

Engaging the Local and Regional Ecosystem

A brief from the Technology Transfer Evolution Working Group of APLU's Commission on Innovation, Competitiveness, and Economic Prosperity (CICEP)

TECHNOLOGY TRANSFER EVOLUTION: THE VISION

APLU's Commission on Innovation, Competitiveness, and Economic Prosperity (CICEP) created the Technology Transfer Evolution Working Group to identify ways in which the practice of university technology transfer is changing, and must continue to change, to sustain and increase university responsiveness to the needs of stakeholders, and more broadly to challenges in society and the economy.

To guide conversations and recommendations, the Working Group established the following vision for the evolution of technology transfer:

University leaders are increasingly responding to the needs of the innovation economy—and in particular their local economies—by including innovation, entrepreneurship, and economic engagement programming in their strategic planning processes. As part of this response, university technology transfer offices are evolving, and must continue to evolve, toward participation in a broader scope of efforts—with patents and licensing as one emphasis, and also connecting with and engaging in other efforts that support the learning and discovery missions of the university. In evolving toward broader participation in university economic engagement, technology transfer offices will develop deeper relationships with industry and other community partners; broaden their reach to areas such as education, technology development, and entrepreneurship; and integrate more closely with other supportive administrative functions such as industry



contracting. While budget and resource threats to the university research enterprise are creating increased pressure to generate revenue from licensing and innovation activities, university leaders must recognize that successful economic engagement will not be focused on short-term income, but rather on longer-term work on relationship development and ecosystem building.

The Working Group also identified five focus areas for defining and advancing the evolution of technology transfer toward economic engagement leadership. The five focus areas are: 1) engaging the local and regional ecosystem, 2) redefining expectations of technology transfer offices, 3) adapting innovation management structures, 4) fostering an entrepreneurial culture, and 5) supporting university start-ups. This brief presents issues in the first of the five focus areas: engaging the local and regional ecosystem.

ENGAGING THE LOCAL AND REGIONAL ECOSYSTEM

This focus area centers on the intellectual property and broader innovation of the university, and the institution's ability to work with other players in the regional innovation ecosystem in transferring those assets. This includes how the university leverages its role in the ecosystem to create new opportunities. The local and regional ecosystem comprises the university, industry, government, economic development organizations, and other innovation and entrepreneurial entities.

Outlined here are examples, obstacles, and imperatives. Examples illustrate the ways in which university technology transfer offices are evolving toward the vision outlined above. Obstacles identify the hurdles that must be overcome to reach a higher scale of success in technology transfer evolution. Imperatives specify what must be done to continue or begin the evolution. Further discussion of these will be included in the Working Group's final report, to be released in late 2017.

Examples: What are universities doing well?

- Leading institutions are moving toward an organizational structure consisting of coordinated collaboration among engagement functions, providing more holistic approaches to university–industry relationships.
- Industry perspectives are being incorporated into events, support programs, and advisory boards.
- [University of Central Florida, University of South Florida, and University of Florida](#): With the goal of supporting the development of research, workforce, entrepreneurship, and industry innovation, the Florida High Tech Corridor (HTC) is a regional economic development initiative that combines the academic and research capabilities of three leading

universities with the industrial resources of companies in a 23-county region. This example demonstrates how universities can collaborate in creating regional innovation and economic development ecosystems, and how they can partner closely with industry to align objectives.

- [Kansas State University](#): The Knowledge Based Economic Development (KBED) program in Manhattan, Kansas was established by Kansas State University in 2008 to align the city's strategy for economic development in a way that capitalizes on the university's research strengths and the area's growth opportunities. KBED is an illustration of university innovation management and economic engagement across academic, civic, and private entities.
- [Georgia Research Alliance](#), University System of Georgia: The Georgia Research Alliance (GRA) is an independent nonprofit organization that works in partnership between the University System of Georgia and the Georgia Department of Economic Development. GRA is an example of coordination across partners on shared objectives in innovation and economic development.

Obstacles: What's getting in the way of technology transfer evolving toward the vision?

