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Flatirons Report

Building a Great Entrepreneurial University

Jack Vihstadt

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Silicon Flatirons is a center for innovation at the University of Colorado Boulder to serve students, entrepreneurs, policymakers, and professionals at the intersection of law, policy, and technology.

Flatirons Reports capture thoughtful analysis of various issues in law, technology, and entrepreneurship. These reports are derived from research conducted by Silicon Flatirons faculty, fellows, and research assistants, as well as from thoughtful conference and roundtable conversations hosted by Silicon Flatirons that include academia, policymakers, legal professionals, entrepreneurs, and students sharing their knowledge and best practices on specific topics.

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Executive Summary

On April 4, 2017, the Silicon Flatirons Center for Law, Technology, and Entrepreneurship brought together entrepreneurial leaders from campus, the community, and other states to discuss *Building a Great Entrepreneurial University*.[1] After reflecting on the University of Colorado Boulder's ("CU") progress in entrepreneurship over the past decade,[2] participants considered what future opportunities could be spearheaded by the recently launched campus-wide Innovation and Entrepreneurship Initiative.

The participants were united on the essential importance of developing an entrepreneurial mindset among students, faculty, and staff. Amidst the world's rising complexity and uncertainty, CU must prepare *all* students—from those majoring in the humanities to the sciences—for a future where students must adapt to repeated changes to their jobs and careers. Notably, to thrive in today's world of accelerated technological change, students, faculty, and staff need to develop a set of core competencies, including grit, resilience, adaptability, collaboration, creativity, and a willingness to take initiative (as well as learn from trial and error problem solving).

The roundtable focused on how CU can enable students to develop their innate entrepreneurial capacity. To do so, Zach Shulman of Cornell University and Troy D'Ambrosio of the University of Utah explained, CU needs to provide forums for exploration, iteration, and failure.[3] This report provides a strategic framework for fostering such forums.

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[1] The list of participants is set out in Appendix A.

[2] *See* Kaleb A. Sieh, Silicon Flatirons, The Entrepreneurial University: What the University of Colorado Has to Learn From MIT and Stanford (2007).

[3] Many thanks to Davis Backer who, after researching over twenty universities and writing an internal report for CU's Innovation and Entrepreneurship Initiative Steering Committee, recommended that CU invite Zach Shulman and Troy D'Ambrosio to the roundtable.

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Introduction

Today, most universities realize that entrepreneurship is an essential feature of 21st century learning, not a luxury. It remains to be seen, however, which universities will architect the entrepreneurial university of the future.[4] In this roundtable, the participants highlighted that core entrepreneurial abilities—grit, resilience, adaptability, collaboration, intuition, creativity, the maturity to give before you get, and the courage to make an impact—can be learned in the university setting and require appropriate support to develop.[5] Most notably, such support includes forums for exploration, iteration, and failure that facilitate self-discovery on an individual level.

To start off the roundtable, Silicon Flatirons Executive Director Phil Weiser highlighted a few notable achievements over the last decade or so that supported the development of entrepreneurship at CU:

> **2005**—Version 2.0 of the Entrepreneurial Law Clinic, taught by Phil Weiser and Brad Bernthal, providing a foothold into the broader community.
> **2006**—Silicon Flatirons hosts the Boulder New Tech Meetup at the law school.
> **2008**—Founding of the CU New Venture Challenge (NVC). The NVC was coordinated by Brad Bernthal, head of the Silicon Flatirons Entrepreneurship Initiative, and supported by a range of organizations around campus.
> **2011**—Founding of Startup Colorado. The Startup Summer program launched, matching undergraduate and graduate students with internships at entrepreneurial companies.
> **2013**—Founding of Catalyze CU, a summer startup accelerator for CU students and faculty, by Doug Smith.
> **2015**—Hiring of Terri Fiez, who takes on the new role of Vice Chancellor for Research and Innovation at CU.
> **2016**—Resources incubated and stewarded by Silicon Flatirons on behalf of the campus— the New Venture Challenge, the Global EIR Initiative, and the campus innovation seed award initiative—are elevated to a campus-wide Research and Innovation Office. Phil Weiser agrees to serve as the first Faculty Director of this initiative.

"Entrepreneurship is moving from outsider status to part of the fabric of the university," explained Brad Bernthal, Director of Silicon Flatirons' Entrepreneurship Initiative. Take, for example, Jaclyn Freeman Hester's experience as a CU law student. Seeking to flex the entrepreneurial mindset she learned in her classes and activities, Freeman Hester left her law firm job to join Foundry Group Next, a venture capital firm. For those CU graduates who developed

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[4] *See* Alexandra Lange, *The Innovation Campus: Building Better Ideas*, N.Y. TIMES (Aug. 4, 2016), https://www.nytimes.com/2016/08/07/education/edlife/innovation-campus-entrepreneurship-engineering-arts.html?_r=0.

