UEDA

UNIVERSITY ECONOMIC DEVELOPMENT ASSOCIATION

IDENTIFY · DESIGN · PILOT · IMPLEMENT

Momentum:
UEDA and Economic Development Ecosystems

ECOSYSTEM DESIGN NETWORK REPORT

AUGUST 2021

UEDA
Ecosystems Design Network

The Lemelson Foundation
improving lives through invention

About UEDA

Established in 1976, the University Economic Development Association (UEDA) is the cornerstone membership organization representing higher education, private sector, and community economic development stakeholders. UEDA works to expand economic opportunity in our communities by leveraging research, community resources, campus planning, talent development, and technology commercialization.

Mission
UEDA serves its members by promoting knowledge and practice in the realms of talent, innovation, and place as drivers of regional prosperity.

Vision
UEDA, and its members, will be the leaders in advancing regional economic engagement fueled by higher education.

UEDA serves more than 1,000 professionals through our international membership of about 100 (and growing!) institutions and organizations. Our core membership comprises college and university professionals focused on economic development, entrepreneurship, innovation, talent development, and community engagement. Those we serve increasingly include higher education partners in private industry, entrepreneurship, local government, economic development organizations, federal agencies, workforce development, manufacturing, and financial institutions. These organizations and institutions are driving modern economic engagement and providing leadership to their regions and communities every day. In partnership with regional stakeholders, they are working to achieve shared economic and community impact goals. Each stakeholder group brings its own perspective and ideas to UEDA, and the resulting diversity of ideas is vital to our continued success. More information is available at www.universityeda.org.

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EXECUTIVE SUMMARY

Funded by the Lemelson Foundation to strengthen ecosystems by exploring the roles, resources and players needed to successfully drive innovation economies, the project, a pilot of UEDA's plans for an Ecosystems Design Network (EDN), strove to address and further examine questions that emerged from The Lemelson Foundation's Ecosystems 2.0 framework. This report covers the progress of the process, outcomes, and recommendations.

The project began in September of 2020 and proceeded through March of 2021. Central to the proposed work was a series of ecosystems design exploration events--a series of virtual workshops with UEDA members and participants in their ecosystems in which they explored the resources, roles, and players in their ecosystems and used a human-centered design approach to considering how to strengthen these ecosystems to support economic and community recovery.

Our process was a multi-tiered graduated approach that progressed well. It began with an intensive and immersive design thinking workshop experience for ecosystem partners at the UEDA 2020 Virtual Summit. Cohorts of leaders from communities and regions from across the country registered for the day. They experienced a facilitated workshop designed to strengthen economic and community development ecosystems that would support creativity, invention, and entrepreneurism This workshop, titled "Ecosystem Acceleration for Recovery", included focused activities to explore the roles of partners in ecosystems. A follow-up convening was hosted by UEDA for those participants in the Summit's ecosystem workshop. Then, we conducted Insight and Ideation facilitated sessions with participating ecosystems. Next, a survey was sent to each ecosystem facilitator to provide feedback about the experience and document outcomes. Finally, more interviews were conducted to help evaluate the project.

The process produced outcomes and recommendations for ecosystems to improve and fortify their work and to prototype their ideas. The Ecosystem Design Network project proved to be a highly valued experience for participants and an important mission-aligned activity for UEDA.

