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Summary

- Mapping out key stakeholders at an institution and how they connect to each other can help strengthen one's understanding of the ecosystem in which the company will start.
- Proactive marketing through targeted meetings and participation in on-campus events can help build one's network.
- Becoming aware of the various marketing channels at an academic medical institution is critical for promoting one's startup.
- Winning small grants can help build traction through an early reputation of success.

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Marketing in an Academic Institution

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Topic Relevance by Timeline

Summary

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- Proactive marketing through targeted meetings and participation in on-campus events can help build one's network.
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Introduction

There are two major avenues to market an innovation—externally to a commercial marketplace, with the goal of profitability or eventually selling the innovation, and internally, with the general goal of growing and developing the innovation. Marketing internally requires somewhat different knowledge, skill set, and resources than commercializing and marketing externally. Specifically, for academic entrepreneurs, marketing internally means understanding their academic medical center, a complex ecosystem representing myriad stakeholders (Wang et al.). Marketing one's company and oneself as an entrepreneur represents a key initial step in gaining awareness and traction. Institutional recognition is helpful in building a network of support, promoting the company's mission, and building credibility among investors. Here we provide a framework that leverages a mapping tool to understand how to market a startup within an institution effectively.

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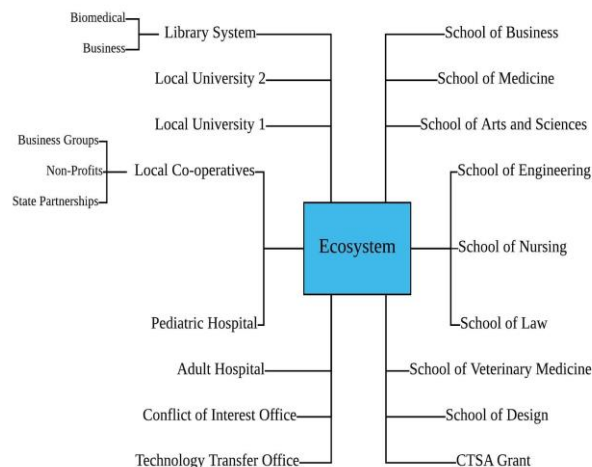
Understanding an Institution’s Ecosystem

Ecosystem Mapping

Academic centers tend to be large and siloed; therefore, mapping out key organizations (e.g., the office of technology transfer, schools, innovation interest groups, funding sources, etc.) is crucial to understanding an academic institution’s layout (see the chapters “Working with the University Technology Transfer Office” and “Resources at Academic Entrepreneurship Centers”). By understanding the component organizations within an ecosystem, entrepreneurs can make more targeted marketing efforts. Mind mapping is a particularly helpful strategy for identifying key stakeholders. An example of a generic mind map for a multidisciplinary institution is demonstrated in Figure 1. In this framework, the right side of the map lists academic-oriented institutions, while the left demonstrates more outward-facing entities. Each branch of the map can be further subcategorized. For example, within the School of Business, there might be a healthcare entrepreneurship group as well as a venture capital interest group.

One might draw a comparison between corporate organization charts (org charts) to the mind-mapping method of displaying information; however, a key difference exists. In company org charts, the goal is to be as comprehensive as possible to fully display component parts. That is not the goal here. The granularity of this type of map should be tailored to specific needs and marketing objectives. For instance, one might want to identify all potential funding sources across the ecosystem, which likely have homes within respective schools. Whichever form the mind map may take, it is important that the map ultimately reaches the level of a human contact (i.e., chief technology officer, chief marketing officer, professor of healthcare management, director of technology transfer, etc.). Even the most complexly organized academic institutions can be boiled down to key stakeholders who will be important to marketing efforts, both on and off campus.

Figure 1: Example of a Generic Mind Map That Begins to Break Down Key Stakeholders in an Academic Ecosystem.

