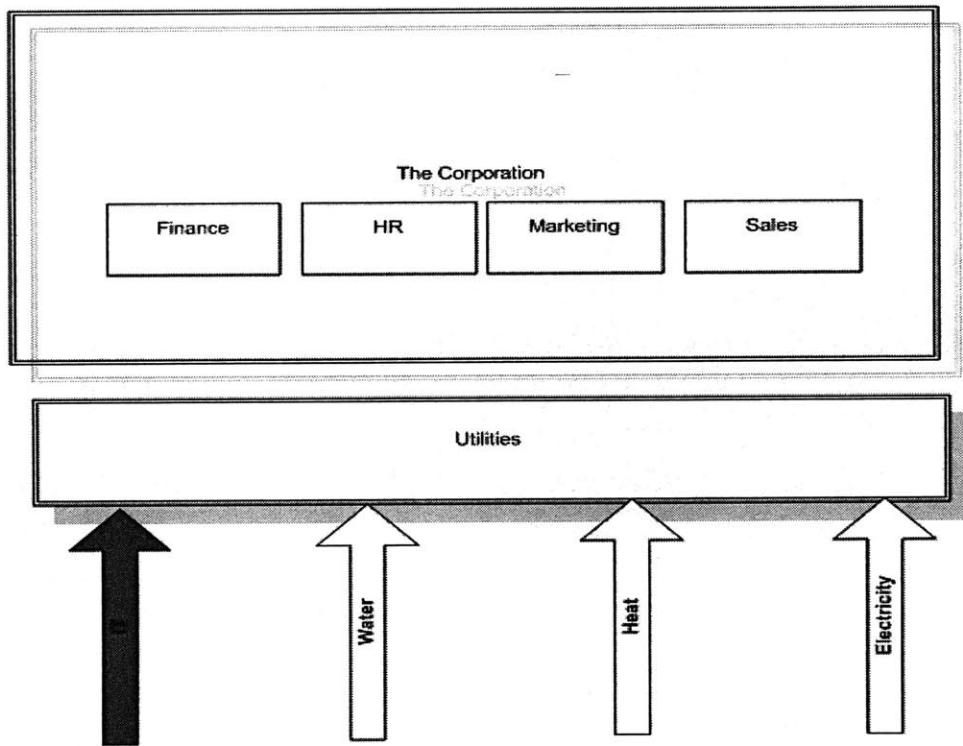
Figure 1: Carr's view of IT

However this assertion is fraught with the danger of discouraging the companies from making IT investments. Successful companies do differentiate themselves from the crowd by making right IT investments. Carr's view of IT has been challenged and some even went as far to call it dangerous [2] because his article falsely promotes reducing IT cost and innovation.

But there is also some truth in Carr's view too. Some IT organizations provide only commoditized service to the enterprise. These jobs should be monitored and could be outsourced for using internal resources for more strategic operations.

Traditionally IT exists just as another organization within the company. The following diagram shows IT as a traditional function within the company. Most companies follow the following organizational structure.

The Corporation

| Finance | HR | Marketing | Sales | IT |
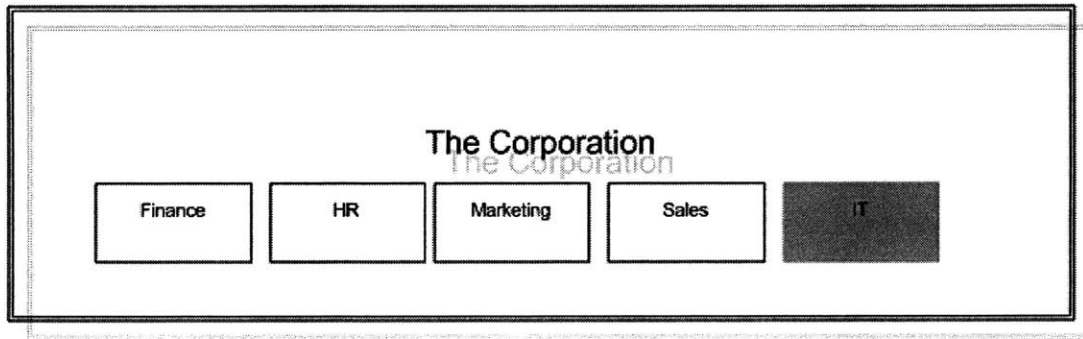
Figure 2: How IT fits in an enterprise

2.3 IT Investment

Some companies have poured significant capital investment in IT. Historically, IT expenditure as a percentage of capital expenditure has been increasing. According to data from the U.S. Department of Commerce's Bureau of Economic Analysis, what was 5% in 1965 has surpassed 50% today. The total expenditure on IT world wide is nearly $1 trillion. An average US company still invests as much in IT as in all other capital expenditures combined.

Even in current economic environment, which is dubbed as the worst recession since the great depression, the IT investment has actually increased according to a Gartner study.
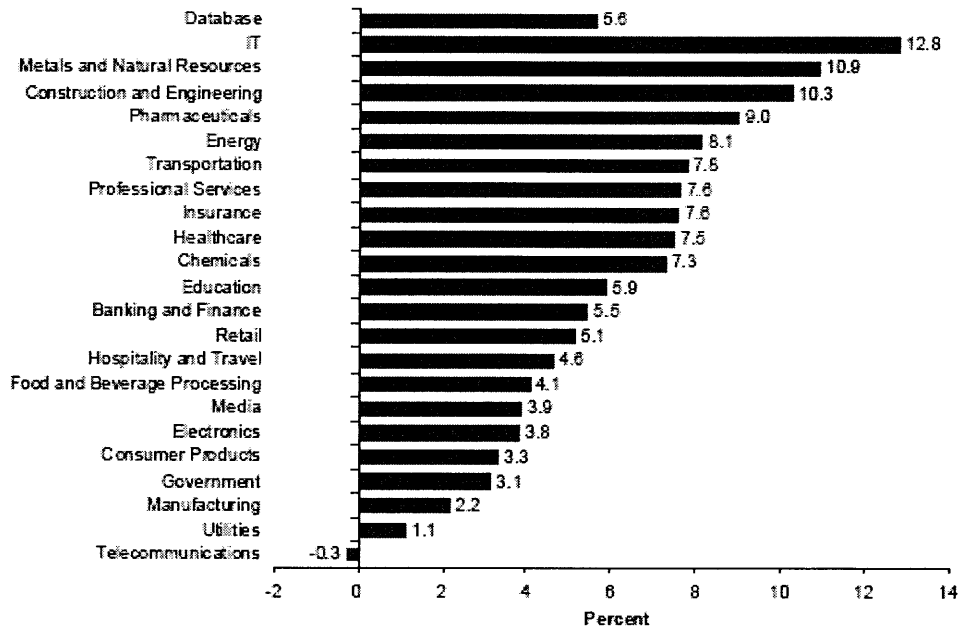
Figure 3: IT spending

The above diagram represents a survey of companies and shows yearly change in IT expenditure. It is interesting to note that there is a wide variation based on industries. But average (represented as database) across industries is above 5%.

The same survey also shows the IT expenditure as a percentage of their revenue. The following chart shows the IT expense for various companies in various industries as a percentage of revenue.

Figure 4: Yearly change in IT investment

As can be seen from the above chart, accounting for expenses of up to 7% of revenues, IT is a significant cost factor.

Another cross section of the survey shows IT investment per employee. It is understandably as high as $24,000 per employee for industries that are heavily reliant on IT for their day to day business. But even for less reliant companies such as Food and beverage processing and Metal and natural resources, their investment per employee is more than $3000.