INSPIRATION   IDEATION   IMPLEMENTATION

DIVERGE   CONVERGE   DIVERGE   CONVERGE
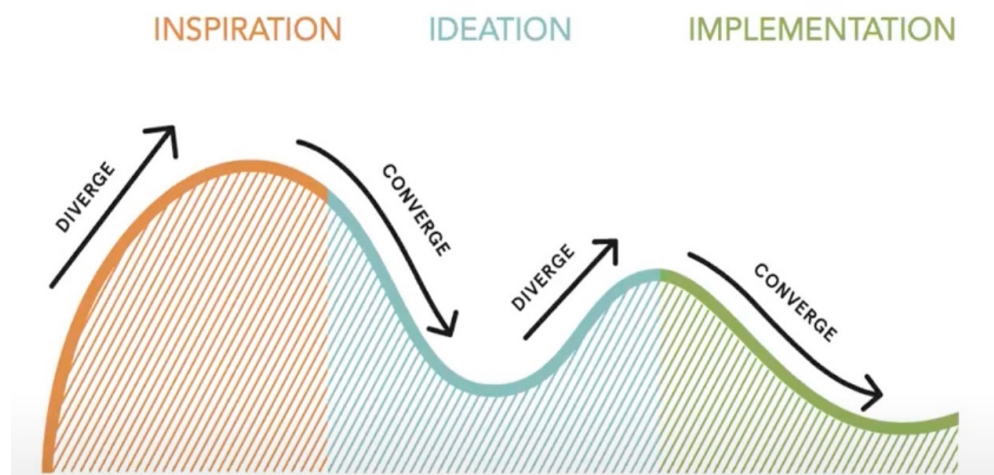
Outcomes

The design thinking approach we employed was focused on generating practicable ideas that institutions of higher education, along with their ecosystem partners, could implement toward strengthening their ecosystems. A total of 63 ideas were generated during the ideation sessions across all 10 institutions. This idea set was narrowed to 31 actionable ideas that came from the survey in which we asked, "Please identify up to three specific actionable ideas or ecosystem solutions that resulted from this work--including a short description." The responses presented clear shared themes that emerged from the Ideation sessions and survey results. Many had a social justice component and all had elements of place-making, talent development and innovation.
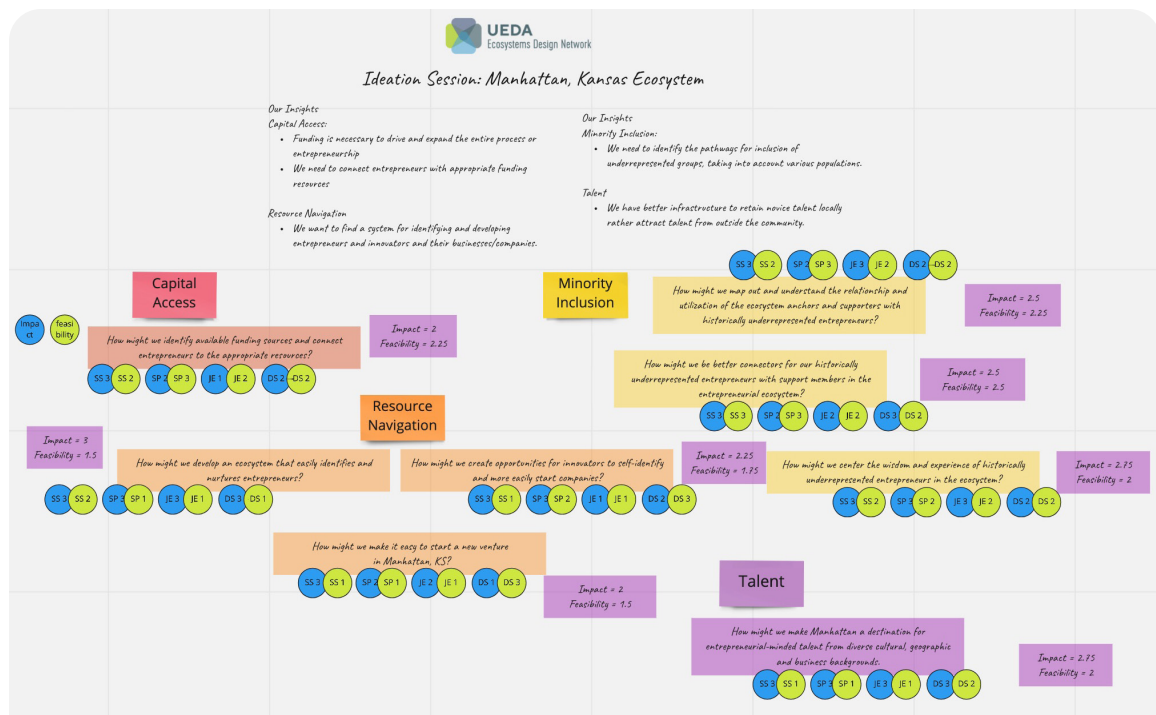
A key practicable idea that emerged from each ecosystem related to developing assessment tools for participating institutions to help them and their ecosystem partners to better understand roles and resources, recognize and assess gaps, and identify new partners that could bring additional resources and assets. Assessment would also help to ensure equity, access, and inclusivity, especially in supporting ecosystems that uplift underserved communities, minority owned businesses and women-owned businesses.

