Competitive Analysis

Knowledge Management to Thrive in IT Professional Services

Abstract: The management of intellectual capital has become a major component of competitive strategy for many consultancies and IT professional services companies.

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Strategic Planning Assumptions

During the next five years, the creation of internal processes and systems for intellectual capital management has the potential to create positive differentiation for IT services providers by improving speed to market, proposal quality, and the ability to provide quality consulting, development and deployment of IT services to their clients (0.7 probability).

Although awareness of a provider’s knowledge management capabilities is not yet a significant differentiator in vendor selection, it is likely to become so during the next five years (0.7 probability).
Introduction

Over the past 10 years, a growing number of IT professional services companies have made investments in the management of intellectual property. Various approaches to knowledge management have emerged within the largest as well as midsize IT professional services companies. To gain a greater understanding of the role of knowledge management within IT services organizations Gartner Dataquest conducted surveys with eight professional services organizations over a period of six months.

The companies that participated in the study are as follows:

- Accenture
- Cap Gemini Ernst & Young
- Compaq Global Services (Prior to HP/Compaq merger)
- CSC
- Deloitte Consulting/Braxton
- EDS
- Hewlett-Packard (Prior to HP/Compaq merger)
- Technology Solutions Company

Interviews were conducted by telephone using an interview guide consisting of 25 largely open-ended questions. The questions focused on the following aspects of intellectual capital management:

- The history of knowledge management within the company
- The investments that have been made and the benefits achieved
- Processes for managing daily operations and enhancements
- Architecture, content and platform
- Plans

This Perspective focuses on the history of knowledge management and the investments that have been made.

History

Of the companies participating in this study, Accenture and Ernst & Young were two of the early adopters of knowledge management processes and related systems. Both companies began efforts in the knowledge management arena in the late 1980s. Most knowledge management initiatives for the remaining six companies began in the mid-1990s.
Anticipated Benefits

The motivation to develop processes and systems for the management of intellectual capital was very similar for all companies interviewed. During the survey, respondents were provided a list of potential benefits and asked to indicate whether they had targeted each as an objective of their knowledge management initiative. Table 1 shows the number of companies that anticipated each of the benefits.

Table 1
Anticipated Benefits from Investments in Knowledge Management

<table>
<thead>
<tr>
<th>Source of Benefits</th>
<th>Number of Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Best Practices — Marketing and Sales</td>
<td>8</td>
</tr>
<tr>
<td>Best Practices — Delivery</td>
<td>7</td>
</tr>
<tr>
<td>Reduced Length of Engagement Life Cycle</td>
<td>7</td>
</tr>
<tr>
<td>Reduction in Training Time</td>
<td>6</td>
</tr>
<tr>
<td>Reduction of Risk</td>
<td>5</td>
</tr>
<tr>
<td>Standardization of Process</td>
<td>5</td>
</tr>
<tr>
<td>Best Practices — Client Management</td>
<td>4</td>
</tr>
</tbody>
</table>

Source: Gartner Dataquest (September 2002)

In addition to the structured list, respondents were asked if there were other benefits that they expected to obtain. The following summarizes their responses.

- At least two of the larger companies explicitly stated that they expect their knowledge management systems to facilitate collaboration and promote globalization of best practices.

- One company said that one of the strongest motivators was to virtualize operations to increase flexibility in staffing implementation projects.

- Two respondents indicated that fostering a climate that would encourage innovation was a primary objective.

- Three companies stated that a significant objective was to create an organizational memory.

The companies that evolved from partnerships were the only ones to consider best practices in client management as a key anticipated benefit. There could be a number of reasons for this, but the primary reason is probably that sales, delivery and ongoing account development is more tightly coupled in the partnership model than in organizations having separate stand-alone sales teams.

Justification of the Investment

Obviously, the study participants anticipated that achieving these potential benefits would result in revenue growth or improved profitability. But attempting to do a formal ROI that weighs the costs of implementation against some quantification of highly subjective benefits is a difficult exercise at best.
Of the eight companies in the sample, only three made any attempt to compute an ROI to support their initial investment. Few, if any, companies attempted to track the ongoing benefits. Therefore, to a large degree justification for the investments in these processes and systems has been based on gut feel and strong support by senior management.

In fact, in all but one instance, the knowledge management initiatives of the study participants were the direct result of the vision of the CEO, COO or some other member of the top management team. Two of the respondents reported that initiatives coming from the bottom up within their companies had failed the first time around because of lack of commitment at the top. In both instances changes in the management team brought the support required to achieve success the second time around.

**Initial Implementation Costs**

Assuming that top management support is there, what is it likely to cost to get started? For the following reasons, the costs of initial development varied widely within the survey sample:

- **Scope** — The primary reasons for these variations was that the scope of the initial efforts varied significantly. Some of the companies’ initial efforts were limited to pilot studies. Others scoped out a broad base of content coverage and supporting systems.

