In the final part of our series, **Ray Murphy** examines how suppliers are playing a bigger role in developing and running computer packages

Outsourcing the program

There is a growing trend for organisations to consider the use of application service provider (ASP) and outsourcing arrangements for their software applications needs.

In recent years, as the Internet has developed and access speeds have increased, many companies have come to the fore with software solutions that involve the supplier hosting the software and providing access to the customer via the Internet on a rental or transaction-based charging basis. These are known as ASP arrangements.

Their use removes the need for expensive early-stage investments in software licences because the costs can be spread across the life of the agreement. Where transaction-based charging is used, the software is, in essence, charged for on a "pay-as-you-use" basis.

There are distinct customer benefits that result from the use of ASP agreements. For example, you do not need to invest in expensive technology infrastructure (as this is provided by the supplier) and your customers or internal users will generally access the software through the use of a basic web browser such as Internet Explorer or Netscape Navigator without the requirement for any additional third-party software licenses. In addition, the software will generally be tried and tested and, to a large extent, you will be able to become productive on the system much more quickly than would otherwise be the case.

If it is necessary to develop interfaces between the hosted software and your own systems, this would generally be undertaken on a joint-cost basis. The supplier will factor the costs of its capital investment, ongoing operational and any other costs into the charges for the service, and economies of scale will generally result in lower costs per transaction as your transaction volumes increase over time.

Software outsourcing

Outsourcing is under constant discussion these days and most large organisations (and significant numbers of smaller ones) will have undertaken outsourcing projects of one sort or another.

There are many variations of outsourcing arrangements, ranging from strategic outsourcing (where an organisation is seeking to achieve overall business performance improvements rather than cost savings alone) to business process outsourcing (such as outsourcing the activities of a particular business unit) to tactical or selective outsourcing (which would involve the use of outsourcing as a means to solve particular short-term problems quickly).

In general, the rationale behind outsourcing is for customers to concentrate on doing what they do best and place non-core activities in the hands of third parties that are best placed to deliver them in the most efficient and cost-effective way.

The most common forms of software outsourcing services would consist of offshore development and co-sourcing, both of which are reasonably mature at this stage. In the offshore development scenario, software applications are developed and unit-tested in an offshore location. Traditionally, this has meant India, but China and eastern Europe are becoming bigger players in this area.

The use of offshore software development brings increasing emphasis on the early- and late-stage activities in the software development lifecycle. The software to be developed must be rigorously specified and, after it has been delivered to the customer, the system and acceptance-testing processes must be carried out thoroughly.

The agreement of service-level agreements (SLAs) with clearly defined performance indicators and measurements are vital and would form the backbone of the relationship.

Offshore software development companies generally use the CMM (capability maturity model) certification as a means of defining their proficiency levels; the achievement of CMM certification level 4 or above is quite common. CMM was developed by the Software Engineering Institute at Carnegie Mellon University in Pittsburgh, US, and is used by organisations globally to improve the maturity of their software processes.

Another important area that needs to be considered carefully is data protection. If an offshore development company has access to customer data, the manner in which it is processed and the security mechanisms to prevent unauthorised access to it are important. Ultimately, the obligation to manage and control personal data rests with you, and any breach of the Data Protection Act can result in prosecution, which, in turn, can result in personal liability for your company's directors.

Cheaper development

From a commercial perspective, the staff day rates for offshore software development can be as low as 30-40 per cent of the equivalent rates for UK resources. This creates a significant imperative to consider outsourced development seriously.

Most offshore development companies are professionally run, with the infrastructure, security regimes, development facilities and skill sets that one would expect of leading UK-based software development organisations. In India, most of the software development companies are based in technology parks that have their own infrastructure, based around satellite communications, independent electricity generation and telecommunications capabilities, and so on.

Where companies do employ co-sourcing arrangements, this is generally to bring external design and development resources onsite to supplement in-house software development teams.

In essence, co-sourcing arrangements are similar to any agreement that involves the use of external resources. The agreement would typically define the types of resources (for example, project manager, designer, technical architect, analyst, software developer); the hourly or daily rates that apply for each resource type; the commitment in terms of number of man days by resource type; the facilities to be provided for the onsite co-sourced personnel; and so on.

These agreements would have the flexibility to increase or reduce the number and type of resources required over time (generally by way of addendae to the agreement). As with other commercial agreements, an SLA with key performance criteria would also apply.

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Code red: Indian software companies face growing competition from eastern Europe and China

PHOTOGRAPH: REPORT DIGITAL

Six tips for software outsourcing

1. **Risk management is important.** Define the worst-case scenarios and strategies for managing them. While application service providers (ASP) and outsourcing arrangements are becoming increasingly popular, consider what would happen if the relationship broke down or the supplier went bust.
2. **Consider all aspects** of the outsourcing business case, not just the staff day rates. It is important to understand the internal process and technology changes that will be needed for software development outsourcing arrangements to work well.
3. **Detailed assessment** of an offshore software development company's operation is important. Use rigorous assessment checklists for any onsite visits and use customer references to understand all aspects of the service.
4. **Where offshore** data processing may be required, ensure your legal people are involved in assessing any exposure that may result under the Data Protection Act.
5. **For ASP** or outsourcing contracts, your security specialists will need to be fully involved to ensure that adequate security mechanisms are in place to prevent unauthorised access to systems or data.
6. **Ensure the supplier's** development and testing methodologies are compatible with yours. It is important that the supplier can work at the required level of detail with your specifications without continuous follow-up dialogue with your analyst or designers. Equally important is your comfort with the testing processes used by the supplier organisation. Capability maturity model certification may be an initial means of gleaning an overview of a supplier's capabilities.

You can read all of the articles in the "Software Sourcing" series online at
www.supplymanagement.com/software