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A BUSINESS INTELLIGENCE RESEARCH PAPER

Outsourcing Information Technology

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Introduction and Definitions

1.1 Introduction

In today's fast pace world we are faced everyday with new challenges, new obstacles and new competition. If we see our own life we find ourselves giving many of our everyday tasks to external objects, like eating outside instead of cooking, ordering groceries online instead of shopping, sending kids to school instead of teaching them at home and so on.

The same thing is happening in corporations, businesses and specially in startups. a company today can no longer do everything by itself from accounting to R&D to marketing to manufacturing. the more the company grows the harder it becomes to manage everything. that's why many big corporations are splitting their corporation into smaller companies with specialised goals and tasks.

Today outsourcing is a must to any business if it want to stay competitive, "If you are good at something, then keep your focus only at what you are good at", many big companies are starting to take outsourcing even into sensitive tasks in order to stay competitive. a very good example is Intel outsourcing their 11th generation CPU's production to Taiwanese TSMC, another very good example is Apple where the only thing it does is R&D and products Development and almost everything else is outsourced.

Another area is new small companies or startups, people think that sense the business is new and small there is no need to outsource, and it would be better to do everything in house to save costs. but this is totally wrong and the opposite is true, we take a small example of stripe a multi billion dollar company that was a small startup just a few years ago. they only focused on programming and designing their system, and they outsourced production of POS systems to other companies, they outsourced Marketing to another startup that they shared the same working space with, they even outsourced web developers from India and Europe to redesigned the front end part of the system after many negative feedback from the customers of their interface.

As we will see later on in this paper outsourcing is a tool, and as any tool you need to know how to use it when to use it and if you need to use it. the tool in the wrong hand or with no knowledge about it can do more harm that good. as we will see in Chapter5.

1.2 Definitions

Leading authorities have defined IT outsourcing as the contracting of part or all of a firm's IT function to one or more external suppliers to achieve a firm's goals (Richmond & Seidmann 1993, Willcocks & Fitzgerald 1993, de Looff 1995, Cheon et al. 1995, Domberger et al. 2000).[14]

1.2.1 According to Human Resource Outsourcing Association (2003)

"Outsourcing is defined as the contracting of one or more of a company's business processes to an outside service provider to help increase shareholder value, by primarily reducing operating cost and focusing on core competencies."[12]

1.2.2 According to Daniel Minoli (1995)

"Turning over of information systems and/or communications functions, as a whole or in part, to a third-party contractor as a solution to the challenge, problem, and expense of creating and running a corporate information enterprise."[12]

1.2.3 According to ADP.com

"Outsourcing is the contracting out of a company's noncore, nonrevenue- producing activities to specialists. It differs from contracting in that outsourcing is a strategic management tool that involves the restructuring of an organization around what it does best - its core competencies."[12]

1.2.4 In the Unisys U3 Conference in 1993, Geoff Kilby of Duesburys

"A contractual relationship where an external organization takes responsibility for performing all or part of an agency's Information Technology functions. This can involve a partial or complete transfer of staff and/or resources."[12]

1.2.5 According to Dianne Northfield (1992)

"An arrangement whereby a third party provider assumes responsibility for performing information systems functions at a pre-determined price and according to predetermined performance criteria."[12]

1.2.6 What Is Software Outsourcing?

Software outsourcing is a practice in which a company delegates software development functions to a third-party vendor. The qualified software outsourcing vendor carries out the programming services and related functions by using the in-house talents and resources. In this way, the software outsourcing vendor saves the resources of the client by paying lower developer salaries.[13]

1.2.7 What Is the Meaning of Project Outsourcing?

Project outsourcing is an approach within which a client fully transfers the responsibility for the product to the vendor. Clients refer to project outsourcing meaning that they would like to delegate either just tech team management or software development and team management to a vendor.[13]

1.2.8 What Is Outsourcing Information Systems?

Outsourcing information systems means that business delegates the data storing to a third-party vendor. A company can consider outsourcing information systems to reduce data storage costs and ensure data security. Data storage centers located in outsourcing destinations charge lower prices for managing, configuration, and actually storing data which makes outsourcing information systems one of the popular approaches in the tech sphere.[13]

1.2.9 What Is Outsource Staffing in IT Outsourcing?

Outsource staffing in IT outsourcing usually refers to practice when a company externally hires talents to fulfill some crucial functions. The main benefit of outsource staffing here is that a company can save on expenses without losing the high quality of work.[13]

1.2.10 What Is the Meaning of Project Outsourcing?

Project outsourcing is an approach within which a client fully transfers the responsibility for the product to the vendor. Clients refer to project outsourcing meaning that they would like to delegate either just tech team management or software development and team management to a vendor.[13]

1.3 Global Trends and Practices

Many high-profile, IT outsourcing multi-million/multi-billion "mega-deals" are by now familiar. Companies that have outsourced significant portions of their IT functions by transferring their IT assets, leases, licences, and staff to outsourcing suppliers include British Aerospace, Chase Manhattan Bank, Continental Airlines, Continental Bank, Enron, First City, General Dynamics, Kodak, and McDonnell Douglas (now Boeing). Since these first mega-deals were signed, the outsourcing market has grown in size and scope of services (see Table 1). In 1999 there was some slowdown after very rapid growth in 1998, but if there were fewer mega-contracts in 1999, there was an increase in medium-sized deals. Moreover, many we talked to were planning outsourcing, but postponing implementation until the Y2K threat and other issues had passed.[10]

