

## *: Is it advantageous to outsource development and operation of Decision Support Systems?*

Sometimes! Currently, outsourcing and especially global outsourcing of information technology services is one of the most controversial business, economic, political and social topics in the United States. The outsourcing debate is often drawn in terms of lost jobs, reduced costs, economic development, reduced immigration and/or security. The issue of outsourcing is a topic of conversation in the hallways of Information Technology departments and in IST classrooms. There has however been insufficient discussion about outsourcing DSS. This Ask Dan! about outsourcing Decision Support Systems was moved to the front burner because of recent developments at Best Buy, a large U.S. discount retailer of refrigerators, TVs and computers.

Best Buy has been an innovator in deploying IT to support decision makers and DSSResources.COM was and is preparing a case study about decision support at Best Buy. Last week, however, Computerworld ([www.computerworld.com](http://www.computerworld.com)) reported that Best Buy was negotiating outsourcing all of its IT operations to Accenture. Best Buy's IT staff would be reduced from 820 to 40. The forty remaining staffers would monitor the outsourcing arrangement. In the bylined article, Carol Sliwa (April 19, 2004) reported Best Buy is negotiating to outsource all of its IT operation. The goal is to contract for bottom-line business results and outcomes. Sliwa writes "Accenture advocates taking 'packaged vanilla solutions and weaving them together in as simple a fashion as possible' and changing business processes, rather than heavily customizing software, as the most cost-effective approach for retailers, Selden said." Angela Selden, the Accenture managing partner working with Best Buy, is quoted extensively in the article.

Best Buy has been innovating with distributed, data-driven DSS to enhance business intelligence (cf., press releases) and its new corporate headquarters was supposedly an "IT mecca". For example, Microsoft showcased Best Buy as an early adopter of Tablet PCs in a wireless environment. Also, in Fall 2003 Best Buy had outsourced help desk services to EDS. So what's going on at Best Buy? I have been trying to contact the PR and IT folks at Best Buy, but I'm not getting a response. BUT let me speculate: too much hype about the possibilities of IT for business intelligence, unfulfilled promises, resistance to change by some IT staff, obsolete skills of some IT staff, cost over-runs on IT projects, a persuasive sales pitch by Accenture, the current "hype" over outsourcing, and finally competitive cost pressures.

Will Best Buy outsource decision support systems and capabilities? We don't know yet. In general, my position is that DSS are always "mission critical" applications and hence should be kept "in-house" whenever possible. Also, packaged vanilla solutions may work for infrastructure and for some processes, but companies don't gain any competitive advantage from "vanilla" decision support solutions.

In Chapter 4 of my DSS Hyperbook titled "Designing and Developing Decision Support Systems", I briefly addressed the issue of outsourcing DSS. A similar discussion is in Power (2002). "Outsourcing involves contracting with outside consultants, software houses or service bureaus to perform systems analysis, programming or other DSS development activities. The outsourcer should be evaluated as a long-term asset and as a source of ongoing value to the company." Some companies also outsource maintenance of DSS especially data warehouses.

My position is that "Outsourcing DSS projects has a number of risks. First, a company relinquishes control of an important capability to an outside organization. Second, contracts for DSS services may be long term and may lock a company into a particular service provider. Finally, a reliance on

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external sources for new systems development can lead to low technical knowledge among the in-house MIS staff."

There are however benefits to outsourcing DSS projects. "Some of the benefits of outsourcing include potentially lower cost development; access to expertise about new technologies; and outsourcing can free up resources within the firm for other projects. The risks often lead to in-house DSS development rather than to outsourcing. When does outsourcing seem to work? Outsourcing can be successful when we need to turnaround DSS activities quickly and our MIS staff seems unable to build innovative DSS in-house."

In some industries, especially defense, healthcare, government and high technology it has become even riskier to outsource decision support and other "sensitive" IT transaction processing services (cf., Overby, 2004). The risk has increased because of regulations like Health Insurance Portability and Accountability (HIPA) and U.S. Export Administration Regulations (EAR).