This idea inspired more ideas that proposed dynamic communication strategies, consensus building approaches, engagement opportunities/events, and data sharing platforms. Some specific ideas were:

- Partner with officials to promote and sustain cultural attractions and entertainment options.

- Create a virtual resource hub for entrepreneurs.

- Set-up an internal Innovation and Entrepreneurial Working Group that will assess assets, identify gaps and collectively determine a path forwards.

- Create a visualization of the regional ecosystem.

- Create an inventory of all members, their services and programs in order to reduce duplication. This will help limited resources to be spread across more unique programs and services.

These ideas that emerged validated the already-identified problem that The Lemelson Foundation has focused work on which is a need for a better understanding of the roles, resources, and players required in connected and collaborative invention ecosystems.

The momentum is already being seen with some ecosystems are beginning to implement their ideas. All of the participating UEDA member institutions reported that they are ready to grow and strengthen their ecosystems because of their participation in the EDN pilot. The feedback received from participants indicates the project was exceptionally successful in fueling regional partners to recognize and leverage the value of an ecosystem and to then turn their experience in the EDN into deliberate and methodical action.

UEDA Ecosystems Design Network

Ideation Session: Manhattan, Kansas Ecosystem

Our Insights
Capital Access:
- *Funding is necessary to drive and expand the entire process or entrepreneurship*
- *We need to connect entrepreneurs with appropriate funding resources*

Resource Navigation
- *We want to find a system for identifying and developing entrepreneurs and innovators and their businesses/companies.*

Our Insights
Minority Inclusion:
- *We need to identify the pathways for inclusion of underrepresented groups, taking into account various populations.*

Talent
- *We have better infrastructure to retain novice talent locally rather attract talent from outside the community.*

Capital Access

How might we identify available funding sources and connect entrepreneurs to the appropriate resources?
Impact = 2
Feasibility = 2.25

Minority Inclusion

How might we map out and understand the relationship and utilization of the ecosystem anchors and supporters with historically underrepresented entrepreneurs?
Impact = 2.5
Feasibility = 2.25

How might we be better connectors for our historically underrepresented entrepreneurs with support members in the entrepreneurial ecosystem?
Impact = 2.5
Feasibility = 2.5

Resource Navigation

How might we develop an ecosystem that easily identifies and nurtures entrepreneurs?
Impact = 3
Feasibility = 1.5

How might we create opportunities for innovators to self-identify and more easily start companies?
Impact = 2.25
Feasibility = 1.75

How might we center the wisdom and experience of historically underrepresented entrepreneurs in the ecosystem?
Impact = 2.75
Feasibility = 2

How might we make it easy to start a new venture in Manhattan, KS?
Impact = 2
Feasibility = 1.5

Talent

How might we make Manhattan a destination for entrepreneurial-minded talent from diverse cultural, geographic and business backgrounds.
Impact = 2.75
Feasibility = 2

Recommendations and Next Steps for Ecosystems

Based on what we learned through this pilot effort, UEDA makes a number of recommendations for universities and their partners as they undertake efforts to design and build invention ecosystems. The following recommendations were developed through an analysis of pilot participants' experiences, ideas, plans, and feedback:

- Using The Lemelson Foundation invention ecosystem roles as a foundation, focus energy on mapping the roles in your own ecosystem to understand which organizations can best support different aspects of invention ecosystems. Add roles as appropriate for your invention ecosystem, and to flesh out roles related to other economic and community development activities.

