

## ***Top executives are “grandmasters” of corporate decision making.***

Chess grandmasters have an amazing ability for devising creative winning strategies from complex information. Top executives show similar “grandmaster” abilities in devising winning business strategies. Not surprisingly, corporate and chess grandmasters use similar approaches. The method used by chess grandmasters to develop their own strategies, until the last ten years or so, should seem quite familiar to corporate decision makers. A grandmaster develops a strategy to gain every possible advantage, hopefully leading to a winning position. The grandmaster leverages their experience and intuition, as well as information from databases, the internet, and so forth. Several possible strategic scenarios are played out mentally, gauging any potential responses of the competitor, the responses to those responses, etc. until the strategy is finally put into action.

Chess grandmasters thus combine their own knowledge with “chess intelligence”: relevant information collected from information systems and analyzed via computer. Business grandmasters develop winning strategies by combining their knowledge and experience with “business intelligence”.

## ***Grandmasters make creative leaps. Computers crunch numbers. Together they crush the competition 99%<sup>1</sup> of the time.***

A watershed event occurred in 1997, when a specialized chess computer named “Deep Blue” defeated world chess champion Garry Kasparov. The key realization from this event was not that computers were “smarter” than people, rather that they possessed a complementary capability. People were good at intuitive and creative thinking, but rather poor at evaluating many strategies at once and precisely assessing the value of a particular strategy. The computer, given the information supplied to it by humans, could “think ahead” for millions of possibilities in seconds, and determine which strategy was most likely to lead to a win. Chess grandmasters understand the gestalt of the human/computer symbiosis: neither is superior to the other, they are complementary, and working together they are considerably more skilled than either human or computer chess players alone.

This has led to a variant of chess termed “advanced chess,” in which players use computers during the course of a game to mine chess databases and evaluate strategy. Two of the world’s top players, Viswanathan Anand and Anatoly Karpov, competed in an advanced chess tournament in 1999. Anand made a creative leap, guessing that he could sacrifice a piece to push a pawn across the board and gain a queen, giving him a major advantage. Anand used his computer for 10 minutes, running a deep strategic analysis and holding the tournament audience in rapture, ultimately finding that he had hit upon a winning play. He then executed this strategy and defeated Karpov.

## ***Advanced corporate grandmasters free their creativity from the bonds of “conventional wisdom” via the computer’s analytical power.***

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<sup>1</sup> According to the ELO performance ratings, even an average club player teamed up with the top chess computer will beat the top grandmaster over 98% of the time.

The use of technology for decision support is often mired in the same state as it was for chess prior to Deep Blue's victory over Kasparov: technology and software are used to gather, store, analyze, and present information to people, who then attempt the strategic analysis largely in their mind. But chess grandmasters have realized the many benefits of offloading the strategic analysis to a computer, freeing their mind for creativity and intuition. Given a proper tool, would not corporate decision makers realize the same benefits?

By combining their intuitive prowess with modern computational capability, chess grandmasters have discovered that many core "principles" of chess, held to be true for centuries, do not necessarily yield winning strategies. For instance, the necessity of controlling the center of the board has been overturned. Many end-games long thought to be draws have been shown to result in definitive wins. The human/computer team, utilizing the truly optimal strategy, will nearly always overwhelm a competitor playing by centuries' worth of "rules of thumb".

Corporate decision making has also long been well-served by guiding principles such as "maximize the chance of success" and metrics such as return-on-investment (ROI) and weighted average cost-of-capital (WACC). But the deep strategic analysis enabled by modern technology shows that these principles lead to choices that are often at best rough approximations of the actual winning strategy and at worst losing significant shareholder value. The corporate grandmaster can use the power of the computer to fully leverage their creativity, experience, and information to attain a significant advantage over competitors relying on "rules of thumb" and mental analysis alone.

### ***Corporate grandmasters "checkmate" the competition***

A chess grandmaster is always aware that the goal of chess is to win the game by checkmating the opponent, not to capture the most pieces. To do so, the grandmaster will both use the computer and examine the entire board to find the right move. Likewise, a corporate grandmaster understands that the goal of business is to maximize shareholder value, not maximize short-term profits. The corporate grandmaster will consider any type of relevant information, whether from information systems or from the corporation's powerful minds. Top executives leverage computer power for real-world strategic victories.