So is it advantageous to outsource development and operation of Decision Support Systems? In my opinion ...

It can be advantageous to outsource DSS development using contract staff or other development services. Many companies can benefit from more expertise related to designing and developing DSS.

It may be desirable to use Web services maintained by third parties as part of some company's DSS environment. By breaking down enterprise decision support applications into shareable Web services it can be easier to connect applications across companies and it may enhance the functionality of existing applications. The ownership and maintenance of Interorganizational DSS will always be an issue of debate. Using Web services provided by third parties may be desirable in some business situations.

It may be appropriate for some small and medium-sized firms to outsource the operation of some decision support services to application service providers. When this path is taken, maintaining control of decision support data and having alternative service providers becomes very important.

Companies have been outsourcing some decision support services since the early days of DSS. Time sharing provided access to capabilities when companies couldn't afford to provide DSS in-house. We are perhaps returning to that approach for some types of DSS, but outsourcing doesn't solve all current problems for any company that moves in that direction and it can and does create new problems. From a managerial perspective, outsourcing avoids the need to directly manage IT and it may be more cost effective than in-house IT, but outsourcing can create strategic vulnerabilities. For example, Best Buy may find that a company like Sears, a competing U.S. retailer, can effectively exploit the "plain vanilla" IT that evolves to gain a competitive advantage. DSS innovation will most likely suffer in any massive outsourcing of IT capabilities. From a shareholder perspective, the outsourcing debate emphasizes the need to look at long term issues rather than only short-run costs. Increasing the strategic vulnerability of a company because of short-sighted outsourcing decisions is definitely undesirable.

From an IST staff perspective, the outsourcing debate showcases the problems inherent in working with information systems and technologies, including rapid obsolescence of IT skills, staffing

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problems, declining costs of technology, exaggerated expectations, etc., etc. From a U.S. nationalist perspective, domestic outsourcing of DSS is a problem in some industries; offshore IT/DSS outsourcing may create national strategic vulnerabilities. For U.S. politicians, the trade-off between more immigration of technically skilled people to meet critical IT staffing needs versus offshore outsourcing is a thorny problem. From a more global perspective, many multinational companies and many governments benefit from non-U.S. Information Technology operations. Information technology is one of the enablers of economic globalization and because of barriers to the "free flow" of labor outsourcing and off-shoring may assist in global economic development and may help improve technology infrastructures in less developed nations.

What DSS capabilities can and should you outsource and to whom? Or is it always a bad idea to outsource DSS? Your answers to these questions should depend upon a company-specific systematic analysis of costs and benefits and upon your assessment of the "risks". I'm not aware of a specific DSS to help you make these tough decisions (although some vendor probably has one), but computer support and general purpose software for cost/benefit analysis and risk assessment should prove helpful when you prepare a special study of these decision questions. Intuition and "gut feel" are definitely NOT the best approach for answering these questions.

### *References*

Overby, S., "How to Safeguard Your Data in a Dangerous World," CIO Magazine, January 15, 2004, <http://www.cio.com/archive/011504/outsourcing.html> .

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Power, D. J., Decision Support Systems: Concepts and Resources for Managers, Westport, CT: Greenwood/Quorum Books, 2002.

Sliwa, C. "Best Buy to Outsource IT to Accenture," Computerworld, Vol. 38, No. 16, April 19, 2004, pps. 1, 14.

The Outsourcing Institute, <http://www.outsourcing.com> .

*Some Relevant Press Releases at DSSResources.COM*

October 12, 2000 -- Best Buy Drives Business Growth with MicroStrategy Platform

November 28, 2000 -- Best Buy to Use Net Perceptions' In-depth Reporting and Analysis to Help Drive Merchandising Decisions

June 6, 2001 -- Best Buy and MicroStrategy Win The Data Warehousing Institute's 2001 Best Practices in Data Warehousing Award

June 6, 2001 -- Best Buy and MicroStrategy Named Finalists in RealWare Awards by CMP Media's Business Intelligence Group

April 28, 2003 -- Best Buy to Expand Use of MicroStrategy Enterprise-Wide

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