- Identify needs for other foundational aspects for ecosystem-building. Begin with some of the ideas generated by ecosystems in our pilot.

- Recognize that the university often participates in many roles within invention ecosystems because of the richness of university assets available for ecosystem building, and also that the university is likely not the best organization to lead or even convene ecosystem building. Through reciprocal and mutually beneficial partnerships, the university should work with invention ecosystem partner organizations to identify appropriate leaders and conveners and make clear that organizations outside the university are coordinating and catalyzing these efforts.

- Carve out an explicit ecosystem-building role, the tasks of which are focused on catalyzing and nurturing connection and collaboration between and among invention ecosystem partners. Identity the organization(s) most appropriate to taking on the ecosystem-building role.

- Through consensus building activities, design invention ecosystem metrics for a shared approach to using ecosystem assessment tools that include goal setting, appreciation of accomplishments, and mutually agreed-upon outcomes.

- Create a resource playbook for your invention ecosystem to identify funding sources and best practices to secure funding.

- Introduce community-building platforms (digital and in-person) to socialize and fortify the ecosystem.

- Develop a theory of change and logic model for your invention ecosystem to help connect invention, innovation, and entrepreneurship to other economic and community development activities like workforce and talent development, and place-making.

- Continue to ensure a focus on diversity, equity, inclusion, belonging, and social justice in all aspects of ecosystem-building.

- Take advantage of UEDA's Ecosystem Membership and participate in UEDA's Ecosystems Design Network as it is built to get design thinking leadership training for ecosystem builders, and recurring engagement with UEDA for check-ins and tool updates, and/or explore other resources for learning and applying design thinking to ecosystem-building.

4 participating institutions have begun work to seek follow-on funding to bring the ideas generated into prototyping and implementation phases.

6 institutions that participated in the pilot activity expressed interest in furthering the work begun in the pilot.

THE PROCESS & ACTIVITIES

Proposed Project Questions and Framing

The project set out to address the questions that the Lemelson Foundation established for ongoing work in refining the Ecosystems 2.0 framework:

> Is the current list of roles (developed through the Ecosystems 2.0 initiative) accurate and complete?
>
> What roles might different types of IHEs play, and what are some specific practices that IHEs can employ in enacting their roles?

Additionally, the initiative engaged economic development ecosystems in examining critical questions related to economic and community recovery:

> How might we address the challenges that lie ahead for individuals and organizations in our community and region, and in particular how might we address equity?
>
> How might we use ecosystem roles and interdependencies among them to increase both resilience of, and equity in, our communities and regional economy?
>
> and How might we capture information about what works in support of both recovery and equity, and scale solutions to other communities and regions?

Recognizing that UEDA members think about ecosystems broadly, as economic development ecosystems, we worked during the initiative to focus and frame our questions in the context of invention ecosystems. Some important elements of this framing for UEDA members were:

> Universities are the drivers of economic growth in their regions because invention and innovation are produced there. Key drivers include advancing the value of faculty research, maximizing the pipeline of student talent, and encouraging students to become inventors and entrepreneurs.
>
> Understanding invention ecosystems means looking at the value that the totality of partnerships brings. Roles in ecosystems must be filled by appropriate partners, and partners and their roles must emphasize equity in order to maximize success in establishing an invention ecosystem.
>
> The success of invention ecosystems relies on universities and partners working every day to break down silos and ensure that roles are being filled by those most capable of doing the work.

