

**Outsource**

## **Software Product Support & Maintenance Outsourcing**



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## EXECUTIVE SUMMARY

Software product companies are often faced with special management concerns in the areas of maintenance, upgrades and new releases. This phase of the product life cycle is widely recognized as not only being the longest, but also the most expensive phase. Research shows that a typical software product company devotes in excess of 50% of its total programming effort on support and maintenance, including upgrades.

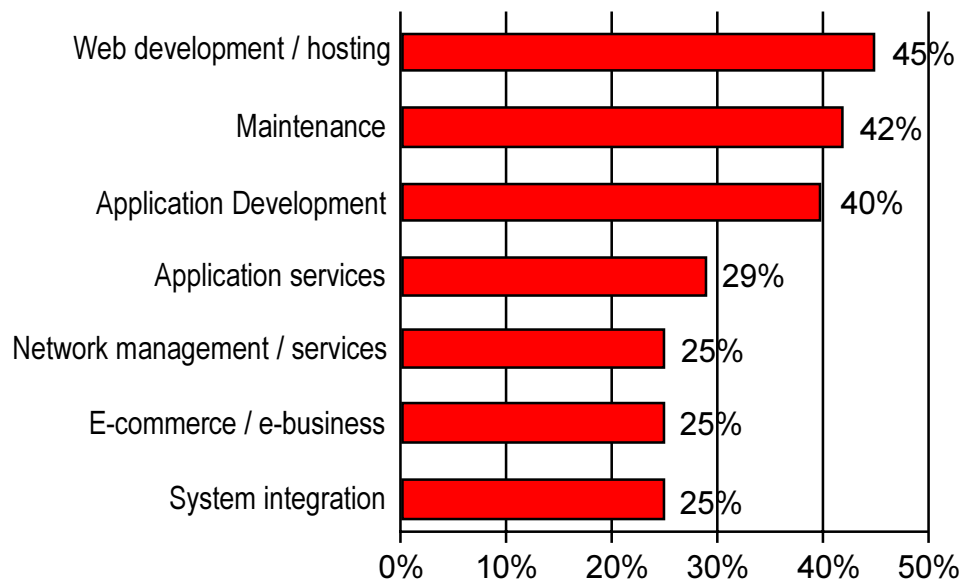
In view of the above, many companies have been looking at outsourcing as a longer term, strategic option. Several software product companies like Microsoft and Oracle have realized significant value and cost benefits associated with outsourcing the support of their products to offshore locations like India. Outsourced functions include code maintenance, bug fixing, version management, help desk, software upgrades, software optimization, feature enhancement, testing, software auditing, GUI modification (localization), development of application interface and porting to different architectures and operating systems, among others.

- ▶ 72%: percentage of software product companies who will release a new product each year
- ▶ 9 months: s/w product life cycle
- ▶ < 10%: success rate of new products
- ▶ 60%: average percentage of maintenance costs to the total cost in the product life-cycle
- ▶ \$USD 173,397 million: size of global s/w product market
- ▶ "Innovate or Perish": CEO's new mantra

The nature of the outsourcing industry has changed over time. With world-class offshore capabilities, vendor companies are increasingly able to offer high value, high quality services more economically with a much-needed accountability. This has helped change the perception of outsourcing from being a "cost-effective" tool, to being a critical component of many software product companies' global competitive strategy. This shift in thinking has enabled product companies to focus on their core competence of new product design and development, while taking the best advantage of outsourcing as a strategic long-term tool.

## INTRODUCTION

Internet has been a great leveler for many industries and the software industry is no exception. Competition has increased many fold; a startup more or less has an identical market reach as that of a billion dollar company. With lot more to choose from, customers too are demanding enhanced and latest products, with more features - at a lesser Price. Competitors are vying for the same market space waiting eagerly to attract any unsatisfied customers. With products becoming outdated at an ever-faster pace, product companies are having to invest more effort and money to come out with new-generation and more customer oriented products that satisfy the customers' requirements. The support division is often faced with the challenge of dealing with different product lines, varied technologies, limitless versions and various legacy systems in an environment of ever-increasing customer expectations.



**Volume of services outsourced**

( Source: Info World Outsourcing Study, Feb 12, 2001)

Management time is increasingly coming under pressure in dealing with issues like technology obsolescence, profitability, human resource management, customer retention, release and management of versions, and the need to continuously improve processes.

