

Whether you are:

- building a new venture;
- seeking new growth sources for an established business;
- dreaming up a creative M&A combination;
- developing a novel product; or
- inventing the “next big thing”,

.... turning your vision into reality takes a lot of work.

And the failure rate is high.

Our Goal: to increase your chance of success.

Contents:

Executive Summary	page 2
Typical Engagement Types	page 3
Examples of our Work, and Feedback	page 6
About Us	page 7

To Learn More:

On our website are (free) articles, videos of talks, entrepreneur case studies, some tools, links to books, and other resources to help people get better at turning ideas into profitable businesses: www.tangiblefuture.com/informationbank.html.

For more detail about our typical engagement types: www.tangiblefuture.com/services.html.

Contact us to discuss your company, to ask about how we work, or to share ideas about creating new businesses.

Website: www.tangiblefuture.com **Contact:** Richard Caro **Email:** rgcaro@tangiblefuture.com **Phone:** +1 (415) 931-1973 **Time-zone:** San Francisco, USA.

Address: TangibleFuture, Inc., 1801 Bush Street, Suite 114, San Francisco, CA 94109, USA.

The TangibleFuture® blend of analysis, advice, & hands-on intervention helps managers & entrepreneurs *accelerate growth; increase value; and avoid costly missteps* — as they create and grow businesses based on innovative science & technology.

We work with startups; large, established companies; and research organizations — in North America, Europe, and the Asia-Pacific region. Many of our clients are focused on growth: through new products, new markets, new business initiatives, or acquisitions. Some form of *innovative science or technology* is often at the heart of their business.

Much of our work is in markets and industries in which things are changing rapidly, or new disruptive technologies are emerging and creating turmoil. Recent engagements have been in fields such as *life sciences, communications, cleantech, homeland security, and various applications of photonics & small-tech*.

Clients seek our help with challenges like how to *grow faster*; or how to *improve the chance of success* of a new venture, or of a growth initiative. For example:

New Ventures seek help to:

- Complete key, *value-creating milestones*, for which the company's team lacks bandwidth, or skill sets;
- *Maximize valuation* at various “deal points”;
- Cross the finish line *faster*, with *less investment*; and
- Avoid potentially disastrous *errors* along the way.

Established Businesses seek help to:

- *Improve the ROI* of growth initiatives;
- *Increase enterprise value* faster than the core business is growing (e.g. find new sources of growth, when the core business begins to mature); or
- *Improve the outcome* of an M&A initiative.

Why get help? Some clients face challenging problems they are not sure how to solve. Some have incomplete management teams, and need to outsource specific functions. Some need vital strategic inputs, but need them only intermittently. Some want an objective independent assessment of a situation. Others know what to do, and how to do it, but lack bandwidth. We have helped in each of these situations.

Our approach involves a blend of *analysis, strategic advisory services, and hands-on execution* — and is uniquely tailored for each engagement to help accomplish a specific, agreed upon, business objective.

Much of our work, although not all, falls into one of these engagement types (details follow):

- Venture Catalyst;
- “Return on Sweat” Advice;
- M&A Value Creation;
- Growth Accelerant; or
- Technology Commercialization Bridge.

Our effectiveness derives from an uncommon blend of skills, experience and knowledge:

- senior management experience in high technology businesses: *we know what it's like to be in our client's shoes, and what it takes to succeed*;
- a track record of successful consulting engagements with clients ranging from startups to large multinational companies: *we know how to provide effective help*;
- expertise in both technology and market analysis: *we know how to find out what customers will need several years in the future, and understand what a technology could be capable of by then*; and
- deep industry expertise and a global perspective: *we know already a great deal about the industries in which we specialize, and the activities of their key participants in North America, Europe and Asia*.

Our business model involves working with a network of specialized, independent industry experts from around the world, as well as with industry analyst firms where appropriate. We assemble our teams from this network on a project-by-project basis. This approach allows us to assemble an optimal team for each project.

To learn more: please visit our website, or contact us. Details are below.

There are some patterns in the challenges we are asked to help attack. Here are the more common categories.

Venture Catalyst

Challenge: Many new technology ventures fail, and many more fall short of their potential¹. Frequently, this happens as a result of repeating one of a set of common (avoidable) mistakes made by many others in the past.

