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ARCHITECT OF A COMPETITIVE SCIENTIFIC PROJECT AND EXPERT CRITERIA FOR THE VALUE OF THE RESULT

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Introduction. In the modern scientific environment, competitive research projects are becoming the main mechanism for resource allocation. Effective project architecture determines not only the implementation of methodological tasks, but also the ability of the results to withstand expert assessment and ensure implementation.

The purpose of this article is to formulate a structural model of the architecture of a competitive scientific project and identify expert criteria that determine the value of the results obtained.

Research materials. A review of the literature shows that there are several approaches to building the architecture of scientific projects: from traditional management structures to flexible modular models that integrate research, administrative, and transfer components. Key topics covered in the sources: methods for assessing scientific quality, innovation, practical significance, and multidisciplinary nature.

Studies [1–4] emphasize the importance of integrating research planning with risk management, budgeting, and stakeholder communication strategies. Other studies [5–7] propose methods for normalizing expert assessments through weighting and multi-criteria analysis.



Fig. 1 Competitive architecture model

For example: a project architecture focused on technology transfer includes additional blocks for commercialization and patent support. In comparison,

fundamental projects focus on data openness and publication output; accordingly, expert criteria emphasize scientific novelty and methodological rigor.

The methodology used in the article is generalized and includes: literature analysis, development of a conceptual architecture, formation of a set of criterion indicators and modeling of their values using the example of a hypothetical sample of projects.

Below are examples of applying expert criteria to a hypothetical sample of projects and illustrating success trends.

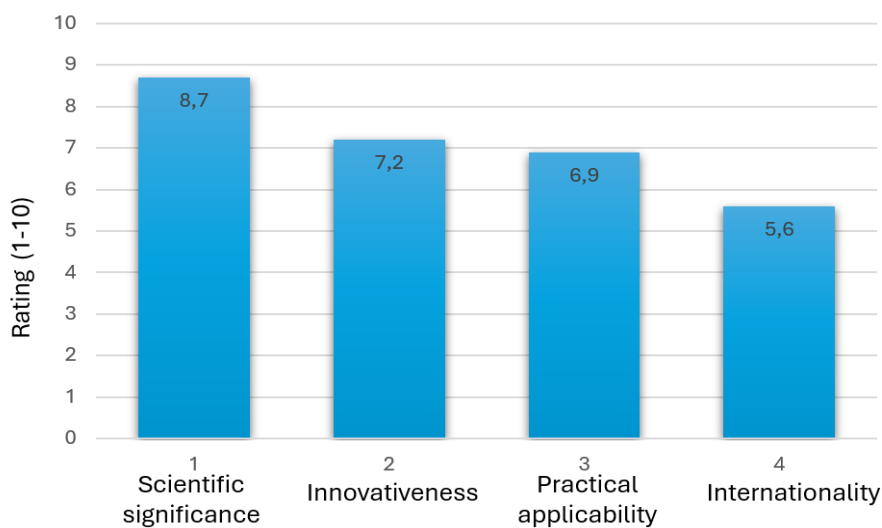


Fig. 2. **Diagram of significance levels for applying expert criteria to a hypothetical sample of projects**

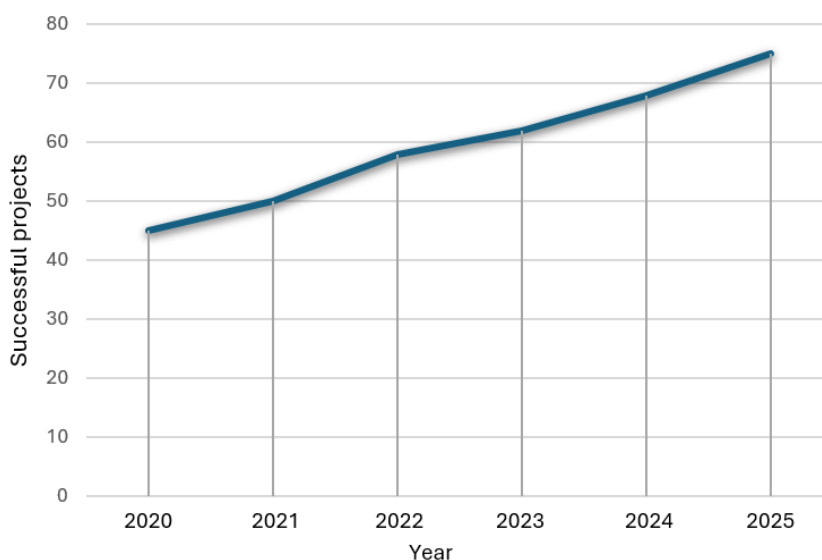


Fig. 3 **Trend in the success of competitive scientific projects**



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Table 7

Sample statistics

Indicator	Average value	Standard deviation
Participants	5	1,2
Average financing (thousand UAH)	1200	300,0
Time (months)	24	6,0
Publications	3	1,1

The analysis showed that an effective architecture should combine: clear definition of goals, adaptive methodology, risk management mechanisms and knowledge transfer channels. Expert criteria should be transparent, measurable and combine both quantitative and qualitative indicators. It is advisable to align the weighting of criteria with the strategic goals of the financial competition and interested stakeholders.

Conclusions. The architecture of a competitive scientific project should consist of modules: initiation, research, implementation, and risk management.

It is recommended to use a multi-criteria approach to assessing the value of the result with weighting of indicators: scientific significance (30%), innovation (25%), practical applicability (20%), team potential (15%), internationality (10%). To increase the objectivity of expert assessments, standardized questionnaires, expert calibration procedures, and statistical analysis of consistency (e.g., Kappa coefficient or Cronbach's α) should be implemented.

For transfer-oriented projects, additional criteria are important: patent purity, marketability, and commercialization strategy. Practical implementation of the architecture requires integration with project management information systems and data storage.

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