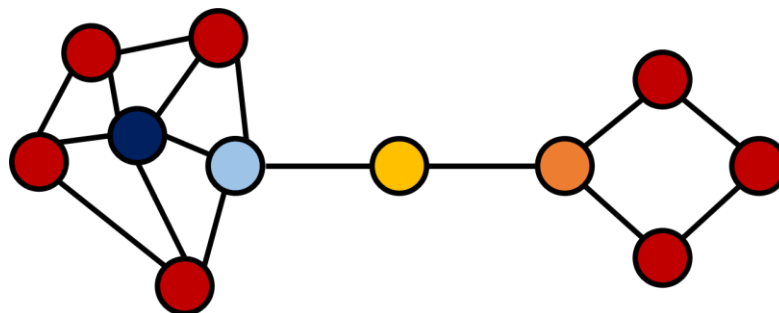


High-Yield Connections

Another key aspect of marketing within academic medical centers is identifying individuals who carry the most influence. Many startups err by squandering precious time on meetings with individuals who may not carry weight when it comes to gaining recognition. We can apply two key aspects of social network theory to avoid this pitfall: bridges and centrality. In a social network map, even in a rudimentary form as described above, “bridges” represent individuals who connect different clusters of people together (Easley and Kleinberg). Fostering relationships with bridges can help with marketing a startup to a diverse group of people within an ecosystem (see the chapter “Forming and Maintaining Meaningful Partnerships Between Academic Scientists and Corporations”). This is an efficient method of disseminating awareness of the team and the idea. Entrepreneurship is increasingly becoming integrated into academic institutions and affiliated hospitals (“25 Hospitals with Innovation Centers”). Reflecting that trend, there is a wave of new executives—such as chief innovation or technology officers as well as managers of innovation and tech-focused initiatives—who are taking on new roles. These roles, in effect, bridge groups across universities and represent prime targets for marketing efforts.

The second key notion in social network theory is centrality (Borgatti and Everett). To conceptualize an ecosystem, the degree of connectivity of individuals is critical. In simple terms, centrality is a metric for how connected an individual or group is to others in the ecosystem. In Figure 2, for example, the blue dots wield more influence over the entire network, given their relative hyper-connectivity across the network, and therefore are said to have greater centrality compared to others. When applying this concept to our aforementioned map, it is important to determine who in the ecosystem has the greatest centrality. These stakeholders will represent the highest yield when it comes to institutional buy-in. Because nodes with high centrality tend to be viewed as leaders within institutions, gaining recognition with them may open a myriad of other doors for the startup. In summary, developing ecosystem maps of an organization can pay dividends because it will help organize one’s goals and better identify which members of the community are of the highest priority.

Figure 2. Theoretical Example of Connectivity Within an Ecosystem.



Legend: The yellow node demonstrates a bridge contact, and the blue nodes demonstrate contacts with higher degrees of centrality.

When applying the concepts of centrality and bridges together, we must also think about resources each contact might be able to share. It is important to align the startup's needs with potential resources that contacts may provide. Resources may take the form of expert opinion (professor/scientist), clinical population (clinician), or electronic health record (EHR) derived databases (bioinformatics/data management administrator). Because academic entrepreneurs are members of an academic system, they have unique access to this broad range of resources—access that would not be available if they were outside the institution. For example, many academic faculty and staff take for granted the university directory, which contains email addresses, titles, and phone numbers. For someone on the outside, much of this contact information would simply not be available.

In addition, given that time is limited, it is important to consider prioritizing efforts to help meet the top needs of the startup. For example, individuals whom one might expect to have access to resources, such as a business administrator in a division, may actually have no discretionary control, and therefore are not particularly helpful partners since they may often defer to the decision of their division chief. Nevertheless, a business administrator could still be a helpful partner in terms of providing insights into the revenue stream from a particular clinical service line.

Building and Maintaining a Network

Once key players in an institution's ecosystem have been identified, the next step is to build one's network. There are two major objectives in this process: promoting one's reputation as an academic entrepreneur and gaining traction for the startup's idea or product. In terms of building one's reputation or personal brand, setting up coffee chats with key bridges and central leaders in an institutional ecosystem is an effective way to broaden one's network. Another proactive means of accomplishing this goal is to reach out to leaders of innovation-based interest groups. For example, the groups MedicineX and Penn HealthX, at Stanford and at the Perelman School of Medicine, respectively, have both cultivated a multidisciplinary audience by hosting speakers at events such as annual conferences, lunch lectures, and evening panels. Through such collaborations, one may gain exposure across multiple schools and begin building a reputation as an entrepreneur in an academic institution.

With the process of building a network comes the effort of maintaining relationships. The antiquated concept of a physical Rolodex has been virtualized by many technology solutions. There are various smartphone applications that can help organize key contacts across an institution, with built-in functionality that allows one to sync meeting notes and calendar events. Some entrepreneurs take a simpler route, using a no-frills spreadsheet that centrally organizes this type of information. With any method, it is important to be thoughtful about the interval between contact with key stakeholders. Maintaining these relationships without exhausting them is a delicate balance. In addition, interdisciplinary meet-ups held on campus can serve as important venues to

casually catch up with key individuals in the network. Numerous universities are increasingly hosting cross-disciplinary meet-ups in an effort to break down silos between clinicians, scientists, engineers, designers, and business leaders. Finding and attending these types of events can be helpful.

Promoting the Team and the Company

Academic entrepreneurs should seek opportunities to promote their teams in poster sessions and networking events. At many academic medical centers, there are newsletters, social media posts, and print material covering entrepreneurship topics. One should consider maintaining a list of contacts who control important email LISTSERVS and other media channels on campus. For example, at the University of Pennsylvania, the Wharton Healthcare Club, Weiss Tech House, and Penn HealthX each manage LISTSERVS and newsletters read by hundreds to thousands of students, faculty, and industry representatives for updates on what is happening across campus. Sharing the team's milestones on these LISTSERVS can help foster awareness as well as create a pull for potential talent if expanding the team is a goal. This can be a useful supplement to other traditional forms of social media available outside the academic environment, such as LinkedIn or a company website. The key to promotion in an academic setting is sustained messaging (see the chapter "The Promotion Process: Academic Entrepreneurship Career Tracks"). Given that students and other trainees are constantly entering and exiting, building institutional memory in this setting of flux can be challenging. Therefore, it certainly helps to be diligent about periodically sending updates throughout one's network to ensure a lasting mark on the community. These marketing campaigns do not need to be major undertakings; an attitude of "good enough" can significantly facilitate rolling out frequent and meaningful updates (Gregg and Weng).