- **Technology infrastructure** — In reporting startup costs, some of the respondents indicated that they did not include the cost of shared in-place infrastructure, while others attempted to factor these costs into the equation.

- **Implementation change management** — The deployment of new processes and systems for the management of intellectual capital requires a considerable investment in change management and training. In all but two instances, the survey respondents did not attempt to track these costs as part of their initial investment.

The costs nevertheless are not inconsequential. For the study participants they ranged from a low of $200,000 to a high of $50 million, with most respondents hovering in the $2 million to $5 million range.

Implementation times did not vary nearly as much. The average for the group of eight companies was 12 months, and the range varied from nine to 18 months.

**Implementation Issues — Pitfalls**

Respondents reported the following implementation issues:

- **Scope creep** — Scope creep in terms of both functionality and content proved more troublesome than anticipated. Scope creep is a common threat in all system implementations. However, the fuzzy nature of intellectual capital management processes, coupled with the large number of stakeholders that are likely to be involved, makes managing scope for knowledge management implementations much more difficult than it would be for the typical transaction processing project.
Process architecture — Several of the study participants indicated that they spent much too little time defining their intellectual capital management processes. Instead they focused on what software to use and what content to include, rather than the processes required to generate, capture, use and maintain content. The result was a considerable amount of rework.

Change management — Almost every change in business process results in changes to systems and related procedures. In turn, these changes may dictate organizational and procedural changes to one degree or another. Many failed implementations of traditional transaction processing systems can be attributed to a lack of attention to change management. Changes in the way that professionals within organizations generate and share the intellectual capital, critical to personal and organizational success, are no exception. In most instances successful implementation require substantial changes in organizational behavior and culture. Some of the study participants indicated that moving to a model where intellectual capital was a corporate/shared asset, rather than a personal badge of distinction, required some monumental cultural changes. Achieving the transformation required a total rethinking of reward systems, mentoring strategies and other human resources processes.

Despite some of these difficulties and a few false starts, study participants have continued to move forward with their investments in intellectual capital management.

Costs Related to Ongoing Management and Enhancement

Getting started is one thing, but keeping a knowledge management system viable and robust requires ongoing adjustments to processes, supporting technologies and content that require ongoing investment. In other words, the processes and systems related to intellectual capital management are constantly evolving. Drivers of this evolution for IT services companies include the following:

- Changing market conditions
- Innovations in technology
- The development of new methodologies
- The creation of new solution sets or market offerings
- The creation of new intellectual communities of interest
The need to continuously evolve the system generates significant annual operational, maintenance and enhancement costs. The following provides some examples:

- Five of the eight companies felt they had a good handle on ongoing operating and enhancement costs. For those five, the average annual cost of operations and enhancement averaged just over $6 million and ranged between $500,000 and $12 million. The three companies that were unable to provide a specific response on this point all indicated that they knew their costs were in the millions annually.

- The number of dedicated personnel to support these systems can also be significant from two perspectives. First, there’s the direct cost associated with salary, benefits and so on. And then there’s the lost revenue that results from taking head count out of the pool of available billable resources. For the study participants, the average full-time equivalent number of professionals dedicated to knowledge management activities was 134 and ranged from a low of 15 to a high of 400. Assuming that a professional in one of these organizations would generate at least $200,000 per year in revenue, companies in the group, on average, are sacrificing about $26 million in revenue per year, over and above the direct cost to support their knowledge management processes.

The costs mentioned are to some degree only the tip of the iceberg. They do not include the usage of these systems by individual professionals, nor the time spent by professionals providing content to the systems. Study respondents reported, on average, that 66 percent of their professionals were regular users of their knowledge management system and that 35 percent made regular content contributions. (Note: Companies that initiated their knowledge management efforts in the late 1990s have a lower use rate in general). But, giving testimony to participants' belief in the benefits, every company in the study indicated that usage was growing and encouraged by management.

**Benefits Achieved**

Study participants were very satisfied with the benefits they have received from their investments in knowledge management processes and systems. To measure their degree of satisfaction, participants were asked to rate to what degree they felt their originally anticipated benefits were obtained. The rating was done on a scale of 1 to 5, in which 1 indicated a low level of achieving the anticipated benefit, and 5 indicated that the benefits achieved were significantly above those anticipated. The average ratings for the study participants are shown in Figure 1.
Survey participants were also asked to discuss any benefits they obtained that weren't originally anticipated. Their responses include the following:

- **Virtualization** — Although only one company indicated that virtualization was one of their key anticipated benefits, at least four indicated that virtualization has turned out to be an extremely valuable benefit. For example, one company cited how their established knowledge management systems were invaluable in keeping them up and running in the post-Sept. 11 world where travel and some other means of communication were restricted. Another cited specific statistics on reduced meeting time and "time to retrieve" relevant information and documents.