[5] A brief primer for those unfamiliar with roundtables: pre-roundtable, participants are provided with a packet of readings, an agenda, and an outline with "strawman concepts" to be debated, discussed, and supplemented at the roundtable. This roundtable was divided into three sections: Core Values of Innovation and Entrepreneurship, Best Practices for Advancing Innovation and Entrepreneurship, and Building a Cross Campus Program with Lasting Impacts. A "firestarter" kicks off each section with a five- to ten-minute introduction and is followed by a "responder" who may directly respond or tee up other points for participants to discuss. This roundtable followed the Chatham House Rule, meaning no participant was quoted without his or her permission.

an entrepreneurial mindset during their undergraduate or graduate studies, the impact on their career direction and trajectory is profound.

This report, generated from the discussion at the roundtable, provides a framework for how CU can ensure that every graduate has the opportunity to develop an entrepreneurial mindset. Part I discusses the changing world awaiting students upon graduation. Part II examines the building blocks of an entrepreneurial mindset. Part III considers how CU is building an entrepreneurial university. Part IV discusses how CU can develop a more robust entrepreneurial experience for all. Finally, Part V recognizes the difficulty in measuring success and weighing outcomes.

I.   The Challenges Universities Face in the 21st Century

A.   *The Rise of Complexity and Uncertainty*

To contextualize the conversation, CU Vice Chancellor for Research and Innovation Terri Fiez explained that CU needs to recognize that our graduates are entering a changing world. As such, Fiez underscored that the roundtable needed to think of entrepreneurship not as isolated within the hard sciences or in the for-profit context of building a business, but as preparing *all* students—from those majoring in the humanities to the sciences—for the future.[6] To succeed, CU must address each of the following trends:

- **First, students will have multiple careers.** Students will periodically reinvent themselves and therefore must reimagine success. A college degree, according to Weiser, provides the perfect platform, as it is "an invitation for lifelong learning."
- **Second, globalization is a fact of life.** Students need to understand macro trends in economics, business, and culture, including the complexity of interconnected, global issues.
- **Third, technology is ubiquitous.** Cross-disciplinary contributions are needed to understand and supplement these computational inputs.
- **Fourth, the Internet of Things will drive daily interaction with automation and data.** This trend will affect all industries, raising a series of opportunities and challenges.
- **Fifth, social media has changed the methods, times, and spaces for communication.** Organizations have likewise adopted networked, horizontal structures. In this emerging environment, students will need to learn to identify the signals through the noise, a theme underscored by Nicole Glaros, Chief Innovation Officer at Techstars.

The above trends highlight why graduates need to prepare to thrive in a world of accelerating changes. In identifying signals through the noise, students will need to observe the effects of many variables at once, identify the ones that count, and act upon them. Universities are

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[6] *See* Irving Wladawsky-Berger, *American Workers Evaluate the State of Jobs in the Digital Economy*, WALL ST. J. (Apr. 7, 2017), https://blogs.wsj.com/cio/2017/04/07/american-workers-evaluate-the-state-of-jobs-in-the-digital-economy/; *see* Creig Lamb & Daniel Araya, *Surfing the 4th Industrial Revolution: Artificial Intelligence and the Liberal Arts*, BROOKINGS (Apr. 11, 2017), https://www.brookings.edu/blog/brown-center-chalkboard/2017/04/11/surfing-the-4th-industrial-revolution-artificial-intelligence-and-the-liberal-arts/.

at a crossroads, noted Phil Weiser, and the "fundamental challenge for any university that wants to be relevant in the 21st century" is to embrace entrepreneurship. For those that do, massive open online courses ("MOOCs") employing the traditional lecture model are not a threat. For those that fail to provide students with hands-on learning experiences, MOOCs may well emerge as a viable alternative.

II.   Maximizing Student Potential

To kick-start the formation of a universal entrepreneurial initiative, participants considered several key abilities in the context of real-world trends, described above, that every student should master. These form the basis of an entrepreneurial mindset.

Trial-and-Error Learning—In other words, "fail fast and iterate" and "prototype, test and iterate." This concept is closely related to a comment by Nicole Glaros on the importance of grit and resilience.[7] The development of these two qualities, said Glaros, relate to the importance of a guiding philosophy: grit and resilience may be acquired by resolutely committing to a vision or end-result and refusing to give up in the face of adversity. In addressing complex, multifaceted problems, separating the signal from the noise can be a challenge. Prototyping, testing, and iterating may assist in discerning the signal. This process of continuous learning is at the center of a growth mindset.[8]

Adaptability—Adaptability, described by Jana Watson-Capps, Associate Director of CU's BioFrontiers Institute, is the ability to be flexible and change as circumstances call for it. This skill is closely related to trial and error learning, and must be offered with a warning. It is easy to shirk trial and error persistence by pivoting amid challenge while claiming adaptation. To know when adaptation is beneficial, mentorship, experience, and a well-defined vision are crucial.

Collaboration—As noted by Terri Fiez in her opening remarks, organizations are increasingly networked and horizontal. Multi-disciplinary teams working closely with technology are often the go-to solution for solving problems. However, Jason Mendelson, Co-founder and Managing Director of Foundry Group, warned that over-collaboration may lead to a descent into groupthink. In this context, "unified thinking" is key. According to Brad Bernthal, this is the "ability to harmonize, juxtapose, and make sense out of many different perspectives."