The corporate average is about $13,000. Investment per employee has come a long way from about $3,500 spent per worker in 1994 to about $8,000 in 2005.

McAfee and Brynjolfsson noted that IT accounts for the largest share of the fixed assets in companies that are IT intensive [16].

Category	Dollars
Database Average	13,119
Insurance	24,823
Banking and Finance	24,391
Utilities	17,153
Media	15,670
Telecommunications	15,580
Energy	13,444
Professional Services	13,359
Pharmaceuticals	12,267
Government	11,467
Healthcare	10,496
IT	10,356
Electronics	9,174
Transportation	8,118
Chemicals	7,850
Consumer Products	7,188
Manufacturing	6,219
Education	5,077
Construction and Engineering	5,077
Hospitality and Travel	4,441
Retail	4,234
Food and Beverage Processing	4,233
Metals and Natural Resources	3,503

Source: Gartner IT Key Metrics Data (November 2008)

Figure 5: IT expenditure per employee

As evident from these figures, if the companies want to stay competitive, they must make investments in IT. IT based innovation can make or break a company. The competition has become so intense that no company can ignore IT investment. IT based innovations improve operating models of companies. But IT also makes it possible to replicate those improvements rapidly [16].

2.4 Do IT investments deliver?

Various researchers have pointed out that investing in IT does make a competitive difference. When UPS was rapidly expanding globally, it never had any issue with IT supporting its business objects. This because IT was aligned with business strategy and IT managers made necessary investment in IT to support operations. [20]

IT also creates enormous value through innovation and integration. Innovation does not come only from senior management. It can come from grass root level too. Web 2.0 applications such as Wikis can foster innovation from lower levels in an organization.

Enterprise integration combines the processes and technology. A good understanding of enterprise architecture is necessary to facilitate this task. It is also necessary to have some vision about how the future organization will look like. Without integration, different business units are siloed and there is potential for duplication of efforts. Integration efforts thus improve efficiency of an organization by optimal utilization of talents. [4]

But despite all the good things IT can do for a business and the staggering investment it demands, there are plenty of examples where companies mismanaged their IT investments. Cost of misalignment is high enough to compel CIOs to rank IT Business alignment as one of the top concerns. The

following survey conducted by Gartner also shows that IT and business strategy alignment has consistently remained a CIO priority. Even in the coming years, this will be one of the top priorities.

CIO Strategies	Ranking of CIO strategies CIOs selected as one of their top five priorities in 2009.				
Ranking	2009	2008	2007	2006	2012
Linking business & IT strategies and plans	1 ↑	2	2	2	2
Reducing the cost of IT	2 ↑	10	12	*	6
Delivering projects that enable business growth	3 ⇩	1	1	1	1
Improving IT governance	4 ↑	7	8	9	14
Implementing IT process improvements	5 ↑	6	12	*	13
Improving the quality of IS services	6 ⇩	4	7	12	12
Improving the business and IT relationship	7 ⇩	5	*	*	11
Attracting, developing and retaining IT personnel	8 ⇩	3	4	5	5
Consolidating IT operations (e.g. shared services)	9 ↑	12	*	*	15
Use of information/intelligence	10 ⇩	9	6	*	4
Developing or managing a flexible infrastructure	11 ⬌	11	7	8	8
Building business skills in the IT organization	12 ⇩	8	9	3	9
Leading enterprise change initiatives	13 ⬌	13	10	*	3

* Item not included this year

Source: Gartner (July 2009)

Figure 6: Top priorities of CIOs

The following survey from CIO insight also resonates the finding from Gartner's survey.

	2009			2008
	Revenue > $500M	Revenue <$500M	Total	
Improving alignment with business objectives	61%	62%	61%	60%
Improving business process	43%	40%	42%	35%
Delivering better customer service	44%	37%	41%	35%
Cutting costs	34%	45%	38%	29%
Improving IT planning process	38%	36%	37%	34%
Reducing ROI costs	33%	44%	37%	28%
Creating of improving strategic applications	35%	36%	35%	37%
Improving ROI on IT spending	25%	50%	34%	27%
Improving project management capabilities	30%	31%	31%	29%
Standardizing or consolidating IT infrastructure	26%	38%	31%	24%
Improving IT security and continuity	34%	16%	28%	31%
Improving the quality of application	27%	31%	28%	26%
Improving ROI of IT investments	25%	33%	28%	21%
Expanding IT infrastructure to keep up with growth	25%	30%	27%	32%
Generating more business from new and current customers	28%	21%	25%	20%
Innovative new products/services	23%	19%	22%	21%
Contributing to creation of new business strategies	25%	17%	22%	31%
Discovering and deploying innovative new technologies	28%	13%	22%	23%
Improving leadership and management development	22%	18%	20%	25%
Improving workforce productivity	19%	18%	18%	20%
Improving system development capabilities	21%	12%	18%	23%
Complying with regulatory requirements	9%	29%	16%	18%
Differentiating company from competitors via IT	13%	21%	16%	16%

http://www.cioinsight.com/c/a/IT-Management/Top-CIO-Priorities-for-2009/

Figure 7: Priorities of CIOs

A McKinsey survey [10] of global executives found that IT is largely effective in the delivery of basic services. The companies are still struggling to position IT in such a manner that it goes beyond maintaining the status quo [9]. If a company wants to go beyond this cycle of status quo, it must plan and execute technology based on business strategy. That's why, IT and business strategy alignment seemed to be the top issues in the minds of IT executives [12]

Business environments are constantly changing. Economic cycles are putting tremendous pressure on a company's bottom line. New technologies are popping up everyday. It has become very crucial to make judicious investment in technology. Today, it is widely recognized that whether or not IT works for a

company has less to do with the technology itself, and much more with how IT is managed and how well it is aligned with the business strategy.

Judging by the above discussions, it is clear to see that IT does matter despite what its detractors say. IT has tremendous potential to transform an organization. The effective utilization of IT requires strategic alignment of IT strategy and business objectives.

3 Should IT and business strategy be aligned?

3.1 IT Business Alignment

The motivation for IT Business alignment is very simple. When business units and IT work in unison, they create enormous economic value. But lack of alignment hinders the performance of an organization. Without an effective strategy, IT may start making decision locally without considering an enterprise wide implication of such decisions. Such localized decision making is often costly and wasteful because they foster redundancy and compartmentalization.

IT business alignment has been a hot topic of discussion for quite some time. Millions of dollars have been poured into efforts of aligning IT with business. Many papers were written on this topic. But, scholars have differed over the definition of IT business alignment. Some definitions from the literature are listed below.

Henderson and Venkatraman defines IT Business alignment as formulation and implementation of strategies that deliver economic benefits to an organization. They categorize strategic alignment as an ongoing process of "adaptation and change" that take shape over time [6]. Luftman defines IT-Business alignment as

applying IT in an appropriate and timely way, in harmony with business strategies, goals and needs [14].

Chan defines alignment as the degree to which the information technology mission, objectives and plans support and are supported by the business mission, objectives, and plans. [5]

Ross and Weil defines alignment as IT management techniques for securing widespread involvement in the effective management and use of IT. They contend that such processes should bring everybody on board both by providing input into governance decisions and by disseminating the outputs of IT decisions. According to their definition, key alignment processes include the IT investment approval process, the architecture exception process, service-level agreements, chargeback, project tracking, and formal tracking of business value from IT. [28]

Despite the differing in lexicon, it is clear to see that IT business alignment is an evolutionary process. It is a process with a feedback loop. The alignment process takes years to shape. There is also a social dimension to alignment because alignment involves two organizations.

