

MIT Innovation Ecosystem (iEcosystem) Symposium 2017

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Innovation and entrepreneurship evolve from ideas to impact with the support of key stakeholder groups. These include government, risk capital, universities, industry, and entrepreneurs. Initiative and programs that combine these actors are therefore central to sustaining vibrant innovation ecosystems. Yet, much remains to be learned about the conditions under which they work best. In an effort to foster mutual learning in this regard, the MIT Innovation Initiative, MIT Lab for Innovation Science and Policy (the Lab), and MIT Regional Entrepreneurship Acceleration Program (MIT REAP) hosted the MIT Innovation Ecosystem (iEcosystem) Symposium in October 2017. The two-day conference brought together a global community of practitioners from industry, risk capital, startups, academia, and government.

Building on each other's experiences and expertise, participants discussed the implementation of novel models, programs, and initiatives that can enhance economic growth and social progress. They also explored best practices and debated possible future directions for innovation and entrepreneurship. More than 70 multi-stakeholder initiatives from around the world submitted concept papers which described novel, action-oriented programs and informed the discussions during the conference. iEcosystem Symposium panels and conversations furthermore drew from MIT's wide range of organizational experiments, including Delta V, Sandbox, and The Engine. Meanwhile, MIT REAP's experience in working with regions from around the world as well as the Lab's research on innovation ecosystems and novel metrics of entrepreneurial quality and program measurement provided useful sources of insight.

This policy brief summarizes key findings¹ from the symposium and lays the foundation for actionable insights and further study.

A changing environment and the need to adapt

An important idea discussed at the Symposium is that stakeholders need to address *systemic changes*, such as the changing nature of capitalism, in order to make progress in innovation ecosystems. Keynote speaker Stephen Forte elaborated on this point when arguing that, unlike in the past, *mission* and *profit* are no longer seen as mutually exclusive, but as reinforcing mechanisms. Identifying “a lot of pressures going against capitalism today ... [from] the unresolved issues of the financial crisis [to] ... the very definition of economics,” he argued that “capitalism, itself, is evolving” and “the old game of just trying to increase shareholder value is rapidly dissipating.”

Forte furthermore suggested that the “new generation [is] really focused on the customer first” and keen to “translate these values not just in the companies that they start, but the companies they choose to do business with.”

In short, it was found that as mission-driven for-profit companies become more common, innovative thinking must touch on all areas of entrepreneurship and business. In Forte's words, this means acknowledging that “The world has changed, so must ecosystems.

The [Student & Innovation House](#) in Copenhagen, Denmark, launched in 2013, is an initiative led completely by students to address the gap between technology innovation, social/cultural innovation and entrepreneurship. To date, it has raised \$8.2 million USD from industrial foundations to redevelop an old police station in downtown Copenhagen. Their work centers on fostering collaboration across diverse students, sectors and organizations, coupling students with surrounding society. The association has grown from 12 volunteers from Copenhagen Business School to 50+ volunteers across 6 different higher education institutions.

¹ To determine the key findings of the symposium, we subdivided the insights from all panels and keynote speeches into five categories: actors, processes, outcomes, measurements and calls for action. We then distilled insights into key learnings that we present thematically, above.

Exploring cooperation with unusual partners and novel forms of organization

Another key finding which emerged from the Symposium is that as the thinking and actions of the various members of the ecosystem are driven by different rationales, it is crucial to be open towards new or unusual partners, engage in novel modes of cooperation and develop a wide set of incentives. According to Gary White, founder of BlackStart Innovation, LLC, “The solution lies in partnering with folks who have similar problems that we might not originally [have] thought of partnering with in trying to get forward.” Key to such efforts is trust, which can be fostered through dialogue, asking the right questions at the right time, and enabling actors to learn from each other.

The U.S. Air Force-backed **JEDDi Lab** was launched in 2017 and leads the Air Force in energy innovation. The JEDDi Lab will drive energy innovation through the creation of a hub that introduces non-traditional entities into the defense mission space to address energy assurance problems. Simultaneously, the JEDDi Lab will cultivate a network of civilian and military workers that have knowledge in energy assurance, defense, and commercial sector practices. Through these unusual partnerships and collaborations, the JEDDi Lab will fill gaps that typical government projects cannot address, utilize the most efficient methods to ensure solutions cycle, provide government partners with a path to technology transfers, and ensure that research has impact.

