

A book review and editorial commentary on cross-industry, early-stage company failure modes

# “WHY STARTUPS FAIL: NEW ROADMAP FOR ENTREPRENEURIAL SUCCESS” BY TOM EISENMANN CURRENCY, AN IMPRINT OF RANDOM HOUSE (2021)

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## ABSTRACT

The recently published book “Why Startups Fail: New Roadmap for Entrepreneurial Success” authored by Tom Eisenmann summarizes research on a much debated topic- what is the reason or reasons why startups fail? The book is based on an extensive, multi- year study led by Eisenmann with assistance from his students at the Harvard Business School (HBS). Their study examined failure modes in 470 technology companies with an objective of answering more definitively why startup companies fail. Therefore, the Eisenman book provides a “deep dive” of what we can learn about the failure modes of startups in the technology industry. We recommend this book for anyone who seeks an answer to why companies fail. But, can we extrapolate their findings to the biopharma industry? While there are definitely differences across startups in different industries, e. g. “tech to biopharma/med tech/digital health” It is our opinion that cross-industry benchmarking can be a very useful methodology that may instruct entrepreneurs on how to minimize “errors of both omission and commission”, and how to start and grow successful companies – across industries, including health related organizations; biopharma, MedTech, and the emerging field of digital health. Our concluding section, focuses on special issues pertinent to the unique challenges for biopharma companies. This comparison is supported by a short summary of a recent overview article by Boni and Abremski . This article identified best practices for starting and growing successful companies in digital health based on our respective experiences at Carnegie Mellon University, and UC San Diego. Evidence from both tech and biotech seem to support an overall conclusion that the most important predictor for startup company success is the extended team.

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## INTRODUCTION

**M**any ask the question, why do startups fail? Early in his book, Harvard Business School professor Tom Eisenmann admitted surprise when he realized he could not provide a succinct, *definitive* answer to that question based on real data. So, he and his students undertook an extensive, multi-year research project to provide some answers that would be valid not only to the

community of academics, but to practitioners as well. We often resort to the often-used phrase that any entrepreneurial venture can be analyzed in term of 3 factors: 1) the Horse (the opportunity/technology product offering); 2) the Jockey (the leadership/team); and, 3) the Race (the specific market segments with “jobs to be done”). Loosely speaking, the Horse is the analog of the product offering and business model; the Jockey is the analog of the extended team (founders, investors, partners);

and the Race represents the market being entered and disrupted, and how it is expected to evolve over the foreseeable future. Boni has previously summarized a variation of this analogy as reported by David and Gary Morgenthaler from analyzing the results from their VC portfolio; c. f.,<sup>1</sup> "Leading and Managing Teams in Entrepreneurial Organizations: an experiential perspective". For their analysis, the Morgenthaler portfolio of companies was analyzed along three dimensions (analogous to horse, race, and jockey): **technology, market, and team**. Analysis of their portfolio companies (consisting of both tech and med tech companies, but not drug companies), demonstrated failure rates as follows: 10% for technology, 30% for market, and 60% for team. In summary, they concluded that leadership was the most important reason for failure, followed by market factors, and with failed technology far behind. This finding explains why VCs spend so much time building teams and understanding markets. Of course VCs also verify the potential and uniqueness of the technology and study market trends and competition as part of their due diligence process – and in most cases this is an easier validation.

While these data are intriguing, clearly one data point is not sufficient. So, I read the Eisenmann book looking forward to a broader perspective obtained thru an academic study on early stage company failure modes. I wanted to see how the conclusions from a more rigorous study compared to my experiences gathered personally over the years, and to the Morgenthaler findings. I recommend the book as an excellent source of insights, data and mini case studies.

I first noted that Eisenmann uses a traditional definition of entrepreneurship that is common not only by those who teach entrepreneurship at Harvard, but by many of us at other leading universities with strong entrepreneurship programs that span from undergrads to MBAs to Ph.Ds. And, also to working with faculty who spin off companies from the technology schools at our respective universities. Entrepreneurship is indeed a "risky business", and was defined by the late Jeffrey Timmons as the "pursuit of a novel opportunity while lacking the resources required to pursue it". The objective is to deliver a product and/or service that is new and novel to the market (the opportunity); but, lacking the team and resources to exploit that opportunity. *The role of leadership is to acquire and balance opportunity, resources and team, all the while sequentially reducing risks through investment tranches*. Risks include technology failure; lack of demand or adoption by the market; finances/resources. The team is evolved to balance pursuit of the opportunity, while

raising resources, all while leading a team through sequential stages, that some describe as "evolution or revolution".

At this point, how is failure defined? Eisenmann uses one that is commonly shared by those with extensive experience in the startup community, and with this author. "A venture has failed if its earliest investors did not or will not get back more money than they invested". This "failure to return capital" may be caused by bankruptcy, or as a result of "liquidation preferences" in subsequent rounds or tranches of capitalization. The terms of these later-round investments favor the later stage investors preferentially; in preference to common shareholders (founders) or even to early investors without preferred shares. Liquidation preference, however is another topic, for another discussion!