3.2 Causes of misalignment

Reich & Benbasat classifies the following reasons as the primary causes of alignment. [18]

3.2.1 *Shared Domain Knowledge between business and IT executives*

If IT knows where the business is heading, it can position itself to support business functions. But in absence of such clearly stated policy, IT managers may take conflicting decisions leading to wasteful spending. One major complain regarding IT has been that IT is enamored with new technologies that have little to do with business functions.

3.2.2 Success of IT implementations

Failure of IT implementation also contributes to the misalignment of business IT alignment. If the implementation is a failure, business is already dissatisfied with the IT department and thus mistrust develops between two departments. Such mistrust inhibits information sharing and thus contributes only to misalignment. IT's failure to prioritize also contributes to misalignment.

3.2.3 Communication between business and IT executives

A very important factor in alignment is CEO-CIO relationship. IT executives must be privy to corporate knowledge. IT requires strong support from senior management, good working knowledge, strong leadership and appropriate prioritization. Some IT organizations lack

executive support. If a CIO wonders whether he will be accepted at a top management meeting, there is a problem.

3.2.4 Connections between business and IT planning processes

There must be a harmony between IT and business. The harmony comes from a joint planning. Alignment is an evolving process that can only be attained by formulating a strategy together. The strategy should be able to maximize the enablers of alignment and minimize the inhibiters of alignment. It is difficult to share a common goal and build a vision for an organization if a common planning process is absent.

3.3 Types of alignment

3.3.1 Strategic alignment

Strategic alignment focuses on synchronizing priorities of business units and IT units. Strategic alignment typically achieved in three distinct steps. The first step is awareness. Information system professionals must be ware of the core business. An organization needs professionals who are more interested to solve an organization's problem using technology than using technology for technology's sake. Modern practice of requiring a corporate sponsor for IT projects is a way to ensure that there is sufficient awareness within the organization.

The second step integration involves synchronizing operation plan of the company with that of IT. Typically IT plan will follow the business plan. But the reverse may occur in a company that is in the business of information technology.

The final stage is strategic alignment. At this step IT integrates the fundamental strategies of the organization and core competencies to deliver value.

3.3.2 Structural alignment

Structural alignment concentrates on aligning the organizational structure of business unit and IT unit. It defines the reporting and decision making structure of the organization. Structural alignment is influenced by the location of IT decision making rights, reporting relation ships, decentralization of IT and the deployment of IT personnel [5].

3.4 Assessing alignment

Alignment must be measured if it is to be properly managed. The researchers have proposed various models over the years. The models can be broadly classified into qualitative models and quantitative models.

3.4.1 Models

3.4.1.1 Typologies:

Typology is the study of types that have characteristics or traits in common. Since business and IT has lot of common traits, studying the common traits gives an idea of alignment. Researchers used Miles and Snow typology to measure strategic alignment between business and IT.

3.4.1.2 Taxonomies

Taxonomies are groupings based on the results of inductive empirical analyses. The taxonomical studies examine how the relationships among antecedents, alignment and organizational performance.

3.4.1.3 Different fit models

Various models have been developed to predict the extent of compatibility of business IT alignment. I have described the models in the next chapter.

3.4.1.4 Questionnaire items

Another approach to measure alignment is just to pose a set of questions to the company in question. These questions ask respondents to rank a given criteria in a scale of 1-5. It is obvious that detailed studies provide a robust result.

3.4.1.5 Cognitive measures

Using a personal construct theory, Tan and Gallupe (2006) used cognitive mapping techniques to explore shared cognitive domain of IT and business executives. The result of the study indicated that cognitive commonality is strongly correlated to IT business alignment.

3.5 *Remedy for misalignment*

Various strategies have been tried in the past decade with various degrees of success.

3.5.1.1 Outsourcing

Misalignment has cost implications. In the competitive environment companies are often forced to reduce cost by increasing return on their capital. Outsourcing provides an opportunity to increase ROI. While outsourcing has an attractive proposition from the strategic point view, it encounters several problems from the operational perspective.

3.5.1.2 New technologies

IT tries to be more effective by using latest and greatest technologies. But sometimes deploying technologies without enterprise wide strategies actually hurt the organizations. Web 2.0 for example has shown great

potential for companies. But they actually have fraught with compromising company's secrets.

3.6 Argument against alignment

Some researchers argue that close alignment is not always desirable. Vitale [30] suggested that close alignment may have detrimental effect on the overall organization should the business environment goes through rapid changes.

If we consider that IT business alignment by definition is an evolving process, the above argument against alignment becomes futile.

4 How do you align?

In the preceding chapters, I have discussed why IT is so important for business growth and why IT should be aligned with business strategy. IT can alter the basic nature of an industry. As evident from the above discussions, the idea of strategic alignment is very appealing. Who does not want to extract value from IT? But the question is how to align organizations. The researchers have proposed various frameworks to understand strategic alignment. I have looked at the most widely cited model [5], the strategic alignment model (SAM) to better understand the phenomenon of strategic alignment.

The SAM was developed by Henderson and Venkatraman. This model views strategic alignment as the right mix of business strategy, IT strategy, organizational infrastructure and processes, and IT infrastructure and processes. There is a tendency to view IT only in the technology domain. But corollary of SAM framework is that all four domains are equally import and that business strategy and organizational issues should be equally emphasized.

4.1 Strategic alignment model
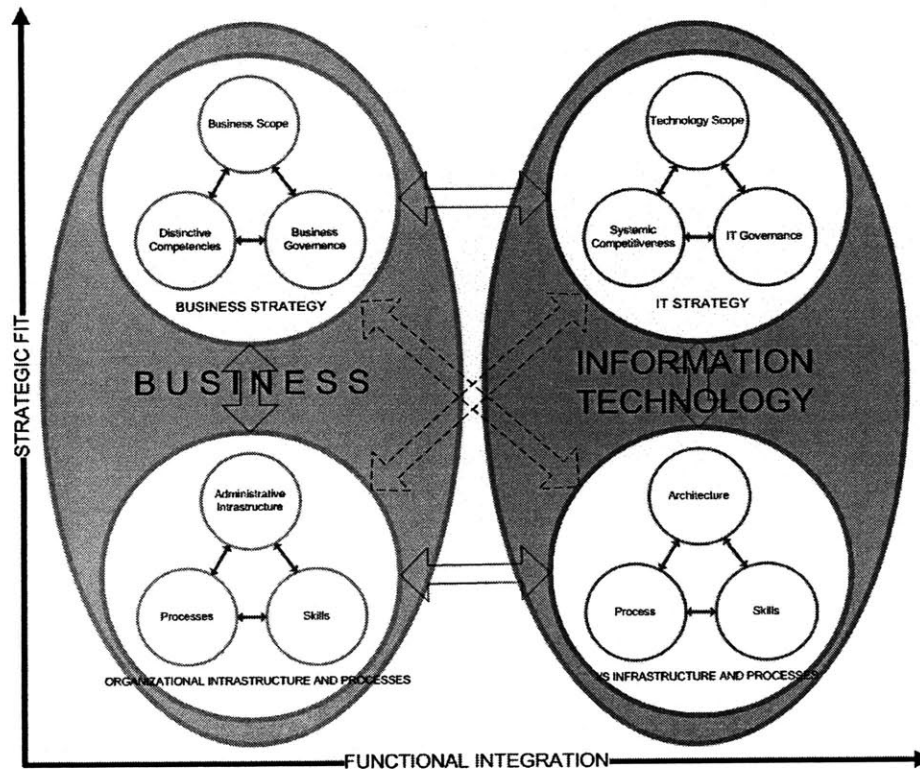
Figure 8: Strategic Alignment Model (SAM)

Their strategic alignment model (SAM) as depicted in Figure 8: Strategic Alignment Model (SAM) is based on the following four related domains of strategic choice: business strategy, organizational infrastructure and processes, IT strategy and IT infrastructure. Each of these domains has three constituent component namely scope, competencies and governance at external level and infrastructure, skills and processes at the internal level.

