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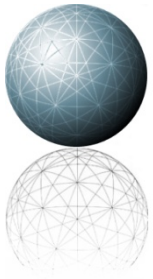

High Performance Decision Making: A Global Study

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15 September 2008
Version 2.0

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Executive Summary

In the first half of 2008, Quantellia interviewed 61 executives, managers, and other thought leaders from several industries around the world. Our initial goal was to understand the interest in, and specific features required for, our *WorldModeler* software product now under development. Additionally, we were seeking guidance regarding the related consulting methodology we had formulated, called Visual Desktop Modeling.

In the course of our interviews, we discussed several hundred individual decisions made within various industries, from the most strategic "big money bets" (choosing the right movie to produce, the best world region in which to launch a product, the best ship model to defend a country) down to the most tactical decisions that permeate every organization (selecting a price for a new product, the right salary to offer a prospective employee, the type of person to target for a marketing campaign).

As our interviews progressed, a pattern emerged that we believe has the potential to radically reshape the way organizations approach decision making around the globe.

The decision making process constitutes an emerging engineering discipline.

We reached this conclusion by observing that a comparable set of conditions led to a similar transition within software development which, in the last twenty years or so, has moved from relying largely on informal methods, to a powerful, sophisticated engineering discipline. We learned that, like software, decisions have a phased lifecycle that stretches over time, and can be *engineered,* yielding considerable reductions in risk and cost, along with improvement to the quality of decisions made.

Our key findings were as follows:

- By and large, **decisions involving millions of dollars and, sometimes even human lives, are made informally** in many organizations worldwide.
- This informal decision-making process leads to a number of **short cuts that reduce the quality** of the decision made. These include the inability to effectively reason about multiple decision outcomes, long chains of cause and effect, and intangible—but nonetheless critical—factors like morale.
- There is no widely established mechanism to combine both **expert judgment** and **quantitative data** to produce the best decisions.
- A number of best practices are emerging to solve these problems. Together, they constitute an **emerging engineering discipline**, which we call *Decision Engineering.* Many of these practices have been maturing for many years, but they are only recently reaching a watershed: a **complexity ceiling** that limits the quality of decisions we can make today without more formal approaches
- Best practices center around the concept of creating—like an architect's blueprint or a software UML diagram—a **visual representation** of how the factors that affect a decision to be made are related, how alternative scenarios are related to the decision criteria, and the proper role for quantitative data (including uncertainty).
- We chose the **telecommunications** market to study in depth. Here, building the network hardware and building software to support operations were previously considered top strategic priorities. Today, this **bottleneck has shifted: telecom is like a fast ship lacking a navigation infrastructure**: making decisions to best utilize these assets—to "steer the ship" and align the entire organization in one direction after another—is considered the next most important arena for strategic differentiation. We have reason to believe that this pattern is true in other industries as well.
- **Alignment** of decisions across an organization is a particularly strong need.

This report presents our high-level findings and gives an outline of the emerging decision engineering discipline. Please contact inquiries@quantellia.com if you are interested in the full study.