IT outsourcing also shows growth across sectors, but also across global regions. The market has been taking off in South America, parts of South East Asia, and Western Europe, all of which have previously resisted the trend. Thus across the 1997-2002 period IDC has predicted annual growth rates of 16% for Asia/Pacific, 20% for Latin America, 8% for Western Europe, 5% for Japan, 14% for Canada, and 26% for the rest of the world. Most notably, the increased competition in the outsourcing market, and a mounting customer experience base, have afforded customers the leverage to negotiate more favourable/flexible deals. Small suppliers are entering the market by focusing on niches. An example has been Convergent Communications, which targets companies with 25 to 500 desktops. Large suppliers are even differentiating their services to focus on niche markets. For example, in 1997, AT&T Solutions separated its outsourcing unit into three divisions for network building, network management, and consulting. Indeed, there has been some further diversification of the market away from a one-size-fits-all model to 'best of breed' in which

specialist suppliers in such areas as desktops, networking, call centres, data centres and applications management take on their parcels of the IT operations. Sometimes, in big deals, the use of such suppliers is increasingly taking the form of sub-contracting. On our estimates, in such deals, as much as 30-50% of the work might be sub-contracted in this way. At the same time, e-commerce developments – the need to act speedily and with little expertise to do so, combined with the expanding third party services available - has been pushing the boat out further in terms of what firms are willing to contemplate outsourcing. Thus the rapid development in 2001 of, for example, web application hosting/application service providers, and business process outsourcing.[10]

Chapter 2

History of Outsourcing

2.1 How it all started

Most businesses outsource all kinds of activities, from bookkeeping and accounting, to customer service, to materials supply, to shipping. There are several reasons to outsource. For one, keeping a full-time staff for rarely needed services is an inefficient use of funds. In addition, many companies simply can't compete for top talent, so it's easier to outsource to professional firms that can provide needed resources and specialists.[1]

When it comes to information technology (IT), which moves along at breakneck speeds, hiring qualified staff and keeping them trained in the latest advances may simply be beyond the budgetary resources of many companies. So it's no surprise small businesses and mega-corporations alike have a long history of outsourcing for their technical support needs.[1]

Many companies used to try to do everything in-house before outsourcing was a common commodity. These days, there are so many affordable options that companies stand to get more bang for their buck when they seek outside help. Here is a brief history of how IT outsourcing became the common practice we know today.[1]

2.1.1 First instance of IT outsourcing

The first instance of IT outsourcing occurred in 1963 when Ross Perot's company, Electronic Data Systems (EDS), took over all of Blue Cross of Pennsylvania's data processing services. EDS continued to provide IT services to other companies throughout the 1980s, and outsourcing started to gain some attention.[14]

In 1989, Kodak contracted out its data center operations in an agreement with IBM, DEC, and Businessland. Kodak's decision changed attitudes toward IT service provision forever. It was the first time that well-known company had outsourced a strategic aspect of its IT function.[14]

Hatonen and Eriksson (2009) delineated three different periods in the evolution of IT outsourcing. The Big Bang period occurred between the 1980s and early 1990s. This period began with Kodak's revolutionary decision and focused primarily on cost-cutting measures. The Bandwagon period spanned from the 1990s to the early 2000s, and many companies that utilized IT outsourcing did so in order to cut costs, enhance capabilities, and improve processes. During this period, the focus of IT outsourcing revolved around its determinants, strategies, and the mitigation of risks.

The period of 'barrierless' organizations began in early 2000 and continues today. This period is one in which organizational transformation has been the focus.[14]

2.1.2 Early Data Centers

The inception of IT outsourcing cannot be tied down to an exact date, not in the same way that a corporate entity opening its doors can. However, it is generally agreed by industry insiders that IT outsourcing officially began in the 1980s.[1]

In 1989, Eastman Kodak struck a deal with IBM. The computer giant was tasked to design, build, and manage a data center on behalf of Kodak. At the time, Kodak is said to have transferred hundreds of their own staffers to IBM's Integrated Systems Solution Corporation (ISSC).[1]

The reason this was seen by many as the birth of IT outsourcing is that it created a revolution of sorts within the corporate world. Up until this point, many corporations would never have considered outsourcing on this scale, preferring to keep necessary services in-house.[1]

When a well-known company like Eastman Kodak decided to outsource on this massive scale, other corporate entities took notice. It wasn't long before many were following suit. As a result, IBM became the dominant IT service provider in the late '80s and throughout the '90s.[1]

Electronic Data Systems (EDS) was another early pioneer in IT outsourcing. However, the company took a different tack than IBM by providing IT services without being linked to a hardware manufacturer. The company entered many lucrative, long-term contracts for service with topnotch corporations by taking the angle of solving business problems through IT outsourcing, rather than offering support services linked to specific products.[1]

2.1.3 Application Service Providers

As computer networks began to grow in the '90s and businesses required more software and services, application service providers, or ASPs, moved in to meet demand. These outsourcing options often targeted the needs of a specific industry or business type, or provided a single application that many businesses could use, such as timesheet or payroll services, or credit card processing, just for example.[1]

In some cases, the software for these services was downloaded by users, while in other instances (such as PayPal), the service was hosted by a website that users could log onto. Over time, the limited scope of ASPs and the increasing demands for multifunctional service providers would lead to the growth of a new form of IT outsourcing.[1]