With outsourcing gaining popularity, companies now have an alternative support strategy that can free up their time. This helps them focus on upgrading their products faster while ensuring higher levels of customer satisfaction and at lower prices – both at the same time.

## The Rationale for thinking “Outsourcing”

Typically, problem requests associated with maintenance needs require faster turnaround times and consume up to 50% of the total cost of product development, over the life cycle. It has become increasingly clear to product development companies that support and maintenance of their products is a critical activity, but at the same time, non-core. This includes upgrades and other changes which have to be made quickly and effectively, while maintaining the quality of the product. This necessitates a re-think for software product companies and many of them are turning to outsourcing.

Outsourcing also offers opportunities for the existing support team to add value to their product by providing value added services to the users. By providing knowledge based articles, enhanced customer support documentation, client feedback initiatives, formation of knowledge repositories and other customer centric initiatives.

Outsourcing support and maintenance activities has been around since corporations first contracted with external companies to outsource their payroll function. Initially, the non-core, non-critical processes like these were outsourced; however, the success paved the way gradually to the support and product outsourcing which is increasingly being looked at as a longer term competitive tool..

The advantage to have such services provided better and economical by people who are specialized in those fields easily overshadowed the “fear of losing control”. Companies found that they could restructure more effectively around their core competencies. At the same time, the premium placed on speed in modern business increased with the net. Companies came under pressure both on time and on the allocation of their scarce development resources. As if high-speed and high quality weren’t demanding enough, the environment challenged them with constant turbulence both in business and in technology. These were the main drivers that led the software product companies slowly, but steadily, embracing offshore outsourcing. Even companies like British Airways, HSBC and GE have outsourced most of their service-centric operations to English speaking territories like India.

Another driver is the old cliché, “Success too soon, too fast”. When a (new) product exceeds growth expectations, the customer pressure on the company to release the next version (or another product) and the burgeoning customer queries become so overwhelming that the consequent pressure on the development staff takes a toll on the quality of support and maintenance activities.

Companies have increasingly come to realize the importance of initiating the outsourcing process, then leveraging the success and moving on to the next phase. Web development, Software support and application management are among the most popular that are outsourced due to the nature of these functions. Since the genesis of outsourcing, the industry has come a long way, Global standards are evolving; most of the guidelines, metrics and methodologies are already available for outsourcing to offshore-based support and maintenance. Companies no longer have to fear the uncertainties as long as they have planned well and have strategically prepared themselves for the process.

## THE SOLUTION – OUTSOURCING

### “Products are not built, they evolve”

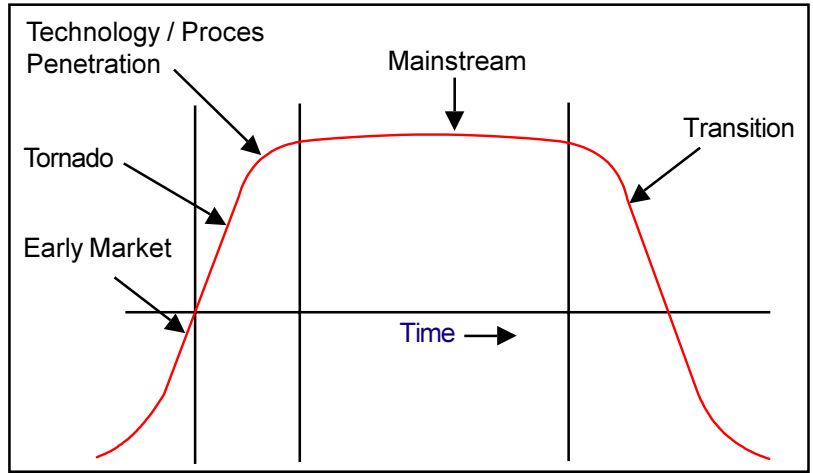
A successful long-term product life cycle is feature-driven. This means focusing on customer value and then building on that. A classic example is Microsoft’s strategy for its products. Most companies are not able to do this for they are caught between developing newer versions and supporting their current installation.

