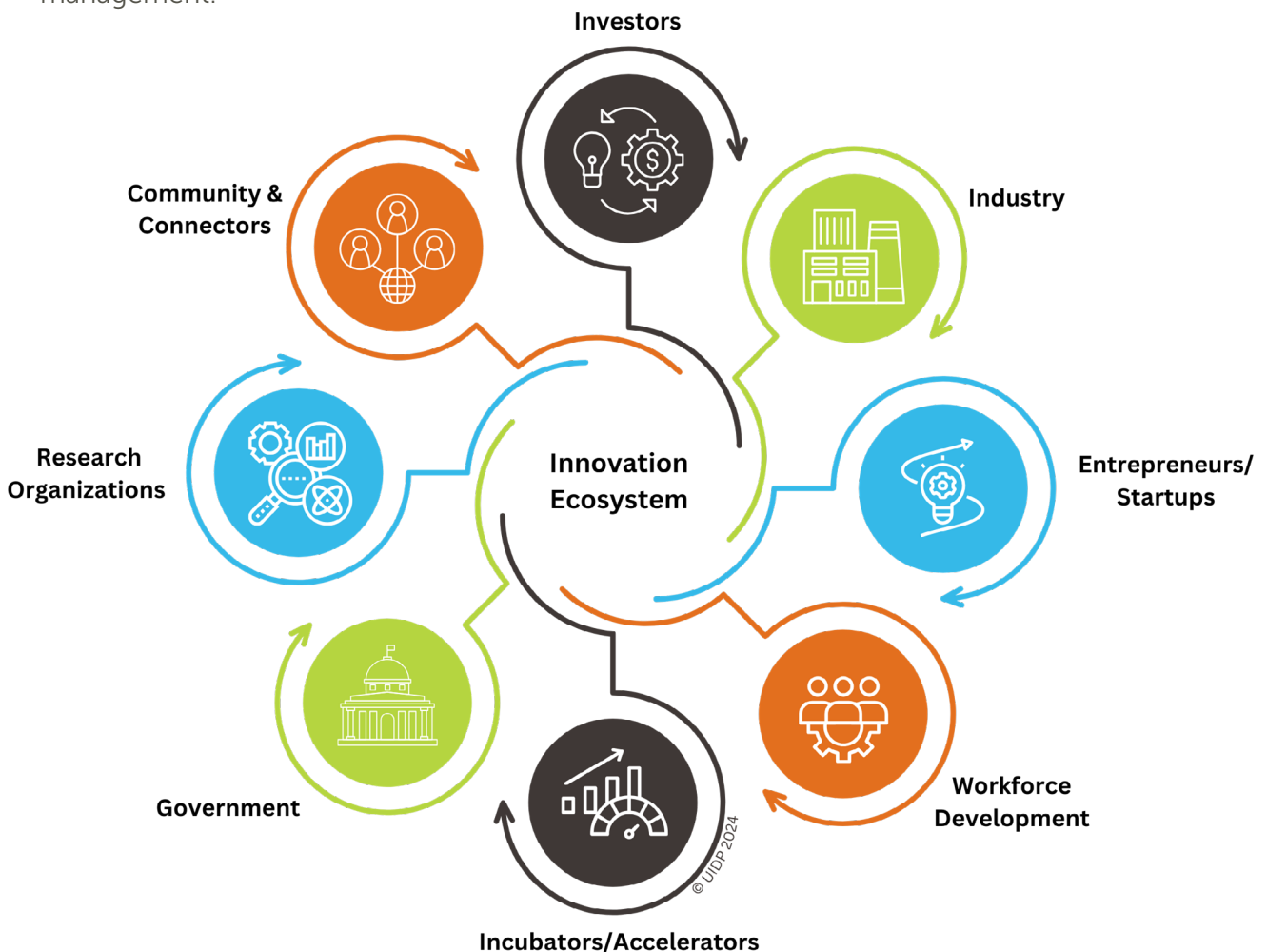


University-Industry Perspectives

Innovation Ecosystems

An **innovation ecosystem** is an interconnected, dynamic network of stakeholders and resources focused on catalyzing the discovery, development, and deployment of new technologies and the workforce to support them, which may include one or more innovation hubs organized around a common vision. These ecosystems are often place-based but can transcend political borders to focus their unique strengths and culture on fostering innovation and providing social and economic impact.