2.1.4 Managed Service Providers

Over the past several years, managed service providers, or MSPs, have slowly replaced many ASPs as the primary source of IT outsourcing. They provide users with fully integrated systems, computer security, off-site backup, cloud functionality, and

maintenance and monitoring options. It's the total package that many modern companies are seeking with affordable pricing options and scalability to meet the needs of businesses large and small.[1]

2.1.5 Long-Term Partnerships

These days, businesses expect more services than they did in the past where IT outsourcing is concerned. Companies are no longer seeking a data center to store their files – that's what the cloud is for. They no longer want individual software applications – they want integration. Plus, they want an entire team of IT specialists at their beck and call.[1]

Modern businesses are looking for long-term IT partners who can handle all of their outsourcing needs with efficient, secure, and affordable services. They want all the benefits of an in-house IT department without actually having to staff one. MSPs are currently filling this role, and with many moving into cloud services and remote maintenance, monitoring, and security, the future of IT outsourcing is once again changing to meet the wants and needs of corporate customers.[1]

Chapter 3

Different types of Outsourcing

3.1 Geographical types

The unprecedented economic recession in 2020 caused by the spread of coronavirus has stimulated businesses to seek new tech talents outside their countries. Not only companies continue outsourcing software development function to optimize costs but also to grow through the recession. Many businesses embrace outsourcing because it helps them work with vetted specialists for a perfect quality-cost ratio.[13]

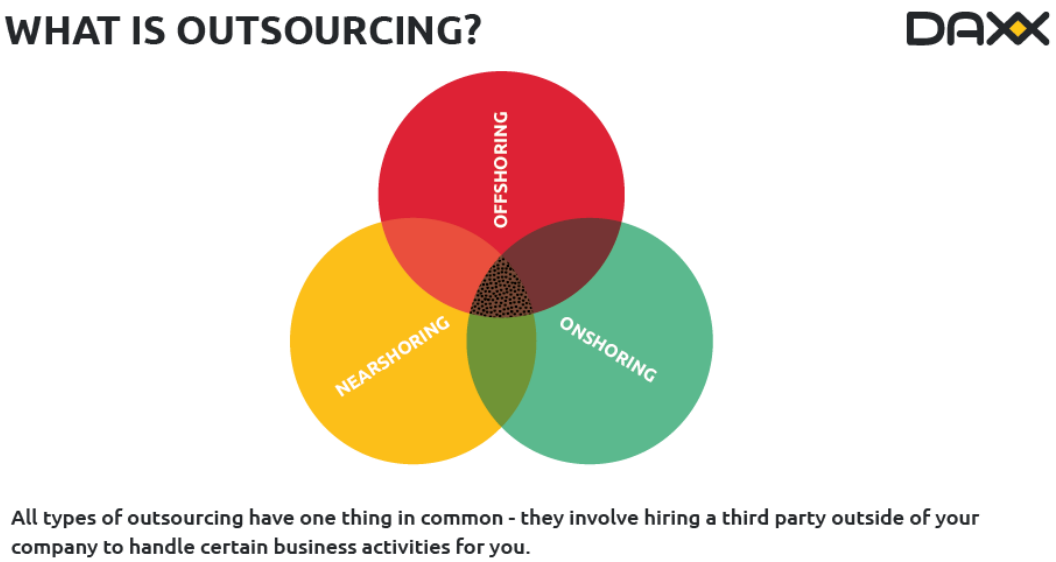

FIGURE 3.1: Types of outsourcing.

The downfall is leaving a footprint on many small and middle-sized businesses across all industries. Curiously, those companies that have undergone digitizing report lighter impact from an economic recession. So do the tech education, pharmaceutics, and medicare are gaining momentum and even growing their businesses by outsourcing software development. Meanwhile, tech travel and many other businesses choose to work in a safe mode.[13]

3.1.1 Offshoring

Also known as offshore outsourcing, it means outsourcing IT services to a distant location to benefit from lower labor costs, more favorable economic conditions, time zones, or a larger talent pool. Time differences we are talking about here are at least 5 or 6 hours.[13]

FIGURE 3.2: Types of geographical outsourcing.

Extreme time differences can definitely come in handy for companies that need to provide uninterrupted tech or customer support, and for those who run constant updates and maintenance work.[13]

Example: a US-based Interactive Marketing Agency outsources web development to a Ukrainian company.[13]

3.1.2 Nearshoring

Nearshore outsourcing is very similar to offshoring, albeit with one important difference: this is that nearshoring means outsourcing software development or other IT functions to a location that is much closer to your home — usually in the same time zone or one within a couple of hours of it.[13]

Nearshoring enables much smoother communication compared to offshoring. What's more, countries that are located close to each other share cultural crossovers that can simplify communication.[13]

Example: a startup based in the Netherlands hires a development team in Ukraine.[13]

3.1.3 Onshoring

Also called homeshoring refers to delegating a number of business processes to a different location within national borders. Usually the chosen location has lower labor and operational costs.[13]

While cost savings are the main reason to onshore, skill shortages can also drive businesses to look for talent in alternative locations.[13]

Occasionally, the term "homeshoring" is also used to describe a situation in which employees work from home.[13]

Example: a company based in Washington engages IT security experts from Texas.[13]

3.1.4 Multisourcing

This term describes outsourcing business processes to multiple vendors, thus diversifying the risk in vendor operations.[13]

