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Offshore IT Sourcing: Decision Making Process in an Italian Banking Group

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Abstract

Organisations often cite financial and cost benefits as reasons for deciding to outsource. However, recent patterns and trends suggest different factors, other than costs, are motivating such decisions. As a result, outsourcing (and its derivative offshoring) is more complex than it may first appear, as witnessed by a case study involving an Italian bank that decided to offshore aspects of its information systems (IS). The article presents findings from the case study, the underlying motives and the decision making process responsible for the change. These include: risk management, processes simplification as well as diminishing the uncertainties that come with self-managing its own technology. The case-study approach was conducted and based on an extensive questionnaire about bank's offshoring activities distributed to IT managers, and on-site interviews with the CIO and the Head of IT Governance, which was followed up through several one–to-one meetings, telephone interviews and e-mail exchanges.

The case study presents answers to the why, how, what and which interrogatives for offshoring IS functions in hopes of providing a model to those organizations facing similar situations. While best practices highlighted in other articles are essentially confirmed, the present study offers insight into important differences result from Bank's decision not to resort to consultants to act as liaison between supplier and project type, and decisions in terms of ideal in-house/onsite/offshore ratio [1], types and sizes of projects best suited for offshore [2].

Keywords: offshore sourcing, information technology, banks, decision making process

1 – Literature review and definition

Large enterprises today are squeezing every possible return out of their IS investment due to uncertain economical conditions, global competition and increased financial pressure.

While looking for new ways to operate in a changing world, companies are increasingly turning to offshore sourcing to help meet these challenges.

Offshoring provides opportunities to expand capabilities, reduce costs, gain access to scarce resources, skills and technologies in an effort to improve services.

Recently, offshore IT sourcing includes various services in expansion, such as applications development, network management and desktop management in addition to more traditional data processing and call centre services.

The decision to insource or outsource, that is, whether to make in-house or to buy from external sources, continues to be a difficult task for those involved in the decision-making process [3].

The reasoning is that it involves considerable complexity and business risks.

Before delving into the practice of offshore sourcing, its benefits and concerns, the literature defines its meaning and scope, as well as the main characteristics that differentiate it from some other related concepts, above all, with reference to outsourcing in general.

Starting with the latter, the IS literature defines outsourcing as: *"… turning over to a vendor some or all of the IS functions [4] …the contracting of various information systems' sub-functions by user firms to outside information systems vendors [5] …the organizational decision to turn over part or all of an organization's IS functions to external service provider(s) in order for an organization to be able to achieve its goals[6]… the commissioning of a third party (or a number of third parties) to manage a client organization's IT assets, people and/or activities (or part thereof) to required results [7] …the third party provision of IT products and services [8] …business practice in which a company contracts all or part of its information systems operations to one or more outside information service suppliers [9] … a decision taken by an organization to contract-out or sell the organization's IT assets, people, and/or activities to a third party vendor, who in exchange provides and*

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manages assets and services for monetary returns over an agreed time period [10] … the significant contribution by external vendors in the physical and/or human resources associated with the entire or specific components of the IT infrastructure in the user organization [11]…the handing over to a third party management of IT/IS assets, resources, and/or activities for required results [12]".

The above definitions make no reference to third party location, which is the element that differentiates outsourcing from offshoring.

As such, offshoring is the practice of hiring an external organization to perform some or all business functions in a country other than the one where the product will be sold or consumed.

In the case of IS, offshoring turns all or part of an organisation's IS operations over to outside contractors.

Benefits of offshore sourcing include reduced costs, better service and access to new technology, as well as enabling staff to focus their efforts on higher-value work thus improving output.

Since the early 1990s, there has been a significant increase in the number of organisations that outsource all or some aspects of their IS functions.

Like other banks, Italian bank XYZ moved through this evolution.

Offshore sourcing is best understood as a management decision with enduring impact and involves an on-going process highlighted through a five stage model of decision-making [13].