In other cases, the management team knows what needs to be done but lacks bandwidth, or perhaps the necessary skill sets, to get it done in a timely fashion.

Goals: Help managers of emerging, high-tech ventures:

- decide how to create value as fast as possible;
- get on that optimal value creation path;
- avoid the classic startup errors we see all too often; &
- reach the key, value-creating, commercial milestones that are often neglected.

Benefits: Independent, objective feedback on:

- whether or not your business is tracking along the path of maximal value creation;
- whether or not you seem to be headed for one of the common pitfalls into which so many startups fall; and
- whether there are important, value-creating milestones that are getting insufficient attention.

Armed with this information, you can fine tune the business so it tracks along the optimal value creation path.

Then we embark together on a process of attacking key, value-creating milestones that you want to hit, but which your team lacks expertise, or bandwidth, to get done in a timely manner. You get intensive, roll-up-the-sleeves-type help actually executing whatever is needed to complete the milestones. And you get access to the set of skills that are appropriate for the task, on an as-needed basis.

Approach: Working closely with the management team of an emerging venture (a startup, or growth initiative in a large company), these engagements are intensive, hands-on, projects, typically lasting for 3-6 months, focused on accomplishing specific business objectives.

We often get deeply involved in activities like:

- refining the business model;
- analyzing the market and industry;
- figuring out the details of the unmet need;
- tweaking the product definition, so the product will be a superior solution; and
- refining the IP strategy, and source of long term competitive advantage.

Depending on the skills of your team, and their available bandwidth, the engagement can range from relatively hands off, where we do most of the leg work, to much more collaborative, where our role is to complement in-house expertise.

"Return on Sweat" Advice

Challenge: Running a new venture, or a growth initiative in an established company, is a lonely job. While there is no shortage of new challenges, there is a shortage of *peers* who can act as sounding boards and advisors. It's easy to find people to talk to about return-on-investment, but who do you talk to about the return on your years of effort?

Goal: Help entrepreneurs, & high-tech venture managers, make the right decisions when they make or break issues surface — and maximize their "return on sweat".

Benefits: When you need to, on any topic, you can talk to someone who has been in your shoes, and watched many others try and do what you are doing. You get personalized, *independent* advice, that helps you make *better decisions*. The deep knowledge of your business and its potential, that comes from a long term relationship, allows the advice to go way beyond generalities.

Approach: We act as an objective, independent advisor to the CEOs of emerging ventures: providing advice on an as-needed basis, sometimes over years, on topics such as financing strategy; IP strategy; negotiations with corporate partners; who to hire, and when to hire them; how to prioritize between different market opportunities; and the composition of Boards — Advisory and Corporate.

¹ In *High Tech Startup*, John L. Nesheim reports that "the chances are six in one million that an idea for a high-tech business eventually becomes a successful company that goes public". Clayton M. Christensen, in *The Innovator's Solution*, estimates that only about one in ten successful companies is able to maintain above market growth rates over a period of a decade or more.

Merger & Acquisition Value Creation

Challenge: It is a truism that many M&A transactions fail to live up to expectations. While there are often execution issues, we believe that many of these suboptimal outcomes occur because of a lack of focus on the detailed upfront analysis of how two businesses will mesh to make a combined company that is *more valuable than the sum of the parts*. Here are two examples.

For Sellers: When an emerging growth venture is acquired, there is typically a big increase in valuation if the acquirer sees the target as having significant *strategic value* — rather than being a simple *financial* acquisition, with a value related to an industry-standard earnings multiple.

Unfortunately, many emerging ventures fail to take full advantage of this potential strategic value *premium* — either because they fail to identify companies for whom they represent a truly strategic acquisition; or because they cannot articulate the true strategic impact that they can have on the future of the acquirer's business.

For Acquirers: Large businesses often have trouble separating the good from the bad among the many similar-sounding startups out there. This commonly leads to acquisitions that fail to live up to expectations. Or, to waking up one day and realizing your competitor has gained a huge advantage as a result of last-year's acquisition of a startup that your company chose not to pursue.