- **Other respondents** (primarily the outsourcers and service arms of product companies) indicated that cooperation and integration with other business units was intensified and has facilitated the process of providing full solutions within their organizations.

- **One respondent** indicated that his or her knowledge management processes had helped identify pockets of duplicate expertise, allowing the respondent's organization to consolidate operations and identify solutions that had been developed for one industry that could be migrated to others.

- **At least three companies** indicated that the time required to develop and bring to market new offerings had been significantly reduced.
And finally, none of the study participants indicated that they intended to reduce spending on intellectual capital management, although tracking quantifiable benefits remains elusive and weakness in the market is putting stress on internal spending.

**Gartner Dataquest Perspective**

Investments in processes and systems to manage intellectual capital (generically referred to as knowledge management systems) within IT professional services companies have grown substantially since the late 1980s. Today about 80 percent of the top 20 IT professional services providers have systems in place or under development. Also, the adoption of these systems by midtier providers is growing rapidly.

Despite the inability for most of these providers to quantify benefits, or for that matter completely understand and capture the costs, they firmly believe that they are gaining competitive advantage through their ongoing investment in intellectual capital management. Subjectively measured or not, participants in this study pointed to many areas of improvement in quality and operational performance spanning all phases of the IT engagement life cycle. But from the Gartner Dataquest perspective, the benefits can be summarized as follows:

- Major decreases in redundancy and duplication of effort
- Promulgation of best practices
- Reduced ramp-up time for new team members and the redirection of established staff into new technologies or business areas
- Greater flexibility in dealing with changing market conditions
- Improved responsiveness to clients and prospects
- Greater productivity, leading to better margins

The cost of achieving these benefits is likely to be high. Processes and systems for the management of intellectual capital tend to be highly customized based on specific company cultures and objectives and are expensive to implement. More importantly maintaining, enhancing and adapting these systems to meet changing business requirements is a continuous process. In most instances annual costs for operation and enhancement will exceed the initial investment.

Nevertheless, it is Gartner Dataquest’s perspective that processes for managing intellectual capital and the supporting systems for IT professional services companies are rapidly moving from a "nice to have" status to a survival requirement.

Services providers that fail to invest in these processes will soon find themselves competitively disadvantaged in such areas as speed to market, the quality and speed of proposal development, retention of key personnel, and price. Most likely, these providers will be performing at lower margins than competitors that have made the investment.
Gartner Dataquest Recommendations
For companies that have not explored the potential benefits of formalized processes for the management of intellectual capital, Gartner Dataquest recommends the following:

- Assess the leadership's attitude toward the treatment of intellectual capital as a real asset of the company, even though it does not show up on the balance sheet. If the climate isn't receptive, there is little use in pursuing an intellectual capital management strategy because to a large degree, a commitment in this area requires a certain leap of faith.

- Remember that for most IT professional services companies, adopting a formal approach to intellectual capital management will involve a fundamental change in organizational culture. Focus on process development and forget tools and technology until the processes are well-defined.

- Maintain focus and limit scope. Ignore the many potential benefits that have been discussed in this Perspective. The first step is to map those potential benefits against your company's current operational needs and long-term strategic requirements for knowledge. Once agreement has been achieved on the intellectual assets required to support those objectives, maintain a strong defense against scope creep.

- Do not underestimate the potential resistance of the established organizational culture. Remember that change management, both culturally and process-wise, will be critical to success.

- Consider that some of the companies referenced in this study were pioneers and thus took a certain number of hits. The good news is, if you're just starting out, you can learn from their experiences.

For companies that have ongoing programs in the area of intellectual capital management, Gartner Dataquest recommends the following:

- You're ahead of the game, and you just have to keep investing. All of our research data indicate that knowledge management, as a process, is a work in progress. In other words, the project is never over. For companies that have already invested substantially, the issue is one of managing the evolution.

- Consider the potential value or your accumulated knowledge as a product. There are probably ways to package this knowledge electronically or otherwise to enter new markets or attract new classes of clients.

- Assess the potential value of leveraging your knowledge management systems with established clients and partners. Some companies are already doing this, at least on a limited basis, and receiving a positive response.
There is a growing interest in intellectual capital management in many industries outside of IT services. This represents a potential market opportunity for consulting, development and deployment of knowledge management solutions. IT professional services providers should consider the potential benefits of entering this market.

**Key Issue**

How do consultants, systems integrators differentiate themselves in terms of market strategies, offerings, best practices and competitive positioning?