Example: the main development capacities of a German software development firm are located in Munich. Occasionally, the company works on projects that also require design services, and when this happens, they contract a small design agency in Hamburg. Later, the company lands a major long-term project that requires skills the Munich team doesn't have, which is when they partner with a development company in Ukraine to help them complete it. A few years later, the company releases its own product which they want to market in China, and for this purpose they engage a Chinese marketing agency with a much better knowledge of the local market.[13]

3.2 Cloud Outsourcing

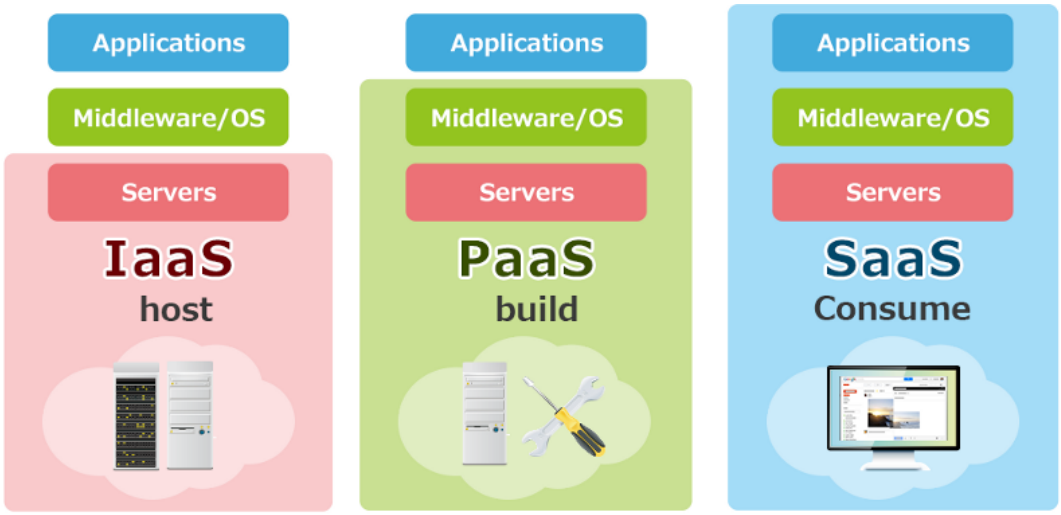

FIGURE 3.3: Types of cloud outsourcing.

Cloud computing provides scalable and often virtualized computing resources to fill a business need on demand. Cloud computing provides servers, storage, and computer power as a service rather than a product. Resources, software, and other information are provided dynamically like a utility over a network, often the Internet. Types of delivery include private cloud, public cloud, hybrid cloud, or community cloud as well as one or more of the following services: software-as-a-service (SaaS), infrastructure-as-a- service (IaaS), or platform-as-a-service (PaaS).[7]

Cloud computing gives businesses the flexibility to adapt to their market and launch an initiative or program without buying and maintaining expensive IT capacity. Another consideration for cloud computing is being able to trade huge capital purchases for a pay-for-use model.[7]

IT experts and firms no longer consider cloud computing as just a tool because of the considerable changes it brings. Cloud computing has been playing an essential role in data management and goal achieving of companies all over the world in the past few years. Cloud service outsourcing is predicted to continue to evolve at a rapid pace in 2019. If company makes technology-related decisions when moving to

cloud or opting for cloud-native development or optimization and wants to prevent unnecessary expenditures and needs for reimplementation, cloud consulting can help.[5]

Before jumping to the next part, we should know what Cloud Computing is. According to Amazon Web Services, Cloud is a kind of outsourcing for the purpose of storage, database, applications and other computing resources, which is delivered via the Internet. Cloud has provided an immense amount of information, which is a basis of other dominant technology trends such as the Internet of Things (IoT), Artificial Intelligence (AI), Social Platforms or Blockchain.[5]

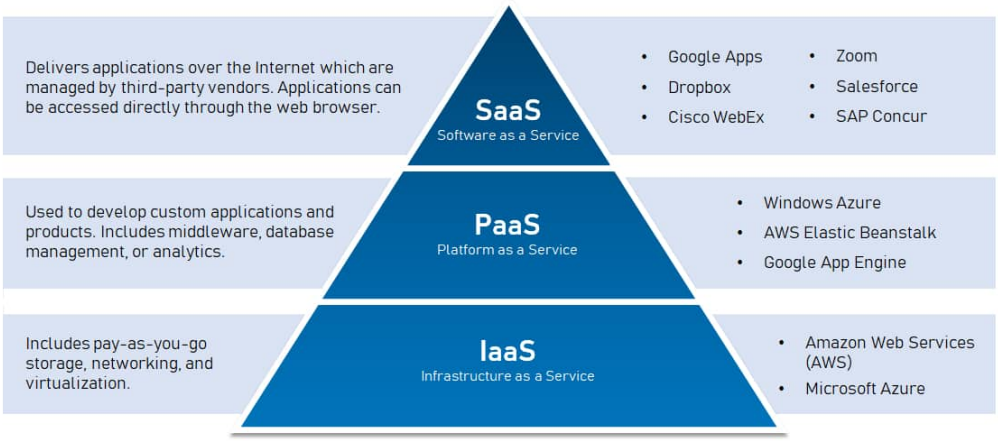

FIGURE 3.4: cloud outsourcing.