Stage 1 "Why". The organization weighs the advantages/disadvantages as well as the *risks and rewards* associated with offshore sourcing. Advantages include determinants such as: cost reduction, cost predictability, access to cutting edge technology, timely development, improved service quality, reduced need for capital investment, access to specialized skills or hard-to-find expertise and improved risk management. Conversely, potential risks indeed exist and include: unrealistic cost saving expectations, hidden costs such as travel, communications, vendor guidance and transition costs, data security/protection, intercultural differences, time and effort associated with transferring technical and business knowledge to the vendor.

Stage 2 "What". The organization addresses what alternative offshoring arrangements are to be considered and which might be most appropriate. These include: applications development, data centre, systems integration, systems design/planning, telecommunications/ network and time sharing.

Stage 3 "*Which*". This reflects who participates in determining and evaluating the criteria, how the evaluation is done and who makes the final decision. Some of the main issues to consider include:

– identification of the initiators and decision makers or decision sponsors, including the role of external consultants within the decision making process and their impact on the perceptions and reactions of internal employees;
– the role of benchmarking and external comparison;
– the role of committees in the evaluation process.
– *Stage 4 "How"*. This includes three issues:
– selecting a vendor, such as which type of vendor (one or multiple vendors), which criteria to consider and how the selection process is to be structured;
– structuring the relationship between the vendor and the customer (e.g., contract negotiation and relationship building), which is constructed around two main elements: (a) the *formal contract* that specifies the task requirements and obligations of each party in written form and (b) the *psychological contract* that is based on the parties' mutual beliefs and attitudes;
– managing subsequent arrangements, including all specific *activities* of the parties that can impact the relationship for its duration, e.g., controlling the supplier's performance based on the contractual agreements or building mixed project teams (staffed by customer and vendor personnel) in order to enhance the exchange of knowledge between both groups.

Stage 5 "Outcomes". During, as well as after the implementation, organizations must carefully monitor the results of their choice by evaluating the actual outcomes of the offshore sourcing decision. The notion of outcome is value-laden and often vague, as evidenced by the broader IS evaluation literature [14]. In an attempt to identify and synthesize the main concepts used in the literature, seven general evaluation groups result: cost savings, service levels, user management satisfaction, client-vendor disputes, vendor responsiveness and attentiveness, comparison of outcomes with objectives and renewal of contract.

2 – Research methodology and case study background

Due to the nature of the study, the research strategy was a case study. The rational for this methodology was that the focus can be directed to understanding the dynamics and complexities present within XYZ Bank, these being the processes, critical issues and lessons learned related to IS offshoring. Since the area of IS offshoring is a relatively new area of research in Italy, the case study approach provided the means for in-depth analysis of our research object.

Data collection was done consisted of semi-structured interviews. Interviews were conducted with 20 responsible and specialist of IT department and each lasted approximately two hours and 30 minutes. In particular, on-site interviews with some top IT managers at BPU Bank, in particular with the CIO and the Head of IT Governance, provided the bulk of

the data, which was followed up through several one – to-one meetings, telephone interviews and e-mail exchanges

Open-ended questions were used throughout the interviews.

They allowed for flexibility and provided the possibilities of depth; they also enabled the interviewer to clear up misunderstanding (through probing), ascertain a respondent's lack of knowledge, to detect ambiguity, to encourage cooperation and to make better estimates of the respondent's true intentions, beliefs, and attitudes.

As it so happened, the informants sometimes gave unexpected answers that indicated the existence of elements that were not originally anticipated and this added to the richness of the cases. For this study, one of the main opening questions was "Describe in your own words what you perceived as the influences that most affected the possibility of an offshoring implementation process and its key characteristics".

All interviews were audio-taped for subsequent transcription and for verification of accurate interpretation. Analysis of interview data consisted of three steps.

First, handwritten notes taken during interviews were reviewed immediately following each interview, and margin notes were added. Second, interview tapes were transcribed, and additional insights that occurred during transcription were noted.

