

: Do small businesses need DSS?

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Today decision-making is more difficult for all managers including those in small businesses. On the positive side, there is a greater emphasis on fact-based decision-making in all businesses. This complex decision-making environment creates a need for computerized decision support. Many small organizations have decision support as part of the accounting system or as a standalone computer application. With the recession apparently ending, and a new cycle of technology spending starting, managers of small independent businesses need to consider the possibilities of new systems for customer relationship management, preparing bids, business intelligence and performance monitoring. What are the rules for building successful decision support applications?

The most common decision support applications for small organizations are report and query applications, forecasting tools, analytical computer models and frequent buyer applications. Small scale applications built using tools like MS Excel and MS Access are feasible and hosted applications like those at Salesforce.com are possibilities. Also, in some lines of business you can find packaged applications with some decision support capabilities.

The big problem is that it is easy to overstate the need and the possibilities of computer decision support. My experience with small businesses has focused on cost estimating applications for manufacturing companies, bid generators for catering companies, small database applications, and residential construction cost estimators. Customer relationship management and improved data-driven forecasting also seem like promising applications for many small businesses.

A decision support system is a computer application that analyzes business data and summarizes it so that users can make better business decisions. A DSS is an "informational application" for supporting decision making rather than an "operational application" that collects data from business transactions. DSS is an all inclusive term for more specialized systems like business intelligence, data warehouses, OLAP, desktop data bases with query tools, spreadsheet financial models, visual simulation models, optimization models built using a management science package, knowledge management tools for indexing and searching text data bases, web information systems that support management decision-making and groupware.

At some point an idea for a decision support system becomes concrete enough and the anticipated costs, benefits and risks are significant enough that a potential project sponsor says "let's conduct a feasibility study". What should the owner of a small business do? An idea for a decision support system is an abstraction and an imperfectly formed concept that must become concrete for it to be systematically analyzed. Sometimes an analysis focuses on "go-no go" at other times a feasibility analysis compares concept A to concept B and sometimes to "no change" in current practices. The feasibility study should determine the pros and cons, costs and benefits of a proposed system. Also, the feasibility study should examine the technical, competitive and economic prospects related to developing a DSS. This study should occur prior to actually committing resources to developing a

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proposed DSS.

An extensive feasibility study examines issues like proposed DSS scope, the targeted users and their needs, anticipated DSS impacts, benefits, risks and mitigating factors. Shorter, less comprehensive studies are prepared for small scope DSS projects.

What are the rules for building successful decision support applications for any business?

Rule 1: Keep initial decision support applications simple and avoid grand solutions. The builders must have experience with the decision and the existing decision process prior to designing computerized support.

Rule 2: Tackle significant problems. A solution that provides some improvement is often enough to justify the cost.

Rule 3: Novel, innovative systems should be initiated by the managers who would use them. As technology and circumstances change, we can expect that managers will have ideas for "new" DSS. The advent of handheld computers and wireless technologies are examples of technologies that managers may choose to adopt for decision support.

Rule 4: Decision Support System projects must meet a need and provide benefits that justify the ongoing cost of operating, maintaining and upgrading the system as well as the cost of building them.

Rule 5: DSS should be built by a team that include potential users and technical specialists.

Rule 6: Prepare for technology shortfalls, technology applications can be frustrating so keep expectations modest.

Rule 8: Tell everyone as much as you can about the costs of creating and using the proposed DSS

Rule 9: Once the application is built, invest in training and market and promote it.

We should consider building a computerized decision support system when:

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1) Good information is likely to improve the quality of decisions; and

2) Potential DSS users recognize a need for and want to use computerized support.

For more information about DSS visit <http://DSSResources.com> or check my recent book *Decision Support Basics*, <http://businessexpertpress.com>.

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