While cloud computing services enable you to make use of limited or unlimited storage space through Internet access, including store data and access various resources whenever and wherever you want, it would introduce great risks to your security. At the enterprise level, security in the cloud can be considered the deciding factor in the decision of outsourcing cloud services instead of keeping it within the walls of the office.[5]

According to Gartner's predictions, 1 Trillion in IT Spending on enterprise software and data centre systems all moving to the Cloud by 2020. It must be a visionary step of enterprise leaders to protect their business's digital assets from cybercriminals. In 2019, outsourcing cloud services not only strengthen the security but also enable enterprises to enhance business management and development, reduce human resources costs and accomplish their business goals.[5]

3.2.1 Software as a Service (SaaS)

Finally, Software as a Service (SaaS) offers the most support and is the simplest of all delivery models for the end user. Chances are that you already use it in your organization.[8]

SaaS can be run in a multitenancy architecture, in which one instance of software serves multiple users. Typically, SaaS products don't involve a download or installation, saving your end users from needing to manage software updates. All they're responsible for is their data. Popular examples of SaaS include CRM software, cloud-based file storage, and email.[8]

3.2.2 Platform as a Service (PaaS)

The next level of service is Platform as a Service (PaaS). PaaS is similar to IaaS, except that your cloud service provider also provides the operating system and databases. That means less work for your IT team. Your organization is still responsible for applications, functions, and data.[8]

PaaS gives your developers a simple, scalable platform for building applications. Much like with IaaS, you can buy more resources as needed. And because multiple users can access the development application at the same time, PaaS can streamline workflows and enhance coordination. Some examples of PaaS are AWS Elastic Beanstalk and Google App Engine.[8]

3.2.3 Infrastructure as a Service (IaaS)

With Infrastructure as a Service (IaaS), a cloud service provider owns and manages the hardware upon which your software stack runs. That includes servers, networking, and storage. This can be a great cost-reduction strategy if you'd like to avoid purchasing and maintaining infrastructure.[8]

However, there's still plenty of work for your IT team. Under the IaaS model, your IT team manages operating systems, databases, applications, functions, and all of your organization's data. As a result, they'll typically have more control and flexibility compared with other service models.[8]

IaaS is self-service, which allows your IT team to access resources as needed through an API or dashboard. Some common examples of IaaS include instances on Amazon Web Services (AWS), Google Compute Engine, and Microsoft Azure, which let you buy more or less capacity as you go. That means there's very little commitment involved—an advantage if you think your needs will change in the near future. If you're part of a large organization, you may also have access to IaaS from another part of your enterprise.[8]

Chapter 4

Methodology of Outsourcing

4.1 The Outsourcing Methodology

A sample methodology described in Outsourcing Information Technology, Systems and Services involves 6 stages of outsourcing. This is just one method or process; there are others that can be followed. The key point is that as systematic approach to the outsourcing process is crucial to the success of the outsourcing. A court can increase their chances of succeeding by hiring an experienced consulting firm to lead them through the labor intensive, expensive and risky process of outsourcing. The 6 stages are summarized below:

1. Feasibility and Planning Phase: The phase in which the objectives and scope of the outsourcing idea are defined and scrutinized and made to pass various criteria or screens before a decision is made to proceed. The ensuing effort is planned in terns if time, budget and resources needed.

2. Analysis Phase: Baselines are constructed, if needed, and the service levels required of vendors are specified. Relationships between the information systems functions(s) to be outsourced and other functions that will remain in-house are also clarified so that contracts with vendors are certain to include proper interfaces with IT performed in-house. The Request for Proposal (RFP) is developed, responses are collected from vendors and analyzed and a vendor is chosen.

3. Design Phase: Negotiations go forward with the vendor and contract is developed and signed.

4. Implementation Phase: The transition from in-house provision of information system services to outsourcing is made.

5. Operations Phase: The outsourcing relationship with the vendor is managed and any maintenance or changes in the outsourcing relationship are negotiated and implemented.

6. At the end of the contracting period the cycle begins again and the decision must be made whether to negotiate with the existing vendor, a new vendor or to bring the IT function back inside the organization.[4]

4.2 Golden rules to follow

4.2.1 When Exploring Outsourcing

There are some actions that will help the success of your outsourcing endeavor. They are outlined below:

- Identify persons who will take the leadership responsibility, do the analysis and make the decisions. Determine the appropriate level of management for the job. For larger outsourcing initiatives, top management must play a role. An executive sponsor or champion is necessary if the situation calls for involvement in organizational politics and/or if the outsourcing considerations are of great magnitude.[4]

- Form a team that has representation from the managerial and technical perspective along with representatives form user areas directly and heavily impacted by the outsourcing under consideration. Keeping in mind though that smaller teams are more effective. It is best that those members on the team be able to devote the time necessary to get the job done right.[4]

4.2.2 If You Decide to Outsource

- Identify persons in the IT department who will be given responsibility for oversight and management of the outsourcing arrangement and vendor relations after the contract is signed. These managers should be part of the team that crafts the contract. Their inclusion is critical for several reasons. First, there is no better way to understand the issues involved in outsourcing than to be involved in all aspects leading up to the deal. Second, relationships with vendors start at the moment discussions begin. Being on the ground floor and having continuity in the relationship with people in the vendor organization contributes to success.[4]

- Caveat: If outsourcing is being considered because of high costs or poor performance of the IT department, it may not be possible to rely on internal sources for accurate estimates of internal costs or internal effectiveness. Under these circumstances, bring in objective outsiders to do some of the assessment work.[4]