Summary of Project Activities

UEDA Annual Summit Ecosystem Day (Monday, September 21, 2020)

UEDA is focused on advancing regions through robust higher-education community engagement. Member universities look to UEDA to provide significant value in their efforts to strengthen and create greater synergy on campus in their work in the community and with regional partnerships. Catalyzing, fortifying and growing ecosystems for economic resilience, recovery and innovation could not be more important than it is now and was a key theme at the 2020 University Economic Development Association's (UEDA) Summit. Themed "Redesigning the Future Amidst Dynamic Change: A Virtual Economic Accelerator Summit", the opening event for the summit was "Ecosystem Day" which was sponsored by the Lemelson Foundation.

The preliminary ecosystems design exploration event was conducted on Monday, 9/21/20 as part of the UEDA Digital Summit Ecosystem Day. The kick-off event encouraged UEDA members and their ecosystem partners to explore: 1) questions related to what it means to be an ecosystem, and 2) the roles that are played by various participants in each ecosystem.

Twenty-three university-connected ecosystems from across the country had registered for Ecosystem Day, and of those, fourteen UEDA member institutions engaged with their ecosystem partners in the sessions to explore the topics of the day.

	Participating Universities	Participating Partner Organizations	Participating Individuals
Ecosystems Registered	23	62	~200
UEDA Ecosystem Day Conversations	15	61	~145
Insights and Ideation Workshops	10	47	91

Participants engaged in the "Ecosystem Acceleration for Recovery" workshop, which kicked-off the interactive portion of the event. Each ecosystem worked together in a dedicated Zoom breakout room to engage in facilitated design-thinking tasked sessions as they explored, discovered, examined and imagined together in order to create stronger ties and a more vibrant ecosystem. Participants collaborated with their regional partners to identify the opportunities to strengthen their economic development ecosystems. Through a design-thinking approach, participants did a deep-dive assessment of the roles organizations play in their ecosystem using the guiding question, "How might we better connect and strengthen roles and organizations in economic development ecosystems, to create more equitable and stronger communities and regions?"

In the first session, participants exchanged and explored gaps in their ecosystem based on the Lemelson Foundation roles. During this sessions, participating ecosystems also listed some categories of roles that were not included in the report from The Lemelson Foundation, pointing to some potential gaps in the Lemelson framework.

Insights and Ideation Sessions

Following the kick-off workshop at the UEDA Annual Summit, ecosystems were recruited to participate in additional design thinking sessions to help them develop practicable ideas for strengthening their ecosystems. The following (10) institutions went on to participate in the Insights and Ideation workshops with their ecosystems.

East Carolina University	Portland State University
Georgia Southern University	University of Houston
Kansas State University	University of Kansas
Ohio State University	University of Kentucky
Oregon Institute of Technology	University of Oregon

To prepare for the Insights Session, each ecosystem was instructed to engage as many of the partners as possible in conducting interviews with other participants in the ecosystem--or with individuals and organizations that should be part of the ecosystem. This "empathy" or "discovery" research was encouraged as the primary activity of the "inspiration" phase of design thinking as applied to ecosystem building, and was aimed at helping ecosystem participants understand more deeply the ways in which their ecosystem could be strengthened.