## REVIEW AND DISCUSSION

The study by Eisenman and his students covered **470** companies in the **technology space** to gather data to permit a more informed answer to why new ventures fail. In *Why Startups Fail*, Eisenmann summarizes his findings. In summary, they comprise **six distinct patterns** that account for the vast majority of startup failures. These are summarized below (and in the book discussed in greater detail in the later chapters). We recommend that the inquisitive reader read to book to get the details. A summary of the 6 most significant failure modes follows.

- **Bad Bedfellows**. Many measure the potential for startup success by analyzing the traits and track record of the founder/CEO and his or her talents/skills, instincts, and "grit" (or perseverance) – and track record. It is well known, even though the idea or opportunity is a good one ("good idea, but bad bedfellows), the wrong team (including investors, advisors,& partners) can lead to a failed venture very quickly, or perhaps falter and then fail much later after many stops and starts (pivots in lean startup language). So, the team is more than the founder. The Eisenmann book points out that perhaps a large set of stakeholders is often misunderstood or neglected. A balanced team is vital to entrepreneurial success. This reminds this author of the old adage posted on the door of the founding CEO (J. Robert Beyster) of his first successful entrepreneurial venture (SAIC – Science Applications International Corporation) – "none of us is as smart as all of us".

- **False Starts**. The lean-startup methodology advocates the mantra "fail fast". Following this advice

is good, but "launching before you're ready" can lead to the founding team to waste both time and capital on the wrong solutions (or entry market products) that have not really been proven to be scalable to more lucrative downstream markets. "Get out of the building" and talk to real customers, users, etc. Often time for technology companies, organizations follow the easy path of neglecting to fully engage broader customer segments before commencing on engineering what they think is a marketable entry product that will provide "traction".

- **False Promises.** Success with early adopters can be misleading and gives founders unwarranted confidence to expand too quickly. Similar to false starts, be sure to really listen, watch, etc. and validate the compelling value proposition.

- **Speed Traps.** Entrepreneurs need to be aware of the pressure to "get big fast." This pressure to grow can spell disaster for even the most promising ventures.

**Editorial note** – We strongly endorse building "the innovators DNA" into the team and avoiding False Starts, False Promises, and Speed Traps; i. e. use associative thinking, questioning, observing, experimenting, and networking. This "collective intelligence approach" will be covered by a separate review of George Whites new book later in this issue of JCB. Successful passage thru the commercialization path, requires articulating and communicating a compelling value proposition at each stage of market adoption ranging from innovators, to early adopters, to early majority, and even late majority users (using Geoff Moore's product life cycle model). Find and pursue a Blue Ocean, not a Red Ocean!

- **Help Wanted.** Rapidly scaling startups requires lots of capital and talent, but many of the mistakes listed above can leave the organization suddenly in short supply of both capital and talent. VCs are good at identifying these risks. The result can be either undercapitalization, a suboptimal team, and/or financing down rounds – if capital can be raised at all.

- **Cascading Miracles.** "Silicon Valley exhorts entrepreneurs to dream big". But the bigger the vision, the more things that can go wrong. It is very difficult to persuade a critical mass of customers to change their behavior and/or to master the use of new technology. The value proposition must be clear to all. Often times being partnered with powerful and influential partners can be employed by the startup company to mitigate this failure mode. In the editor and entrepreneur's opinion, selective "renting parts of the value chain from others" is a growth strategy to be considered.

So what is a pitfall, when do you need to keep going, and when is it time to recognize failure and quit?

In the Eisenmann book, Part I deals with Launching, Part II is titled Scaling, and Part III covers Failing. For the purposes of this review, we have summarized above the categories of failure to provide perspective. However, if you are interested in more detailed examples of technology-enabled ventures that failed to fulfill their early promise; they are included in Part III of the Eisenmann book and will not be repeated here. Our purpose in this review is to learn why technology enabled ventures fail, and then to consider how that may (or may not) compare to the companies in the biopharma industry. We urge the interested reader to fill in the detail from Eisenmann's book depending on their level of interest and field of technology. As a preview, the book included companies from across a broad spectrum of technology enabled organizations: examples included; a home-furnishings retailer, and dating app, a social robot, a network of EV charging stations, and many other technology ventures. Eisenmann offers frameworks for detecting when a venture is vulnerable to these patterns, along with a wealth of strategies and tactics for avoiding the failure modes and instead following a path to success beyond the startup phase.

## MANAGING RISK - "THE DIAMOND AND SQUARE FRAMEWORK"

One item that Eisenman proposes for startups is a framework that in the author's opinion if a technology venture analog to use of the Business Model Canvas of Osterwalder.