4.1.1 Business strategy

4.1.1.1 Business scope

The business scope can be explained by Porter's five forces and defines the environment the business operates in. The elements comprising an enterprise's environment are suppliers, customers, new entrants, existing competitors and product

4.1.1.2 Distinctive competencies

The competencies provide competitive advantage to a firm and are the critical success factor of the firm. The competencies include brand, research, manufacturing and product development, cost and pricing structure, and sales and distribution channels.

4.1.1.3 Business governance

Governance determines how the company is run, who makes which decision and creates the structure of responsibility within the organization. Governance sets relationship between management, stockholders and the board of directors. Governance determines how a company is affected by government regulations, and how the firm manages its relationships and alliances with strategic partners.

4.1.2 Organizational infrastructure and processes

4.1.2.1 Administrative infrastructure

Administrative structure defines the way a firm organizes its business. The organizational structure of the firm could be functional, matrix, horizontal or vertical etc.

4.1.2.2 Processes

Processes determine how the business activities are performed within the organization.

4.1.2.3 Skills

Skills are what make an organization unique.

4.1.3 IT strategy

4.1.3.1 Technology scope

Technology scope defines the technology landscape of the company. It includes the information systems, applications and technologies.

4.1.3.2 Systemic competencies

Systemic competencies are technologies that set the company apart from its competitors.

4.1.3.3 IT governance

IT governance defines how the authority for resources, risk, and responsibility for IT is shared among business partners, IT management, and service providers. This also defines how Projects are selected and prioritized.

4.1.4 IT infrastructure and processes

4.1.4.1 Architecture

Architecture defines how the IT resource such as software, networks, hardware and data etc. are connected.

4.1.4.2 Processes

Processes define how various activities are carried out in an organization.

4.1.4.3 Skills

Skills are unique to the IT organizations.

The model is conceptualized in two fundamental characteristics of strategic management: strategic fit and functional integration. Strategic fit recognizes that the IT strategy should be articulated in terms of an external domain as well as an internal domain. The functional integration denotes integration between business and IT. Two types of functional integrations are possible. They are strategic integration and operational integration. Strategic integration is the link between

business strategy and IT strategy in an external domain. Where as the operational integration is the link in the internal domain.

4.2 Guidelines of SAM

SAM framework not only helps us to understand the dynamics of IT organizations, it also has a practical guidelines to achieve strategic alignment. Among many guidelines, I found the following three as most important:

- Internal and external domains of IT must be aligned.

- IT strategy and business strategy must be integrated

- Alignment is a dynamic process.

4.2.1 Alignment of internal and external domains

Internal domain is the internal structure of IT organization. It is concerned with administrative structure of IT organizations such as functional organization or matrix organization etc and also how critical business processes such as product development, product delivery and customer service are designed. Internal domain also determines how critical human resources are acquired and developed. External domain on the other hand, is the business domain in which the firm competes and is concerned with decisions that that differentiate the firm

from its competitors as well as decision to build something internally or acquire something.

According to SAM framework, fit between external positioning and internal arrangement is critical to maximizing the economic performance. IT strategies, according to SAM, should be articulated in terms of an external domain. So, IT managers should not only think in terms of internal strategy of organizations, their goal should be maximizing the business performance.

4.2.2 Integration of IT strategy and business strategy

Integration between IT strategy and business strategy is concerned with how one domain shapes other and vice versa. Strategic alignment model identifies two types of integrations between business and IT domains viz. strategic integration and operational integration. Strategic integration links the business strategy and IT strategy in external domain. It articulates how IT supports business strategy. Operational integration links the IT strategy and business strategy in internal domain. It ensures delivery capability within IT.

4.2.3 Dynamic nature of alignment

The challenges that a business face in market place are not static. Similarly, the alignment between four domains described in SAM framework is not static. They evolve with the change in business environment. It is very

important to recognize this factor and use appropriate measures to ensure alignment. Strategic alignment is an on going process.

5 Case studies

5.1 Campbell Soup

Campbell North America's portfolio includes powerful retail and food service brands, including: Campbell's, Pace, Prego, Swanson, StockPot, V8 and Pepperidge Farm. Each of these brands is in the market leader in its category or segment. Campbell's American business represents $5.2 billion in sales. Campbell International's portfolio features leading brands in Europe and Asia Pacific. Its international business represents $1.5 billion in sales.

The company was a top performing company in S&P Food group in 90s. But by the time Douglas Conant became the CEO, the company was struggling to sustain growth. Consolidation in the industry meant Campbell had to compete with the giants such as Kraft and Nestle. To add to it, Campbell's upstream agribusiness partners and down stream retail partners were consolidating and became more powerful.

Consumer habits were also changing. Ready to serve alternatives were becoming popular. This meant margin was decreasing while raw materials became costly. The leadership saw the need for rethinking company's business strategy. The company rolled out a transformation plan, which pursued to

increase growth, strengthen brand, increase product quality while increasing productivity.

For IT department it essentially meant providing an efficient service that could allow Campbell to respond promptly and cost effectively to the changing market conditions. In essence this meant aligning Campbell's IT with business strategies.

The new CEO brought the new CIO, Doreen Wright on board. The transformation of IT started with a first look at the internal IT capabilities and assessment of it core competencies. When Doreen started assessing the system, she discovered that IT has a portfolio of 1400 application. Also, the organization became quite decentralized. There were historical reasons that were responsible for these.

Over the years the company had acquired many different businesses and instead of integrating IT functions of these businesses with those of Campbell's, the IT functions of these businesses remained separate. The integration would have required investments but the previous management decided against such investments. The following figure shows architecture of IT systems in that era.
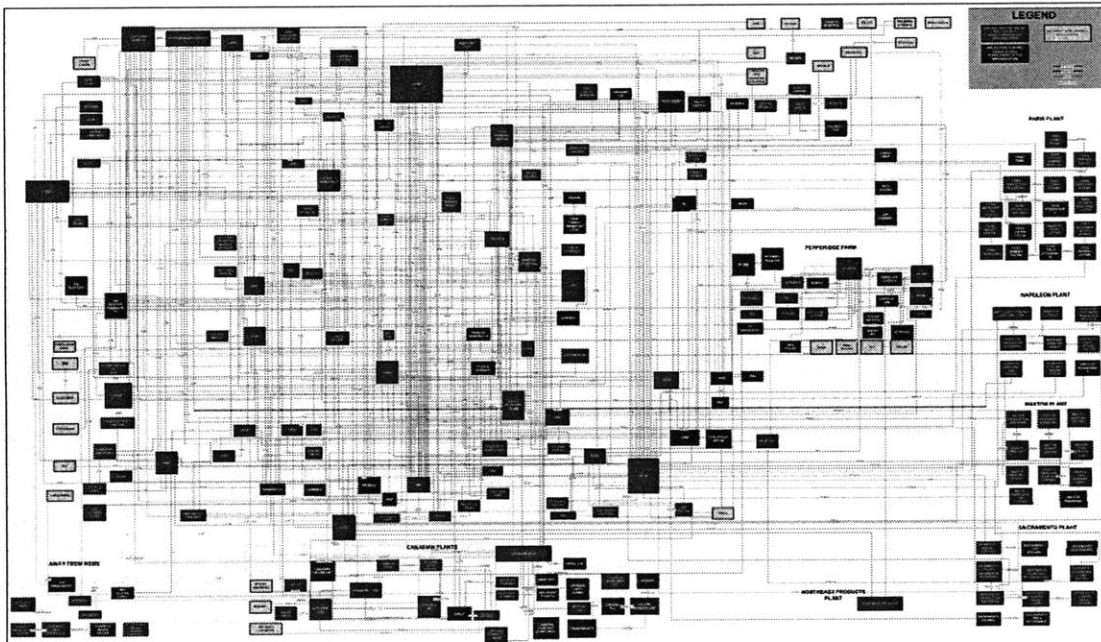
Figure 9: IT architecture of Campbell before transformation [22]

