



Optimize Profits Using “Hidden Knowledge”

The unspoken reality in business is:
1) Most of the knowledge in a company is not available to decision makers; 2) Most of the knowledge that is available is outdated or unclear; as a result, 3) Most corporate conventional wisdom is wrong. Why this is and what can be done about it is the subject of this article.

The Problem

1. “Most of the knowledge in a company is not available to decision makers”

Complex organizations today are supported and managed by experts with decades of industry and company specific knowledge in addition to years of training in engineering, business, computer science and other disciplines. Since you (and I) no doubt fit this profile, consider the last time you had to write a report or make a presentation. The many thoughts you could have included but rejected or edited out because you felt they were not relevant to the issues at hand are what I call “hidden knowledge.” Add your personal store of hidden knowledge to that of everyone else’s in your company and you can appreciate the mountain of know-how that is unavailable to decision makers. To illustrate this, you can see that much of the time spent in meetings involves the exchange of hidden knowledge.¹

2. “Most of the knowledge that is available is outdated or unclear”

Knowledge is communicated primarily in words and sometimes in numbers. While they are used more sparingly, numbers add significantly to the clarity and, therefore, power of a message. Saying, “Our goal is to increase sales” has much less impact than to say, “Our goal is to increase sales by 25%

in 2004.” Accounting data is the most numbers-rich knowledge base in an organization but it suffers the limitations of being historic in nature and subject to accounting conventions. Similarly, the quantitative knowledge contained in ERP and CRM systems is compromised by being based on past performance. For instance, if a company metric has always been “10” but management knows it will be “12” in the future, neither an accounting or ERP/CRM system will predict this change. Because of convenience and convention people largely rely upon words to impart knowledge about the future. However, we all know that even with the best of intentions, this media easily leads to misunderstandings, misconceptions or worse.

3. “Most corporate conventional wisdom is wrong”

Most humans can hold in their mind up to three variables at a time. For instance, when the military plans an operation, they give three—and only three—objectives to the soldiers. From experience they know that more than that leads to confusion. By contrast even “small” companies have thousands of variables that determine the resulting performance. Faced with such complexity people invent theories to explain the observed behavior of their company. The problem is, when top executives are asked to name and rank the most positive and negative influential metrics of their business, they are invariably wrong. This profound finding illustrates more the organic intricacy of organizations than the failings of the people managing them.

When we inquire into the hidden knowledge of our clients, managers often comment, “These are the questions we know we should be asking but haven’t been.” So what prevents them from capturing, quantifying and utilizing the knowledge in their company? In our experience working with hundreds of companies in dozens of industries, the reason these questions are not asked is because managers do not know what to do with the answers. They lack a comprehensive, quantitative context or structure in which to effectively employ such valuable information.

Aircraft Carrier versus Submarine Case Study

The following true story contains the kernel of a proven solution to this problem. After WWII the US Navy faced a critical decision: whether to invest in a fleet of new, untried nuclear submarines or build more aircraft carriers. The conventional wisdom was to stay with the ships they knew and that had won the last war—namely, carriers. However, to test this strategy they interviewed experts on both sides and quantified their collective knowledge. A computer model was fed the tactics, characteristics, capabilities and limitations of both types of ships. Surprisingly, in repeated simulated battles under varying conditions and assumptions, the submarine usually sank the aircraft carrier. This insight enabled the Navy to optimize its capabilities by launching a fleet of nuclear submarines.

Five Steps to Profit from Hidden Knowledge

As the example above illustrates, executives can take five steps in the planning process to profit from hidden knowledge within their organization:

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¹ “Hidden Employee Knowledge” is the detailed learning and intelligence contained in every area of a company. For instance, sales and marketing personnel know or can reasonably estimate the seasonality and price elasticity of each product or service as well as the productivity of various sales drivers. Support departments know how specific costs are tied to individual sources of revenues and how such allocations of resources will change under different sales and growth assumptions. Also, managers know how these dynamic interrelations are likely to evolve over time. ERP and CRM systems are examples of capturing, quantifying and applying employee knowledge.

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1. Operational Level: Capture and quantify employee knowledge that is not available or used by management. The Navy sought out experts and quantified their (otherwise) hidden expertise.

2. Assessment Level: Simulate employee knowledge in a computer model to identify and rank the most important (positive and negative) business drivers. Matching up the two ships in simulated battle gave planners more insights into their respective strengths and vulnerabilities.

3. Planning Level: Utilize these insights and tools to quantify and predict outcomes—including the unintended consequences. We recommend checking and rechecking model inputs and assumptions but then let the results speak for themselves. Very often surprising outcomes (submarine wins again!) contain important, innovative insights.

4. Execution Level: Rigorously compare outcomes to prioritize goals and implement the best path to achieve these objectives. The Navy realized from this analysis that a combination of both types of ships best served its overall requirements.

5. Monitoring Level: Respond quickly to changing conditions by immediately assessing the impact of updating strategies on the entire company. As other nations gained in submarine technology, the Navy deployed nuclear submarines to protect aircraft carrier battle groups.

We assure clients that they know much more than they think they do and harnessing hidden knowledge is not as difficult as it may seem. Sometimes accessing a more concrete level of thinking simply requires translating words into the rigorous language of numbers and quantitative relationships. A case in point happened a few years ago during the interview of two founders of a startup company. They were co-workers in their previous company, had a total of 40 years experience in the target industry and had written their business plan. However,

when asked how a significant aspect of their business would operate, each was surprised to learn that the other had very different thoughts regarding this matter. Importantly, the words they had employed up to then masked this conflict but having to specify the functions in sufficient detail to mathematically model them uncovered the differences. Fortunately they avoided this potential stumbling block in advance by quickly finding a solution that combined the best attributes of each partner's ideas.

A CAD Tool for Engineering Profits

Supplementing work done at Stanford University and SRI International, this methodology has been applied for over ten years in many industries. From emerging companies to large, multi-billion dollar enterprises, it has been used to analyze a wide variety of strategic decisions including rapid expansion or retrenchment, allocation of resources, mergers and acquisitions, product launches, market rollouts, infrastructure planning, testing strategic planning objectives and many other issues. Such a "crystal ball" combines the comprehensive, dynamic attributes of an ERP system with the top-down, bottoms-up forecasting capability of a financial model.

In summary, Evans Strategic Consulting enables executives to optimize profits by 1) capturing and quantifying their company's hidden knowledge and 2) applying this knowledge so that they gain deep, innovative insights. We create custom simulation models that capture the real-world complexity of a company. This synthesis of subjective knowledge and objective discipline yields valuable insights not available any other way. As one client observed, "If you can't quantify and predict outcomes, you're just guessing." Up to now, guessing has been the standard of practice in business.

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