Before meaningful relationships can be formed with others, Greg Greenwood, Executive Director of Blackstone Entrepreneurs Network Colorado, explained that you must understand yourself. Greenwood focused on mental fitness by advocating for setting aside meaningful time for self-learning and reflection. George Deriso, Managing Director of CU's Innovation and Entrepreneurship Initiative, echoed this comment, "Companies are extensions of their founders…you must know who you are as a person and what drives you." Reflection empowers empathy, which in turn develops inclusivity and diversity of perspectives. On a related note, Jason

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[7] ANGELA DUCKWORTH, GRIT: THE POWER OF PASSION AND PERSEVERANCE (2016).
[8] CAROL DWECK, MINDSET: THE NEW PSYCHOLOGY OF SUCCESS (2007).

Mendelson stressed that a Type A personality is not a prerequisite for entrepreneurship, nor must an entrepreneur be an extroverted leader.[9]

Vision—Brad Bernthal added vision to the list of entrepreneurial abilities. "It's the ability to see new things and discern what is worth doing." Vision means "knowing steps one, two, three, and ten, and trusting that you can figure out missing parts four through nine."

Network Mindset—A network mindset thinks creatively about potential resources and encourages community dialogue through information sharing, accountability, and openness.

Give-First Mindset—Brad Bernthal called entrepreneurship a "civic endeavor," one which requires individuals to establish a community.[10] A give-first mindset is a core tenet in Brad Feld's Boulder Startup Community thesis and is a Boulder cultural norm.[11] It means mentoring without an expectation of immediate rewards. In doing so, contributors become mentors, not advisors. According to Brad Feld, Co-founder and Managing Director of Foundry Group, mentors say, "How can I help?" Advisors say, "I'll help you with your company if you give me 1% of the equity."[12]

Make an Impact—Closely related to Nicole Glaros' mantra of detecting the signal from the noise, participants emphasized that the above abilities are useless without the courage to act. Part of this stems from establishing one's professional identity and purpose, which Assistant Director of CU's Innovation and Entrepreneurship Initiative Sarabeth Berk warned may be more difficult to discern in the gig economy and "era of hybrids." A student's major may shape an early professional identity and indicate what a student would like to accomplish. Interestingly, Berk noted that at Stanford an undergraduate is more likely to be asked about his/her mission rather than major.[13] This highlights an individualized, interdisciplinary, purpose-driven education. Likewise, Finland has adopted "phenomenon" teaching, a thematic, as opposed to a subject-based, approach.[14]

III.   The Institutional Structure

For entrepreneurship to thrive on campus, it is important to develop a foundation that can support the development of an entrepreneurial mindset and entrepreneurial skills. This foundation is built on three premises: (1) entrepreneurship can be learned, (2) entrepreneurship is relevant to every student, and (3) every student should be exposed to entrepreneurship.

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[9] *See* Susan Cain, Opinion, *Not Leadership Material? Good. The World Needs Followers*, N.Y. TIMES (Mar. 24, 2017), https://www.nytimes.com/2017/03/24/opinion/sunday/not-leadership-material-good-the-world-needs-followers.html?_r=0.

[10] *See* ROBERT D. PUTNAM, BOWLING ALONE: THE COLLAPSE AND REVIVAL OF AMERICAN COMMUNITY (2001).

[11] STARTUP REVOLUTION, http://www.startuprev.com/ (last visited May 14, 2017); *see also* BRAD FELD, STARTUP COMMUNITIES: HOW TO BUILD AN ENTREPRENEURIAL ECOSYSTEM IN YOUR CITY (2012).

[12] Brad Feld, *Give Before You Get*, LINKEDIN (Dec. 31, 2012), https://www.linkedin.com/pulse/20121231160601-6332-give-before-you-get.

[13] Brad Hayward, *Exploring Provocative Ideas for Undergraduate Education at Stanford*, STANFORD REP. (May 5, 2014), http://news.stanford.edu/news/2014/may/dschool-undergrad-reimagined-050514.html.

[14] Richard Garner, *Finland Schools: Subjects Scrapped and Replaced with 'Topics' as Country Reforms its Education System*, INDEP. (Mar. 20, 2015), https://www.independent.co.uk/news/world/europe/finland-schools-subjects-are-out-and-topics-are-in-as-country-reforms-its-education-system-10123911.html.

First, entrepreneurship is innate and can be learned. Jason Mendelson analogized entrepreneurship to a drummer's rhythm. Everyone has an innate "rhythm." It may lie dormant in some, but anyone can achieve rhythm through practice. John Kembel, Co-founder of dglobal.org, characterized entrepreneurship as "both mindset and muscle…it is a lifelong practice."

Second, entrepreneurship is relevant to every student. Through education, students build a collection of tools with which they can analyze and make sense of the world. Each class promises a new tool, each reading and discussion relates to another part of the instruction manual. An entrepreneurial mindset enables students to go off-manual. As John Kembel put it, "an entrepreneurial mindset, including the journey to get there, uniquely shapes an individual's ability to navigate the rise of complexity and uncertainty where others would avoid for fear."