- Never outsource all of IT Management. It may be obvious, but it is important enough to emphasize that at the outset of total outsourcing, no organization should outsource its capability to manage outsourcing and information systems technology strategy. Don't outsource all information systems responsibility to a vendor. Retain a small group of IT managers who: (a) manage ongoing outsourcing relationships with vendors, (b) oversee and pass on vendor technical decisions, (c) develop experience with outsourcing and help make future outsourcing decisions, (d) negotiate and enforce future outsourcing contracts, (e) develop the information systems technology strategy of the organization for the future as it relates to support of business needs, and (f) keep overall information systems strategy in alignment with overall corporate strategy as it evolves over time (Cronk and Sharp 1995)."[4]

The retention of strategic control by the customer is often key to a successful outsourcing relationship because it ensures that the customer has control over its technology direction, which is "core" to the customer's business even if the actual

implementation of such direction may not be." (Halvey 50)."[4]

- Make sure you count all costs. For example: The number of information technology and telecommunications positions working within the scope of this proposal was 347 staff years for Fiscal Year 1998-99. Approximately 300 of the positions were filled at the time. In addition, there were approximately 25 employees filling non-information technology support positions impacted by the proposal. Thus, the total was approximately 372 staff years. The County created approximately 37 positions to monitor the contract, provide departmental critical support functions, focus on a smooth transition and ensure that the County retains critical expertise.[4]

- Management/Vendor Relationship is critical.[4]

- How the relationship between customer and vendor is framed and managed is another critical element.[4]

- Vendors can bring extensive expertise to a technology project. However, they are going to want to minimize their risk and maximize their profits. Court officials need to acknowledge this reality and work to acceptably distribute the risk between the vendor and the customer while allowing the vendor to make a reasonable and justifiable profit.[4]

- A solid contract between a court and the vendor can go a long way to reducing conflict during the course of the project. However, it is important to realize that problems will arise. How the courts and the vendor have established their working relationship will go a long way in determining how problems will be resolved. Vendors become frustrated with customers who have several people representing the court's interest. Ultimately, the courts need to designate a single individual who will represent the court when interacting with a vendor during a technology project. Ultimately, the vendor needs the court as much as the court needs the vendor. A successful project is to the benefit of both, and that realization should be kept in the forefront of the relationship with the vendor." (Peay 5-6)[4]

- Communication with the Customer and the Staff regarding the events of the outsourcing is critical.[4]

Chapter 5

Advantages and Disadvantages of Outsourcing

5.1 Advantages of Outsourcing

5.1.1 Cost Savings

There can be significant cost savings when a business function is outsourced. Employee compensation costs, office space expenses and other costs associated with providing a workspace or manufacturing setup are eliminated and free up resources for other purposes.[11]

5.1.2 Focus on Core Business

Outsourcing allows the organization to focus on their expertise and core business. When organizations go outside their expertise, they get into business functions and processes that they may not be as knowledgeable about and could potentially take away from their main focus. An example of this is when a grocery store decides to add a florist to its operation. If too much focus is put on that part of the business they lose focus of the core business which is grocery.[11]

5.1.3 Improved Quality

Improved quality can be achieved by using vendors with more expertise and more specialized processes. An example of this would be contracting out a cleaning service. An outside service would have the resources for hiring, proper training and facility inspections that may not be available if the function were kept in-house.[11]

5.1.4 Customer Satisfaction

The advantage of having a vendor contract is they are bound to certain levels of service and quality. An example of this is if your IT function is outsourced and the technician calls in sick, it is the vendor's responsibility to find someone to replace them and meet your support needs.[11]

5.1.5 Operational Efficiency

Outsourcing gives an organization exposure to vendor specialized systems. Specialization provides more efficiency that allows for a quicker turnaround time and higher levels of quality.[11]

5.1.6 Focus on core-competence of the organization

Task outsourcing enhances the power of your team which is important for small and medium enterprises with limited non-IT resources. Their workers may concentrate on those tasks they are especially good at and leave other types of work for remote experts. That will help your company to strengthen and improve major business activities as well as to execute the development strategy.[9]

5.1.7 Scale or improve effectiveness easily

Why outsourcing IT is good? Using freelance or digital vendor's resources is not only about executing your regular business tasks well but also about trying to achieve more in your market area! To scale your non-digital company you've got no need to share your upcoming IT tasks between existing specialists that are experts in other fields. Let them achieve more in their basic departments and dedicate your digital goals to remote developers' team. Avoiding in-house development means leaving your existing team alone so that it can accept professional challenges, as well as saving space in the office and working hours of the HR manager.[9]

5.1.8 Lower organizational complexity

With IT outsourcing, you can get rid of entire departments and focus your management resources on production. Digital vendors will propose you to redirect corporative IT support tasks and goals to their remote teams. You may choose to be an active party of the project and even let your in-house project manager control the remote team, or you may work with orders and results only.[9]

5.1.9 Faster development performance

Any work will be done quicker if you split it into functional parts, dedicate tasks to experts, and hire an effective project manager to control the process. Outsourcing is all about it. Your teammates may live in different countries, but you'll be sure they are the best possible candidates to solve your IT problem. Or, you can work with IT development vendor and spend no time at all on task splitting. That will do the company. Another good news about it — the outsourcing team can work around the clock.[9]

5.1.10 Better equipment without buying it

IT outsourcing vendors invest their resources into finding the best equipment, software, and specialists to propose to you. With their help, you will get better quality of IT products developed on your to request and meet higher security standards without spending money on software and hardware you'll probably need for completing one task per year.[9]

