

# MGMT

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**Leveraging  
co-created knowledge**  
— Perspectives on University-  
Industry Collaboration



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# Leveraging co-created knowledge

— Perspectives on University-Industry Collaboration

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University-Industry Collaboration (UIC) has emerged as a platform for synergistic value creation, combining the complementary resources of academia and industry. Funding programs such as the EU Horizon 2020, the US NSF-IUCRC program and VINNOVA's Strategic Innovation program all have the explicit purpose to incentivize collaborations between academia and industry.

But despite these initiatives, the utilization of outcomes (in the form of knowledge) from UIC is insufficient. Various reports indicate a lack of awareness of the mutual benefits that UIC can offer. Additionally, academia is often criticized for not effectively working on practical problems and industrial actors for not absorbing relevant research. Consequently, organizations may miss out on opportunities for knowledge co-creation necessary to keep up with the changing times. Universities are often portrayed as the primary source of knowledge, overlooking the contributions of industrial organizations in knowledge co-creation processes. This limited perspective hampers the understanding of knowledge sharing processes in UIC. Additionally, firms which are inexperienced UIC may be at a disadvantage when attempting to leverage co-created knowledge

**“The centers facilitate the knowledge sharing by simultaneously encouraging participation and networking of individuals, both within and beyond the center’s boundaries. The background, experience, contacts, and networks of involved individuals play a crucial role in the outreach of knowledge dissemination.”**

from such collaborations. To bridge this gap, a more holistic understanding of knowledge sharing processes in UIC is needed.

This is the starting point for a 5-year research project exploring how to leverage knowledge in UIC, digging into organizational practices for knowledge sharing. This article reports on initial findings, based on studies of three UIC competence centers and their collaboration with a knowledge-intensive Swedish industrial firm.

## Pathways and perspectives

This article explicates organizational practices related to knowledge sharing and how co-created knowledge in UIC can be leveraged, centering on: How can knowledge be effectively leveraged in University-Industry Collaboration? In addressing this question, three perspectives are examined: the ecosystem, the collaboration, and the industrial organization.

The three perspectives are interconnected, as UIC does not take place in a vacuum and in fact involves multiple actors and organizational forms. An intermediary in the form of a competence center is often a critical component in UIC to gather the actors. But the collaboration also exists in a wider, more loosely bounded context of a knowledge ecosystem, incorporating other actors, networks etc., working in the same knowledge domain. Our comprehensive analysis provides insights into processes of leveraging knowledge in UIC, benefitting both academic and industrial stakeholders (see Figure 1).

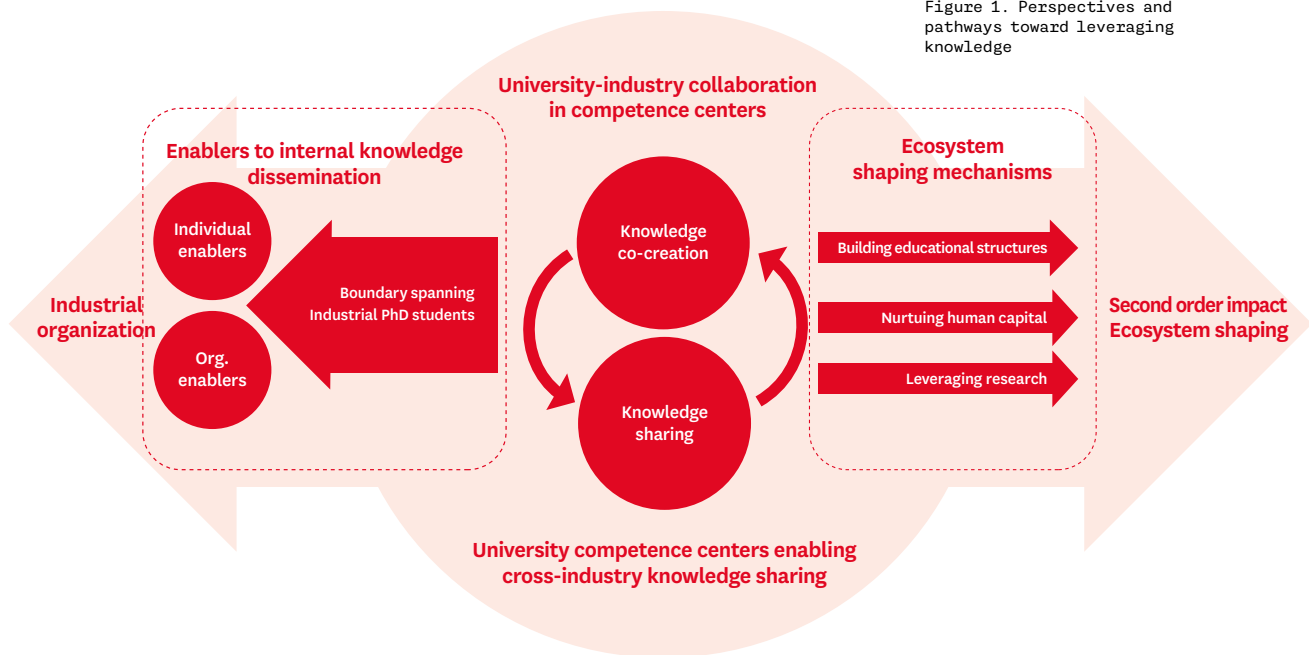
## The Knowledge Ecosystem Perspective

UIC in competence centers contribute to shaping the surrounding knowledge ecosystem through nurturing human capital, building educational structures, and leveraging research. Nurturing human capital emphasizes the importance of individuals in disseminating the co-created knowledge beyond the boundaries of the competence centers.