Goal: *Help science- & technology-based companies, on either side of the M&A transaction process, create a "1+1=3" scenario — in which combining two companies creates a business considerably more valuable than the sum of its parts.*

Benefits for sellers:

- Identify the short list of companies that ought to see significant strategic benefit from an M&A transaction with your company; and
- Articulate clearly, *for each strategic acquirer*, how the two companies will fit together, and why you deserve a *strategic valuation*, rather than one based on standard earnings multiples.

Benefits for acquirers:

- Find those rare acquisition target gems, that help you reach otherwise unattainable strategic goals — such as *accelerating growth*; *breaking into hot new markets*; or *leapfrogging the competitors* with innovative technology.

Approach: We get excited about M&A combinations that lead to combined revenues (and profits) that are greater than just the sum of the two original revenue streams — typically as a result of product, market or business model overlaps and complementarity.

We work closely with your internal management team, over a number of months. We can support both the M&A activity and the subsequent integration. Our focus is to help figure out what the overall M&A strategy should be, which companies make sense as targets, how to articulate the value of the combination of the two companies, and how to mesh the businesses post-acquisition.

While we do not act as a “broker”, and our services exclude solicitation, negotiation or execution of a securities transaction, we are happy to collaborate with such transactional experts as part of the overall M&A team.

Growth Accelerant

Challenge: There comes a time in the life of many high-tech ventures (often as revenues reach \$50-100M) when growth starts to slow significantly. This may occur because the opportunity the venture was formed to attack is not huge enough to support continued rapid growth, or because the initial products have become less competitive over time, or because competition has heated up.

Particularly for companies that are publicly listed, this is a difficult stage in the company's life cycle. The market expects continued growth, and harshly penalizes failure to live up to that expectation. Because of compliance costs and the dearth of analysts covering such small public companies, there are large incentives to grow as rapidly as possible to at least the \$500 million revenue mark.

Options facing the management team in this situation include:

- seeking new opportunities for growth, beyond the core business around which the company is currently organized;
- managing the business differently (e.g. for cashflow instead of for growth); or
- selling the business.

While seeking new opportunities for growth seems particularly tempting, the skills for doing that are often not among the core competencies of companies at this intermediate stage of growth.

Goal: Help an established, high-tech business increase enterprise value — significantly faster than the rate at which the core business is growing.

Approach: Working closely with your management team, these engagements are intensive, hands-on, projects, typically lasting for months, focused on accomplishing specific business objectives. We look for ways to leverage some of the company's core technical assets, or customer footprint, or other assets, so as to expand into new areas of business that offer the potential for significant, incremental, long term growth. We seek fields in which the business should have significant competitive advantage.

Technology Commercialization Bridge

Challenge: All too often, promising technology development projects languish for years in limbo after they move beyond the initial research stage. There is even a name for this: the *Valley of Death*, which projects need to cross before attracting startup funding, or development partners. These projects are too far along to get funding from “research” sources, but are unable to negotiate partnership or licensing arrangements with large companies, or attract investors, because they are perceived as “too early”.

Some believe that the *Valley of Death* is an unavoidable feature of the landscape, or that it exists because of flaws in the way investors think. We think of it as more analogous to a sand trap in golf. It certainly exists, and falling into it is bad. However it can be avoided all together with careful planning and good execution. Even if you fall into it, you can get out if you know how.

Goal: Help leaders of promising, early stage technology development projects navigate around the “Valley of Death” and reach the next stage in growth of the project — whether it be partnership with another company to develop a product, or investment to commercialize the technology.

For those unfortunate projects that are languishing in the “Valley of Death”, our goal is to help them get out.

Important subgoals are to select the commercialization path most likely to succeed; and to identify and excite partners and investors who have the right profile for the opportunity.

Benefits: A key part of our Commercialization Bridge work is helping to create a bridge between two very different world views. On one side are the technologists who

developed the project to the point where it appears “promising”. On the other side are managers within companies that are potential development partners or licensees, and investors who might wish to invest in the future of the project.

The “bridge” between these groups takes the form of a clearly articulated description of the *business being created*, in sufficient detail for all parties to understand its size, risks, and attractiveness. This detailed understanding of the business potential is the foundation for accomplishing the goals above.

Approach: The typical question that initiates these projects is “Should I (or How should I) commercialize technology xx?”