Decision-makers must furthermore be aware of and help navigate misalignments between short-term objectives, which might occur even as longer-term goals coincide. In concrete terms, ecosystem programs should foster industry buy-ins, knowledge exchange, and sponsorship where possible. Building on his experience of cooperating with the Vatican, Stephen Forte explained “[Y]our partners won’t be very obvious to you at the beginning, and there’ll be multiple constituents, and they’ll come from a variety of places. ...But when you’re building an ecosystem [such as for mission-driven for-profit companies], you take into account that you’re going to have multiple stakeholders. And ...these stakeholders [like the Vatican] might just be a little different.”

Leveraging technology and (re)designing physical space to foster connectivity

In addition to collaborating with unusual partners, a thoughtful approach to the design of physical space and the use of smart technologies can significantly improve how human beings interact and connect with each other. According to MIT Professor Albert Saiz, thought leaders in architecture and real estate are not just integrating *smart technology* or designing smart buildings, but are “seek[ing] to create spaces that facilitate the exchange of ideas and effective cooperation.” They are taking “more holistic perspectives, and [thinking about] how to integrate [a] building with the neighborhood.”

Reflecting on his current practice, Carlos Cubillos, a Planning and Urban Design Practice Area Leader from Gensler explained “We begin to tackle how you house people; how people move; how you integrate different uses in different densities; how you welcome technological change; and how you convey the different ways in which people work, live, create, learn, and share.” Meanwhile, Salomon Salinas of Accenture’s Smart Cities Practice underlined “the potential is to create a truly sentient city. A city that sort of ‘senses’ its occupants in the same way that the occupant senses the city.” He also suggested that “It is no longer about what technologies can be used. They’re available to us. It’s fundamentally what technologies should be used in order to deliver the outcomes that matter...”

Founded in 1963, **University City Science Center** in Philadelphia is a mission-driven nonprofit that connects innovation to entrepreneurship and technology commercialization. Although this initiative is decades old, it is constantly evolving and addressing new challenges for innovation and entrepreneurial ecosystems. Most recently, it launched Quorum in 2011, an entrepreneurs’ clubhouse as a convening ground for the greater innovation ecosystem, that includes programs, events, and a co-working space. While technically a Science Center program, Quorum belongs to the region. It includes a strategic partner alliance of Delaware, New Jersey, and Pennsylvania non-profits, as well as scores of other stakeholders, to support innovation, entrepreneurship, and technology based development in the region. To date, Quorum has had 60,000+ people attend 1,000+ events with 1,000+ entrepreneurs connected into the ecosystem.

As a building's design and planned use can foster connections across diverse groups, policy-makers are thus encouraged to actively engage with city planners, real estate companies and the wider community in producing solutions for their respective cities, regions, or countries.

Erik Ubels, Chief Technology Officer at OVG Real Estate, made this point particularly clear when stating that he feels “an obligation to communities and ecosystems and so on”. Drawing on his experience with designing a new location in a low-income area in the Eastern part of Berlin, he explained that the building “will be totally open to the people in that area. So, they can go to education in evening hours. They can have political meetings if they want to. ... We will allow the business center and the co-work space to be open for those people. And we will also do an urban farm for them, with them. Obviously, that's an experiment.”

Ubels' conclusion that “Everybody claims that smarter, healthier buildings are increasing productivity. Yet they don't have the proof”, furthermore suggests a need to rethink collaboration across ecosystem stakeholders to help advance understanding, support collaboration, and deliver outcomes that matter. In that context, especially universities can act as hubs of expertise, help to identify sustainable solutions that improve productivity, and measure the impact of different initiatives.

Galway City Innovation District (GCID) refurbished an old Guinness storehouse in 2016 and launched the PorterShed, a technology accelerator and a co-working and event space. Through PorterShed, GCID is optimizing the potential of Galway as a place to live and work by accelerating the potential of startups there along with a shared vision of community. This is truly a multi-stakeholder engagement collaboration across many innovation ecosystem stakeholders including: University/Institute (NUI Galway & GMIT), Corporate (KPMG & IBM), Government (Enterprise Ireland & Local Enterprise Office), and Risk Capital (AIB & WDC). GCID has plans to also launch a space for scaling companies in 2018 (The Stables), leveraging innovation and entrepreneurship, as well as the city of Galway, to foster economic development and shared prosperity.