Ecosystem participants brought the key learnings from these interviews to the Insights Session. After all participants shared their learnings (across ecosystems, over 400 learnings from the empathy interviews were shared), each ecosystem used affinity grouping to identify themes across the learnings. Forty-five themes and 99 key insights which were further refined into (74) "How might we...?" (HMW) questions to serve as the basis for ideation in the second session.
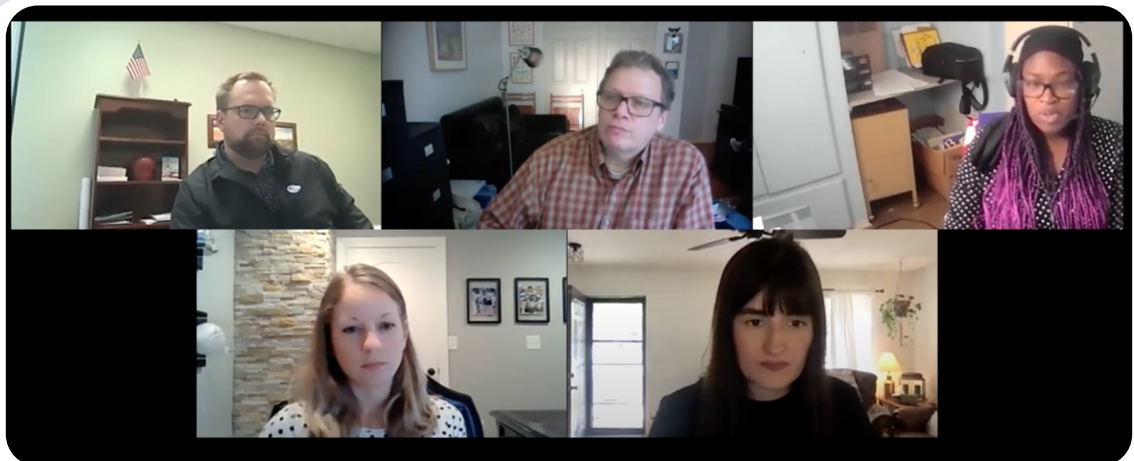
November 3, 2020, Kansas State University and participants in the Manhattan ecosystem engaged in the insights and ideation workshops

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In the Ideation session, participants were presented with a "brainwriting" brainstorming framework in which each participant shares one idea in response to the HMW question, then each participant rotates from one of their colleague's ideas to the next, building on each as they go. The result is as many ideas as there are participants, each with a set of additional ideas that enhance or build on the original idea. This activity resulted in 63 ideas with many more enhancements identified across the 10 ecosystems.
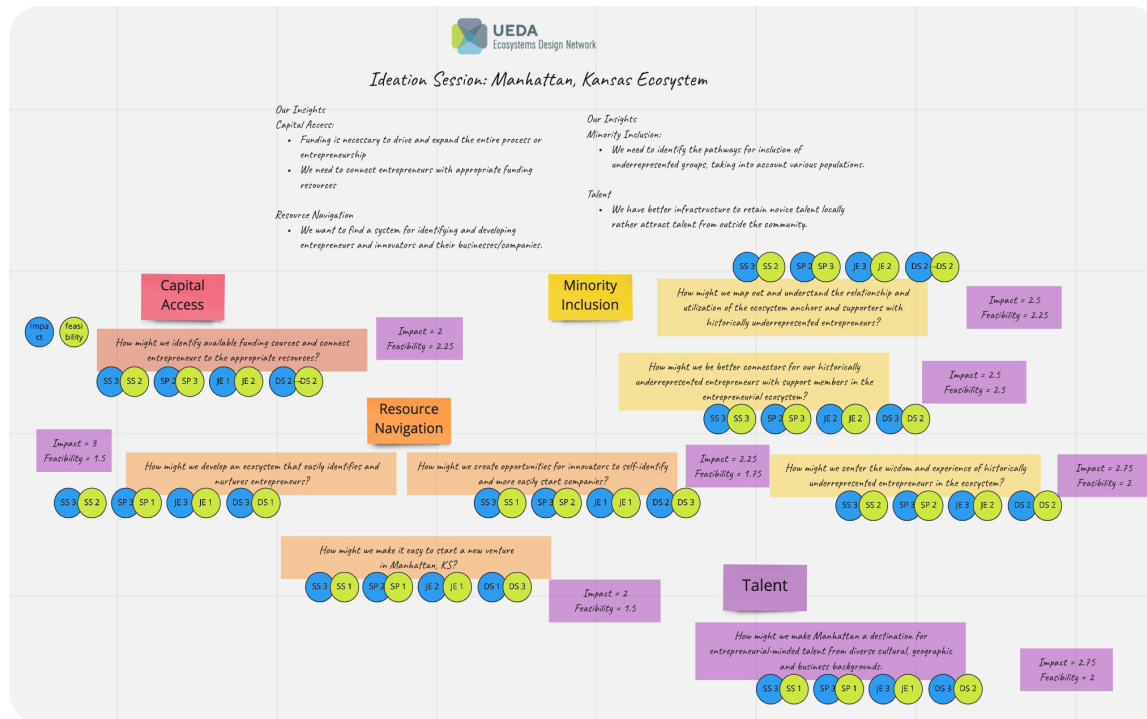
The Ideation session continued with an overview provided by the workshop's facilitator about the next steps that each ecosystem might take to narrow their ideas to one that should be pursued. The facilitator presented design thinking concepts related to prototyping, encouraging the ecosystem participants to consider what kinds of things they might need to prototype in order to gain feedback on their preliminary idea, strengthen it, and ready it for implementation.

