"Strategy must be based on facts, not on wishes. Market research is the fundamental intellectual discipline underlying the creation of effective business strategy.”

Dr. Barry Unger, co-founder, MIT Enterprise Forum.

How much, and when, do we have to invest in market research to create a foundation for strategy?

The MIT Enterprise Forum asked Mr. Grabowski to develop a new metric to answer that question for technology-based enterprises. For the IEEE, in the 1990s, he published data on the Marketing/Engineering Investment Ratio (M/E Ratio), from both successes and failures, to guide entrepreneurs. Now, in his one-hundredth paper, Ralph delivers a major update for the new millennium that reveals the financial and human impact of the investment in upstream marketing that underlies fact-based strategy:

- more than 1 Trillion dollars
- more than 400,000 jobs
- more than 100,000 engineers

Wishes  Similarly the upstream marketing budget must be based on facts, not on wishes.

For example, “I wish we did not have to consume our precious capital in market research; we have this heavy-duty technology to develop. I wish that I could devote my limited budget to engineering. I wish to have revenue first, then expenses.”

Enterprises in the success data have created more than 400 Billion dollars of value, as well as generating more than 70,000 jobs and more than 25,000 positions for engineers.

At first, the data may seem counterintuitive. How could EMC, with about 9,300 engineers out of 20,000 employees, invest as much in the upstream marketing process as they do in engineering? In fact, only about 2,000 engineers write software code or design hardware at EMC. Of those 2,000, many invest a significant fraction of their time doing market research as team members alongside marketing and strategy people.

Failures  do not invest in the upstream marketing process, devoting, on average, only about two cents towards market research for every dollar in engineering. Without the facts, they develop failing strategies; and go down in flames or become bankrupt. Flaming failures generate pain; employees lose their jobs, entrepreneurs lose their companies, and investors squander their money.

Besides losing more than a Trillion dollars for investors, the ventures in the failure data have eliminated the slots of about 100,000 engineers.

Ralph Grabowski  is a MIT-trained Electrical Engineer who focuses on the upstream marketing process for technology-based enterprises. He has helped launch new products, new companies, and new fields that gainfully employ thousands of his fellow engineers; and which are worth more than ten Billion dollars.

Ralph enjoyed seven years a solid-state microwave circuit engineer. He has thirty-three years of marketing experience, beginning with a 1970 startup, Applicon, helping to pioneer the Computer-Aided-Design (CAD) and Electronic Design Automation (EDA) fields.

Mr. Grabowski has been an IEEE member for thirty-six years, serving as Chairman of Robotics and Automation, and of Microwave Theory and Techniques (MTT) Chapters. Ralph co-founded the world’s first Robotics and Automation Chapter, here in Boston, now an IEEE Society, and has Sponsored the IEEE Entrepreneurs’ Network. He co-founded MIT’s annual entrepreneurship program, and co-founded Technology Capital Network (TCN) at MIT.