Third, it is CU's duty to expose students to entrepreneurship. Participants cautioned that entrepreneurship is still viewed by many as inextricably linked to a male-dominated, for-profit context. "This has to be for everybody," John Kembel said. Students must be at the center of the discussion, particularly those who do not self-identify with or seek out entrepreneurship themselves.   There is ample room for CU to become a national leader in fostering inclusiveness and diversity within entrepreneurship. To move the needle, CU cannot sit still and wait for students who self-identify as entrepreneurs to come forward. Rather, CU must simultaneously meet students where they are and actively seek out and engage all students.

A.   Guide Cross-Campus Adoption Through a Student-Focused Philosophy

A dizzying amount of influences affect a student's education. Parceling them into digestible chunks based on circumstance—academic, athletic, social—or time—momentary, short-term, long-term—may help make sense of the blend. But the abilities listed in Part II are intangible and ill-defined as to a circumstance or time; their role is more dependent on the story in which we find them. So why should CU, at the *institutional* level, choose to inculcate these values, define their role, and choose the way they are taught?

Just as the construction of a house takes time and requires architects, framers, plumbers, and electricians, developing entrepreneurship rewards patience, collaboration, and perspective. For the layperson, examining a plumber's or electrician's schematics may not make much sense without considering the whole. In the university setting, undergraduate and graduate students are separated into schools, departments, majors, and concentrations. CU, at the institutional level, needs to develop a guiding philosophy that provides context and credit while allowing each department to develop its own schematics, its own best practices. As Jana Watson-Capps explained, we need a broad campus vision that allows each department to adapt as appropriate.

The evolution of the Techstars mission, as highlighted in a colloquy between Brad Feld and Nicole Glaros, is instructive on how a vision can shape an initiative. Feld asked Glaros what Techstars' vision was in year one. Glaros responded, "meet some cool people doing interesting stuff, and maybe they'd hang out in Boulder." "And when Techstars expanded?" "Helping other communities do the same." "And in year six?" "Build an entrepreneurial network." "And now?" "Be the best global ecosystem for entrepreneurs." That mission, and the Techstars network, was developed over 10 years. CU must be similarly patient in developing and deploying its guiding

philosophy. Brad Bernthal concurred, "For the next 10 years, our challenge is to weave entrepreneurial thinking into the fabric of the university and build a sustainable path forward."

>   *B.   Adopt a Unified Approach*

Cornell, like CU, has many pockets of entrepreneurship on campus. The entrepreneurial professors and students are from many schools and colleges at Cornell. Each department has its own hierarchy, websites, and alumni networks. These "silos," explained Cornell's Director of Entrepreneurship Zach Shulman, presented a problem. Prospective entrepreneurs did not know where to look to find resources, interested students and professors had difficulty locating information on cool new projects and events happening on campus—especially if outside their department—and there were few means of communication or sharing resources across disciplines. To address this problem, Entrepreneurship at Cornell ("EaC") coordinates across the greater campus community. EaC, under the leadership of Shulman, exists to "unify, promote, and inform."[15]

Shulman explained that, "EaC ensures Cornell as a whole gets recognition for all of the collective entrepreneurial pursuits." This is particularly important as CU builds its program. Troy D'Ambrosio, Executive Director of the Lassonde Entrepreneur Institute, shared how the University of Utah embraced entrepreneurship, "We started with small asks, built up small wins, and celebrated them." For Cornell, EaC serves as a "brand builder." For Utah, it is the Lassonde Entrepreneur Institute. Both provide a central location for celebration, where students prospective, current, and past can observe the entrepreneurial achievements on campus. In 2002, the University of Utah had five small scholarships. Now, Utah has 160. Over 2,000 students are engaged in entrepreneurship at Utah; at Cornell, that number is over 4,000. EaC and the Lassonde Entrepreneur Institute are invested in tracking those metrics and storytelling beyond specific programs.

EaC provides a forum for all 12 deans, or representation from each school at Cornell, to discuss a "unified broad agenda of promoting Cornell as an entrepreneurial destination." Each dean sits on EaC's board of directors, and each department contributes a small sum to EaC each year. Deans are then free to implement the entrepreneurial vision as appropriate for their unique schools or colleges. This "ensures the autonomy of the units," and, in turn, prevents "encroachment on core faculty activities." Faculty in each department are encouraged to cooperate among other departments and host their own entrepreneurship activities, potentially creating more individualized experiences for the students within the context of their majors. Through its decentralized, co-curricular nature, EaC has become a "neutral sponsor and promoter" for entrepreneurship at Cornell.

At Cornell's annual pitch competition, 11 startups competed for Student Business of the Year and a $5,000 cash prize, awarded by EaC. EaC was also responsible for the logistics and brought in outside judges.[16] However, each of those 11 startups' respective school or college

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[15] ENTREPRENEURSHIP AT CORNELL, http://eship.cornell.edu/ (last visited on May 14, 2017).
[16] Kathy Hovis, *Students From Across Campus Pitch Business Ideas*, CORNELL CHRONICLE (Apr. 5, 2017), https://www.news.cornell.edu/stories/2017/04/students-across-campus-pitch-business-ideas.

nominated them among others for the finals. This approach "allows participants to have their cake (autonomy) and eat it too (all the resources of a quasi-centralized approach)."