*“knowledge is best transferred in a pair of shoes”* [research leader]

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Figure 1. Perspectives and pathways toward leveraging knowledge



experience, contacts, and networks of involved individuals play a crucial role in the outreach of knowledge dissemination. Personal relationships and mobility of individuals facilitate knowledge diffusion to different organizations and environments. Additionally, the competence centers contribute to shaping the knowledge ecosystem by building educational structures that offer and shape education and learning opportunities. This includes courses, workshops, seminars, and tailored educational initiatives. Education not only benefits the partner organizations but also influences higher education at universities, bridging industry needs with academic curriculum. The research conducted at the UIC competence centers shapes the surrounding knowledge ecosystem by disseminating research results and facilitating further research within or outside of the center (e.g. spin-offs), also aiming to enhance the diffusion of research results to new application domains. By leveraging research and funding, the centers play a role in influencing industry standards and contributing to regional and international research projects.

### The collaboration perspective

University competence centers serve as intermediaries that facilitate cross-industry knowledge sharing. This perspective highlights organizational practices inside competence centers that enable knowledge sharing between industrial firms from different backgrounds. Additionally, it provides implications for knowledge sharing differentiating between competence centers with or without research activities.

All the studied centers emphasize the importance of creating a fertile environment for knowledge exchange, finding common ground for collaboration, and nurturing long-term relationships.

*“the center is an open and neutral arena where you could try things without being afraid of confidentiality. It might not be in your own domain but can still be beneficial”* [center director]

These centers provide platforms where partners from diverse industrial backgrounds can openly share knowledge, reducing competition-related barriers. Trust is crucial for effective knowledge sharing, allowing for the gradual understanding of each other's challenges and building lasting relationships. However, some differences can be noted between centers with and without research activities. Research-oriented centers have more structured organizations, with academia taking a leading role. Knowledge sharing is meticulously orchestrated through various activities and practices, guided by center management. In contrast, centers without research empower industrial representatives to self-organize and explore areas of mutual interest, promoting informal interactions and allowing for organic knowledge exchange. Overall, the findings reveal that while common enablers drive cross-industry knowledge sharing, the specific strategies employed by competence centers depend on the source of funding and research orientation.

### The industrial organization perspective

This perspective brings insights on enablers of internal knowledge dissemination among industrial PhD students within their respective firms. At an individual level, the development of strong communication skills is vital including adapting the knowledge for various internal audiences, bridging the gap between complex research and practical understanding. Fostering an open mindset and a commitment to continuous learning emerges as essential in knowledge sharing, building on individuals' attitudes and receptiveness. Active networking and participation in organizational events are emphasized as effective means for PhD students to expand their reach and facilitate knowledge dissemination.

On an organizational level, integrating PhD students into daily operations, promoting cross-functional collaboration, and encouraging participation in communities of practice are deemed crucial in leveraging their insights. Building the organizational competence to comprehend and appreciate PhD knowledge

# “Embracing less formal collaborative activities can facilitate initial cross-industry knowledge sharing and complement more formal activities.”

entails providing training, organizing events, and nurturing networking opportunities to enhance the understanding of research outcomes.

*“it is important to build up the relationship to the concept of research”* [graduated PhD student]

The presence of managers with research backgrounds can be a pivotal facilitator in this context. To enhance knowledge sharing, diverse communication channels and contexts beyond traditional presentations are advocated. Moreover, increasing the visibility of PhD students within the company is stressed, urging efforts to showcase their valuable contributions.

## Implications for practice

Based on our initial insights, industrial organizations should consider that middle managers play a vital role in the daily practice of engaging in UIC, e.g. by involving industrial PhD students in the organization. Creating innovative formats for interaction around science-based knowledge and application is also essential for internal knowledge dissemination as well as ensuring sufficient organizational resources e.g., flexibility and slack, are dedicated to UIC-related activities.

For UIC management, encouraging industrial partners' participation in problem formulation can enrich collaboration outcomes. Embracing less formal collaborative activities can facilitate initial cross-industry knowledge sharing and complement more formal activities. Proactive efforts to attract diverse partners and encourage boundary-spanning individuals can stimulate discussions and strengthen the collaboration.

Policy makers need to more clearly recognize the multifaceted contributions of UIC to competitiveness and societal impact in policy development. Taking a holistic approach to shaping knowledge ecosystems, while avoiding fragmentation and silo thinking, can lead to more effective and synergistic initiatives.



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