

Abstract

Transforming a scientific breakthrough into a profitable business takes lots of effort, time and money. Unfortunately, the vast majority of such initiatives fall far short of expectations. Accepted wisdom is that this is just “the way it is”. And investors think in terms of “portfolios”, and require high potential financial returns, for this reason.

In studying a wide cross section of high tech startups, in fields such as medical devices, telecom/datacom, and various applications of nanotechnology and photonics, we have found that there are strong patterns that emerge of a set of mistakes that entrepreneurs make. It’s as if entrepreneurs have no knowledge of the mistakes made by their predecessors, have not learned from history, and are doomed to make a similar set of errors to those who have gone before them. The truly frustrating thing is that many of these errors are avoidable, and often one can see them coming sufficiently far in advance that there is time to take corrective action.

We believe that these errors can often be avoided, and that following a set of “rules of the road” can significantly increase the chance of success for a science-based business.

In this talk, Dr. Richard Caro will describe an approach to turning science into profitable businesses, which is designed to significantly increase the probability of success. The talk draws both on the speaker’s 20+ years of hands-on experience, working at the interface of science and business in the USA, as well as on a systematic 5-year study of the failure modes of new ventures.

This talk is for:

- entrepreneurs and business leaders who want to *improve the success rate* of science-based, new business initiatives;
- scientists and engineers who want to see their breakthroughs enable *real products*; &
- policy makers who would like to see an *increase in successful innovation* in the economy.

Biography: Richard G. Caro



Since 2004, Dr. Richard G. Caro has been CEO and founder of **TangibleFuture, Inc.**, where he helps managers and entrepreneurs create and grow businesses based on innovative science and technology.

Prior to founding TangibleFuture, Inc., Richard was Managing Director at **RHK**, a provider of advisory services to the communications industry, where he led consulting engagements with multinational businesses such as **Intel**, and **Carl Zeiss**; research institutions such as **Battelle**, and **Sarnoff Corporation**; and a variety of as-yet-unknown, emerging startup companies.

From 1986 to 1999 Richard held operational roles in high tech companies in Silicon Valley and Boston. He was CEO (founder) of **Vital Insite**, a venture-backed, medical device start-up, developing noninvasive monitoring products; Engineering Program Manager at **Coherent**, one of the world’s largest laser manufacturers; and CTO (employee #5) of **Summit Technology**, a pioneer in the laser refractive surgery (LASIK) business. Before entering industry, he was a member of the research staff at **Stanford University**.

Richard has been responsible for the development of a number of successful products, and has 23 issued patents. In addition to his work with TangibleFuture, Inc., he is an occasional angel investor, and has a keen interest in the education of science and technology entrepreneurs — speaking regularly, around the world, on topics relating to *turning science into profitable businesses*.

Born and raised in Australia, Richard received a B.Sc. (Hons.) degree from **Melbourne University**, Australia (1977), and a D.Phil. in experimental physics from **Oxford University** (1982) — where he was a **Rhodes Scholar**. In 1982 he was awarded an **IBM** post-doctoral fellowship to work at **Stanford University**, and migrated to the USA where he has lived ever since.