Third, interview transcripts were re-read and margin notes added to the printed transcripts. These steps provided multiple opportunities to reflect upon the data, generating initial insights as part of a coarse-grained analysis. The case study presents answers to the why, how, what and which interrogatives for offshoring IS functions in hopes of providing a model to those organizations facing similar situations. XYZ Bank[1] is one of the largest banking group in Italy and trades on the Milan Stock Exchange in the S&P/MIB index. A capitalisation of approximately 7.5b Euro makes it the biggest co-operative credit bank. It is the result of a merger between 3 major banks, leading to a group that preserves their local identities by maintaining strong coverage of their respective territories.

This includes fully serving households or retail clients as well as small and medium-sized enterprises, while providing nationwide and worldwide services through specialised Group product companies. The bank offers consumer and commercial banking at more than 1,184 locations throughout Italy and employs more than 14,000 people.

Investment in IT/IS plays a vital role in the strategy of the bank with the IT/IS operations budget in 2008 totalling € 170m and employing a staff of 360. Further IT/IS investments are already earmarked as part of its long-term strategic business plan. IT/IS is very closely linked to its business strategy and thus forms an integral part of the company infrastructure. The traditional role of the IT/IS department is not merely a utility but rather a core part of the organisation that facilitates the bank in providing competitive banking services.

3.1 – *Stage 1 - Why*

"Up until 2004, the evolution of applicative demands made on XYZ Bank's Information System at that time never exceeded the 13,000-14,000 mpd or manpower days (a manpower day is eight hours of one staffer's time, thus for a staff of 120, 14,000 mpd equals approximately six months work). Traffic volume of this kind was easily managed by existing internal personnel (approx. 120 staff also managed applicative maintenance) with the help of a small number of local contractors whose numbers never exceeded 6 or 7 and had basic competencies at best", explains the CIO.

The *XYZ Bank* merger was announced at the end of 2004, which meant an increase of applications development needs of approximately 5,000 mpd for 2005 in order to facilitate integration as the first steps to create a group IS took shape.

The solution chosen at the time was to increase the number of contractors fivefold, from 6 to approximately 30.

During the rest of 2005, a master plan (2005-2007) was prepared in which the IT component was to undergo a capacity increase without precedent (100,000 mpd during the two year 2005-2006 period).

This was deemed necessary in order to: speed up group integration, bring key sector capacity (e.g., Commerce, Finance, etc.) in line with the market's top levels as well as to respond to newly instated pan-European legislative norms (IAS, Basilea II, etc.).

At this point, two new directives further modified the IT strategy: another increase in contractors, now sourcing regional talent as well as local and developing entire IT projects using large multi-national IT firms. Internal personnel were responsible for purely functional departments. As the IT manager points out *"The effect of these initiatives decisively increased development costs, both in absolute terms as well as billable fees per manpower day. Indeed in early 2006, offshore sourcing alternatives were drawn up in order to try to reduce costs. By year end when the applications effort was estimated at 120,000 mpd for the 18 month period January2007-June2008, offshoring was immediately implemented for approximately 20% of the billable manpower days required. The resulting benefits included: expenditure reduction, elimination of productive capacity limitations (availability of resource numbers were theoretically unlimited) and increased software quality"*.

[1] Even if the XYZ name is not the real one, all the facts and strategic decisions here reported are true and related to an important Italian bank.

3.2 – *Stage 2 - What*

"Contrary to what one might expect, the possibility to contract-out at least the maintenance of one or more applications, keeping programming development in house, was not considered in as much as it accounted for a relatively small amount of the total costs in question (all of the applications maintenance combined totalled less than 25,000 mpd per year), not to mention the time and difficulties of know-how transfer of the large volume of pre-existing software", explains the responsible of IT governance of the bank. The type of activity considered in any offshore sourcing proposal had to consist of completely managing entire applications departments (maintenance and development).