Consistent with the jockey, horse and race analogy, the **Opportunity** (the horse) has 4 dimensions (the **Diamond**)

1. Customer Value Proposition
2. Technology and Operations (resources)
3. Marketing
4. Profit

The Diamond is framed by the **Square**

1. Founders (the jockey)
2. Team
3. Outside Investors
4. Strategic partners

In discussing the Diamond and Square framework, it is pointed out that sustainable differentiation is crucial, as are proprietary assets and business model attributes. Also, network effects are

important and therein lies that advantage of building a Platform vs. a Product (see discussion on Boni and Abremski paper below).

In the opinion of this author/reviewer, the Diamond and Square Framework proposed by Eisenmann is an interesting extension and adaptation of the business model canvas (BMC) of Osterwalder that has become a common tool used in the lean startup methodology. The Diamond and Square effectively includes the 9 elements of the BMC; i. e. value proposition, customer segments, customer relations, channels, revenue; key resources, key activities, key partners and costs (recall that revenues less costs equals profit).

In our opinion, pick which of these frameworks that you find most comfortable to use. But, use one of them to align your team, investors, and partners!

## CONCLUSIONS AND SIDEBAR: A CROSS-INDUSTRY PERSPECTIVE FOR BIOPHARMA, MEDTECH AND DIGITAL HEALTH STARTUPS

The Eisenman book is focused on technology companies and all that is covered there is certainly relevant to maneuvering thru the complex commercialization process in any company. What about healthcare companies? These lessons are certainly relevant and insightful cross industry, especially in MedTech and Digital Health. What we have not included explicitly at this point are several other important essential for successful startups in the broad healthcare industry. Recently, Boni and Abremski<sup>2</sup> focused on the topic of commercializing digital health technologies. In summary, we found that most if not all of that short article is consistent and supportive of Eisenmann's much more thorough book. However, Boni and Abremski also highlighted the following important points that are keys to entrepreneurial success in any successful biopharma, MedTech, and digital health company:

- **Build Platforms**, because they are scalable, create sustainable value, and leverage networks. They can also be augmented with partnerships across the value chain to maximize market access, leverage resources, and enable complementary products and services.
- Create a **sustained competitive advantage** by building a pyramid of compelling intellectual property (**IP**). National and international IP protecting your technology (both national and

international) is an important part of your competitive advantage. Other forms of competitive advantage include partnerships, proprietary know-how, ability to manufacture cost effectively, and of course regulatory approvals.

- **Work closely with regulatory authorities** and regulatory consultants – start early and continue the dialogue through all phases appropriate and necessary to bring your product/service to market and post market follow up.

Pay attention to IP, regulatory and reimbursement early and throughout the product/platform development life cycle. These are key factors that are needed for commercial success.

Further, keep in mind that in addition to “early and often” engagement of partners as part of the lean startup approach, the entrepreneurial leadership and team must pay particular attention to others in the ecosystem who significantly influence the decisions that need to be made and their outcomes. This includes: patients, physicians, providers, payers, and partners (the 5 Ps). Keep in mind that in technology companies the customer experience is important. That is true in healthcare companies as well, and with the multiple parties even more complicated to manage. Note that in healthcare, one has a variety of “customers” to satisfy, e. g. the “multiple Ps); c. f.<sup>3</sup> While competition is present in all markets, the most important difference between technology and healthcare organizations is the addition of the **regulatory** authorities and the approvals process involved (recall the failure of Theranos - very large and very public).

On additional and important difference between “tech and biotech” is the impact of the hopefully successful outcome upon approval by the FDA approval is the **pricing** of the successful product and/or service. Reimbursement by the “payers” at a level profitable to the company is not a foregone conclusion. So, pricing strategies are another important aspect of commercialization throughout the development and approval cycle.

While IP is also a given for any technology enabled company, the net result for our healthcare related organizations in comparison to technology companies is higher risk, and a longer time scale for validation/approval. Also “profitable prices” for successful products are not a given. So, in summary it all comes down to building teams and partnerships with experience in this complex field. Think of it as follows: a necessary component for building a successful biopharma organization is to include on the team the capacity (either external of

internal) for active development and management of regulatory, reimbursement and IP assets.

I have one big takeaway from the Eisenmann book, derived from many years of entrepreneurship experience that includes “both hands-on” experiential learning, and through teaching other in the classroom, or through board work. The team and leadership is by far the most important predictor of a successful outcome for new ventures. As a corollary, the team evolves as the company progresses through its growth stages. Therefore, we are planning to include in future issues of JCB some further editorial opinions on team related topics, such as leveraging collective intelligence, building alliances and leveraging networks. Much of this learning is also derived from cross-industry benchmarking.

## REFERENCES

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## CLASSIC BOOKS CITED HEREIN

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“The Four Steps to the Epiphany” – Steve Blank

“Lean Startups” – Eric Ries

“Business Model Generation” – Alexander Osterwalder and Yves Pigneur

“New Venture Creation” – Jeffrey Timmons