

# : *How important is a robust decision support capability?*

by Dan Power

Editor, DSSResources.com

A robust decision support capability is perhaps desirable. Robust means a decision support system (DSS) requires little change as circumstances change or that it can adjust to changing circumstances. So a robust decision support capability is either especially flexible (cf., Power, 2008) and easy for users or developers to adapt, alter and change or it is self-adjusting based on machine learning. In general, experience suggests "robust" is **not** a major DSS requirement and one can argue that automating learning by a decision support system is undesirable. The critical issue is establishing indicators that help a user or developer recognize and identify the need to change and adapt a decision support capability.

There are few or no benefits from an outdated DSS and for many reasons a decision support capability that adapts on its own is currently unrealistic and even somewhat ominous and potentially bad or dangerous. In fact, the more a system is able to adapt to change in an autonomous, self-adjusting fashion, the less the system is a decision support system and the more it is a "smart" or adaptive, learning system.

We have many desires for modern decision support and some designers think that creating a system that adapts and learns is important. The reality is that most routine decision situations change slowly and often times when a situation does change it is abrupt and the result of conscious managerial action of external forces. It therefore becomes difficult to track changing decision making needs and processes that will impact existing computerized decision support. Anticipating that an analytical or decision support capability is or will soon become obsolete is desirable, but the task is perhaps best left to human decision makers to consider when they change decision processes or criteria for decision making. An important design requirement for a computerized decision support system should be a characteristic or capability that is both necessary and desirable.

Failing to revise, replace and retire decision support capabilities can and usually will create problems. Decision making processes and analytics must change in response to internal and external pressures. When new products and new processes are developed new or revised decision support is needed. Also, changing inputs to production processes and changing service delivery necessitate new decision support capabilities.

A decision support capability can become obsolete as a result of new processes or new technologies. Recognizing the need to change existing support capabilities is not however easy and straightforward. Managers learn to use an existing system and they learn "a way of making a

## : *How important is a robust decision support capability?*

decision" and it becomes routine to act in that manner even when circumstances change and the results of using the outdated capability are increasingly inaccurate or suboptimal.

Managers and decision makers must be alert for indicators that existing decision support is not performing as well as intended or as well as it had at a prior time. Logging decisions and tracking decision results can assist in monitoring and auditing decision support capabilities. Decision makers and designers make computerized decision support "robust". Keeping people in the decision making "loop" makes the entire decision making process stronger, more capable, and more robust.

A person, a human system, is robust when strong, healthy and resistant to external and internal attack or disease. From my perspective, it is unimportant and undesirable to translate this metaphor into characteristics of a DSS, a computing system.

### References

Power, D. "How important is flexibility for a DSS?" DSS News, Vol. 9, No. 14, July 13, 2008 at URL <http://dssresources.com/newsletters/220.php>.

Author: Daniel Power

Last update: 2013-11-10 06:12