Several product companies who outsourced their support and maintenance functions have demonstrated rapid growth. Companies with rapidly expanding market share or Mergers & Acquisitions strategies have been quick to appreciate the time-to-value advantages of outsourcing their support and maintenance activities. That’s because, like a good car, product support and maintenance outsourcing offers companies the opportunity for smooth, rapid acceleration. Outsourcing is often scaleable, that is, the provider has the ability to expand services promptly with marginal cost additions. Everest Group has published valuable research into the tremendous savings of up to 50% associated with offshore outsourcing by companies such as Tracmail. Fortune 500 companies such as Microsoft and Oracle have been taking advantage of the cost differentials and have contracted world-class offshore support and maintenance centers for their products.

In the recent past, outsourcing software application development, support and maintenance functions has paid rich dividends to many companies. Since the support and maintenance activities share a larger percentage of total product cost (over full life cycle), the benefits of outsourcing are strikingly clear in the longer term.

Peter Bendor-Samuel has developed a model for a Product Adoption Outsourcing Life Cycle as illustrated in the figure.

With the exception of the Early Market Stage, in each of the preceding stages right up to the end of the product life cycle and beyond, outsourcing should be a critical component of strategy, he argues.



**Product Adoption Outsourcing Life Cycle**

The authors of this white paper are of the opinion that ‘Maintenance’ is a good way to test the waters of outsourcing, eventually paving the way for a broader strategic relationship.

**KEY TO SUCCESSFUL OUTSOURCING**

Outsourcing support and maintenance functions was a nebulous activity fraught with complexity, unseen dangers and many traps for the unwary. Not any longer, though certain challenges are still present. Once these are effectively addressed, however, the potential rewards can be remarkable in terms of money, time and customer satisfaction.

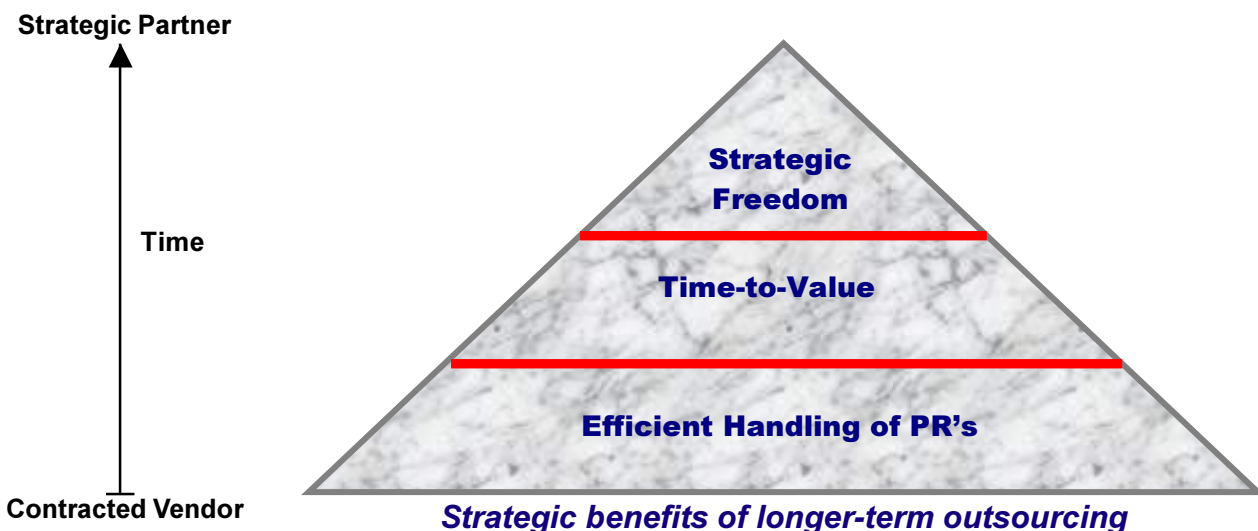
The most important key to successful outsourcing is a slow and a measured pace. People and processes are central to the continued success of outsourcing. The following areas require careful planning and effective implementation.

