

# Building a Successful Startup Team

Maura Weber, MSE,<sup>1</sup> and Zev Sunleaf<sup>2</sup>



Topic Relevance by Timeline

## Summary

- The startup team built in the early phases of commercialization can be a critical determinant in a company's future success.
- A primary technological and/or scientific founder should be established, along with a CEO who can assist with business planning.
- Secondary team members such as marketing and regulatory personnel, should be brought on, if applicable.
- Tertiary team members and consultants can include entrepreneurs in residence, human resources, business lawyers, software engineers and scientific advisory boards.
- Creative employee compensation strategies should be considered in order to maximize limited financial resources.

## Introduction

No matter how promising a technology may be in the academic setting, the challenges involved in commercializing research discoveries are immense. A significant determinant in a startup's future success or demise is who the team founders surround themselves with, especially in early company development (Figure 1). The main body of this chapter will focus on the primary personnel necessary to launching a startup, namely, the technological founder and business partner. The appropriate addition of secondary team members, such as marketing personnel and colleagues versed in regulatory affairs, will also be discussed. Finally, the use of tertiary team members and consultants will be examined, as will strategies for employee compensation. This chapter will

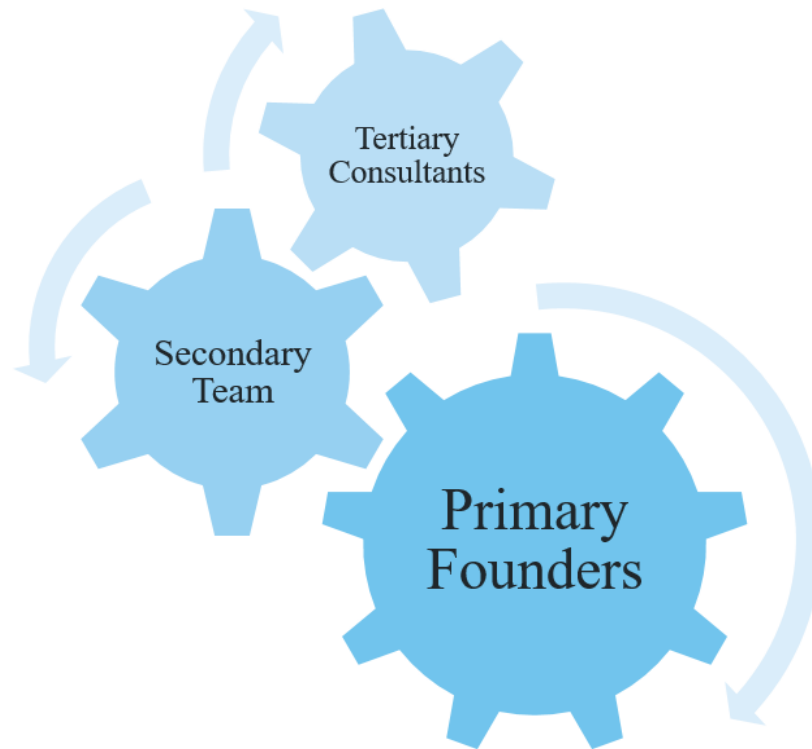
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<sup>1</sup> ETHOS Health Communications

<sup>2</sup> Children's Hospital of Philadelphia

discuss navigating initial startup hiring with the understanding that team structure should evolve as commercialization and scaling take place.

**Figure 1. Basic Structure of a Startup Team.**



## Primary Team Members

### *Technological / Scientific Founder*

As a technology is developed and commercialized beyond the research laboratory, a scientific founder should be chosen. The principle investigator (PI) of the lab from which the technology was created may choose to take on the task of forming a startup team and bringing a product to market by serving as the scientific founder. Programs, such as innovation sabbaticals, provide investigators with the opportunity to take academic leave and devote themselves fully to a company's foundation. As outside funding from venture capital firms and angel investors becomes necessary to expand the company, the presence of a technological founder who is able to devote significant time to the startup is critical (see the chapters "Seeking Venture Capital Investment" and "Angel Investors"). For this reason, laboratory team members other than the principle investigator may be better suited to lead the commercialization process in comparison to PIs who may not be prepared to exit academia or lack sufficient business knowledge. Indeed, SBIR and STTR grants have become more popular in recent years; postdoctoral fellows and even pre-doctoral

candidates who have a strong understanding of the scientific background of the technology are able to apply for these funding sources because they do not require applicants to have a PhD or MD degree (see the chapter “SBIR/STTR Grants: Application Guidance”). When applying for these funding sources, applicants are required to work for the company for at least 51% of their effort.