Ensuring Collective Impact through participation, planning and leadership

Another important discussion at the Symposium evolved around the Collective Impact Framework which calls for entities from different sectors to abandon their own agenda in favor of a common one, a shared measurement system, mutually reinforcing activities, constant continuous communication, and a backbone organization or structure. Building on this idea, Jan Rivkin from the Harvard Business School explained that: “Communities around the world are struggling to motivate collective action ... whether it's

The Engine, a for-profit accelerator launched by MIT President Rafael Reif in October 2016, bridges the gap between discovery and commercialization by empowering disruptive technologies with the long-term capital, knowledge, specialized equipment and labs they need to thrive. The Engine's new CEO, Katie Rae, is maximizing impact through collaboration – forming a board of directors and advisors from top industry leaders across Boston and bringing together industry partners and advisors to collaborate with founders. The Engine has closed a \$200 million USD fund, opened a 26,000-square foot co-working and laboratory space in Cambridge, MA, and hired a team of 10 professionals to lead investments, programs, and partnerships. The Engine is structured as a venture capital fund and public benefit corporation that incubates tough tech companies under the same roof in its Central Square co-working and laboratory facilities.

[to improve] education or to spark entrepreneurship or to improve workforce skills,” He further emphasized that “the most important thing is to make sure the communities that are affected are engaged from the get go. ...[S]o many of these efforts are done to or for our communities rather than with or by them.”

Also, Mark Kramer, the director of FSG and co-author of the ‘Collective Impact Framework’ pointed out that for collective impact efforts to succeed, it is essential to invest the time to build trust and set up structures which enable meaningful participation and direction by communities notwithstanding power differentials. “Changing the relationships and dynamics among the players is itself a form of progress.” As a result, collective impact requires a different kind of leadership.

According to Rivkin, “[It’s] not about having the answer, or being in control, or setting the agenda”. Rather, the focus should be on establishing “leadership where no one is in charge.” Kramer further explained that a leader must be “strong enough to be sure that the agenda moves forward, but not so strong that the leader imposes his or her own agenda.” Collective impact is thus a fragile process, which “[i]n the hands of an effective leader, [can be] a truly transformative process. [I]n the hands of an ineffective leader, [it can be] completely ineffective.”

Collective impact requires long term investment and planning. As such, it is one of a complementary set of tools or approaches that can help advance progress. In any innovation ecosystem, there is always a struggle between long-term planning and enabling quick wins: while planning and preparation are important, so is experimentation and sometimes failure. Policy-makers must therefore enable an environment that allows for both. Even though public attention often focuses on new and exciting initiatives, they must further ensure that basic needs — such as infrastructure, public transportation, or high-speed internet — are addressed first. In short, decision-makers must focus on those aspects that address and enhance the specific level of connectivity within their communities after having identified location-specific needs, available resources, and comparative advantages.

Fostering diversity - the impact of targeted initiatives

In light of limited resources, ecosystem leaders must likewise decide whether to focus on activities that increase levels of knowledge more broadly, or to fund on concrete ideas such and start-ups. In this context, it is important to acknowledge that innovation and entrepreneurship will be interpreted in different ways by different people and that stakeholders’ priorities might therefore differ. Throughout the symposium and across all panels, inclusion was therefore emphasized as a critical aspect of systems-level change. Sheila Herrling, vice president of social innovation at Case Foundation, underlined that outcomes will not improve if we leave more than 50% of the people on the sidelines: “The differentiator today is that you understand your customer and how you can handle user experience. If you’re talking about innovation technology in the United States and what’s going to drive all the new jobs being start-ups, we can’t leave more than half of our people on the sidelines.”

Venture for America, founded in 2011, is a nonprofit fellowship program that empowers recent college graduates to launch their careers as entrepreneurs, while helping to revitalize American cities and regions that typically struggle to attract and retain talent. VFA specifically targets regions in the U.S. that are emerging startup ecosystems and are disadvantaged in some regard. They are not choosing the Silicon Valleys and the Kendall Squares, instead opting for an inclusive perspective on fellowship placement to enhance those less-served ecosystems. Fellows undergo rigorous training and are placed in a startup for 2-years; 450+ startups have hired fellows post fellowship in their ecosystems. These startups have also created 3,000+ jobs across 18 cities with emerging start-up ecosystems.

While innovation and entrepreneurship are crucial for societal advancement, the underlying enabling conditions can vary significantly among different demographic groups. In particular, women and minority groups frequently have less access to important resources, such as venture capital, networks, and mentors. Drawing on her experience at the Case Foundation, Herrling pointed out that as “only 10% of venture capital goes to companies that are founded by women and less than 1% (goes) to founders of color,” there is a need to be “more intentional about inclusive entrepreneurship.”