- ▶ Knowledge transfer
- ▶ Sharing of responsibility in remote management
- ▶ Fear of placing paying clients in the hands of outsourcing vendors
- ▶ Service Level Agreements
- ▶ Adherence to quality standards

In the case of offshore outsourcing, two additional factors creep in:

- ▶ Managing social and cultural difference and,
- ▶ Language incompatibility

**THE BENEFITS OF OUTSOURCING**



There is extensive proof that companies do realize longer-term competitive advantage when they have a focused and a long-term outsourcing strategy. Initially, reliable and efficient handling of support and maintenance requests can be the main focus. The initial exercises also help the companies to test the relationship and assess the capabilities of the outsourcing partner - whether the partner has the capability to 'go the next step'.

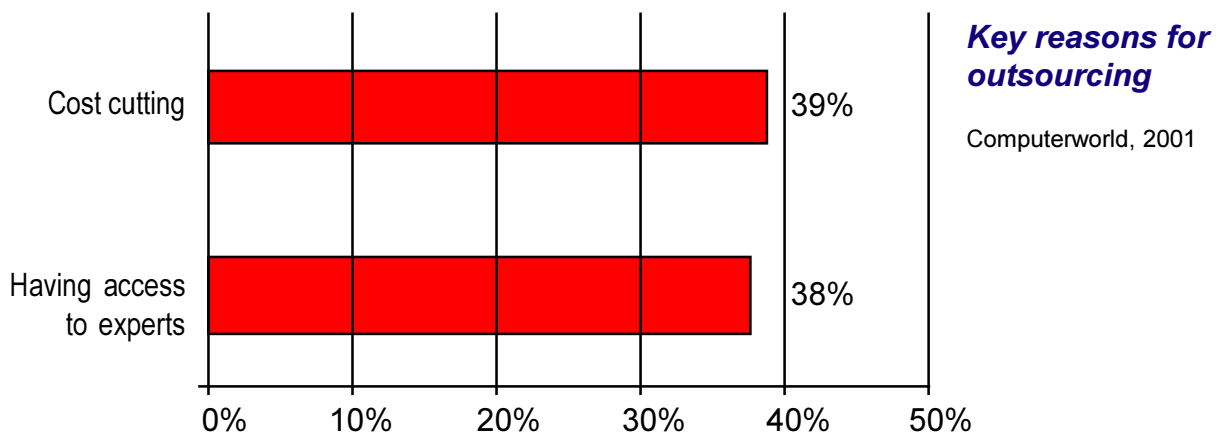
At the second stage in the pyramid of benefits, the outsourcing partnership offers the next level of savings as well as competitive advantages offered by improved "time-to-value" - time that can add value to both sides of the partnership in their effort to enhance resource productivity. The learning curve effects are clearly visible and the cost advantages are highlighted. The outsourcing vendor offers ready access to support and maintenance and the required skilled personnel to make it work.

Finally at the top of the pyramid, both the companies can work cohesively to improve the processes. This brings the required freedom in terms of trust in each other to be able to make strategic decisions together - a true partnership that allows for the creation of value to both companies.

Some of the other potential rewards are

**1. Free core resources and Focus on core business**

By outsourcing their operational activities, the software product companies can concentrate on market dynamics instead of the product dynamics. Companies can focus on their core businesses by having operational functions taken over by an outside expert, freeing resources on fulfilling customer's needs. With a strong customer focus, companies can get better market-oriented products and focus on areas that add value to the product; like marketing and R&D



**2. Respond faster to market opportunities**

Outsourcing ensures that project cycles are cut down and timely releases ensured. The offshore model ensures this with simultaneous guarantee of reduced costs. This helps the companies in gaining a competitive edge and the first mover advantage in their market space. By hastening the release of new products and versions, companies ensure that they have a competitive edge in:

- ▶ Time-to-Market: The fastest to market gets the mind-share of the customers.
- ▶ Time-to-Respond: The fastest to meet demand gets the margin in the market

**3. Lower costs**

Reduced support and maintenance costs directly translates to lower product cost for the customer and higher margins for the product companies

**4. Flexible Resource Pool**

Due to attrition and market conditions maintaining an up-to-date optimum pool of skilled professionals is becoming an expensive task. Since outsourcing partners gain experience and expertise by working with many clients facing similar challenges, they are sometimes the best source of obtaining expertise in shortest span of time. This combination of specialization and expertise gives companies a competitive advantage and helps them avoid the cost of chasing technology and repeated training.

## THE PROCESS

For a software product company, the key to successful outsourcing of support and maintenance can be defined as the “virtual” and “seamless” replacement of their internal processes of product support and maintenance with those of the vendor.