Credibility and Equipoise

Another key aspect of successful marketing in an academic ecosystem is maintaining your credibility as an academic faculty or staff member. One of the most important assets in this effort is equipoise, which can be described as the willingness to present a balanced perspective. This entails efforts to present data accurately, including both positive and negative findings, and to value transparency and integrity in your communications. Following the university's conflict-of-interest and disclosure guidelines is also an important element of this process (see the chapter "Understanding Conflict of Interest for Academic Entrepreneurs").

Gaining Institutional Recognition

Winning small grants and awards will help a company build the most traction within an institution and prime the company for marketing outside the academic landscape. While the efforts described above will certainly help build awareness, traction needs to be built with credibility. An impactful

way to do this is to garner a reputation of success at winning grant money, both intra-institutional and external. In the crowd of startups that are competing for recognition, teams rising to the top are those demonstrating success at securing seed funding. To this end, it is important to be aware of various funding opportunities on campus.

Within universities, there are typically multiple small amounts of grant money within the schools of business, engineering, and/or medicine. At times, larger sums of grant money are available through adult and pediatric hospitals affiliated with the university. Typically, the former group of prizes range from a few thousand dollars to less than a hundred thousand dollars and represent low-hanging fruit for an early academic entrepreneur. Importantly, these prizes are typically given without equity stipulations. Hospital systems, on the other hand, might give grants on the order of millions of dollars, in which case equity discussions will be involved. In either case, there is certainly a phenomenon whereby success yields further success. That is, once a few groups have injected cash into an idea, other funding entities are much more willing to follow suit. While this tendency has obvious advantages from a nominal perspective, there is also the value generated in building a reputation of a winning team. Typically, awardees of these small-scale pitch competitions, demo days, and other similar events are asked to give a presentation after a few months, which affords yet another marketing opportunity. More importantly, winning a handful of small grants before a formal seed round of funding can help establish some credibility before approaching venture capitalists and other more savvy investors.

A case example demonstrating the value of building a reputation for potential success in an academic institution is the company Oncora Medical, which spun out of the University of Pennsylvania. This machine-learning technology startup was an idea that came from a graduate student partnership. The team went on to win numerous non-dilutive funding grants across the Wharton School, Perelman School of Medicine, and Weiss Tech House. These small grants ultimately helped them secure the reputation of an up-and-coming startup arising from an academic setting. As a result, the company built credibility across various disciplines at the university, from the realms of business to medicine and engineering. By the time the company went to formally raise seed funding, many local venture capitalists with a tendency to pursue academic startups were already well aware of their success to date, and the company was thereby favorably positioned for additional financing (see the chapter “Seeking Venture Capital Investment”).

Conclusion

This chapter provides a framework for marketing oneself and/or a startup in an academic medical center. Given these institutions’ organizational complexity, we propose using a mind map to understand how key stakeholders are connected across an institution’s ecosystem. From there, one can identify the most high-yield stakeholders for efficiently gaining recognition. Actively maintaining one’s network means taking advantage of multiple channels across campus through

partnerships with interdisciplinary interest groups. At the end of the day, winning grants and prizes on campus can solidify one's reputation for success and help a company launch outside of the academic arena and into the marketplace.

Resources

1. "How to Use Mind Maps to Unleash Your Brain's Creativity and Potential"
 - a. This article by Melanie Pinola describes an example of how to use mind maps to organize your institutional structure in a way that is tailor-made for your marketing efforts. As demonstrated in this resource, the process is iterative and should serve your purpose of identifying key points of contact. The map should ultimately reach the level of individuals you can contact to set up a meeting.
 - b. Article available here: <https://lifehacker.com/how-to-use-mind-maps-to-unleash-your-brains-creativity-1348869811>
2. Cross-disciplinary programs such as Stanford's MedicineX, Penn HealthX, and the Polsky Center for Entrepreneurship and Innovation are key fora in which you can broaden your network. As demonstrated on their webpages, these organizations tend to hold events such as conferences and meet-ups, which are important for networking. Moreover, these organizations typically control LISTSERVS of community members who are interested in entrepreneurship, thereby breaking down inherent interdisciplinary silos.
 - a. <https://medicinex.stanford.edu/studio/>
 - b. <http://pennhealthx.com/>
 - c. <https://polsky.uchicago.edu/>

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