It was obvious that there was lot of scope for improvement in the infrastructure and skills required to support them. Doreen picked a Gartner model known as "IS Lite" that she believed would enable the transformation of the company. This model called for certain amount of centralization where needed.

Campbell's Europe and Asia Pacific units were run by geographical units but its US unit was run by individual businesses. The first step was to create a dotted line reporting between the CIO and IT executives. The dotted line eventually became a solid line [19]. The process also involved some restructuring because not all IT leaders were enthusiastic about change. Doreen's change strategy also included making Campbell's network a world class one.

In the skill front she leveraged an existing contract with IBM. The IT functions were already outsourced to IBM. Doreen was able to leverage that relationship to eliminate $4M in base operating costs. The next step was standardization of processes. Over the years IT applications were developed for particular units resulting in non standard business applications. SAP was chosen as it would save cost by reducing complexity. The senior executives developed a set of operating objectives which Campbell referred to as the global Framework of objectives: [19]

- Utilize standard SAP capabilities
- Reduce unnecessary touches
- Maintain/Improve customer services
- Maintain/Enhance order fulfillment process productivity
- Utilize "available to promise" across all business units
- Create customer transparency
- Drive "easy to do business with" concept
- Streamline/Improve controls
- Present a single voice to customer.
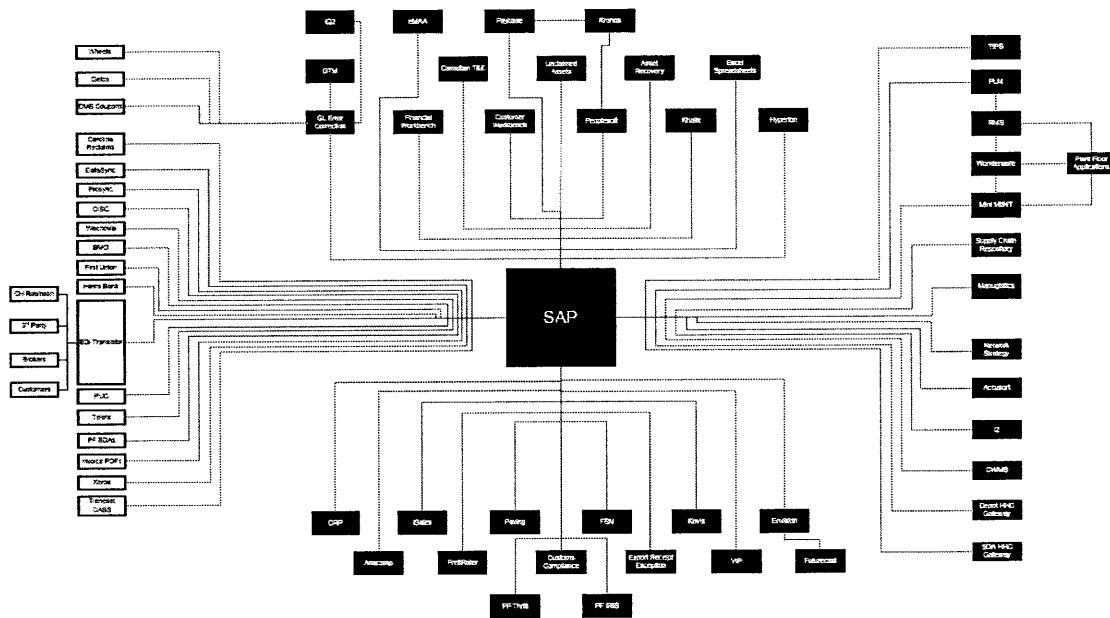
Figure 10: IT architecture of Campbell after transformation [22]

Campbell's SAP implementation was right on track in late 2009. It developed strong capability in security and infrastructure. They also built capabilities on wide range of process areas. In Doris's words: "Campbell's investments became aligned with company strategy".

According to CFO B. Craig Owens, the margin improvement achieved in its previous quarter was driven by "excellent productivity" in its supply chain and a modest cycling impact from pricing taken early in fiscal 2009". Cost reductions from supply chain productivity improvements contributed to gross margin percentage, outstripping inflation for the quarter. [22]

When we look at the journey of Campbell through the alignment process we see how corollaries of SAM framework are echoed through the process. Alignment process for Campbell was an on going process. Campbell did not achieve strategic alignment in a day. Many intermediate steps such as reorganization, standardization of process and choosing a vendor were involved.

We also see that Campbell synchronized its internal domain and external domain in the process. The global framework of objectives ensured that IT strategy would be synchronized with the external world. We also note that IT achieved both strategic alignment by becoming a part of business decisions and operation alignment by standardizing internal IT processes. So, we can explain this alignment through SAM framework.

5.2 Southwest airlines

Southwest Airlines is a domestic airline. The Southwest Airlines has built its business around the road warriors. The customers who travel from one city to another to earn their livelihood. Since they could also travel by car, Southwest's competitors were not other airlines but cars. Southwest attracted its customers because of its low price. But it retained its customers because of its superior service.

It was quite natural to assume that a cost conscious airline like Southwest airlines will rely on automation to lower the cost. But the company executives attributed its success to its culture. The company's advertisement boasted about this culture. "Love" so much part of its culture that the company, based in Dallas love field, used the symbol of the airport LUV in its advertisements extensively.

Initially, technology was not a huge part of Southwest's portfolio. It was expensive and management also believed that reliance on technology would create a barrier between Southwest and its customers. But eventually as technology became a part of its core strength. Southwest was the first airlines to offer ticket from its website. The company also relied more and more on the IT innovations. Technology became an enabler or business growth. In 2006, 70% of passenger revenue was generated by southwest.com.

An IT organization grew from 60 to 1200 between 1996 and 2002. But this break neck growth came at a price. The technology group was trying to please the business needs and there was very little synchronization among various IT groups within the organization. Over the year, IT became misaligned and was catering to local needs rather than supporting to business needs.

Southwest's transformation started with rationalization of data and tearing down silos. This involved three major changes: Overhaul of IT units, design and implementation of robust technology and adaptation of disciplined processes for prioritization of processes.

Southwest created a central IT organization by bringing all IT units under a CIO. It also created standardized infrastructure technologies. While these processes were in progress, IT leaders also rolled out IT governance plan. These changes delivered significant benefits, such as more reliable systems and strategic allocation of technology.