A slow and measured operations transfer often results in a high quality outsourcing partnership. Effective outsourcing of support and maintenance activities depends on a phased approach to all the various facets, such as knowledge transfer, trust building, mirroring the processes and so on.

The product support and maintenance outsourcing partner will translate a support and maintenance requirements document into a full-blown support and maintenance process, which includes:

- ▶ Defining service levels
- ▶ Baselines for each service level
- ▶ Methodologies for change management
- ▶ Effective communication protocols and channels
- ▶ Knowledge transfer policy
- ▶ Performance measurement metrics and processes
- ▶ Reporting formats
- ▶ Performance based compensation and bonuses
- ▶ Employee retention policies
- ▶ Identified areas for continuous improvement.

## PERFORMANCE METRICS

The usage of the performance metrics rests on the premise that unless the measurements are made, the progress and/or the improvement cannot be assessed suitably. Comparisons of the measurements over a period will reveal the causes for any problems and appropriate corrective measures can be taken. Close analysis of the causes enables the taking of suitable steps to make progress/improvement. The intention of metrics is to focus on the improvement of the processes and is not meant to be used as a performance appraisal process for the team members... Some of the metrics that can be used are:

- ▶ Nature of problem requests (PR) per day/week/month
- ▶ Mean time / Average time / Average resources required to resolve a PR
- ▶ PRs received via e-mail/telephone/fax
- ▶ Average telephonic time spent on each PR resolution
- ▶ Number of code fixes per day/week/month
- ▶ Average number of lines of code affected per PR
- ▶ Average time spent for PR that requires code modification
- ▶ Responsiveness
- ▶ Average case resolution time.
- ▶ Ease of logging a case for the customer.

The above are only a few of the metrics that can be collected to track and measure performance. Several other metrics are collected in areas like testing, release management, customer satisfaction etc.

## THE ROLE OF THE VENDOR

Needless to say – vendor selection holds the key for success in outsourcing

In any outsourcing relationship, the company should look at the vendor as a long-term strategic asset that is a source of ongoing value to the company. Time and resources are required to be dedicated for managing this relationship and for maximizing the value out of this asset.. Companies and Vendors must learn to work like an integrated unit in the supply chain and not in the mode of traditional customer-supplier relationship.

Apart from the lower cost structures that a vendor would bring in, companies wanting to outsource should look for some additional features in a vendor:

- ▶ The partner must have a critical mass of resources
- ▶ The partner must have a solid management team
- ▶ The partner who understands the importance of quality
- ▶ The partner should be capable of providing some additional value.
- ▶ Cultural compatibility
- ▶ Technological capabilities
- ▶ Proven track record and reputation
- ▶ Willingness and the commitment to play long-term
- ▶ Infrastructure

## **CONCLUSION**

Software product companies, today, are looking at outsourcing their support and maintenance process as an area for competitive advantage. They are unlocking the potential of the Internet and the global nature of business to offer their customers the limitless savings and economies of offshore outsourcing. Several companies have successfully demonstrated that the outsourcing of support and maintenance functions not only helps the bottom line, but also establishes a concrete roadmap for long-term success. The associated advantages percolate to other facets of business.

## **REFERENCES**

1. B.P. Lientz and E.B. Swanson, Characteristics of Application Software Maintenance
2. G. Parikh, The Guide to Software Maintenance, Winthrop Publishers, Cambridge
3. S.S. Tau and T.J. Tsai, A Survey of Software Design Techniques, IEEE Trans on SW Engg
4. Global Top Decision-Makers Study<sup>SM</sup> on Business Process Outsourcing, PricewaterhouseCoopers & Yankelovich Partners, 1997-1998.
5. IGG-100197-03, Gartner Group
6. Management Strategies, The Yankee Group, February 1998
7. Contracting for Risk and Reward, Brown Raysman Millstein Felder and Steiner LLP
8. How to manage your outsourcer, Datamation, March 1996
9. The Client/Server Payoff, Gartner Group, 15 April 1996
10. Industry Trends, IT Pro, Jan/Feb 1999
11. G. E. Stark, Measurements for Managing Software Maintenance proc Intl. Conf. on SW Maintenance, Nov. 1996

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