Machine translation: Inside the enterprise or outsourced?

Lori Thicke & John Papaioannou

Machine translation (MT) is on your company's strategic roadmap, but you're not sure what the best scenario is: should you build or buy? Do you bring MT capabilities and technology into the enterprise, training and managing your translation engines internally (build)? Or do you outsource the technical and linguistic tasks to a commercial MT services vendor (buy)?

Now that MT is moving, slowly but surely, from early adopters to mainstream users, we find this question to be the starting point for companies that have a six-month to three-year time horizon for implementing their MT strategy.

Whether to develop an MT solution internally or to outsource it is a similar dilemma to the build-or-buy decision faced by companies with regard to other enterprise software needs. One issue, of course, is whether external suppliers can perform better in terms of cost, quality and so on, but there are other factors to consider, such as what skills and resources are available within the enterprise and which solution would best serve the overall corporate strategy.

The Localization Outsourcing Decision, the MBA thesis of Lexcelera CEO John Papaioannou, identifies a number of decision-making frameworks that provide a useful toolkit for our customers who need to choose which approach to take. We have selected two that are capable of yielding a structured and objective means to weigh business goals against internal capacities and resources, and to measure the strategic importance of an internally-managed translation process against an outsourced one. The full 80-page document may be downloaded for free at http://lexworks.com/translation-resources/.
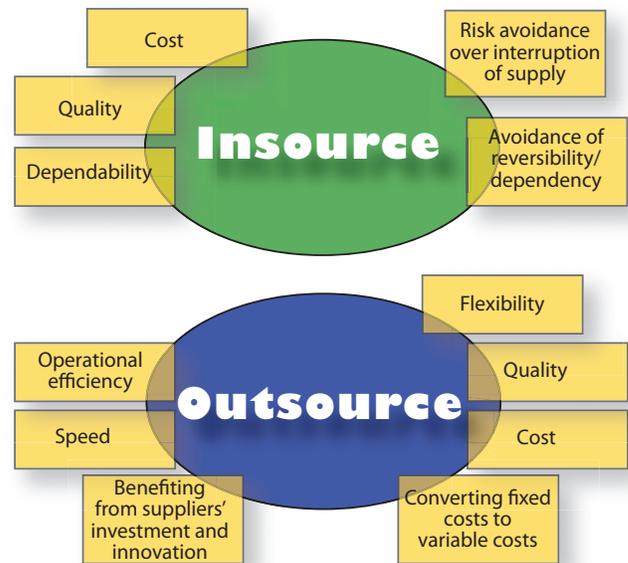
Advantages of insourcing vs. outsourcing.

Frameworks for examining MT needs

The first framework, adapted from L. Willcocks and G. Fitzgerald's *A Business Guide to IT Outsourcing* (Business Intelligence, London: 1994) examines both business and technical factors, determining whether MT is a commodity or a differentiator. This model is based on the belief that if MT functions as a commodity, companies are better off to outsource it, but if it is a differentiator, then it should be managed internally.

To determine which case describes your company, look at this questionnaire covering business and technical factors, and select A or B depending on which best reflects your situation.

Your future business needs for MT are . . .
A. Certain
B. Uncertain

The potential contribution of MT to your business positioning is a . . .
A. Commodity
B. Differentiator

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The impact of MT on your business strategy is . . .
A. Useful
B. Vital

The in-house cost for MT compared to the marketplace is . . .
A. High
B. Low

Ideally, your MT processes would be . . .
A. Discrete
B. Integrated

Your technological maturity is . . .
A. Low
B. High

Your in-house capability compared to the marketplace is . . .
A. Low
B. High

If you answered mostly A to the above questions, it would make sense to outsource your MT needs. However, if the majority of your answers fall into the B category, you may want to consider bringing MT into the enterprise. Before making a final decision, however, it is useful to look at the second framework to determine if internal capabilities and resources are sufficient.

The second framework is based on D.F. Blumberg's volume, *Strategic Assessment of Outsourcing and Downsizing in the Service Market* (University Press: 1998), which weighs in-house capabilities and resources in order to determine whether a process such as MT is best managed by internal or external experts. As above, to assess your company's capacity to manage MT internally as well as its strategic importance, choose A or B in the following questions:

Customer view of MT
A. Customers are concerned with the outcome, not the process.
B. Customers are concerned with the process of MT.

Capabilities and physical assets to execute MT.
A. Capabilities and assets are available in the market from qualified providers.
B. MT requires specialized capabilities and assets, not easily found outside the company.

Technological requirements
A. The technology is either very stable with limited applications or very dynamic, changing quicker than the rate of adaptation.
B. The technology is relatively fluid and possessing it can be a clear advantage.

World-class ability
A. Average performance is sufficient; resources to achieve world-class are not available.
B. Resource and capabilities exist to retain/achieve world-class performance.

Performed capability vs. alternative resources
A. External vendors are clearly more competent.
B. A leadership position exists within your company.

Time and cost required to close performance gaps
A. Significant capital and resources are required to close gaps
B. The internal source provides a clearly competitive cost advantage over external suppliers, rate of improvement is high.

Length of commitment
A. You plan to harvest or exit the business in the near future.

B. A long-term planning horizon exists.
As with Framework 1, more answers in the A category support outsourcing, while more answers in the B category suggest that MT may not be a good candidate for outsourcing.