Commonly these engagements involve market research, and a synthesis of “what people need” and “what the technology can do”. This leads to an understanding of the best target application for the technology. And hopefully to a product definition that will both target an important unmet need, and leverage the technology in question as a source of competitive advantage.

Results from these projects typically include a detailed recommended path forward — including go/no go decisions; IP analysis; potential licensing targets; and even spin out business plans where appropriate.

Speaking

Richard Caro speaks regularly, around the world, on topics relating to innovation, and the transformation of ideas into profitable businesses. His ideas are designed to:

- help entrepreneurs, and managers of emerging growth businesses, avoid the mistakes of their predecessors and improve their odds of success; and
- help policy makers develop policy interventions to improve the innovation capability of specific regional economies.

Feedback:

“Richard Caro’s talk was a breath of fresh air to a captivated audience at the EuroNanoForum. His message used a unique combination of clarity, enthusiasm, experience and practical help for those starting a new technology based business, covering many details usually overlooked, but essential in successful businesses.” Brian More, Chairman, Institute of Nanotechnology.

“Richard Caro is a marvelous speaker. Not only does he have a superb and up to date command of the subject matter, his visuals are lively and engaging. And he is that rare bird of a public speaker — easy and interesting to listen to.” Carol S. Steele, Ph.D., Vice President, MANCEF

NASDAQ-listed communications company

Helped the CEO develop a strategic plan to transform the company from a low-growth, unprofitable supplier of commodity components into a profitable business focused on an emerging, niche, communications market segment — with great potential for future growth. This repositioning culminated in a successful sale of the company.

“TangibleFuture brought a fresh assessment of our company and the markets in which we compete. This thorough and analytically objective assessment helped us develop a strategic plan and implementation strategy that created a tidal change in the direction we were headed and the ultimate market value of our company. Each step of the process we went through with Tangible Future was executed in a timely manner with disciplined analysis and effective communication among all involved parties.

Richard Caro led our project and was meticulous in assembling needed information and creating a clear path for the company to materially improve our operating performance. All of our requests and requirements for the project were fully met. All engaged parties from management to the Board of Directors to key investors embraced the strategic plan and supported its implementation. In summary, Richard Caro is one of the most valuable advisors with whom I have worked throughout my career.” **Andy Harris, Former President/CEO, Stratos International.**

Korean photonics business

“Because we saw companies generating substantial revenues from sales of a specific optical transceiver product, our company was about to invest heavily in development of a better/cheaper version of that product, based on a novel optoelectronic platform technology we have developed.

Luckily, we retained TangibleFuture to go out and dig deeply into the market and its future trajectory, and learned that customer requirements and the competitive landscape were changing rapidly. Even though there was a current need for the product we planned to develop, by the time we were able to finish product development the market would have shifted and customers would be buying quite different, next generation products, for which our technology offered no compelling advantage. With the benefit of hindsight, things have played out pretty much as TangibleFuture said they would.

As a result of TangibleFuture’s work we shifted our efforts elsewhere, and have saved a great deal of money.” **B.H. Lee, Chairman, Novatronix.**

Website: www.tangiblefuture.com **Contact:** Richard Caro **Email:** rgcaro@tangiblefuture.com **Phone:** +1 (415) 931-1973 **Time-zone:** San Francisco, USA. 6/7

Surgeon / inventor

On behalf of a surgeon/inventor, who invented a novel approach for transmitting electrical power into the body to power implants (eg defibrillators, or muscle stimulators), we dug deeply into the potential market applications of the technology, the IP position, and the competitive landscape, and guided his engineers in an evaluation of the likely performance of a product based on the invention. Based on a clear understanding of the invention’s likely competitive advantage, target applications and commercial potential, we helped the inventor make an informed decision about the best path forward.

“I found working with Richard Caro extremely rewarding. We found the real obstacles and challenges, opportunities and boundaries, and we were able to more clearly identify the issues which would differentiate our technology. We could not have made the right commercial decisions without his help.” **Dr. Gerard W. Sormann, MBBS, FRACS.**

Australian Neuro-marketing startup

Acted as long term advisor to the founder of a startup, which is developing services and equipment using brainwave evoked potentials to make market research more objective, more precise, and language independent — as he bootstrapped the company from zero to its first \$1 million of revenue, and developed plans for the next phase of growth.