### *Business Partner (CEO)*

An experienced CEO is the other critical member to be selected during startup foundation. A CEO should have a proven track record of successfully raising capital, forming companies, developing technologies or taking a product to market, as these are the skills that make them highly “investible” to outside investors. Though not ideal, even CEOs who have been part of a failed startup and are positioned to learn from past mistakes can still prove valuable to the team, depending on the prior company’s level of development. A crucial element of a company’s future success is the ability to gain the trust of investors who can finance the startup, and this often hinges upon whether the CEO is investible. Thus, a scientific founder greatly reduces the odds of successful initial funding if they fail to bring on board a competent business partner in the early stages of startup development. No matter how innovative a technology is or how well the science is conveyed, a well-established CEO is necessary to deliver pitches. This initial CEO may not necessarily have the skills to manage the company as it grows and scales, so a different CEO may be recruited for this purpose.

### *Creating balance between the scientific founder and CEO*

A study that compared the attributes of those who join startups to those who found them concluded that startup founders often have a much higher tolerance for risk than the employees they hire. As such, the relationship between a company’s scientific founder and hired CEO is a critical one. While the ability to engage in calculated risk is necessary for any company’s growth, a scientific founder must have a prudent CEO with whom to consult. Often, the scientific founder is strongly attached to the initial vision for commercialization and is reluctant to change course, even after careful market research suggests otherwise. Thus, guided by previous business experience, a CEO must be both passionate about the scientific technology and open to pivoting commercialization strategies so the technology’s maximum market potential is realized. While the relationship between a scientific founder and CEO should be balanced, moments of tension are expected and indeed necessary in order to push the company forward. Though it may seem appealing for a scientific founder to additionally assume the role of CEO, there are immense benefits to working with an effective business lead, as well as significant risks in attempting to fill both positions.

## Secondary Team Members

Just as it can be a challenge to identify a CEO, identifying and hiring talented individuals who are secondary team members can also be complex. One useful approach is to engage someone as a

consultant, and if they perform well, to consider bringing them on board in a full-time capacity if they are interested. Alternatively, they may be able to recommend a capable colleague if they are unable to take on a full time position.

### *Marketing Personnel*

The decision to bring on marketing personnel is highly specific to the type and stage of technology being commercialized. For example, in a software company that develops at a fast pace, forming a marketing team during the initial phases of startup creation is critical to company growth and success. Conversely, drugs take years to commercialize, and it is more prudent for pharmaceutical startups to focus on hiring personnel with regulatory expertise who will assist in overcoming the hurdles associated with gaining FDA approval, as opposed to expending resources on marketing employees who will not be necessary until the later stages of development. When a startup is ready to develop a marketing team, the first person to be hired is a marketing director who will serve as the point person for promotional implementations moving forward. Similar to the hiring of a CEO, a desirable marketing director should have previous experience, along with a proven track record of marketing success, particularly in the same, or similar technology segment. Because the marketing director will be responsible for leading a marketing team, they should be involved in hiring subsequent marketing personnel. Additional staff could include editors and writers experienced in content marketing, data scientists to assist in need finding and market analysis, and search engine experts who can ensure that the target population is engaging with web-based content. Again, marketing employees are specific to the startup's product, and the marketing team should expand and evolve in accordance with the commercialization trajectory.

### *Regulatory Affairs*

Similar to marketing employees, the decision to form a regulatory affairs team is often specific to the type of startup. For example, those specifically involved in clinical trials and FDA approval warrant the need for employees with regulatory expertise (see the chapter "FDA Device Regulation: 510(k), PMA"). Such companies will want to ensure regulatory affairs team members join early, so that employees can work with government agencies from the onset of the approval process. Even startups that are not directly involved in drug or device development can benefit greatly from personnel with regulatory expertise. Academics are trained to find solutions to pressing problems in the physical world, and recent technological advances mean these innovations are finding their way into the hands of consumers faster than ever before. Entrepreneurs are also in the business of taking risks and engineering products with little thought to the regulatory implications of such innovations. As such, having a regulatory affairs team in place is an effective way to create an internal checks and balances system that can catch regulatory issues early before they spiral into costly litigation.

## Tertiary Team Members and Consultants

### *Entrepreneurs in Residence (EIR)*

If the scientific founder or academic entrepreneur is having difficulty securing a business partner for their startup, an entrepreneur in residence (EIR) program can help in hiring a CEO. Often funded by a university's tech transfer office, an EIR is a business partner paid and hired to work with a company for a finite time period, often six months to a year. An EIR assists in company development, culminating in a successful startup launch and identifying a full-time CEO; in some cases, they may become the CEO following termination of their EIR contract. As such, EIRs are highly motivated to see the company succeed and can therefore be a useful resource when a CEO does not naturally present him or herself during startup formation. EIR programs can vary greatly by institution. In particular, some tech transfer offices will assign multiple companies to a single EIR, which can significantly limit their ability to help any individual company.