SAM framework's premise that alignment is an evolving process holds in this case too. IT in Southwest also went through a journey of evolution. The process started with the recognition that IT was working only to meet the business need of today and not the preparing to meet the need of tomorrow. The process of

alignment started with changing organizational structure and continued through the standardization process.

We see how Southwest aligned its internal domain with external domain by making IT a part of organizational strategy. When IT capabilities helped Southwest to become first airline to sell tickets online, IT became a differentiator for Southwest. This is how IT in Southwest achieved strategic alignment. The operational alignment was achieved by breaking down the silos in IT.

5.3 Swiss Re

Swiss Re is one of the largest reinsurance companies in the world. Reinsurance is an instrument for insurance companies to spread the risk of direct insurers. Swiss Re has been in reinsurance business since 1863. It operates in more than 20 countries and provides its expertise and services to clients throughout the world. The company is organized into three business segments: Property & Casualty, Life &Health and Asset Management.
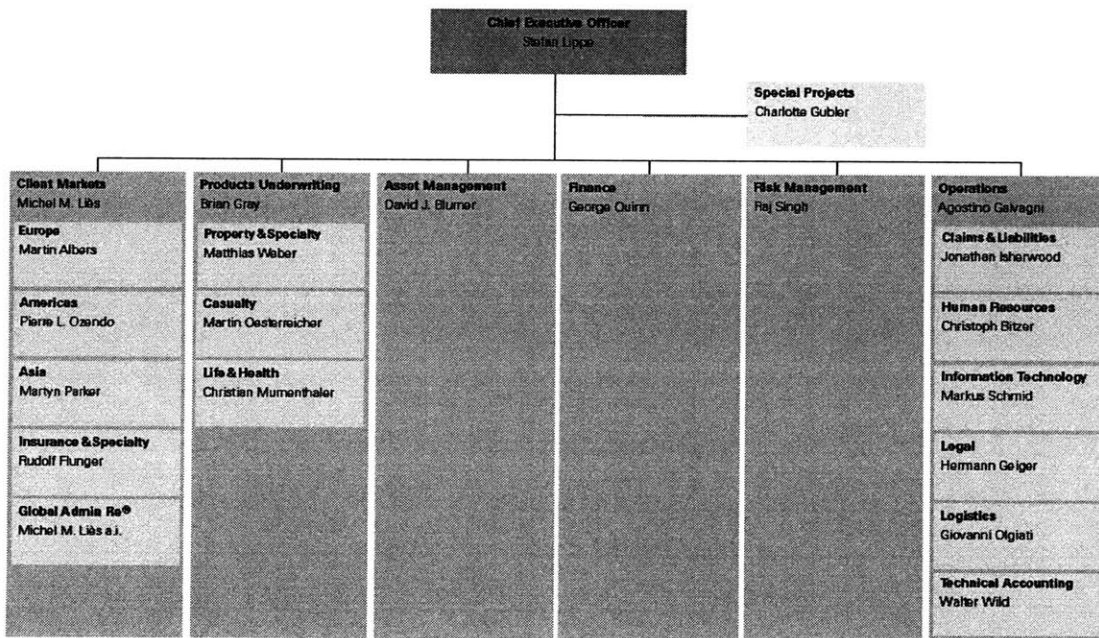

Figure 11: Organizational overview [25]

With the growth, the company's IT portfolio contained various siloed regional platforms and numerous locally sourced solutions. In 1996, the company started moving from a siloed, manual approach in managing key IT processes to an end-

to-end service management model in which IT processes are standardized, automated and aligned with business needs.

As the first step, the CIO introduced enterprise wide IT governance. The company also introduced an IT Governance handbook that aligns IT processes with business needs and clearly outlines roles, responsibilities and governance processes [**Error! Reference source not found.**]. The CIO reported directly to CEO and that role helped him to create a committee, which included heads of major businesses. The steering committee made investment decisions for global, shared IT infrastructure and applications while the individual business units retained their own IT development resources and made unit specific business decisions.

The steering committee was very instrumental in rolling out enterprise wide technologies. It rolled out a standard email client for the enterprise. The committee also initiated various other optimization efforts that resulted in cost savings, reliability, efficiency and scalability of IT infrastructure. But the most significant impact was adaptation of ITIL as a vehicle for process standardization. The standardization was a precursor to Swiss Re's transformation.

The quest for IT transformation got a new mark in 2001, when the company incurred its first loss since 1863. Also, the 2004 hurricane season (Charley, Frances, Ivan, and Jeanne) caused greater losses in the United States and the

Caribbean than any other storm season in history. The extent of losses were so great in 2001 because the terrorist attack touched many risks perceived to be uncorrelated e.g. Aviation property damage, business interruption, work men's compensation and life and health. The excess capitals were invested in equities, which also suffered massive losses in the days following 9/11. This financial loss caused the management of Swiss Re to do some soul searching.

The management noted that one of the contributing factors of volatility of earning was the firm's organizational structure. It exposed the firm to dramatic vulnerabilities due to extraordinary events. In 2001, the firm had eight geographical divisions and each region took on liabilities and managed its portfolios locally. These eight units did not co-ordinate their investment decisions and hence the company did not know its total risks. The information needed to understand and manage the company's risk position at global level was not readily available in 2001.

The competition landscape was also increasing. On one hand direct insurers were keeping more risk on their books and on the other hand insurance brokers, investment banks and hedge funds were all entering the reinsurance the market. All these forced the management of Swiss Re to explore various options to increase shareholder value. Swiss Re looked more closely to its IT processes.

But due to the nature of business, it was not possible to centralize entire decision making process. The nature of business is such that local knowledge workers needed to make decisions. So, Swiss Re's challenge was two fold. First, the senior managers needed detailed performance and market data to effectively set decision making criteria. Second, every knowledge workers needed specific contextual information to apply those criteria to individual transactions.
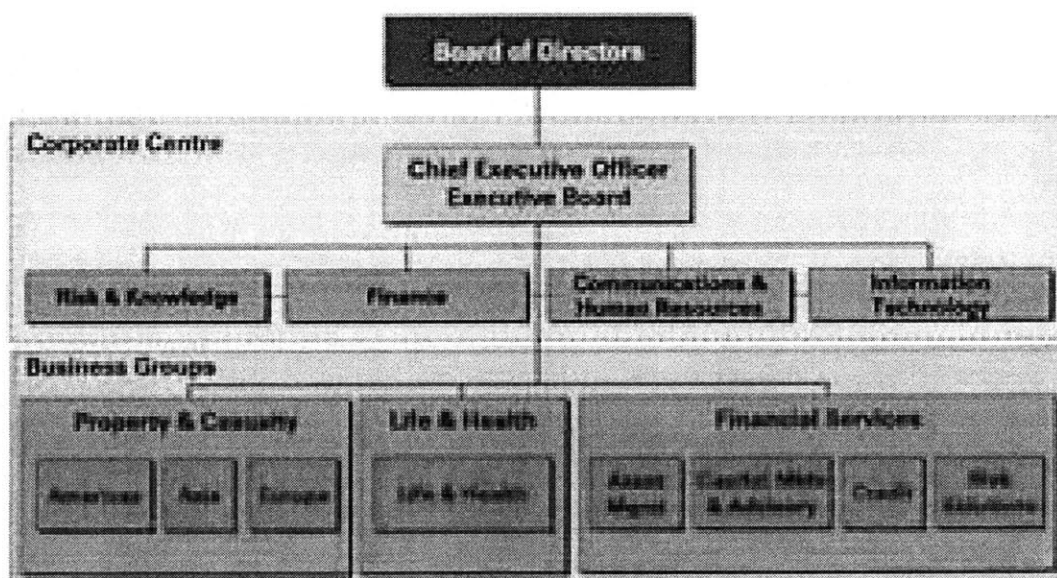
Figure 12: Organizational Structure of Swiss Re [27]

The CEO's vision was to create a global organization. He organized the firm into three global business groups: Property & Casualty, Life and health and Financial services. This prompted the second phase of transformation. Common processes across the geographical regions were adopted. Eight regional asset management centers were consolidated into two: one in New York and another

in Zurich. Both of these centers operated globally. IT became the company's tool for globalization.