“I am very happy with our collaboration and enormously impressed by your capacity to contribute to Neuro-Insight’s development at so many levels. These range from your astute observations regarding basic science issues to the practicalities of translating scientific discoveries into commercial products. Coupled to this is your ability to offer practical and invaluable advice on issues as diverse as business and negotiation strategy, financial structuring, and marketing. In summary, TangibleFuture comes as close as I have ever seen to constituting the “complete package” in terms of consulting to high tech start-ups.”

Richard Silberstein Ph.D., Chairman & CEO, Neuro-Insight, Pty. Ltd.

University-owned, nanotechnology company

As the commercialization arm of a large, multi-university research effort, whose 50+ researchers are focused on solving the fundamental scientific challenges that lie on the path to quantum computing, this company owns a significant amount of intellectual property in the field of “extreme nanotechnology”. They

asked TangibleFuture, Inc. to help them decide how best to exploit several near term commercial opportunities based on that IP; and to help fine-tune the company’s strategic objectives.

As a result of this project, the company significantly altered its strategic objectives; gained a clear understanding of the near term commercial opportunities for its IP, as well as of how best to commercialize it; and has decided on a specific path forward.

Particularly relevant was TangibleFuture’s ability to understand the complex science; to go out and interact with key market participants around the world; and then to help the management team gain a clear understanding of what the commercial opportunities might look like, and what they would need to do to capitalize on those opportunities.

US Biodiesel startup

Mentored (pro-bono) the founders of a US-based biodiesel startup in the UC Berkeley Business Plan competition. This work was featured in a documentary on NPR’s radio program Living on Earth (6/11/05).

“Richard’s philosophy and multidisciplinary approach to value creation enabled us to appreciate the larger picture.... By reorienting our focus from technological features to the core customer needs we were able to craft a much more persuasive argument for both our investors and our customers.” **Chris Carstens, Founder and CEO, Homeland Fuels, Inc.**

US communications startup

“The project led by Richard Caro helped us understand that our target market would develop slower than we had expected. This drove us to shift priorities and explore adjacent beachhead markets more likely to generate near-term revenue. Had we continued on our existing roadmap, we would have mistimed the entry to our ultimate target market, and missed a tremendous opportunity to address an overlooked, near term, substantial customer need. Many of our competitors who failed to make this course adjustment are no longer in business.” **Aaron A. Bent, Founder & V.P. Marketing and Business Development, Continuum Photonics** (merged with Polatis Incorporated in 2005).

Our Teams

The TangibleFuture® business model involves working with a network of specialized, independent industry experts, as well as with industry analyst firms where appropriate. We assemble our teams from this network on a project-by-project basis. This approach allows us to assemble an optimal team for each project.

What sets us apart?

Our effectiveness derives from an uncommon blend of skills, experience and knowledge:

- senior management experience in high technology businesses: *we know what it's like to be in our client's shoes, and what it takes to succeed;*
- a track record of successful consulting engagements with clients ranging from startups to large multinational companies: *we know how to provide effective help;*
- expertise in both technology and market analysis: *we know how to find out what customers will need several years in the future, and understand what a technology could be capable of by then;* and
- deep industry expertise and a global perspective: *we know already a great deal about the industries in which we specialize, and the activities of their key participants in North America, Europe and Asia.*

Industry expertise

Our overall focus is on high technology growth businesses. Recent engagements have been in fields such as *life sciences, communications, cleantech, homeland security, and applications of photonics & small-tech.*

We have an ongoing research activity investigating markets we believe will be promising loci of future innovation. This helps us to offer deep industry insight, and enables us to be productive immediately when we work in those markets. We specialize in markets/industries in which things are changing rapidly, or new disruptive technologies are emerging and creating turmoil. Our recent engagements, above, are examples.

Because many companies view the world through the lens of a specific *technology*, we have a watching brief on specific technological fields as well as on specific markets. We spend time thinking about the full range of possible

product categories, in all industries, that might be impacted by those technologies. Examples include a variety of *cleantech* technologies; *nanotechnology & MEMS*; *photonics*; and the *convergence of silicon, micromachining and biotech* as a platform for healthcare devices.

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.