Elements of Corporate Decision Making

Executives reported that they would like their companies to improve in four major areas: objective and alignment, risk and uncertainty, usability (simplicity, speed, flexibility), and communications and transparency[1].

Objective and Alignment

The goal of any public corporation is to maximize shareholder value.

This is a universally accepted concept, but decision makers have no clear idea of what this means quantitatively or how to do it. Instead, they are forced to use approximate goals such as "maximize total revenue" or "maximize ROI". Depending on the project, they may focus on different "metrics" such as cost, speed, or "risk". To maximize shareholder value, we must integrate all project aspects. By eliminating these approximations and maximizing shareholder value directly, we will obtain an alignment of goals from the shareholder down to the shop floor and will eliminate the complex and contentious goal-choosing aspect of the decision process. A single goal for all corporate decisions means more consensus and "buy-in".

Risk and Uncertainty

To make the best decisions possible, we would like to include all the most relevant information we have and none that we don't.

Most of the time, we have partial or incomplete information when decisions are made. That means we are not able to simply use our most-likely estimate or single-point "forecast". It also means that we should not force our information into a probability distribution or structure that does not faithfully represent it. The decision maker should be able to state whatever relevant information he or she has in whatever form is most accurate, and the process should be able to incorporate that information without adding any information that isn't there.

Uncertainty is unavoidable in business. Therefore, any good strategy is agile and making decisions dynamically. Decisions made today should account for uncertainty and future decisions contingent on those uncertainties.

Risk and uncertainty mean different things in the context of maximizing shareholder value. The "risk" that concerns a public corporation is the risk to the shareholders overall portfolio (the "Market"). Increased risk to shareholders lowers the shareholders' value. How uncertainty translates into risk depends on how that uncertainty is related to the Market, and oftentimes increased uncertainty leads to greater shareholder value (a fact not lost on Wall Street traders).

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[1] INFORMS Roundtable Conference 2005.

Usability (Simplicity, Speed, Flexibility)

No matter how precise or sophisticated the process, it is worthless if it is not used.

Cheaply available computing power means the complexity, number-crunching, and mathematics can be transferred to the machine so the decision maker can focus on the creativity, communication, and execution of the business problem. To get the decision maker's information into the model, they may use a trained internal or external consultant, or receive training to directly enter the relevant information. The decision process needs to be people-centric, fast, and flexible.

Other simplifications that would simplify the decision process include: a single and repeatable end-to-end process for all decisions regardless of industry, application, or managerial level; always maximizing shareholder value; creating a contingent strategy in advance; and reusable model templates or pieces originally created for previous models.

Communications and Transparency

Executives spend the majority of their work day communicating their mental models and expectations to others and trying to understand others' mental models and expectations.

When making a decision, everyone has a mental model of the future. For complex decisions, these mental models are nearly always over-simplified and flawed. By bringing these mental models to light through a codified model, they can be challenged by the owner of the mental model and by others. To make the best decision, the model should include all the most relevant corporate information and not just that of one decision maker. Having the model codified in a standard form makes it much easier to communicate with other parties.

As the future unravels and evolves, there should be continuous communication about the status of the model. With all parties able to see the appropriate strategy in the face of constantly changing information, decision making becomes more agile and disciplined.

To learn from the models, decision makers should be able to ask any question. What is the most-likely finish date? Would you show me a graph of how the shareholder value of this project changes as the variability in the revenue increases? These questions are not asked to directly determine the optimal strategy. The optimal strategies can be very complex and are found by the computer. The questions are asked to see what can be learned and to ensure that the model is representative of the decision maker's information. If it's not, the decision maker learns and the model is changed and improved. It's a feedback process. After the choices are made and the uncertainties resolved, the model can be reviewed to determine any possible biases the decision maker may have.