ECOSYSTEM ROLES- A CLOSER LOOK

A key area of exploration for the project was to address the questions that the Lemelson Foundation established for ongoing work in refining the Ecosystems 2.0 framework:

Is the current list of roles (developed through the Ecosystems 2.0 initiative) accurate and complete?

What roles might different types of IHEs play, and what are some specific practices that IHEs can employ in enacting their roles?

and What metrics can be used to determine whether an IHE is effectively playing its appropriate roles?

A focus on roles was part of the initial phase of the initiative. We explored issues related to roles in two ways. First, during the Ecosystem Day session as part of the UEDA Annual Summit, we asked institutions and their ecosystem partners to undertake a "card sort" activity in which they placed ecosystem partners within the framework of roles outlined in The Lemelson Foundation's "Cultivating invention ecosystems: insights from Oregon." We followed up this card sort exercise with follow-up interviews with UEDA members who had participated with their ecosystem partners, to gain further insights related to discussions that occurred during the card sort activity. Second, we asked questions related to roles in our wrap-up survey.

Interviews were later conducted with a number of the ecosystems that participated in the kick-off event, with questions focusing on what each ecosystem learned about roles during the second breakout session of the kick-off event.

Types of Roles Participants Play

Roles that **inspire and educate** around invention, entrepreneurship, an economic development.

Roles that **help create new products, businesses, and services** (including invention-based).

Roles that **foster network connections and program effectiveness**.

Roles that foster broader **system-level effectiveness and sustainability**.

Roles that promote **access and inclusiveness**.

Ecosystem Roles Card Sort Activity at the Summit

Reviewing the card sort Miro boards and follow-up interviews on roles, a few lessons emerge:

- Most evident in looking at the boards is that the universities see themselves playing or contributing to a number of the roles. Anecdotal data provides more context for this--in one-on-one conversations with the university representatives, they frequently reported that they are cautious about playing a "leading" role in ecosystem building because they don't want to eclipse the importance of many other important players and contributors to their ecosystems. That said, university representatives also recognize that their institutions are rich in an array of assets helpful to ecosystem development, and they want to be able to contribute across multiple roles.

- Based on the card sort exercise as well as the follow-up interviews, it was clear that most of the ecosystems saw themselves as complete with regard to the Lemelson framework. Universities and their ecosystem partners demonstrated comprehensive coverage of the roles, identifying multiple organizations contributing to most roles, and at least one organization for nearly every role.

As part of the card sort exercise, we added "what else?" cards to prompt ecosystems to identify roles not outlined in the Lemelson framework, but played by organizations in their ecosystems. Reviewing the Miro boards for the card sort exercise, and the follow-up interviews, reveals some insights to how universities view themselves, and their ecosystem, as it relates to economic development and innovation:

- Many institutions identified themselves in economic development roles such as promoting economic development, business recruitment/retention/expansion, planning, land and space development, opportunity zones, and other similar activities.

