

**Ministry of Education and Science of Ukraine
Taras Shevchenko National University of Kyiv
Faculty of Information Technology
Department of Information Systems and Technologies**



The 3rd international scientific and practical conference

**«INFORMATION SYSTEMS AND TECHNOLOGY:
RESULTS AND PROSPECTS»
(IST 2026)**



March 10, 2026

39.	ІОТ-СИСТЕМА ЗАБЕЗПЕЧЕННЯ КОМФОРТНИХ УМОВ ПРОЖИВАННЯ ЛЮДЕЙ З ДОДАТКОВИМИ ПОТРЕБАМИ Софія Ушакова, Ольга Кравченко	144
40.	RULE-BASED DIGITAL TWIN ДЛЯ ЗАБЕЗПЕЧЕННЯ НОРМАТИВНОЇ ВІДПОВІДНОСТІ У ВИБУХОНЕБЕЗПЕЧНИХ РОБОТАХ Даніїл Філатов	148
41.	МОДЕЛІ ТА МЕТОДИ ПІДВИЩЕННЯ ЕФЕКТИВНОСТІ МОНІТОРИНГУ СТАНУ ПАЦІЄНТІВ В ІОТ СИСТЕМАХ Юрій Ярошенко, Володимир Дружинін	151
	Section Digital Technology of Project Management	154
	Секція Цифрові технології управління проєктами	154
42.	A MOBILE APPLICATION FOR LEARNING FOREIGN LANGUAGES AS A SOLUTION FOR MICROLEARNING: APPLICATION CONCEPT AND GAMIFICATION TOOLS Viktoriia Bytska, Vadym Ziuziun	155
43.	DIGITAL TRANSFORMATION MODELS OF PROJECT MANAGEMENT SYSTEMS IN DEVELOPMENT COMPANIES Volodymyr Kochuma	159
44.	HYBRID BLOCKCHAIN ARCHITECTURE FOR TRUSTED DOCUMENT AUTHENTICATION: A THEORETICAL FRAMEWORK FOR ENTERPRISE IT SOLUTIONS Assylbek Muratbek, Yenlik Begimbayeva	165
45.	PSYCHOLOGICAL DETERMINANTS OF ADDICTIVE BEHAVIOR IN YOUTH UNDER CONDITIONS OF DIGITALIZATION Vladlen Lisnevsky	168
46.	DEVELOPMENT OF PROJECT RISK SIMULATOR USING THE MONTE CARLO METHOD Viktor Putrenko, Yuriy Oliarnyk, Nataliia Pashynska	172
47.	MODEL OF TECHNOLOGICAL MATURITY OF ARTIFICIAL INTELLIGENCE USE IN BANKING INFORMATION SYSTEMS Kristina Shostal, Vadym Ziuziun	176
48.	BRIDGING THE CULTURAL GAP: THE ROLE OF COMMUNICATION TECHNOLOGIES AND STUDENT BOUNDARY SPANNERS IN UNIVERSITY-INDUSTRY COLLABORATION Andrii Utvenko, Vadym Ziuziun	181
49.	ЦИФРОВІ ІНСТРУМЕНТИ ПІДТРИМКИ УПРАВЛІННЯ ПРОЄКТАМИ В СУЧАСНИХ ОРГАНІЗАЦІЯХ Ольга Бондаренко	184
50.	РОЗРОБКА ПРОЄКТУ СТВОРЕННЯ CRM-СИСТЕМИ ДЛЯ АВТОМАТИЗАЦІЇ ДІЯЛЬНОСТІ МЕРЕЖІ КВІТКОВИХ МАГАЗИНІВ Лілія Гаркушко, Любов Кубявка	187
51.	ІНТЕГРАЦІЯ FIGMA У ПРОЦЕС РОЗРОБКИ ПРОГРАМНОГО ЗАБЕЗПЕЧЕННЯ: ЕТАП ПРОТОТИПУВАННЯ Маргарита Гладка, Ольга Бондаренко	191
52.	КІБЕРБЕЗПЕКА ТА НАДІЙНІСТЬ ЯК ВБУДОВАНІ ПРОЦЕСИ ГІБРИДНОГО УПРАВЛІННЯ ІОТ-ПРОЄКТАМИ В ЕНЕРГОСИСТЕМАХ Дмитро Загородній, Ігор Пархомей	196
53.	АНАЛІТИКА ПОВЕДІНКИ КОРИСТУВАЧІВ У СИСТЕМАХ ВИПАДКОВИХ ВИНАГОРОД: МЕТОДИ ПРОГНОЗУВАННЯ УТРИМАННЯ ТА ВІДТОКУ КОРИСТУВАЧІВ Любов Кубявка, Станіслав Ганчев	200
54.	АВТОМАТИЗОВАНА СЕРІАЛІЗАЦІЯ (Е-АКЦИЗ) З ВИКОРИСТАННЯМ ІОТ-РІШЕНЬ Дмитро Неделько, Володимир Дружинін	203
55.	ВИКОРИСТАННЯ МУЛЬТИМОДАЛЬНИХ ВЕЛИКИХ МОВНИХ МОДЕЛЕЙ ДЛЯ ПРОТОТИПУВАННЯ ІНТЕРФЕЙСІВ КОРИСТУВАЧА Юрій Поліщук, Сергій Грибков	206
56.	МАСШТАБОВАНІ AGILE-ФРЕЙМВОРКИ ЯК ІНСТРУМЕНТ УПРАВЛІННЯ ІТ-ПРОЄКТАМИ В УМОВАХ ВІЙНИ В УКРАЇНІ Олена Фендьо, Микола Пирог	210
	Section Network and Internet Technology	214