5.1.11 Scaling Staff

Bringing on new staff, especially with IT, creates challenges, primarily with time and cost. But with outsourcing, experienced IT experts are integrated with projects and crucial tasks immediately. Staff is scalable too, meaning an enterprise can bring on as many or few members as needed. When projects finish, you can reduce staff

numbers. This flexibility grants unprecedented control over project management without the dedicated time required to hire and train new employees.[2]

5.2 Disadvantages of Outsourcing

5.2.1 Quality Risk

Outsourcing can expose an organization to potential risks and legal exposure. As an example, if a car is recalled for faulty parts and that part was outsourced, the car manufacturer carries the burden of correcting the potentially damaged reputation of the carmaker. While the vendor would need to make good on the faulty product by contract, the manufacturer still has the black eye from the incident and carries the burden of correcting the negative public perception.[11]

5.2.2 Quality Service

Unless a contract specifically identifies a measurable process for quality service reporting, there could be a poor service quality experience. Some contracts are written to intentionally leave service levels out to save on costs.[11]

5.2.3 Language Barriers

If a customer call center is outsourced to a country that speaks a different language, there may be levels of dissatisfaction for customers dealing with the language barriers of someone with a strong accent.[11]

5.2.4 Employee/Public Opinion

There can be negative perceptions of outsourcing and the sympathy for lost jobs. This needs to be managed with sensitivity and grace.[11]

5.2.5 Organizational Knowledge

An outsourced employee may not have the same understanding and passion for an organization as a regular employee.

There is the potential that an outsourced employee will come in contact with customers and not be as knowledgeable of the organization, resulting in a negative customer experience.[11]

5.2.6 Labor Issues

Organized labor in the United States has very strong feelings about outsourcing to other countries that have a less standard of living and worse working conditions. This viewpoint can affect how the workforce responds to outsourcing and can affect their daily productivity.[11]

5.2.7 Legal Compliance and Security

It is important that issues regarding legal compliance and security be addressed in informal documentation. Processes that are outsourced need to be managed to ensure there is diligence with legal compliance and system security. An example of this

is outsourcing the IT function and having outsourced employees use their access to confidential customer data for their own gain.[11]

5.2.8 Employee Layoffs

Outsourcing commonly results in the need to reduce staffing levels. Unless it can be planned through attrition, layoffs are inevitable. This is difficult at best and if not managed appropriately, can have a negative impact on remaining employees.[11]

5.2.9 Hidden and uncertain costs

Why outsourcing IT? Working with a trusted service provider does result in cost savings. However, you can't be always sure about how much you should pay in the end. Sometimes, the development process can go unexpectedly — your company may change requirements or the executive team may face additional troubles while jumping into project details. In most cases, freelancers work with task modules and you know their constant hourly rate only. In that case, monthly bills could differ depending on how hard the month task is. How to overcome risk — try to avoid flexible goals and set clear tasks to your remote team. That is also important to pick an experienced vendor. The more experience in the same tasks execution it has, the more precise your budgeting is.[9]

5.2.10 Negative impact on your company culture

Although not all of IT outsourcing risks are critical, some of them may have negative effects on your business in a long perspective. That is a bad idea to replace in-house experts with remote freelancers as other in-house workers may get stressed thinking of losing their jobs. Another example is gaps in salary rates. Your constant team may get to know that remote experts get more than they and lose their productivity.[9]

5.2.11 Morale

Outsourcing may impact your staff too, depending on the extent. No one wants to think their job is on the line, especially for essential services like cybersecurity and IT infrastructure. Depending on how extensive a company on board third-party resources, morale is something to consider. Disheartened staff may work less or grow frustrated with their environment, resulting in quality loss and in some cases, turnover.[2]

Chapter 6

Bad examples in the history of Outsourcing

6.1 Five of the biggest outsourcing failures

It was inevitable. The exponential growth of information technology during the last decade has created the need to deliver IT products and services through increasingly economical means.[6]

While most major businesses are investing more in technology internally, their customers do not expect to pay more for the benefits technology offers a corporation. The inevitable result is the tendency for companies to seek ways run a leaner operation.[6]

To the dismay of a growing number of IT professionals, a leaner operation often means IT and software outsourcing. Also inevitable is the failure of some of those outsourcing efforts. Let us look at some notable case studies of some of the biggest IT outsourcing failures, and see what we can learn from their examples.[6]

6.1.1 IBM Mega Disaster

In December 2007, Queensland awarded a contract to IBM to develop an application to administer payroll for Queensland's health department. IBM proposed to complete the project by mid 2008 for $6 million. Shortly after beginning the project, IBM realised that it faced numerous and unforeseen technical challenges and announced to Queensland that the project would cost $27 million. The project dragged on for several years and the payroll platform never functioned properly. In the interim, thousands of staff failed to receive paychecks, while others were overpaid.[6]

By the end of the project, costs had escalated to $1.2 billion, 16,000 per cent above projected cost. Queensland banned IBM from working on other government projects and sued IBM to recover its losses. Queensland had learned that a famous-name vendor might yield infamous results.[6]

Both IBM and Queensland ultimately agreed that there was plenty of blame to go around. A report from the Queensland Health Payroll System Commission of Inquiry indicated that IBM employees had used unethical tactics to gain favourable consideration over other contenders, and that Queensland officials had neither communicated their full expectations to IBM, nor vetted contractor's properly.[6]

