: What is a data-driven decision making organization?

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A data-driven decision making organization encourages and rewards use of facts and data by employees. Using facts and data to make decisions in organizations has long been a goal of most managers. Using "gut instincts" and limited information has serious risks. Basing a decision on self-interest is poor practice, but the decision maker still requires facts. Consulting mystics/fortune-tellers fell into disfavor long ago. Today decision makers have increased access to more and better data in real-time almost anywhere in the world. This new reality has changed the decision support possibilities.

Becoming a data-driven or data-informed organization has become a priority for some managers. Analytics and decision support must be aligned with business strategy to realize benefits. Pushing for more data and more analytics without a strategic fit is folly. Decision support initiatives fail when there is a poor alignment with business strategy.

Organizations can empower employees with access to relevant data and analytics. The key is to provide relevant data when it is needed to make a decision. The decision maker remains central to decision taking, but technology and analytics support is enhanced for data-driven decision making. Providing data does not mean however it will be used properly or even used. Training and reward systems are key to making the new decision support capabilities a factor in improving organizational performance.

Data refers to all the relevant facts, figures and digital content captured in information systems. Data are the bits and bytes stored electronically. Data may be streaming to a decision maker or retrieved from a historic data store. Figuring out what data is relevant and what the data means in a decision situation can be challenging. Data can overwhelm a decision maker and can mislead. Data-driven decision making requires anticipating data and analysis needs and providing the opportunity to request and analyse additional data. Analytics involves processes for identifying and communicating patterns, derived conclusions and facts.

Using data in decision-making **must** become part of the culture. The quest to capture and make available appropriate data and relevant analyses **must** become an urgent requirement and ongoing priority. A data-driven organization survives and hopefully prospers based on the quality, provision and availability of data to decision-makers. Data is captured where it is generated and it is appropriately stored and managed for use in decision-making. Analytics and data become the basis for decision making.

Creating a data-driven decision making organization has both technology and human resource challenges. The technology issues continue to evolve as more data and better, easier to use analytic tools become available. The human resource challenge involves retraining and motivating current employees in analytics and model-driven and data-driven decision support systems.

We know that factors other than facts influence the success of our choices, but without facts then luck and chance dominate the outcomes in situations. Bet on using facts.

References

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

Power, D. Decision Support Basics, New York: Business Expert Press, 2009.

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Brynjolfsson, Erik, Hitt, Lorin M. and Kim, Heekyung Hellen, Strength in Numbers: How Does Data-Driven Decisionmaking Affect Firm Performance? (April 22, 2011). Available at SSRN: http://ssrn.com/abstract=1819486 or http://dx.doi.org/10.2139/ssrn.1819486 .

Abstract:

We examine whether firms that emphasize decision making based on data and business analytics (“data driven decision making” or DDD) show higher performance. Using detailed survey data on the business practices and information technology investments of 179 large publicly traded firms, we find that firms that adopt DDD have output and productivity that is 5-6% higher than what would be expected given their other investments and information technology usage. Furthermore, the relationship between DDD and performance also appears in other performance measures such as asset utilization, return on equity and market value. Using instrumental variables methods, we find evidence that the effect of DDD on the productivity do not appear to be due to reverse causality. Our results provide some of the first large scale data on the direct connection between data-driven

decision making and firm performance.

Brynjolfsson, E. and A. McAfee, "The Big Data Boom Is the Innovation Story of Our Time," The Atlantic, November 21, 2011 at URL http://www.theatlantic.com/business/archive/2011/11/the-big-data-boom-is-the-innovation-story-of-our-time/248215/ .

"According to Google economist Hal Varian, his company is running on the order of 100-200 experiments on any given day, as they test new products and services, new algorithms and alternative designs. An iterative review process aggregates findings and frequently leads to further rounds of more targeted experimentation."

Casino Executive Gary Loveman, an economics PhD from MIT and former Harvard Business School professor, found when he became CEO that that Harrah's "was already gathering a great deal of data about its customer interactions with existing information systems and programs such as its Total Rewards loyalty card. However, it wasn't using these data to develop improved processes, products and services. After becoming CEO, he developed strategies to continually tests new promotions, price points, services, workflow, employee incentive plans and casino layouts using controlled experiments."

Brynjolfsson, Erik "Seven Pillars of Productivity" Optimize, May 2005 at URL http://ebusiness.mit.edu/erik/Seven%20Pillars%20of%20Productivity.pdf.br>

"IT intensive companies tend to be more productive, and most economists now agree that growing investment in information technology has been the single most important reason for the resurgence in the past decade. However, it's also true that, since 1995, thousands of IT projects have failed to deliver on their productivity promise each year."

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