- Community colleges and organizations focused on workforce development play an important role for technical workforce/talent development, not only development of entrepreneurial talent. Similarly, continuing education units were seen as contributing to some of the talent-focused roles.

- Within the category of roles "that help create new invention-base products and services," there was some variation based on institutional mission. These roles may be played differently for research intensive (and IP-rich) institutions, where there is an intra-development focus, versus those that are more focused on teaching, such as regional comprehensive institutions that support student entrepreneurs and entrepreneurs in the community.

- It's also recognized that ecosystem-building is not included as a formal role, yet is important to achieving shared goals. There is a need for an organization or multiple organizations to encourage and support, and in some cases provide cover for, ecosystem-building efforts among partners.

Survey Results on Roles

Some additional insights regarding roles did emerge when we asked for details on ecosystem roles as part of our wrap-up survey. We asked respondents to review the roles in the framework from The Lemelson Foundation, and for each role check all that apply among these options: 1) We know who plays this role in our ecosystem; 2) We need more information about which organizations play this role in our ecosystem; 3) This role represents a gap in our ecosystem-- we can't identify organizations currently playing this role; and 4) This is one role played by the university in our ecosystem.

Among the nine respondents to the survey, the following emerged as patterns:

- Ecosystems were most confident about roles in the categories of "inspire and educate around invention and entrepreneurship" and "help create new invention-based products and businesses." Ecosystems classified the following categories as roles they could identify: Formal/Academic Education, Business/ Technical Advisor, Entrepreneurial Facilities, and Talent/Workforce Pipeline.

- The role categories least identifiable and presented gaps were Mentoring/ Inspiring, Market Access, and Business Capital.

- There was a strong need for more information about which organizations played the role of Safety Net and Risk Mitigation.

- The responses for "This is one role played by the university in our ecosystem" confirmed the view presented by the Miro boards--that the universities see themselves in a number of different roles. Each of the roles across the framework got at least one check for this response. Five roles got five or more checks: Formal/Academic Education (8), Research and Development (8), Invention Facilities (5), Entrepreneurial Facilities (5), and Talent/Workforce Pipeline (7).

FEEDBACK ON PILOT

The design of the pilot included several opportunities for feedback from participants: wrap-up interviews with Dr. Jim Woodell, the project lead, and a survey. Responses have all been positive and indicated a desire to continue the process. Participants reported that they valued the experience and came away with new insights that are applicable to their work. The experience was described as productive, enlightening, and important. Many reported that the convenings with facilitated conversations and tasks were the catalyst for ecosystem development in their communities and regions. A few excerpts from responses from facilitators were:

"The Design Thinking process has been helpful to me to integrate into other work that I am involved in... It has been a very valuable process but we have much work to do."

"Our ecosystem partners were able to focus on bigger issues/questions/opportunities through design thinking than if we had used the "same old" meeting techniques that have been employed before this discussion. Design thinking allowed us to think strategically AND to move toward tangible outcomes. The latter is an important distinction."

"It brought together more of the ecosystem partners and got the conversation started."

"The Design Network helped us identify the gaps and then focus on defining what the issues are, how we can solve them, and then how to solve them. This process helped us hone in on an attainable end product that we could prioritize and focus on completing. The design thinking practices also gave us a framework and language for communicating throughout the ideation process so we could use the same terms and definitions with our stakeholders as we engaged the process."

"It allowed us to acknowledge this is a challenge and is a very complex topic. So while creating an overarching framework, the pilot encouraged the notion of prioritizing and digging deeper in the priority areas."

All facilitators reported that the pilot helped their ecosystem identify gaps in the roles needed, identify and build new relationships and partnerships, encourage new thinking about partnerships, and inspire new thinking about the roles of members in their ecosystem. There was agreement that this is work in progress.

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Follow UEDA's ongoing Ecosystems work relative to this document at universityeda.org/ecosystems

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