

Most daily decisions are no-brainers: we hardly think about them, much less how we make them. Some critical business scenarios, however, call for more conscious decision engineering. When decision factors are complex or ill-understood, pressures and risks are high, and actions must be defended, a deliberate approach to multicriteria decision analysis offers both assurance and better results.

What goes into a good decision? Contrary to popular belief, good decisions don't begin with options: they begin with goals. What do you want to accomplish? Setting a goal allows you to define criteria that must be met to attain it. Criteria for project selection, for example, might include alignment with strategic goals, development costs, and staff skills, among other factors. In general, goal criteria should be qualitatively or quantitatively weighted. Weighting serves two purposes: it helps you to prioritize important criteria, and it provides a basis for measuring performance down the road.

Once your goal is well described, you can begin to look at options for meeting it. Most options can be parsed for characteristics that can, in turn, be compared to goal criteria. Organizational standards, values, and principles can also support or deprecate options. Finally, uncertainty indicators (fact gaps, assumptions, biases, and chaos potential), as well as distortion factors (decision speed, team dynamics, and game-changing meta factors) should be evaluated for their potential to warp the logic of the decision process.

In terms of the analytical process, collaboration and time both help cultivate good decisions. Working with others on key decisions expands your knowledge base, thought power, and perspective. Brainstorm, assess, break, regroup, and revisit. In particular, never underestimate the value of breaks. Humans are, by nature, reactionary thinkers. Many bad decisions have been made in marathon meetings where tedium, conflict, and other pressures eclipsed the expertise, experience, and rationality of the participants.

How to Clarify Complex Decisions

A REALITY-BASED GUIDE



SET A GOAL

Direction without a destination is indistinguishable from rambling. Setting clear, strong goal statement at the outset of your decision analysis will: 1) guide the definition of the criteria you need to meet; 2) constrain the scope of options you consider; and 3) create a target against which downstream decision consequences can be measured. In defining your goal, be careful not to overgeneralize ("spend next year's budget") or unduly limit your options ("choose between Harry's and Jane's projects"). Instead, focus on a business benefit you want to achieve or a problem you need to solve.



DIG, POKE, PEEL

Constructive skepticism is a great asset in decision analysis. Collect, assess, and (if necessary) debunk supporting evidence for all options. Goal criteria often benefit from brainstorming and research, particularly for complex projects or systems and when diverse stakeholders are involved. Weighting criteria on either quantitative or qualitative scales can focus your field of options and help you more easily assess their attributes and tradeoffs. Devil's advocate and dissenting opinions bring important perspective to decision processes: seek both positive and negative indicators for every option. Where data is available, validate its source and quality.



PLOT BIASES

Understand the influences that might skew decision input. Be alert to red-flag phrases, such as 1) "because," which might indicate a confusion of cause and effect; 2) "I prefer," which might indicate personal bias; and 3) "we know that," which might signal the dubious assumption of future results based on past performance. Note, however, that neither recognized bias nor lack of evidence necessarily invalidates an objection or suggestion. In fact, "outing" a bias can support decision analysis by exposing deeper considerations. Similarly, a lack of evidence may only increase the uncertainty ascribed to a characteristic—and the known risk of hanging a decision on it.



RESPECT YOUR GUT

As you consciously pound the rational pathways of decision analysis, your intuitive brain is crawling connections, contexts, and reactionary deltas for the millions of notes of data that hit your eyes and ears. The upshot of this background processing is often a sensation or feeling; for example, that an option that makes sense in theory will certainly fail in execution, or that a pivotal criterion is based on a faulty premise. Before dismissing these intuitions, try to give them clarity and structure. You might discover you know more than you think.

[EXTRA]

FACTORING NEGATIVES INTO DECISIONS: THREE OPTIONS, IN ORDER OF PRUDENCE



GOOD: DISSECT AND QUANTIFY
The road to failure is paved with optimistic assessments. Shed those rosy GLASS and research the risk and uncertainty factors in all options. Quantify whenever possible and measure against your own risk tolerance.



BAD: BACK A LOST CAUSE
Some decision analyses simply leave you with no good options. Before you begrudgingly endorse the best of bad paths, remember that the goal, not the decision itself, is your primary responsibility. Walk away, integrity intact.



UGLY: IGNORE
Basing decisions on avoing risk will decimate your options and debase your goal. Instead, assess risk tradeoffs against your criteria and look for ways to mitigate risks in the options that most closely match your goal.

References & Resources

DECISION ANALYSIS

Decision Analysis journal

A quarterly publication dedicated to the theory, application, and teaching of all aspects of decision analysis.

<http://www.informs.org/site/DA/>

Analytic Hierarchy Process (AHP) Tutorial

Introduction, walkthrough, and examples for one approach to multicriteria decision modeling (MCDM)

<http://people.revoledu.com/kardi/tutorial/AHP/index.html>

The KM-MCDM Interface in Decision Design: Tradeoffs-Free Conflict Dissolution

A paper from the 2008 International Journal of Applied Decision Sciences proposing the integration of MCDM and knowledge management (KM) for better decision support.

<http://inderscience.metapress.com/link.asp?id=4016432444150060>

Making Decisions Using the Balanced Scorecard and the Simple Multi-Attribute Rating Technique

A 2005 paper from the Performance Measurement and Metrics journal exploring MCDM support for performance measurement.

<http://www.ingentaconnect.com/content/mcb/279/2005/00000006/00000003/art00002>

Too much information: Managers Can Use a Decision-Modeling Process to Make Tough Choices Easier

Walkthrough of a decision modeling methodology for information security projects and procurement.

<http://www.entrepreneur.com/tradejournals/article/84165997.html>

A Methodology to Support Software-Release Decisions

A software management methodology reflecting economics, IT, and psychology.

<http://www.sei.cmu.edu/library/abstracts/news-at-sei/feature2200604.cfm>

What Is Groupthink?

Overview of a common group dynamic that prioritizes consensus and cohesion over critical thought and judgment.

http://psysr.org/about/pubs_resources/groupthink%20overview.htm

FOUNDATIONS, CHECKS, AND BALANCES IN DECISION ANALYSIS

Decision analysis is, essentially, the process of producing clarity from chaotic complexity. A robust decision-making methodology illuminates what you want to achieve (a goal), how you can achieve it (options), and why some options are better than others. The following figure diagrams major factors that support both the development of knowledge for decisions, as well as analytical checks and balances that cultivate confidence in multi-criteria decision outcomes.