C.   Build a Cohort of Engaged Mentors Among the Faculty and Community

To grow an entrepreneurial mindset on campus, faculty and staff must embrace entrepreneurial stories within their lesson plans and encourage the entrepreneurial abilities listed in Part II. Many may already be encouraging students to think critically and challenge the status quo without calling it "entrepreneurship" or "innovation." Shulman endorsed the hiring of more entrepreneurial faculty as a key driver in increased alignment between EaC and each school. CU could hire staff and faculty based on Part II's competencies and values and incorporate these concepts into course evaluations.

Participants strongly endorsed engaging Boulder's entrepreneurial community in teaching. Xin "Eva" Yao, Assistant Professor of Management and Entrepreneurship at Leeds School of Business, offered two suggestions: (1) make it easier for professors to co-teach with community members and (2) open classes to students across departments and have professors across disciplines teach them. Notably, two roundtable participants co-teach at CU. Zach Nies, Vice President of Education at Techstars, co-teaches Startup Essentials to undergraduate computer science students, and Jason Mendelson co-teaches Venture Capital and Private Equity to a combined class of MBAs and JDs.

Beyond teaching, participants emphasized that CU should partner with members of the community. Students would benefit, said Jana Watson-Capps, if CU "poked holes throughout campus to open up outside experiences." Nicole Glaros echoed this sentiment asking, "How can CU increase engagement with outside parties?" Co-teaching may be the gold-standard of engagement, but CU should keep community members, particularly those in the broader research community, engaged with low-commitment contributions. Examples include holding office hours, speaking on an hour-long, lunchtime panel or morning coffee, attending a speed-dating-style networking event, or judging a competition.

Participants said CU should promote insightful thought leadership and scholarship on innovation and entrepreneurship. It should make its plans, reasoning, and conclusions "open source," and invite debate.

D.   Try Something New: Partner with Companies to Solve Industry Pains

Going beyond scholarship on innovation and entrepreneurship, CU could become an innovator itself by partnering with company leaders to solve industry pains. Bart Foster, Chairman of ReVision Solutions, explained how this could work. First, CU identifies two to three "centers of excellence," areas in which CU outshines on an international level. Entrepreneurs with first-hand knowledge of both the industry and CU's capabilities work with outside companies to identify common industry pains. These could be neglected problems that would not make-or-break a single company but have a significant impact when aggregated across the industry. CU could function as a neutral platform for research, product development, and go-to-market solutions. Professors would work alongside graduate and undergraduate researchers, MBAs and JDs.

Multiple companies within the space could provide funding and feedback. Foster's ReVision Solutions[17] suggests this model works. After connecting with Brad Bernthal, the Office of Industry Collaboration, and the Technology Transfer Office, Foster brought the optical lens industry together with CU professors and students to find a way to recycle lens shavings.[18]

E. Provide Lightweight and Fast Funding

At one recent pitch night at the University of Utah, over 130 attendees from area universities, high schools, and businesses sampled Afghani hors d'oeuvres catered by a local food entrepreneurship incubator. The crowd voted to award about $7,000 to five of eight early stage, pre-revenue teams, from $400 for equipment to a team designing custom rock climbing bags to $2,685 for prototyping to a team exploring contact lens drug delivery.[19] By keeping awards monthly and amounts modest, the larger community stays engaged, and students with just a nascent idea can actively compete for money and talent.

F. Recognize Alumni

Several roundtable participants are CU alumni who have started companies. Director of Technology Transfer Bryn Rees noted that CU's Technology Transfer Office ("TTO") regularly works with CU researchers to commercialize technology. CU could recognize these companies, and those that were alumni started but not directly founded on CU research.

Consider, for example, how the University of Florida's ("UF") Gator100 recognizes, celebrates, and facilitates collaboration and networking among "the 100 fastest-growing, Gator-owned or Gator-led businesses in the world."[20] The UF Alumni Association and UF's Entrepreneurship and Innovation Center lead the initiative and pick the companies based on applications and nominations. The companies then gather for a weekend on campus. Bart Foster, a past Gator100 honoree, endorsed the model for CU. Through a similar program, CU could connect honorees, open opportunities for student-alumni mentorship, and create a treasure trove of data. CU students could even play a central role in coordinating the affair.

G. Identify a Core Space

Participants referenced the creation of a dedicated physical space for entrepreneurship throughout the roundtable and questioned whether a space is a prerequisite for a great entrepreneurial university or a natural outgrowth. Both Zach Shulman and Troy D'Ambrosio featured their institutions' physical spaces prominently in their presentations. Continuing his student-driven approach, D'Ambrosio said he arrived at a dedicated physical space because the Utah students wanted the freedom to create day or night. Students at Cornell also have after-hours access to their space, but do not live there, as Utah students may.

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[17] REVISION SOLUTIONS, https://revisionsolutions.org/ (last visited May 17, 2017).

[18] *Partnership "Looks Into" Creating New Material From Eyeglass Lens Waste*, CU BOULDER TODAY (Aug. 4, 2016), http://www.colorado.edu/today/2016/08/04/partnership-looks-creating-new-material-eyeglass-lens-waste.