The IT unit analyzed the company key business processes. But it was not a one time process. IT management initiated ongoing discussion with business units. But despite their increased on processes, IT also knew the importance of standardization of data. IT and business leaders at Swiss Re define what became known as Swiss Re Data Language (SDL) in their quest to standardize data. IT leaders crafted a high level architecture identifying the critical processes that Swiss Re needed to standardize to conform to SDL. The architecture became known throughout the company as Business Application Architecture (BAA)
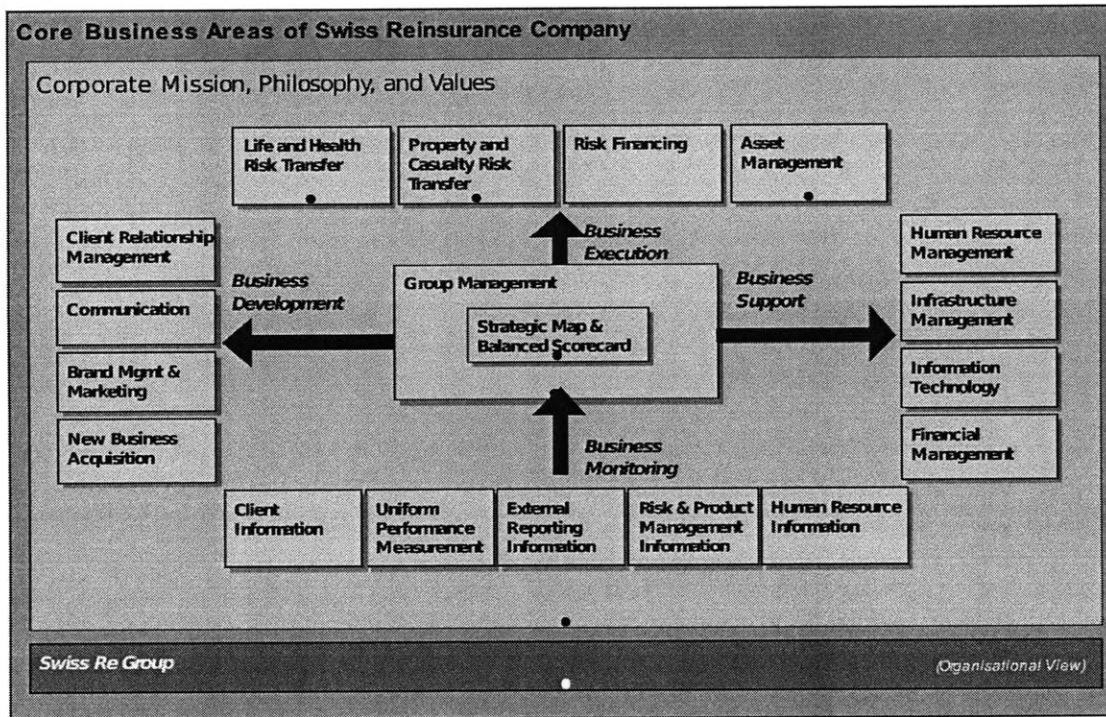
Figure 13: Core business areas of Swiss Re [27]

The IT and business units developed an enterprise model that consisted of process oriented Business Application Architecture (BAA) and data oriented Business Information Model (BIM). Business groups controlled their own business specific details.
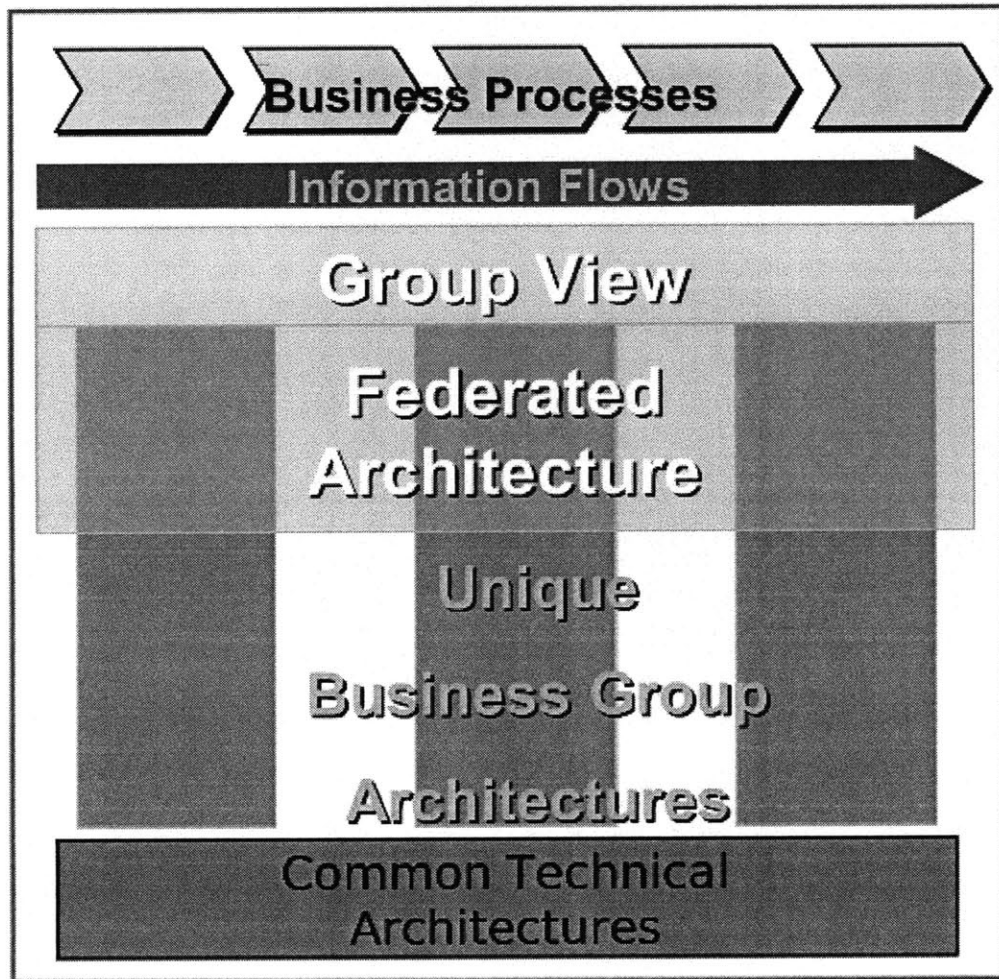
Figure 14: Enterprise Architecture of Swiss Re [27]