BRIDGING THE CULTURAL GAP: THE ROLE OF COMMUNICATION TECHNOLOGIES AND STUDENT BOUNDARY SPANNERS IN UNIVERSITY-INDUSTRY COLLABORATION

Andrii Utvenko, Vadym Ziuziun

Abstract. *This paper explores the critical role of communication technologies in enhancing University-Industry Collaboration (UIC) within the Triple Helix model. While traditional literature emphasizes explicit technology transfer, the relational processes driven by student "boundary spanners" require robust digital communication frameworks. By examining hybrid project management and Connectivist learning theories, this study highlights how digital platforms, shared portals, and unstructured networking tools mitigate cultural gaps. The findings underscore the necessity of advanced communication strategies to transform academic-industry linkages into resilient innovation ecosystems.*

Keywords: University-industry collaboration (UIC), communication technologies, boundary spanners, hybrid project management, digital platforms.

I. INTRODUCTION

In the modern knowledge-based economy, collaborative innovation between societal institutions is an imperative. The Triple Helix model serves as a foundational macro-level framework for understanding these dynamic interactions among universities, industry, and government. However, the key barriers to successful University-Industry Collaboration (UIC) frequently revolve around institutional incompatibility and the divergence of stakeholders' goals.

Historically, the literature has evaluated technology transfer primarily through explicit outputs, such as patents and co-publications, often overlooking the deeply social and relational processes required for successful knowledge exchange. A critical gap in this dynamic is the "cultural gap" between academia and industry, which must be navigated by human capital. Students and early-career researchers act as essential "boundary spanners" and "knowledge vessels" who traverse this cognitive and cultural distance [3].

As collaborative innovation becomes increasingly globalized, the mechanisms of knowledge sharing are rapidly evolving, highlighting an urgent need to systematically investigate the role of communications and advanced communication technologies.

Current studies indicate that digital platforms are frequently underutilized in UICs.

Therefore, this paper aims to analyze how the integration of digital mediums, hybrid project management, and Connectivist approaches can optimize communication pathways, thereby ensuring the adaptive continuity of university-industry interactions [5].

II. DATA AND METHODS

This conceptual paper draws on a systematic review of recent literature regarding micro-level project management and network theories in UICs.

To fully understand the mechanics of knowledge exchange and communication, the study evaluates collaboration through the lens of Connectivism. In this paradigm, learning and knowledge generation are viewed not as isolated processes, but as the capacity to establish, traverse, and leverage interconnected digital and social networks [5].

The methodological framework applies a hybrid project management approach to analyze communication strategies. This involves examining the balance between structured methodologies (formal communication plans) and the flexibility of Agile frameworks (organic networking).

The analysis focuses on how specific digital communication environments alter the geographical and cognitive distance between partners and support the "network competence" of the collaboration [2].

III. RESULTS AND ANALYSIS

The analysis reveals that effective UIC is heavily dependent on the communication capabilities of students acting as strategic "boundary spanners". These actors absorb academic theory and translate it into practical industrial applications, necessitating robust communication channels to transfer both tacit and explicit knowledge [3, 4].

The application of hybrid project management offers a structural solution for aligning divergent expectations. Formal communication planning which involves setting clear objectives, defining responsibilities, and establishing milestones provides a necessary roadmap that mitigates early misunderstandings.

