



“Plans Are Nothing. Planning Is Everything.”
General Dwight D. Eisenhower

by Dr. George Manners

Decades of development in managerial accounting, operations research, raw computing power, software development, process modeling, data management, and graphics are combining in ways that are rapidly altering the world of integrated decision making. We are on the cusp of a revolution.

But how did we get here? How did we build to this point? The first step involved creating a language to communicate between a company and the suppliers of capital. This is accurately measuring financial results and grew from the field of accounting. The second step was to understand the actual business, counted in units not dollars. This is accurately measuring operational results and grew from the field of operations. The third step was tying the two areas together in some way that yields understanding of the overall business. Namely, how operational activities affect profitability or identifying profit drivers. Only then can we begin to develop a beneficial process for planning and decision making.

But there is so much more to know and understand. A higher level of understanding begins with capturing and measuring the interdependencies of a company's open system of assets. When an organization's interdependencies, efficiencies and capacities are captured, rarely can two firms look the same. As a result, true competitive opportunity and advantage is obtainable.

The ultimate insights start with a simple but powerful word: optimization. This refers to a firm having the knowledge and skills to optimally configure its interdependent input-throughput-output-multiple constraint system in ways that lead to superior financial outcomes. These superior financial outcomes may or may not actually occur, of course, because optimally is primarily definable in a planning mode. The world keeps moving, so the plan may not be realized.

The word optimization must be accompanied by another word in order for the firm to be truly knowledgeable concerning decision making: enterprise. There are thousands of firms that possess the decision support knowledge and tools to achieve 'optimization' of various sub-systems (though they rarely "foot" to any financials). But superior financial knowledge and understanding occurs only

when the entire system (strategic planning and operational processes) can be modeled and credibly reproduce true financials.

It is the capability to build and understand this enterprise model of the business that leads to knowledge – and at this level profound knowledge.

There are categories of optimization applications that the firm might adopt. One of the most fruitful, of course, is to determine optimal product mix – meaning what would the system prefer to produce. This is critical knowledge, but the outcome may not be achievable in the marketplace. Thus, another common category of application is optimal resource deployment for a given mix. And there are, of course, hybrids of these categories. Sub categories of optimal resource deployment include networking and transportation applications.

To achieve this knowledge base one needs contemporary software – way beyond spreadsheets and basic ‘solvers.’ We need substantively scalable support platforms (which spreadsheets are not); we need software that has the ability to connect to minds and appeal to the visual (the latter being something spreadsheets never do well); we need state-of-the-art data management capability; and we need raw computing power. I have found one software product that can provide these capabilities on an enterprise-wide level, River Logic’s Enterprise Optimizer[®].

Once a model is validated against historic financials, the firm can then ‘unlock’ the model and begin to test both the tactical and the strategic implications of optimality. There will be some “Ah-Ha’s!” There will also generally be the proverbial low-hanging fruit that can be quickly plucked. And, invariably, there will be some strategic implications in the areas of mix, resource productivity/acquisition, sourcing, etc. that present potentially enormous opportunity. To the extent that the model has achieved credibility and executives can wrap their minds around the risks of these opportunities, high-potential actions can follow.

The model becomes a budgeting support system; it becomes the scenario manager for the strategic system; it becomes the platform for capital appropriation analyses; and it becomes the source of critical evaluation for a huge number of tactical decisions in pricing, customer profitability, negotiation, sourcing, etc.

When the enterprise reaches this level of knowledge, it can now begin to behave in ways economists have been suggesting it behave all along. Most of us have heard the economists’ adage that “all decisions are made at the margin.” While that is the way economists would like decisions to be made, way too many decisions are made “on the average.” Companies generally have only a vague understanding of where “the margins” exist – they just don’t possess the analytical wherewithal to continuously address marginal thinking. So they create

sub-optimal policies that make sense but do not have the robust power of integrated decision making. Firms may think at the margin for major strategic analyses, but without this level of understanding, they cannot capture an enterprise-wide view and really stretch understanding.

Another characteristic of this level of knowledge is something we also likely first heard in an economics class – the concept of opportunity cost. Although managers understand the concept of an opportunity cost, if they are not operating at this level, the understanding is theoretical. But at this level we know the value of an incremental sales unit at the current mix, we know the value of an additional resource unit (hour, day, etc.) at the current level of throughput, and we know the value of additional beginning inventory heading into the next period. We know this because we are aware of the constraints at what “the margin” is all about. When a firm achieves this level of financial knowledge, opportunity costs become the key component in priority setting.

Being able to optimize (in a planning sense) an interdependent system and fundamentally understand marginal analysis does not lead to “easy” decision-making, but it does lead to “insightful”, “right” decision making. Optimality needs to be evaluated as to how it would impact the market, especially in terms of the reactions of competitors. It needs to be evaluated in terms of the impact on long-term suppliers. It needs to be evaluated in terms of the capacity of the organization’s people to understand and implement “the optimal”.

Optimality constitutes a “corner position” which is often a significant departure from current thinking and operating flows. Thus, managers have a new level of understanding that makes for winning analysis.

About the Author

Dr. Manners has decades of experience as an educator, consultant, and business executive. He is senior author of *Managing Return on Investment*, and has over 40 articles published in a wide range of journals. His clients over the past 25 years include GE, IBM, Cyanamid, Philip Morris, Bank of America, Weyerhaeuser, Georgia Pacific, Cox Communications, WellStar Health System, and McKee Foods. Dr. Manners has occupied tenured positions at Rensselaer Polytechnic Institute, Clemson University, and now Kennesaw State University. He has held positions of Director of Organization Development and Director of Technology Services with the James River Corporation.