[19] *Get Seeded: Monthly Grant Program Awards $6,960 in April*, LASSONDE ENTREPRENEUR INSTITUTE (May 15, 2017), http://lassonde.utah.edu/get-seeded-monthly-grant-program-awards-6960-in-april/.

[20] *About the Gator100*, UF GATOR100, http://gator100.ufl.edu/about.asp (last visited May 17, 2017).

Cornell University's 15,000 square feet of entrepreneurship space with offices, conference rooms, and open-floorplan co-working spaces has been "transformational," said Shulman.[21] One-third of the space is on campus, and the rest is about a five-minute walk off campus right in the heart of Collegetown. Neither building is exclusively for entrepreneurship, but the spaces themselves, which are accessible after-hours, are. Students may receive coaching and mentorship from Blackstone Launchpad mentors,[22] who have offices in the on-campus space, as does EaC. The off-campus space, which comprises two floors, hosts Cornell's eLab Accelerator Program.[23]

The University of Utah's 160,000 square foot Lassonde Studios co-locates residential (140,000 square feet) and creative-build spaces (20,000 square feet) in one 24/7 building reserved entirely for entrepreneurship.[24] D'Ambrosio echoed Shulman's enthusiasm for the University's designated space, stating it may be one of the most attractive lures for prospective entrepreneurially minded students. Along with co-working space, Lassonde Studios features "Make Space," complete with workbenches, materials, and tools, including a CNC laser and 3-D printers for rapid prototyping. Each of the four residential floors feature nonexclusive, themed community spaces: "Sustainability and Global Impact," "Products, Design, and Arts," "Adventure and Gear," and "Games and Digital Media." Exclusive to residents, each floor also has theme-specific tools. Like Cornell's, the space does not have any lecture halls. Unlike Cornell, it does not have space for staff offices. It is also revenue generating through its student residents—which can accommodate undergraduates and graduates of any year or discipline—and its on-site restaurant. The building and related programs are all privately funded through donations, including Zions Bank and a $25 million donation from Pierre Lassonde and the Lassonde Family Foundation. This private funding provides an additional layer of autonomy to Lassonde Studios and avoids intellectual property ownership issues with tech transfer.

Turning to the University of Colorado Boulder, Dean Sharon Matusik of CU Leeds School of Business noted CU must foster on-campus infrastructure to encourage collaboration among CU's existing pockets of entrepreneurship in curriculum, extracurricular activities, and scholarship. "Space has a subtle power, it changes behavior by engaging people on an unconscious level," John Kembel said. Kembel continued, "space is the slowest thing to learn." Thus, a challenge for CU will be to avoid prescriptive, fixed, and engineered spaces, favoring instead adaptable platforms with the goal of "shaping terrain." These considerations produced a complimentary alternative to dedicated space in the form of diffuse space. Julia Richman, Chief Innovation and Analytics Officer for the City of Boulder, warned against copycatting other institutions' spending and evaluations of space stating, "The place cannot be the thing; the culture needs to be the thing, and it needs to inform the space." The key for the University, concluded Richman, may be to recognize Boulder's unique, existing infrastructure and improve current spaces within the Boulder entrepreneurial ecosystem, both on- and off-campus.

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[21] EHUB, https://www.cornellehub.com/ (last visited May 14, 2017).

[22] BLACKSTONE LAUNCHPAD, https://www.blackstonelaunchpad.org/ (last visited May 14, 2017).

[23] ELAB, http://elabstartup.com/ (last visited May 14, 2017).

[24] *Lassonde Studios*, LASSONDE ENTREPRENEUR INSTITUTE, http://lassonde.utah.edu/studios/ (last visited May 14, 2017).

**IV.	Preparing Students for Adaptation and a Changing World**

*A.	Focus on the Students*

At the University of Utah, students opt-in to an entrepreneurial curriculum or set of experiences primarily through the Lassonde Entrepreneur Institute. Although it is technically housed within the University of Utah David Eccles School of Business, the Institute is open to all and focuses on experiences, not courses. Early on, D'Ambrosio identified a core group of student entrepreneurs and asked, "What are you missing?" They responded with four key considerations: Where do I meet other smart people? Where do I find computer science students? How can I prototype? Where do I find a mentor? By focusing on these concerns, D'Ambrosio has spurred excitement around entrepreneurship at Utah and has achieved organic growth.

In the spirit of inclusivity and widespread adoption, some participants, including Brad Feld and John Kembel, warned CU not to lean on "innovation," "entrepreneurship," and other trendy buzzwords, which are often used sloppily and quickly lose any value. Kembel noted that while language does get watered down, it is also crucial for newcomers. "Language," said Kembel, "has the power to invite or deter participation." Ultimately, however, it is better to show than tell, particularly for 17- to 21-year olds.

*B.	Make it Easy to Join With Low-Risk, Low-Cost Opportunities*

College students are more enthusiastic and stay engaged longer in entrepreneurial activities, noted Troy D'Ambrosio, when recruited by their peers. To encourage peer-to-peer recommendations, D'Ambrosio made it easy for newcomers to contribute to and explore new ideas. Students attend monthly pitch nights with free food, mix with members of the community, and vote on their favorite ideas.[25] Regular workshops, meetups, and mentorship sessions available to all make it easy to get involved. For artists specifically, Utah also hosts a monthly morning conversation series with creative professionals.