Conversely, organic and agile communication practices fostered through digital tools promote rapid adaptation to new scientific findings and build intercultural awareness [1, 3].

Crucially, the integration of specific communication technologies significantly impacts the ability of boundary spanners to navigate knowledge networks. Technologies such as dedicated "Shared Portals" for integrated project management, digital innovation hubs, and social media tools facilitate continuous idea sharing.

Viewed through a Connectivist lens, these emerging digital platforms deeply alter collaboration dynamics.

A central finding is the evolving nature of trust-building. Collaborative experience creates familiarity and builds the interpersonal trust necessary for long-term adaptive continuity. Researchers must now ask whether digital collaboration environments can complement or even substitute the trust-building processes that have traditionally relied on face-to-face interactions.

Optimizing UICs requires a delicate balance between formal communication plans and informal, "organic" digital networking to mitigate conflicts and enhance overarching network competence [1].

IV. DISCUSSION AND CONCLUSION

This study reconceptualizes the micro-level dynamics of the Triple Helix model by positioning the student boundary spanner at the center of digitally mediated UICs. The findings demonstrate that while formal project management methodologies are critical, the systemic integration of advanced communication technologies is equally vital for bridging the cultural gap between academia and industry.

Digital tools, such as shared portals and innovation hubs, serve as the infrastructure through which Connectivist learning and tacit knowledge transfer occur. By balancing structured communication with unstructured digital networking, organizations can facilitate the adaptive continuity required for long-term success.

However, the conceptual mechanisms proposed including hybrid project management and integrated digital communication frameworks must be empirically tested across a broader range of scientific disciplines, firm sizes, and regional innovation systems. Future research should continue to investigate the intersection of micro-level project management, advanced communication technologies, and the systemic mobility of human capital. Providing actionable insights in these areas is essential to transform fragile university-industry linkages into resilient, self-sustaining ecosystems of open innovation.

REFERENCES

1. Fernandes, G., Tassari, G., Rocha, L., Ferreira, L. M. D. F., Santos, J., Ribeiro, P., Barroso, D., & Bacelar Pinto, E. (2023). Useful Project Management Practices in Collaborative R&D&I Projects. *Procedia Computer Science*, 239, 1062—1069. <https://doi.org/10.1016/j.procs.2024.06.270>
2. Fernandes, G., & O'Sullivan, D. (2023). Project management practices in major university-industry R&D collaboration programs – a case study. *The Journal of Technology Transfer*, 48(1), 361—391. <https://doi.org/10.1007/s10961-021-09915-9>
3. Abu Sa'a, E., & Yström, A. (2025). Shaping knowledge ecosystems through University–industry collaboration: Exploring the ‘second-order’ impact of knowledge sharing. *Industry and Innovation*, 0(0), 1—21. <https://doi.org/10.1080/13662716.2025.2560932>
4. Ziuziun, V. (2026). SUBSTANTIATION OF THE CONCEPT OF COGNITIVE VISCOSITY FOR OPTIMIZING AGILE TEAM MANAGEMENT. *European Open Science Space*, 69—73. <https://doi.org/10.70286/EOSS-19.01.2026.001.69-73>
5. Khan, I. M., Edwards, E., Ianicelli, B. M., Ahmed, W., Hardey, M., & Eremionkhale, G. (2025). University-industry collaboration for academic success and employability: A connectivist perspective. *Studies in Higher Education*, 0(0), 1—21. <https://doi.org/10.1080/03075079.2025.2545606>



ANDRII UTVENKO

PhD student, Department of Management Technologies, Taras Shevchenko National University, Kyiv, Ukraine

ORCID: 0009-0006-1900-6420

E-mail: andrii.utvenko@knu.ua

Received the B.S. degree in Applied Physics in 2014, the M.S. degree in Applied Economics in 2016, and the M.S. degree in Project Management in 2018, all from Taras Shevchenko National University (Kyiv, Ukraine). Research interests include communication and communicative technologies in project management, as well as the application of artificial intelligence in project management.



VADYM ZIUZIUN

Associate Professor of the Department of Management Technologies, Taras Shevchenko National University, Kyiv, Ukraine

ORCID: 0000-0001-6566-8798

E-mail: vadym.ziuziun@knu.ua

Since 2022, he has been working as an associate professor at the Department of Management Technologies at Taras Shevchenko National University of Kyiv. The experience of scientific and pedagogical activity is 14 years. Research interests: project management, risk management, information technology, transport technologies, ecology and environmental protection technologies, management.