The adaptation of this enterprise model involved unification and integration of various departments and the process. It was not an easy process by any means. Despite initial reluctance, the business units eventually embraced the change as the benefits became evident as time went by. Asset management for example reduced incidences of delay and errors. The global processes increased transparency. The decision makers were able to monitor results of their decisions

with ease. Global process also helped manages to respond to change in business environment promptly.
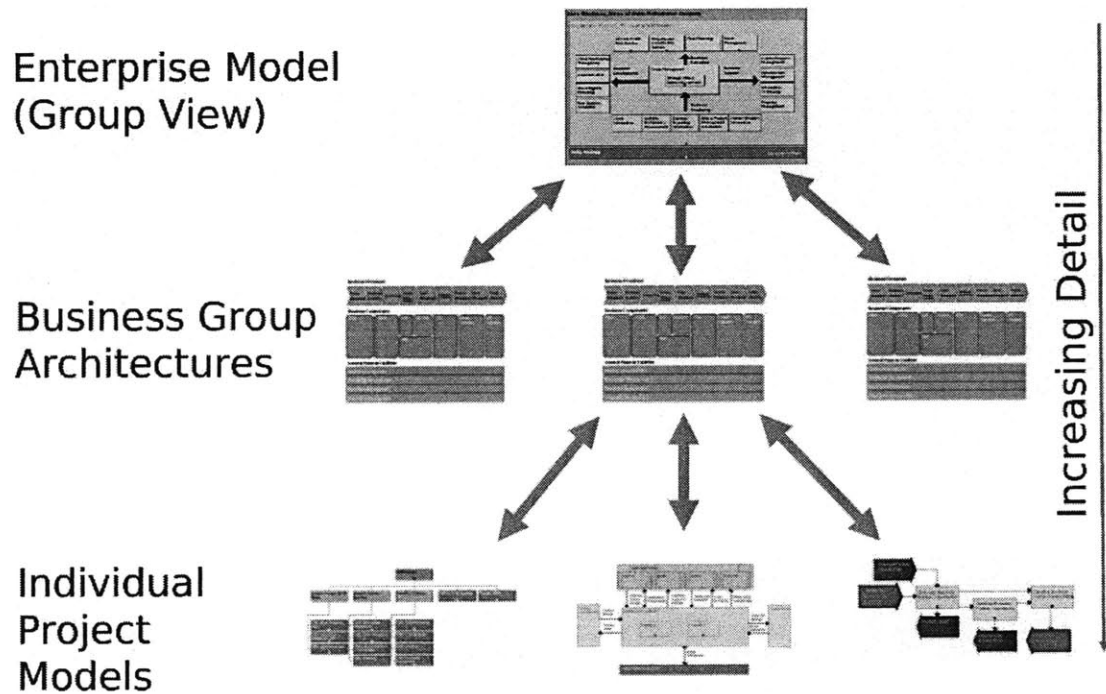
Figure 15: Enterprise Architecture of Swiss Re [27]

These standardizations also helped Swiss Re to respond more effectively to change in regulatory environment. Responding to country specific European regulations and Sarbanes Oxley act (SOX) in USA was also much easier.

Journey of Swiss Re is yet another example of how SAM framework is correct about alignment process. Alignment was not the outcome of any single event. The alignment was achieved because of a series of organizational evolution. The executives recognized the bottleneck in the system, and started the process

with organizational change. The process continued through the standardization of processes and eventually helped IT in Swiss Re become an agile organization. One clear example is how Swiss Re was able to respond promptly to changes necessary to comply with SOX. Operational alignment ensured controls were in place and strategic alignment helped business respond quickly without incurring huge cost. Swiss Re's internal and external domains were clearly synchronized.

6 Conclusion

If we consider top 10 IT issues, strategic alignment between IT strategy and business objective is sure to occupy a very high position in the list. This assertion is validated by research reports from reputed organizations such as Gartner, McKinsey and others. Considerable scholarly work has been done in this area of strategic management. But there is no consensus among researchers on definition of strategic alignment. But everybody agrees that strategic alignment creates economic value. Today we have tools and frameworks to understand and measure strategic alignment.

One such framework, strategic alignment model (SAM) has been widely quoted in literature and it has some practical suggestions to achieve alignment. SAM defines IT strategy in terms of four related domains. It asserts that to achieve alignment, there should be coherence in decisions taken in each domain and that alignment is an evolving process. The strategic alignment can not be achieved in a single step. On the contrary, strategic alignment is attained in a series of steps over a period of time.

I noticed these guidelines of SAM framework in action in companies that achieved strategic alignment. For example, no company I studied achieved alignment in a single step. Each company took a series of steps to align its IT objectives with business strategy. The journey to alignment started with

realization of top management that there was misalignment. Similarly, after achieving strategic alignment an organization can't stop. There is no room for complacency. As the SAM framework states, strategic alignment is an on going process. So, these organizations should continuously measure and take appropriate actions to maintain alignment.

But it is also interesting to note why misalignment occurs in the first place. The prevailing view in the industry is to use IT as a beast of burden. Many companies don't see IT as a strategic resource despites its strategic potential. For them, IT is a big programming shop. IT in its quest to satisfy the need of the business builds redundant systems without seeing the bigger picture. The result is obvious. But successful companies are quick to realize this and save themselves from this downward spiral.

I have seen some striking patterns in the cases I studied. During the period of growth, the systems often get misaligned. Companies often build IT systems to meet the need of a growing business. The business domain IT domain becomes misaligned starts bleeding the company. All three case studies show how major IT systems were developed in isolation in response to business needs. There was no big picture to show how these systems would interact. There were redundancies and conflicts but no mechanism to prevent such problems. IT systems and services were poorly aligned with business strategy, reducing

company's agility and competitiveness. For Swiss Re it resulted in tremendous loss, For Southwest it caused reservation system shutdown and for Campbell soup growth was inhibited.

So, this is not the problem of legacy technology. Rather a failure to create a consistent system. Technology will not solve problem unless processes are well defined. Creating an Enterprise Architecture could make the processes consistent. EA is a structured approach that creates business value by connecting business strategy with technology solutions.

But it may not be possible to see such shortcoming when the company is growing. Money is coming and if ain't broke why fix it? But as the growth slows down and companies go to the drawing board again to figure things out, these problems start staring at them. The most important aspect of IT transformation is CEO-CIO relationship. The business leaders should have faith in IT. CIO on the other hand should have earned the trust of business. IT earns its trust by providing reliable services

IT leaders should place proper governance in place so that the decision making process within the organization is crystal clear. Governance seems to be a key ingredient of strategic alignment. IT transformation in all three cases started with

formulation of IT Governance. Strong IT governance policies those involve both business and IT executives play a critical role in transforming IT.

IT Governance starts with clearly defined roles and responsibilities that establish who makes what decisions. It clearly specifies the extent of control that corporate executives will exercise and how much of it will be left to the individual divisions and business units. There are various standardized frameworks such as ITIL and COBIT available to facilitate this change.

Standardization plays the next part. It is very important to define the processes and eliminate unnecessary complexities. And use enterprise architecture to document the organizational structure. Enterprise Architecture (EA) capabilities not only help companies to create new systems that fit together seamlessly but also establish a clear and consistent approach that would help them avoid similar problems in the future. To achieve strategic alignment we should define the business processes first and then we should use a frame work such as ITIL or COBIT or use ERP software to facilitate standardization.

Finally, we should identify the processes that could be commoditized and find a vendor or choose standardized software or migrate to common off the shelf solutions. Outsourcing to a vendor may have a cost advantage while freeing up internal IT resources for implementing more strategic objectives.

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