### *Human Resources (HR)*

A strong HR team can be extremely useful in a company's initial and long-term success. Though HR employment is not typically viewed as essential in early startup hiring, research suggests that HR employees should be among the first 25 hires ("Implementing Inclusive Cultures"). In addition, an eight-year longitudinal study found that companies who brought in HR employees were more successful, going public faster than those without human resource divisions. A strong human resource sector can also improve the workplace culture and diversity, particularly if implemented before internal problems arise. Thus, the hiring of human resource employees early in startup development should not be overlooked (Baron and Hannan).

### *Legal Consultants*

Building a strong network of legal team members with which to consult is an important consideration in startup formation, especially for academic entrepreneurs who are often unfamiliar with the intricacies of the business world (see the chapter "Startup Company Formation and Management"). Lawyers can be useful in filing for patents, IP protection, establishing equity rights, assessing freedom to operate, and drawing up employee contracts (see the chapters "Intellectual Property: Ownership and Protection in a University Setting" and "Intellectual Property: Commercializing in a University Setting"). Legal consultants should have expertise in the company's specific field and should have beneficial referrals to ensure competent, trustworthy consultants. Because lawyers often assist multiple startups, they can be a valuable source of referrals for consultants in a broad range of areas; for example, they may have a rolodex of talented software engineers. In addition, it is important to take into account seniority when choosing a lawyer; while more senior legal professionals may be better equipped to handle complex litigation issues, they will also bill significantly more for their efforts.

### *Software Engineers*

For tech and device startups, hiring software engineers is crucial for company growth. At times, a senior engineering student working in the lab prior to the startup's launch may be poised to take on a full-time position after graduation. More often, small startups face the difficult task of convincing software engineers to join their company, rather than take a higher paying job at a larger organization, such as Google or Apple. This occurs, in part, because software engineers are in high demand; and it is estimated that there are only eight engineers available for every ten positions posted (Niehaus). To make their startup offer more appealing, companies can offer stock options, along with the opportunity to work remotely if the prospect of relocating poses an issue (Field).

### *Scientific Advisory Board (SAB)*

A dynamic SAB can increase productivity during the initial phases of startup formation if used properly. Specifically, the opportunity for the laboratory principal investigator of the startup technology to serve on the SAB provides a way for academics to remain involved in the commercialization process even if they are not the primary founder of the company. As SABs consult and advise, rather than perform specific tasks, the most effective advisory boards consist of both academic and industry leaders who can provide diverse insights into a technology's commercialization. Also, while the previously discussed tertiary team members are always paid, SAB consultants are not always compensated. Thus, academic entrepreneurs would be wise to cultivate strong scientific networks from which they can form SABs. Having well-known individuals on a startup's SAB can make the company more appealing to investors, all board members should be accessible in order to make meaningful contributions to the company and provide technological assistance during product development.

## Costs

The financial limitations of the startups initial funding dictate how many secondary and tertiary team members can be hired in the early stages of startup formation. Furthermore, finances play a central role in the ability to retain team members, a common challenge for startups, which are often at risk of losing vital team members to other opportunities. While paying team members a pre-negotiated salary is an option, there are unconventional ways startups can afford to hire staff (Figure 2).

Compensation through a salary is the standard option, and founders may choose to raise a salary when pre-determined startup milestones are met. Equity shares offer an additional avenue for compensation, which can be combined with salary payouts (see the chapter "Equity Allocation in Startups"). Interns and students may work in the lab at a low cost as a means to gain experience or to be screened for potential full-time employment.

**Figure 2. Compensation Options for Startup Employees**

|                |  |
|----------------|--|
| <b>CAPITAL</b> | <ul style="list-style-type: none"> <li>• Standard salary pay</li> <li>• Salary may increase when startup milestones are met</li> </ul> |
| <b>EQUITY</b>  | <ul style="list-style-type: none"> <li>• Stock options and company shares</li> <li>• Can be combined with salary offers</li> </ul>     |

Offering company equity through stock options is another way to supplement employee salaries. While this option only makes sense for certain startups that expect to go public in a reasonable timeframe, offering employees equity can create a workplace culture where employees are highly motivated and invested in the company's success. Another way to negotiate salary terms involves increasing salary with predetermined company milestones, or to convince financially stable employees to take an initial salary cut until outside investors sign on. Also, college internships can be another staffing resource. They benefit students by helping to prepare them for post-graduation hiring and offer a trial period of pseudo employment at very low risk to the startup. This strategy is particularly applicable to startups rooted in a university setting where academic entrepreneurs are often connected with engaged students. In this context, the US Department of Labor guidelines for internship/student programs, as stated under the Fair Labor Standards Act, should be followed ("Fact Sheet #71: Internship Programs Under The Fair Labor Standards Act").