6.1.2 J.P. Morgan and IBM

While Queensland's project represents IBM's worst debacle as an outsource vendor, it was not the first time IBM lost a major outsourcing client. In 2004, J.P. Morgan Chase & Co. cancelled the remainder of its seven year, $5 billion IT contract with IBM and opted to bring its own IT talent back in house. The bank made the decision to terminate the contract, initiated in 2004, following its acquisition of Bank One Corp.[6]

J.P. Morgan stated that, with its merger with Bank One, it would have the ability to manage its IT infrastructure internally and more efficiently then through outsourcing. "We believe managing our own technology infrastructure is best for the long-term growth and success of our company," said CEO Austin Adams.[6]

Although J.P. Morgan did not accuse IBM of failing to meet its contractual obligations, IBM lost billions of dollars, and the decision to dismantle and later reassemble its IT team cost J.P. Morgan millions.[6]

6.1.3 US Navy and EDS

Sometimes, it is a total breakdown in communications that causes an outsourcing disaster. Such was the case between IT contractor Electronic Data Systems (EDS) and the US Navy.[6]

In 2000, the Navy and Marine Corps contracted EDS to provide voice, video, network, desktops, and system training for their personnel. By 2004, EDS had written off more than $500 million in lost assets because it was unable to fulfill its obligations.[6]

In its fervor to win the contract, EDS failed to grasp the project's full scope. Only after starting work on the project did EDS realise that the Navy and Marine Corps expected EDS to integrate or replace tens of thousands of legacy applications - it had planed on 10,000. The Navy claimed its own share of responsibility, admitting that indecision among its personnel lead to EDS receiving poor direction.[6]

Worse, still, EDS' contract with the Navy obligated EDS to absorb the costs for hardware changes, and there were plenty. Further, EDS was contractually bound to perform unplanned customisation of legacy software prior to installing new PCs. Loose contract language had left EDS vulnerable to some costly and unforeseen obligations.[6]

EDS closed the third quarter of 2004 with a loss of $153 million.[6]

6.1.4 Virgin Airlines Grounded by IT Provider Navitaire

Sometimes, its not the problem that creates an outsourcing disaster, it's the vendor's inability to correct it.[6]

In September 2010, Virgin's Internet booking, reservation, check-in and boarding system, and other mission-critical applications abruptly crashed - for the second time in three months. IT provider Navitaire quickly traced the cause of the latest failure to a failed disk drive. Under its contract with Virgin Air, Navitaire was

obligated to resolve mission-critical system failures within a "short period of time." It took nearly 24 hours, during which time the FAA grounded all Virgin flights, leaving more than 50,000 passengers stranded and frustrated.[6]

In hindsight, Navitaire's decision to attempt repairs on the bad unit, rather than switching in backup hardware, was not the wisest use of time and resources.[6]

The Virgin/Navitaire crisis highlights one of the key risk factors when using a Software-as-a- Service (SaaS) vendor: being subject to issues occurring on the vendor's hardware at remote locations. With Cloud-based outsourcing, the reason for your downtime could lay halfway around the world.[6]

6.1.5 Royal Bank of Scotland

If there's anything worse than leaving customers stranded at an airport, it's keeping them from having access to their money. And that is just what an outsourcing disaster at the Royal Bank of Scotland (RBS) did.[6]

In June 2012, a failed software update left millions of bank customers unable to access their bank accounts to withdraw funds or view their balances. The bank, itself, was unable to conduct transactions for either commercial or non-commercial customers. 30,000 social welfare recipients did not receive their payments, even though the funds were moved from government accounts. Also affected were customers of British bank NatWest and Ireland's Ulster Bank.[6]

The failure of a computer that processes overnight transfers resulted in paralysis of critical banking systems. Customers' inability to either receive money or make payments had a ripple effect on local business, creating a backlog that took several days to clear up.[6]

While RBC did not disclose details to the public concerning the IT vendor responsible for performing the software update that initiated the shutdown, it is clear that a backup plan for such contingencies was not sufficient, or did not exist.[6]

Chapter 7

Conclusion

7.1 Final thoughts

In the end we find that Outsourcing IT is not just an afterthought but has become a necessity, and specially for new startups, it is the only way to put your product to market in time. Even in our Arab world the old idea of controlling everything and doing everything within the company is over.As a personal final thought we think that there is a big future in new startups that offer all sorts of IT outsourcing services, as the government of Algeria is going into digitization its entire infrastructure and databases to keep with the ongoing demand of fast services and more transparency.

The focus of what is called the Second Industrial Revolution is much more on facilitating decision making, innovation, and service (in contrast to manufacturing efficiency). In this day and age, the effective application of information technology is key to organizational success – it can expedite decision-making, enable innovation, and enhance service.[4]

Unfortunately, managing information technology – keeping up with the almost blistering pace of hardware and software advances, keeping IT staff adequately trained and maintaining existing systems – has become increasingly difficult. More and more, private and public organizations look to IT outsourcing as an alternative that will enable them to manage this monumental responsibility.[4]

Outsourcing is becoming more prevalent in business today as companies seek to reduce costs and still stay abreast of technological breakthroughs that offer them the opportunity to develop a competitive advantage. While government organizations donít face the same competitive environment that other organizations do, they are faced with the challenge of providing better service to their customers - the tax paying public - at a reduced cost. Outsourcing offers one means of doing this. However, this alternative may not best meet their financial and technological needs. By choosing to work together, local government agencies can create a win-win situation in which they can more easily integrate new technology with existing systems and continue to meet the demand for standard type functions while reducing the cost of providing IS services.[3]

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