An individualized approach

To these previous questions, additional questions can lead to a better understanding of the individual situation. The questions should lead to the identification of primary goals (such as process control, process standardization, consistency/quality improvements, reduction in unit costs, reduction in overhead costs, direct/real-time access for customers, acceleration of translation cycles, protection of IP and so on) as well as the pain points. It's also helpful to assess staff buy-in for a particular solution and to take stock of the size of localization team and skill set (such as technical and linguistic). Current processes for handling translation memories (TMs) yield a useful roadmap for management of the MT process. Taking the external environment into consideration allows you to compare capital and human resources costs for an internal solution compared to the transaction costs related to outsourcing. The following case studies of three of our MT customers show

how for some enterprises an internally managed solution is best, while for others the case for outsourcing is stronger.

Case Study 1: Total outsourcing

One customer, the top manufacturer in the rail transport sector, views translation as a necessity, but not as a differentiator. Furthermore, there are insufficient linguistic and technical resources internally, which means that for this client, the cost of a do-it-yourself solution would be higher than what is available in the market.

The specific business need of this customer is the ability to respond more quickly to international tender documents that routinely run to hundreds of pages. To be more competitive they require translations that are cheaper and faster – both typical benefits of an MT process. Specifically they need gisting quality translations to understand the content of requests for proposals (RFPs) and then fully human quality for their responses.

This situation called for a total outsourcing solution with translation as a deliverable. The chosen solution involved building and maintaining customer-specific MT engines on our premises and using those engines to provide them with fast-turnaround translations at reduced costs. A combination of gisting (raw) and post-edited (human) quality gives this manufacturer a speed advantage in order to win more international RFPs.

Case Study 2: Selective outsourcing

A leading software publisher has a strong localization department, which manages its software, documentation, courseware, user interface and online help translations. The customer's goals were to introduce MT in order to reduce translation costs and increase turnaround speed while maintaining or improving translation quality. For this customer, translation is a commodity – but one for which quality is absolutely mandatory.

For this customer, there is not much question of managing the process internally: the company is known for its lean localization team, which is based on outsourcing even some typical project management tasks to their vendors such as maintaining TMs. In this case, MT was to follow the same process. Glossaries, TMs and engine builds were to be delivered and updated on their Sharepoint platform once the engineering tasks were completed, giving them complete control over their linguistic assets.

In this case, as above, the best fit was to build and maintain MT engines on our premises with post-edited content for fully human quality as a deliverable. However, this is actually a selectively outsourced solution rather than a full outsourced solution because centralization of all linguistic assets takes place on the client's premises so that they have full control of the latest version of their TMs and the latest iteration of their MT engines. This gives them the freedom to work with any vendor at any time.

Case Study 3: Selective insourcing

When we applied the decision-making frameworks to one of the world's largest banking groups, it became clear that they did not have the internal linguistic resources to take on the task of building and maintaining MT engines in multiple languages and for multiple domains;

significant capital and resources would be required to close performance gaps. Furthermore, translation was not a differentiator. It seemed clear that they should outsource the activity – total outsourcing.

However, one consideration trumped all others: they needed an internal MT engine that their 200,000-plus employees could use. It was critical to this customer not to expose its internal data to the world. They were aware that when using Google's translation application programming interface, they gave Google a "perpetual, irrevocable, worldwide, royalty-free, and non-exclusive license to reproduce, adapt, modify, translate, publish, publicly perform, publicly display and distribute such content."
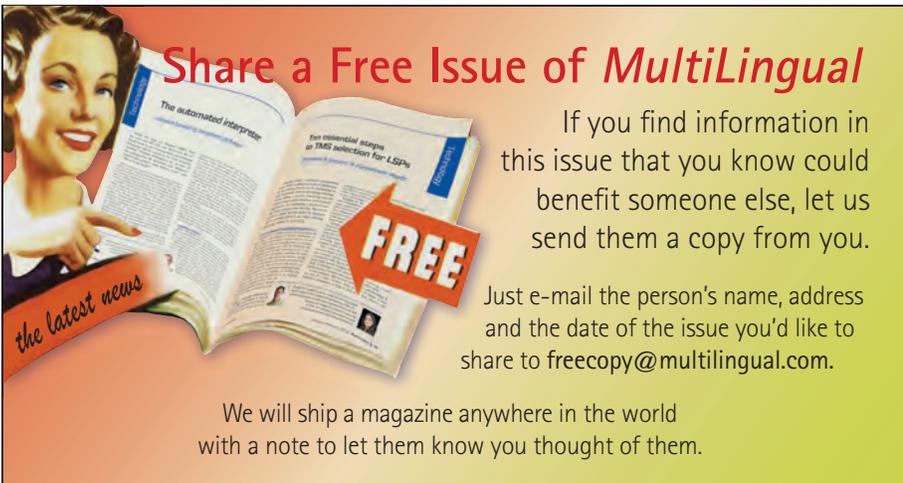
To meet their needs, the solution we put in place involved a series of MT engines installed behind the bank's firewall, available to all their global staff via the enterprise intranet. While the bank's technical team ensured the technical integration of the MT engines, we build and maintain engines in various language combinations and for various domains remotely, effectively managing all linguistic tasks. This ensures that the internal employees can use the engine while still maintaining confidentiality of their intellectual property.

Choosing the right path

As the above case studies show, both outsourcing and insourcing have their benefits. Both also have their drawbacks. The advantages of insourcing include cost, risk avoidance over interruption of supply, dependability, quality and avoidance of reversibility/dependency.

The advantages of outsourcing include operational efficiency, cost, speed, dependability, benefiting from suppliers' investment and innovation, quality, flexibility and converting fixed costs to variable costs.

At the end of the day, whether a company chooses outsourcing, insourcing or a combination of the two, the decision is both important and strategic. I have heard more than one company say, "We wish we hadn't gone down this path." Before sinking a significant investment, and possibly years of human resources, it's best to consider the question from all possible angles, starting with an objective framework for asking the right questions. **M**