## Conclusion

There are many permutations of how staff can work together to form a successful startup team, and founders should be open to discovering the combination that produces the most success for their company. Some team members may have the experience to take on multiple roles within a company, though certain positions, such as the scientific founder and CEO, are typically not best assumed by one person. Also, what is best for a startup in the initial phases of company development is not always ideal for long term growth. As such, the startup team should be seen as an evolving system rather than a concrete entity. When forming a team, work backwards from the end commercialization goal and contemplate gaps in knowledge that could be filled by potential employees. As employee costs consume precious resources in early startup development, maintaining both short and long term company benchmarks in mind when hiring helps ensure that the entrepreneurial team aligns with commercialization aspirations.

## Resources

1. “Do I have to leave to launch?”
  - a. This article by Trisha Gura describes the spectrum of involvement academic PIs can have in their startup that range from passing off the technology to a lab member to leaving academia and running their company full time. Case study examples of numerous trajectories are cited and discussed.
  - b. Article available here: <http://www.sciencemag.org/careers/2016/05/do-i-have-leave-launch>
2. “Entrepreneurship”
  - a. This article by Ali K. Yetisen and colleagues is a useful review on the entire commercialization process and includes a section describing the main reasons startups fail, citing an incompetent team (section 6.3) and issues with pivoting (section 6.4) as major contributors.
  - b. Article available here: <https://pubs.rsc.org/en/content/articlehtml/2015/lc/c5lc00577a>
3. PennHealthX Podcast Episode 16 - NeuroFlow Co-Founders Chris Molaro and Adam Pardes - Mental Health and Entrepreneurship.
  - a. Chris Molaro and Adam Pardes are the co-founders of the Philadelphia start-up NeuroFlow. NeuroFlow is a digital health software firm that uses advanced data analytics and machine learning algorithms on real-time biometric data to quantify stress, focus and relaxation for mental health.
  - b. Podcast available here: <https://soundcloud.com/pennhealthxpodcast/episode-16-neuroflow-co-founders-chris-molaro-and-adam-pardes-mental-health-and-entrepreneurship>
4. PennHealthX Podcast Episode 21 - Justin Larkin, Co-Founding WellSheet to Improve the EHR Experience.
  - a. Justin is one of the co-founders, and current CMO of WellSheet, which is a start-up that is using machine learning to identify, prioritize, and visualize patient health data across electronic health records.
  - b. Podcast available here: <https://soundcloud.com/pennhealthxpodcast/21-justin-larkin-wellsheet-entrepreneurship-and-fixing-ehrs>
5. “Scientific advisory boards: What works, what doesn’t.”
  - a. This post by Bruce Booth synthesizes the pros, cons, and best practices for early stage biotech scientific advisory boards.
  - b. Article available here: <https://lifescivc.com/2012/09/biotech-scientific-advisory-boards-what-works-what>
6. “The rise of regulatory affairs in innovative startups.”



- a. This chapter by Elizabeth Pollman describes what has contributed to the growing rise and importance of regulatory affairs and for many startup companies, and the impact these developments may have on law and entrepreneurship.
  - b. Article available here:  
[https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=2880818](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2880818)
7. “Founders and joiners.”
  - a. This article by Michael Roach and Henry Sauermann describes research on founders and joiners (employees who join founders in their efforts to start companies).
  - b. Article available here:  
<http://science.sciencemag.org/content/sci/348/6240/1200.3.full.pdf>
8. “This is why your startup plan needs to include HR.”
  - a. This article by Courtney Seiter-Buffer gives key tips on when and how companies should add human resources support.
  - b. Article available here: <https://www.fastcompany.com/40435954/startups-need-to-think-about-hr-before-they-need-them>
9. “What start-ups should know about hiring a lawyer.”
  - a. This article by Rebecca Thorman gives key tips on how start-ups should choose a lawyer.
  - b. Article available here:  
<https://www.themuse.com/advice/what-startups-should-know-about-hiring-a-lawyer>
10. “A startup guide for hiring a marketing team.”
  - a. This article by Violetta Zavadsкая gives key tips on how start-ups should choose a marketing team.
  - b. Article available here:  
<https://kraftblick.com/blog/hiring-a-marketing-team/>

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[https://projectinclude.org/implementing\\_culture](https://projectinclude.org/implementing_culture). Accessed 3 Aug. 2019.

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*VentureBeat*, VentureBeat, 25 Sept. 2014, <https://venturebeat.com/2014/09/25/how-can-you-hire-top-engineers-on-a-startup-budget/>.

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Chapter Last Updated 9/27/2019.

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