INTERDISCIPLINARY RESEARCH ASSESSMENT AND PERFORMANCE INDICATORS

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1. STRATEGIC VISION: TRANSITION TO THE "TRIPLE HELIX" MODEL

2025 is a critical turning point for NDU in transforming academic resources into high value-added economic assets. The university's development trajectory justifies the transition from the traditional education model to the "Triple Helix" model (University-Industry-Government). In this context, the NDU Innovation Center serves as a central node that eliminates the "Death Valleys" in the commercialization process of scientific research.

2. RESEARCH QUALITY AND SCIENTIFIC INDICATORS

The scientific productivity of the university has shown a sharp increase in recent years:

- Dynamic Software: From 2020 to today, 120 articles and 561 citations are registered on the Scopus database. The increase in the number of articles to 48 in 2024 (~150% increase compared to previous years) shows a leap in scientific activity.

- Artificial Intelligence Integration: The "Scopus AI" tool, implemented since February 2025, accelerates the research and development (R&D) cycle and ensures early identification of global scientific trends.

- Scientific Popularity: The participation of more than 200 AI employees and students proves that a modern research culture has been formed at the university.

3. INDUSTRY LINKS AND INTELLECTUAL PROPERTY

NDU's strongest differentiator is its multimodal intellectual property (IP) portfolio:

- International Patent Performance: Shahla Guliyeva's Eurasian Patent (stress resistance method
- DBZ2 protein) is the university's highest commercial potential asset.

-Interdisciplinary Inventions: Taleh Khalilov's (automated monitoring platform), Ikhtiyar Seyidov's (stringed musical instrument), and Siddiga Hajiyeva's (wooden trunk board) patents are innovations emerging at the intersection of different scientific fields.

- Industrial Design: The works of Javid Ismayilov (piano and lamppost design) and other authors are the university's main competitive tool in cooperation negotiations with industry.

4. RESEARCH ENVIRONMENT AND GRANT RESOURCES

The grant portfolio for 2025 reflects the financial sustainability and interdisciplinary synergy of the university:

- Geocataclysm Forecasting: This project, implemented jointly with AzTU, serves regional security with a budget of 254,026.11 AZN.

- Virtual STEAM laboratories: Provides digital transformation of education with a budget of 244,788.94 AZN.

- Agriculture and Medicine: The Agricultural Products Transformation Project (222,000.00 AZN) is important research in the field of food security.

5. INTERNATIONALIZATION AND GENDER EQUALITY

The university proves its international environment with figures:

- Foreign Student Quota: A total of 1,589 foreign students study at the bachelor's level, which indicates that the university is a regional educational center.

- Academic Staff: 52 foreign teachers work at the university.

- Gender Balance: Out of a total of 401 teachers, 209 are women (52%). This indicator provides one of the highest scores in the ranking on the equal opportunities criterion.

- Global Networking: The participation of 71 institutions, 11 of which are foreign, at the October 2025 conference confirms the scale of international scientific transfer.

6. OUTCOME AND FUTURE PRIORITIES

NDU has successfully completed the transition from "knowledge production to knowledge transfer" in 2025. The following priorities have been identified to take a higher position in the ranking:

1. Patent Commercialization: Launching licensing mechanisms for Eurasian patents and technological platforms.

2. AI Standardization: Integrating the application of artificial intelligence in R&D processes in all faculties into a single system.

3. Global Grants: Increasing the number of applications to international funds such as "Horizon Europe."