This option works best when the department in question is large yet well-defined, delivery times are relatively short and significant growth is seen in the medium term in such a way as to guarantee a workload volume of at least 3,000 mpd per year for a 2-3 year period.

Anything less in terms of volumes would be better served in-house given the start-up costs.

In 2007 offshore sourcing was launched in the CRM department, one of the most critical to the banking business and one whose requisites match the above criteria.

The majority of the effort in developing applications at XYZ Bank is not concentrated to large projects, but rather diluted in hundreds of ongoing initiatives that utilise the effort of some 100 to 3000 mpd (figure 1).

These projects are characterised as being:

- planned well in advance;
- grouped according to business departments/applications departments (e.g., credits, commercial banking etc.).

In order for these development activities to be as easily carried out offshore as the larger well-defined ones described above, the following considerations would also have to be true, namely: ample project knowledge transfer time given the wide scale arguments addressed, planning timetable with some leeway and open ended defining specifics, that is, all details must not be complete for all of the activities foreseen.

Not all projects fit these criteria and thus applications development at XYZ Bank was sourced to internal personnel, external domestic contractors and external offshore personnel as well.

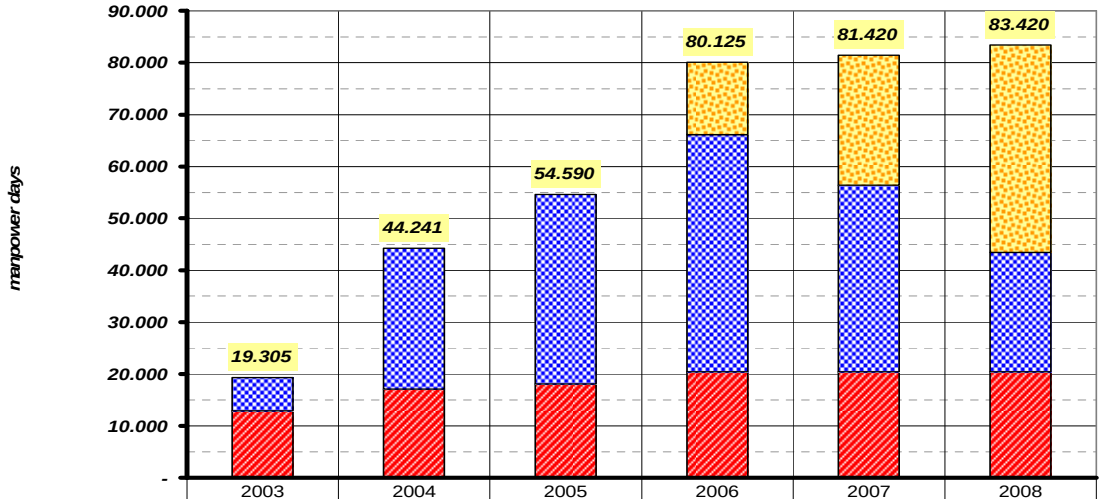
3.3 – *Stage 3 - Which*

The entire decisional process was carried out within the Bank and no external consultants or partners were involved.

IT Governance proceeded autonomously until the final decision was placed before the Chief Information Officer for approval.

HQ imposed no proxies for additional steering committees or project groups.

Fig. 1 – Applicative Effort during XYZ's Information System evolution for the 2003-2008 period subdivided by personnel type



	2003	2004	2005	2006	2007	2008
Offshore - application effort	-	-	-	14.000	25.000	40.000
Outsource -application effort	6.435	27.142	36.512	45.705	36.000	23.000
In-house application effort	12.870	17.099	18.078	20.420	20.420	20.420
Application effort	19.305	44.241	54.590	80.125	81.420	83.420

3.4 – *Stage 4 - How*

Currently XYZ Bank uses three offshore service suppliers located in India. *"XYZ Bank personnel is not in a position to directly manage an offshore software manufacturer with any sort of acceptable risk, this for reasons traceable substantially to language and cultural barriers as well as to their need to work in a very structured rapport"*, explains the CIO. A functional model consisting of a work group formed by three distinct components overcame this problem by designating:

1. An internal component made up of a XYZ Bank functional analyst, who furnishes suppliers with an analysis of the software to be written. Standard languages to be used are negotiated before any contract is stipulated. This component then tests the acceptance levels of the new software and generally coordinates the entire project (functional analysis, pre-testing and implementation of the software).
2. An onshore component including Italian speaking employees of the supplier who, on the Bank's premises, act as liaison between the bank's staff and the offshore software manufacturer. This component makes sure official implementation is done according to all relative norms and may be called upon to translate any project documentation as the case may be. Although numerically reduced, this component is of the utmost importance and must possess both functional and technical skills of the highest order.
3. An autonomous offshore component located and managed exclusively by the supplier according to its own efficiency and effectiveness standards. Responsibilities here include: the original technical analysis and proposal, the codification of the new software, unit testing and final system testing.

In summary, the model that is currently in use at XYZ Bank for software development sees the internal component managing the top tier (functional analysis and trial test run), the onshore component the middle tier (technical analysis and system test) and the offshore component the lower tier (codification and unit test). Figure 2 reports the classic phases of the software development cycles, each with its relative percentage in terms of total costs and influence on business and technology.

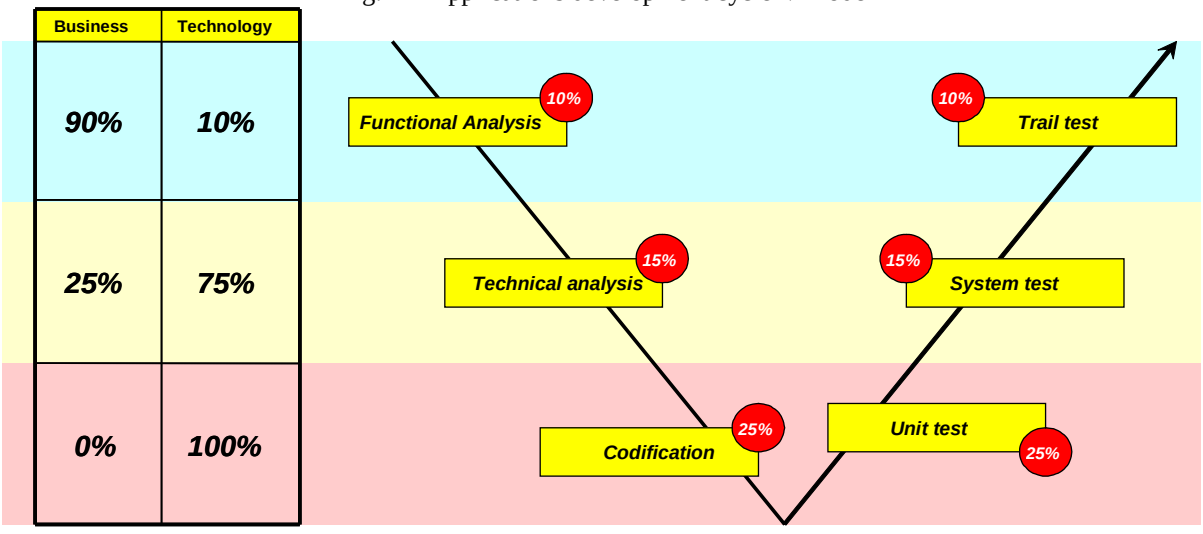
3.5 – *Stage 5 - Outcomes*

The offshore sourcing plan prefixed certain objectives including costs control, eliminating production capacity limitations and increasing software quality.