Students exploring a new idea may even receive course credit through the Foundry at Lassonde Studios.[26] Once admitted, students join a small group of graduate and undergraduate students for weekly, hour-long meetings. Students without an idea of their own are welcome to join existing teams and projects. Helping each other be successful is the only requirement.

Utah has excelled at creating a safe setting to explore all levels of entrepreneurship through low-risk, low-cost opportunities that still deliver tangible rewards like school credit, money, peer recognition, and experience. The breadth and depth of these opportunities demonstrate a commitment by the university to entrepreneurship for all, while still leaning on organic growth through peer-to-peer recommendations.

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[25]	*Get Seeded: Monthly Seed Grant Program*, LASSONDE ENTREPRENEUR INSTITUTE, http://lassonde.utah.edu/getseeded (last visited May 16, 2017).

[26] *The Foundry @ Lassonde*, LASSONDE ENTREPRENEUR INSTITUTE, http://lassonde.utah.edu/foundry (last visited May 16, 2017).

C. *Convince Students to Stay Through Tailored Experiences*

While it is possible to entice students with free food or the chance to award money that is not theirs, these are not long-term solutions. To retain students, CU must convince them through tailored experiences, such as courses and events on real-world issues or intriguing topics that appeal to a student's individual purpose.[27]

Brad Feld recommended requiring a class on entrepreneurship in every undergraduate student's first or second year. The advantage to an early start, Eva Yao observed, is that students can be mindful in carving out time for entrepreneurship-related learning, otherwise their time tends to be quickly filled with various courses and activities. Furthermore, an introductory course could introduce CU students to the Boulder startup community and create new pipelines for internships, mentorship, and community engagement. Above all, Yao said any course should be "fun, practical, and hands-on."

Doug Smith, Assistant Dean of CU Programs and Engagement and Co-director of CU's Engineering Leadership Program, offered the idea of experimenting with informal seminars or semi-regular discussion forums. Smith posited that these could "inoculate all incoming students with language and thought frameworks for innovation." Yao also encouraged CU to think creatively to provide multiple instances of entrepreneurship and community contact, for example, engaging freshmen during orientation, a one-credit course, and/or a pass-fail course.

Following participants' concerns on departmental autonomy, broad principles could be set by the university, leaving the specifics to individual departments. However, trends toward multi-disciplinary collaboration suggest there is value in entrepreneurship classes combining many majors, departments, and levels. A more novel idea would group students by self-selected purpose or interest in a current event or topic, and perhaps even mix class years so that collaborative projects serve as both a senior's capstone and a freshman's foundation. The University of Utah is experimenting with this, albeit in an informal, residential setting, by allowing undergraduate and graduate students of all years to apply to live on themed floors at the Lassonde Studios.

D. *Hand Students the Keys*

Utah and Cornell have made a habit of asking students and faculty what they need and how they as institutions can help. As Zach Shulman noted, "Customer-driven demand drives EaC's existence." At Cornell, EaC "exists for 'you.'"

Students at Utah also have the option of diving deeper into entrepreneurship by volunteering at Lassonde Studios, which serves as the physical hub of entrepreneurship on campus. Each year, up to 160 students may receive a scholarship based upon a moral commitment to create, coordinate, and support Lassonde Entrepreneur Institute activities. Scholarships range from $500 for one hour of work per week to $10,000 for 15 to 20 hours of work per week. Phil Weiser quickly observed that scholarships are irrevocable once awarded and are at best *moral* obligations. However, students face two constraints that limit bad behavior. The first is structural, students are

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[27] *See* Simon Sinek, *How Great Leaders Inspire Action*, TEDxPUGET SOUND (Sept. 2009), https://www.ted.com/talks/simon_sinek_how_great_leaders_inspire_action.

repeat players who must reapply for the scholarship each year. The second is reputational, even if the student is in her last year, word travels fast among the tight-knit entrepreneurial community.

V.   Evaluating Outcomes and Success

Hopefully most administrators would recoil at the idea of viewing students as merely an SAT score, GPA, or class rank. Evaluating programs and initiatives is another matter. Institutions often evaluate success based on measured outcomes derived from defined metrics and gathered data. To do so in the entrepreneurial context would ignore the student focus. "Almost" achievements are common among startups, which exist amid conditions of uncertainty. Outsiders without context often overlook them, but they earn the respect and admiration of those who have been in their shoes. If the abilities from Part II are central to an entrepreneurial mindset, and the mindset is the goal, CU must embrace the long-game and accept some uncertainty. There are better ways to measure success than defaulting to numbers and outcomes. They may be novel, requiring CU to get creative, but this area, like inclusivity and diversity in entrepreneurship, is where CU can become a national leader.