Suggesting that “we must begin by asking the right questions,” she then explained that “the Case Foundation asked three key questions: who is making the investment decisions? Are accelerators intentionally focused on curriculum that supports entrepreneurs of color and women entrepreneurs? And are policy-makers, more generally, structuring policies and programs with equity and inclusion in mind?”

That broadening inclusion starts with reforming program goals in response to specific questions was also shared by Lee Wellington, founding executive director of the Urban Manufacturing Alliance. Elaborating on her work with city and regions, she explained that “we challenge[d] a couple of city agencies to ... integrate their manufacturing programming with an equity agenda, [and to] start to really ask themselves: ‘When you create new manufacturing opportunities, are you benefiting low-income communities? Are you benefiting communities of color? What did that benefit look like?’” She concluded that “what we found was that a lot of these city agencies weren’t actually talking about equity. And so even getting that conversation going was an important first step.”

Equitable Innovation Economy (EIE), founded in 2015, brings together leaders to grow cities by connecting disadvantaged communities with high-paying jobs in advanced manufacturing and other pathways to the maker economy. EIE creates multi-stakeholder ecosystems where city and economic development leaders work together to build new equity strategies driven by manufacturing. Examples of their success are found from Portland, Oregon to San Jose, California to Indianapolis, Indiana. In Portland, the project helped to launch a startup fund for companies with diverse founders. In San Jose, EIE initiated a program that connects disadvantaged youth to employment with advanced manufacturers. In Indianapolis, its program to re-invest in urban industrial corridors helped to revitalize manufacturing jobs for local neighborhoods.

Equity and inclusion were also discussed in the context of the “idea of failure cavalierly” which regards failure as an opportunity for personal growth. Criticizing this dominant discourse in the United States, Herrling explained, “it is very easy to say for people who already have privilege, for people who have safety nets, who have access to friends and family with money [to talk about a culture of failure]. ...[I]n communities of color, failure [may not be] an option. ... You hear a lot of people saying, ‘Look, as a black person, when I graduate from college, I’m somehow advancing the entire race by doing so. So, if I fail it is a failure to the entire black community.’ [T]hat has been a real learning experience [for me and for our team] So, ‘make failure matter’ is one lesson. But fail, just fail purely to get ahead is tough. It’s not an inclusive idea.”

Calls for Action

The following key “action-items” can be derived from the Symposium:

- Critically assess and rethink existing decision-making structures, both in terms of actors as well as processes.
- Raise awareness and increase transparency regarding the status quo in areas such as gender or racial diversity.
- Identify easy-to-apply frameworks and metrics for evaluation.²
- Devise concrete ways by which innovation and entrepreneurship can be supported, including
 - The efficient use of media, especially with regard to helping challenge existing images of entrepreneurs and providing “alternative narratives” through flagship campaigns.³
 - Incentivizing and providing support for groups which so far have been underrepresented through early-stage career development programs, a greater emphasis on mentoring and sponsoring as well as regulations that address particularly problematic areas, such as on sexual harassment.
- Encourage and support stakeholders to cooperate with various groups in developing and implementing a vision for their respective ecosystems that reflects their respective strengths.⁴
- Demonstrate creativity and courage in fostering cooperation and enabling conditions.

² See, e.g., Phil Budden and Fiona Murray, A systematic MIT approach for assessing ‘innovation-driven-entrepreneurship’ in ecosystems, MIT Lab for Innovation Science and Policy Working Paper, https://innovation.mit.edu/assets/BuddenMurray_Assessing-iEcosystems-Working-Paper_FINAL.pdf

³ As one example, see the Case Foundation’s #Faces of Founders and Be Fearless Campaigns.

⁴ As Forte succinctly explained: “I was born and raised in New York City, I live in Silicon Valley, I went to school in London, and I lived in Hong Kong, and I do a lot of work in Los Angeles. London wants to be Silicon Roundabout, New York wants to be Silicon Alley, LA wants to be Silicon Beach, and Hong Kong wants to be Silicon Harbor. And all community leaders from those four places come to me and ask me questions and say, ‘How do we build Silicon Valley?’ I say, ‘You can’t.’ I say, ‘Play to your strengths.’”

Conclusion

In her final remarks, Lee Wellington offered a succinct observation that underscored the purpose of the symposium and the importance of the many discussions hosted there: “[T]he only way we’re going to get anywhere with respect to ecosystems is if we’re honest about where we’ve been successful and where we’ve hit challenges.”

The findings and calls to action highlighted above are an important start. We hope to continue the dialogue started at the Symposium through further research and insights into the practice of building and sustaining innovation ecosystems around the world.

References

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