A little over a year into the project, an update on these goals includes:

– Software costs are significantly reduced with respect to those the bank would have incurred if sourcing were done in Italy. The savings range was between 20% and 30%;
– The software produced was normally better structured than the one produced in Italy. Conversely, an unexpectedly high number of recyclings was noted at the outset of the project. To date, tools needed for technical measurements have yet to be developed, although methodological quality is guaranteed by the IT Quality Department;

Fig. 2 – Applications development cycle-V model



– The ability to rapidly source additional personnel to meet specific needs was not adequately tested to date. Although orientation is quite positive, training times on certain applications and environments are not that different from domestically sourced ones, which underpin the advantages of medium term planning procedures.

4 – Lessons learned and Conclusions

In 2006 approximately 14,000 mpd (manpower days) were sourced offshore during the information system's development, representing 17.55% of the total. This percentage augmented to 30% in 2007 and to 50% in 2008, the remaining half to be sourced in house and domestically.

In an effort to improve offshore sourcing benefits, more aggressive functions models will be implemented thereby increasing contacts between internal bank personnel and offshore suppliers, while onshore supplier personnel is at first reduced and ultimately eliminated altogether. Once an adequate level of confidence in operational functions offshore is reached, other types of ICT initiatives will be evaluated, such as a testing phase (test facility) as well as managing some technology infrastructure components.

The lessons learned from the offshore sourcing experience thus far include:

1. Contractual discrepancies-that is all of those elements left to interpretation and vaguely described in connection to tasks and additional costs (hardware, software, transfers, telecommunications etc.) have caused attrition with suppliers. As the responsible for IT governance points out " *Some banal examples of conflict were due to rental payment terms for office space in India or who would cover costs for their PCs etc."* It becomes apparent that defining a detailed contract with a stringent SLA (service level agreement) and a mechanism to determine fees should be tied to objective criteria. On this front, XYZ bank is working on two directives:
   i. Definition of a daily all inclusive average fee (including transfers, transmission of data, hardware and software, logistic space, offshore and onshore personnel etc.)
   ii. Definition of an objective way of measuring the costs of specific activities on a manpower per day basis
2. The bank's cost for specific activities is therefore determined by multiplying the average daily fee by the number of manpower days. The first component of the equation was easily agreed upon, even though the bank had to cover certain sporadic extra expenses that were, however, marginal. The second component proved more difficult since traditional metrics (e.g., function points, cyclical McCabe numbers etc.) were completely inadequate. The Bank had to come to terms with the suppliers in an ad hoc way to establish metrics criteria, based on amount of software programmed for each activity sector (e.g., converting client server masks to J2EE). This approach, although costly at first, pays high dividends as the activities proceed.
3. Particular attention must be paid to planning the processes that govern software development, particularly at interaction points between the Bank and supplier, as described by the CIO. *"We have excellent programmers and analysts, but they are accustomed to working using partially formalized structured methodologies. In India, programmers use methodologies that are much more structured yet with limited flexibility. It is not a problem of language barriers, but one of communication, of culture, of coordinating different working procedures, of behaviour as well as of business perception"*. Internal personnel is in need of a formal change management project, whereby progressive reduction of purely technical activities gives way to more functional analysis, preparation of test cases and a modus operandi that is more articulated and structured.
4. Start-up times can be more generous with respect to those required to launch a more traditional production facility. *"In some cases the time allotted for certain activities doubled or tripled with respect to original programming schedules. Recurring to offshore suppliers for the first time is not indicated for those projects with a strict temporal horizon, such as, compliance norms (e.g., IAS), but rather for those projects without a specific deadline, like CRM"*, continues the manager.
5. XYZ Bank paid great attention to avoid creating a dominant position, limiting the activity volume assigned to each individual supplier to 5,000 mpd, retaining that any lost efficiency due to workload split up could be abundantly made up for in the commercial negotiation phase. Given the above project's activity entailed a significant number of supplier personnel on bank premises over an extended period of time (onshore), this first phase was awarded to suppliers with a strong domestic presence, more readily able to provide added value and in order to avoid possible legal and fiscal problems resulting from cross border contractual obligations.

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