- Technology transfer offices are frequently understaffed and under-resourced, and separated from units more directly responsible for the teaching and research missions of the university.
- Intra-university tensions are created by commercialization initiatives across other units, separate from technology transfer offices, competing for budget and resources.
- Limited patenting budgets result in the technology transfer office not being able to pursue all commercializable discoveries, frustrating some faculty. Limited budgets also frustrate some industry partners when protections cannot be secured.
- There is a lack of alignment between university and industry expectations related to goals, outcomes, timelines, technology readiness, and other aspects of innovation management.
- There are cultural differences between universities and industry, sometimes exacerbating the lack of alignment.
- Collaboration among institutions is critical for effective ecosystem development, but public universities rely heavily on government funding, and when budget cuts occur universities view each other as rivals rather than collaborators.
- Technology transfer offices are often focused on individual technologies, and a broader landscape and opportunity focus is required to effectively engage the regional ecosystem.
- Universities have not effectively communicated with university stakeholders—including policy makers, business and industry, and the

public—about the purposes and strategies of universities, including about innovation management. As a result, misperceptions and misguided assumptions about university technology transfer drive the public discourse.

- Too often, university leaders view technology transfer as a revenue generation opportunity for the institution, rather than a platform for participation in economic development and advancing regional prosperity.
- In engaging business and industry partners, universities tend to overlook small and medium size enterprises (SMEs) and supply chain as partners or as sources of resources and expertise.

Imperatives: What must universities do to continue the technology transfer evolution?

- Continue or begin to develop broader skill sets in technology transfer office staff, and promote professional development opportunities.
- Focus on relationship-building among partners—both on- and off-campus. Place more emphasis and effort on relationship-building across campus, with the objective of building more capacity and capability for working with industry and government. Support and value collaborative initiatives that are physically located off campus—university innovation does not always have to happen on the university campus.
- In relationship-building, place more emphasis on collaboration with R&D teams, rather than focusing only on company licensing and acquisition groups. Work with industry to co-develop technologies that will end in licensing agreements.
- Engage industry further upstream—before an invention is created—and place more emphasis on collaboration with R&D teams. In doing so, universities work with industry to co-develop technologies that may result in future licensing arrangements.
- Communicate the value of university economic engagement. Clearly articulate the overall university contribution to the innovation ecosystem, and the university's economic impact. Define the university value proposition in specific terms and back it up with examples and data. Ensure the success metrics used in communications tell a more complete story, changing or expanding currently used metrics as necessary.
- Work together with other universities, and with other stakeholders in the regional ecosystem, to engage more effectively in advocacy at the state and national levels.
- Break down silos within and between universities, focusing on critical initiatives, building stronger cases for stakeholder support of university economic engagement.

YOUR INPUT

As the Working Group prepares its final report and recommendations, we'd like to hear from you.

Please take a moment to respond to our [brief survey](#) (10 minutes) to tell us what you think of the examples, obstacles, and imperatives that we have identified (www.bit.ly/TTEfeedback). You may also email feedback to APLU's Office of Economic Development and Community Engagement at oedce@aplu.org.

FURTHER READING

- [Statement to APLU Members: Recommendations on Managing University Intellectual Property](#)
 - [AAU Technology Transfer Working Group Statement on Managing University Technology Transfer in the Public Interest](#)
 - [Technology Transfer for All the Right Reasons](#)
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ACKNOWLEDGEMENTS

The Technology Transfer Evolution Working Group of APLU's Commission on Innovation, Competitiveness, and Economic Prosperity (CICEP) is co-chaired by Julie Nagel, President of KU Innovation & Collaboration and Associate Vice Chancellor for Innovation & Entrepreneurship, University of Kansas, and Paul Roben, Associate Vice Chancellor, Innovation and Commercialization, University of California San Diego.

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A full membership listing for the Technology Transfer Evolution Working Group is available [online](http://www.aplu.org/TechTransferEvolution) (www.aplu.org/TechTransferEvolution).

ABOUT APLU

APLU is a research, policy, and advocacy organization dedicated to strengthening and advancing the work of public universities in the U.S., Canada, and Mexico. With a membership of 237 public research universities, land-grant institutions, state university systems, and affiliated organizations, APLU's agenda is built on the three pillars of increasing degree completion and academic success, advancing scientific research, and expanding engagement. Annually, member campuses enroll 4.9 million undergraduates and 1.3 million graduate students, award 1.2 million degrees, employ 1.2 million faculty and staff, and conduct \$43.9 billion in university-based research.

ABOUT CICEP

APLU's Commission on Innovation, Competitiveness, and Economic Prosperity (CICEP) was created to help leaders of APLU member universities—including presidents and chancellors, senior research officers, provosts, other officers and their staffs—plan, assess, and communicate their institutions' work in local and regional economic development.



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