An **innovation hub** organizes stakeholders around a common vision that capitalizes on their region's unique strengths and is usually created through intentional planning and management.



Defining the Stakeholders

Investors

Financial support for innovation ecosystems comes in many forms. Investors in innovation ecosystems can include angel investors, venture capital, philanthropic organizations, large companies, state and local governments, national government agencies, and economic development programs.



Entrepreneurs/Startups

For an innovation ecosystem to thrive, research outcomes that are industry-relevant, economically viable, and societally impactful need to be catalyzed into use. Entrepreneurs, innovators, founders, and startup companies are the entities responsible for the early stages of transitioning technologies into products and services that can have a broader economic and societal impact. For entrepreneurs and their companies to grow robustly, partnering and acquiring support from other stakeholders in the innovation ecosystem is crucial.



Industry

Companies of various sizes and types play a critical role in innovation ecosystems. Large, multinational companies may provide guidance on the economic viability or industry relevance of research directions. Multinational companies can also provide support for workforce initiatives and can ultimately serve as employers for those trained by the economic engines that most innovation ecosystems aspire to be. Small and medium size enterprises play an important role in providing pathways for new research outcomes to move from lab to market. Industry also plays a role in providing manufacturing capacity and market access to new inventions that emerge from the innovation ecosystem.



Workforce Development

Increasingly, the innovation enterprise is focused on cultivating a labor force that is prepared to support new technological advances. Workforce development initiatives can target K-12 education, customized community college and technical or trade school programs, a diverse mix of universities and colleges, and graduate programming focused on emerging fields. The goal of workforce development programs associated with innovation ecosystems is to identify necessary skill sets and match them to educational programming that ensures that laborers with those skill sets will be available, ideally in a specific geographic region.



Government

Government entities of various kinds are involved in the creation, cultivation, and support of innovation ecosystems around the world. Economic development agencies have a long-standing history of supporting many of the components of an innovation ecosystem. More recently, national governments have taken a much more active role in supporting and incentivizing place-based innovation. Most often, national governments influence innovation ecosystems through funding opportunities, but governments (national, regional, and local) also play a role in regulation, taxation, and the provision of resources that impact how innovation ecosystems emerge and are sustained. Additionally, governments can provide unique resources to support innovation such as national laboratories or being a preferred buyer of products that emerge from the ecosystem.

Incubators/Accelerators

Research parks, maker spaces, incubators, and accelerators are all different types of physical space created to inspire groups such as researchers, technology developers, and industry to work together. The concept behind incubators and accelerators is to provide office space, lab space, or other appropriate buildings for startups and others in the innovation ecosystem to work from. Ideally, the real estate is designed to inspire serendipitous opportunities for new ideas and new partnerships.



UIDP Perspectives

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Research Organizations

The personnel, resources, and unique knowledge that universities possess are key assets in an innovation ecosystem. When the creation of an innovation ecosystem is being funded by a national government, research intensive universities tend to take the lead on organizing and managing the related collaborations, although many types of organizations can and do fill the organizing and managing role. Research organizations involved in innovation ecosystems are not limited to research intensive universities, many non-profit, for-profit, and government-run research organizations play a strategic role in advancing the goals of an innovation ecosystem. Research-focused hospital systems, for-profit government contractors, national labs, and academic institutions of various types support innovation ecosystems around the world.

Community and Connectors

For an innovation ecosystem to thrive, intentional efforts must be made to connect the different groups and people in a district or locality. Innovation ecosystems must engage the local community from the outset to truly have the intended impact. The community has insight into what works well in their region and also what might be missing. They know the places where people meet and understand the needs of families and workers. Connectors may be professional consulting groups specializing in economic development, local or professional societies, an organization created specifically to organize and manage the innovation ecosystem, or an existing contributor to the innovation ecosystem such as a university.



For additional information:

Please visit uidp.org or email info@uidp.net
Call us today at 803.807.3679

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