CU absolutely should consider outcomes "to validate you are making progress in the institutional context," said Brad Feld. "The mistake is that the success on those outcome measurements define your success." Feld cautioned CU on placing too much emphasis on outcomes in shaping its entrepreneurship initiatives, encouraging CU to view outcomes as "guidelines." A focus on outcomes may lead to merely "adding on pieces"—copycatting other programs, events, or initiatives—in a blind attempt to bump CU in the rankings. This would be a disservice to students; adding programs because other universities have them will not incorporate entrepreneurship into the fabric of the university. However, Dean Matusik said CU must be careful in taking this to the extreme by automatically favoring novel approaches. Rather, outcomes can focus our efforts, encourage efficiency, and prevent a wasteful mentality of effort over impact.

In measuring outcomes, observed Jana Watson-Capps, it may be useful to define the level—institutional, programmatic, or project. Nicole Glaros noted that the entrepreneurial abilities listed in Part II, particularly trial-and-error learning, could be tracked. Watson-Capps said that measuring these may be better at the program or project level, as they see the abilities in context. At the institutional level, Zach Shulman admitted EaC's Board of Directors cares about outcomes. He finds it helpful to track the number and growth of companies both failed and started, as well as student engagement, including the number of attendees, groups, and capital raised.

Terri Fiez shifted the conversation around gauging outcomes earlier in CU's entrepreneurial initiative. Her starting point would be to take CU's "vital signs" to identify the university's strengths and weaknesses. To do this, she introduced the concept of "soft data," such as surveys among students, faculty, and staff. To guide its effort, CU should consider McKinsey & Company's "Organizational Health Index."[28]

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[28]   *Organizational Health Index*, MCKINSEY & COMPANY, http://www.mckinsey.com/business-functions/organization/how-we-help-clients/organizational-health-index (last visited May 17, 2017).

Conclusion

Each participant could have easily spoken, without repetition, for the roundtable's duration on building a great entrepreneurial university. This report encapsulates one conversation and provides a roadmap for further discussions.

Appendix A – Roundtable Participants

Davis Backer, Student, University of Colorado Law School

Sarabeth Berk, Assistant Director, Innovation & Entrepreneurship Initiative, University of Colorado Boulder

Brad Bernthal, Associate Professor, University of Colorado Law School; Entrepreneurship Initiative Director, Silicon Flatirons

David Camerucci, Entrepreneurial Fellow, Silicon Flatirons

Troy D'Ambrosio, Assistant Dean, David Eccles School of Business, University of Utah; Executive Director, Lassonde Entrepreneur Institute

George Deriso, Managing Director, Innovation & Entrepreneurship Initiative, University of Colorado Boulder

Jill Dupre, Associate Director & Industry Partnerships Director, ATLAS Institute, University of Colorado Boulder

Brad Feld, Co-founder and Managing Director, Foundry Group

Terri Fiez, Vice Chancellor for Research and Innovation, University of Colorado Boulder

Bart Foster, Chairman, ReVision Solutions

Nicole Glaros, Chief Innovation Officer, Techstars

Don Grant, Professor and Department Chair of Sociology, Renewable and Sustainable Energy Institute, Institute of Behavioral Science, University of Colorado Boulder

Greg Greenwood, Executive Director, Blackstone Entrepreneurs Network Colorado

John Greff, General Partner and Chief Financial Officer, Sequel Venture Partners

Jaclyn Freeman Hester, Associate, Foundry Group Next

Chris Kaffer, Co-founder and Chief Executive Officer, Mallinda, LLC

John Kembel, Co-founder, dglobal.org

Mark Kent, Director, Institute for Entrepreneurship, Colorado State University

Ali LeBeau, Program Manager, Innovation and Entrepreneurship, University of Colorado Boulder

Krista Marks, Co-founder and Chief Executive Officer, Woot Math

Sharon Matusik, Dean, Leeds School of Business, University of Colorado Boulder

Trisha McKean, Assistant Dean for Advancement, Leeds School of Business, University of Colorado Boulder

Jason Mendelson, Co-founder and Managing Director, Foundry Group;

Erick Mueller, Senior Instructor, Leeds School of Business; Faculty Director, Cross Campus Entrepreneurship Program, University of Colorado Boulder

Zach Nies, Vice President of Education, Techstars

Julie Penner, Director, Techstars

Brynmor Rees, Director, Technology Transfer, University of Colorado-Boulder and Colorado Springs

Julia Richman, Chief Innovation and Analytics Officer, City of Boulder

Zach Shulman, Director of Entrepreneurship, Cornell University

Doug Smith, Assistant Dean, Programs and Engagement; Co-director, Engineering Leadership Program, University of Colorado Boulder; Founder, Catalyze CU

Jack Vihstadt, Student, University of Colorado Law School

Jana Watson-Capps, Associate Director, BioFrontiers Institute, University of Colorado Boulder

Phil Weiser, Hatfield Professor of Law, University of Colorado Law School; Founder and Executive Director, Silicon Flatirons; Faculty Director, Innovation & Entrepreneurship Initiative, University of Colorado Boulder

Brad Williams, Instructor and Entrepreneurship Program Director, David Eccles School of Business, University of Utah

Xin "Eva" Yao, Associate Professor, Management and Entrepreneurship, Leeds School of Business, University of Colorado Boulder