Kompetentnost' / Competency (Russia) 5/2025
ISSN 1993-8780. DOI: 10.24412/1993-8780-2025-5-50-54

System for Supporting Decision-Making Readiness for Opening Experimental Design Work

V.L. Lyaskovskiy[1], FSBI 46 Central Research Institute of the Ministry of Defense of the Russian Federation (FSBI 46 CRI of MOD of RF) , Prof. Dr. (Tech.), dop_big@mail.ru
A.Yu. Pronin[2], FSBI Russian Academy of Rocket and Artillery Sciences, Assoc. Prof. PhD (Tech.), Corresponding Member, pronin46@bk.ru
G.Yu. Pershikov[3], FSBI 46 CRI of MOD of RF, gggppptkd@mail.ru

[1] Leading Researcher, Moscow, Russia
[2] Associate Professor of Department, Moscow, Russia
[3] Researcher, Moscow, Russia

Citation: Lyaskovskiy V.L., Pronin A.Yu., Pershikov G.Yu. System for Supporting Decision-Making Readiness for Opening Experimental Design Work, *Kompetentnost' / Competency (Russia)*, 2025, no. 5, pp. 50–54. DOI: 10.24412/1993-8780-2025-5-50-54

key words

complex piece of equipment, assessment methodology, technology readiness level, scientific and technical groundwork, mathematical support

Increase in the degree of technological risks associated with the technologies planned for use leads to the increase in the cost and delay of development work. In this regard, at the initial stages of development of complex samples of technology, it is necessary to conduct a timely assessment of the readiness of the scientific and technological backlog. The subject of this study is the mathematical support of the decision support system for assessing the readiness to open development work. The result of the conducted research is the architecture of mathematical support of the decision support system for automation of the process of assessment of readiness of the development work on the development of a complex piece of equipment, taking into account the identified shortcomings of foreign software tools, and based on assessments of design, production readiness and readiness of the testing base.

References

1. Stukalin S.V., Khovanov D.G., Pershikov G.Yu., *Vooruzhenie i ekonomika*, 2024, no. 3(69), pp. 39–46.
2. Cobos M. P., Quezada V. F., Morloy L. I. Z., etc. A model based on the Technology Readiness Level (TRL) scale to measure the maturity level of research projects that can become spinoffs in higher education institution, Congreso Internacional de Innovation y Tendencias en Ingenieria, 2021.
3. Boburg L., Mazariegos C. Utilizing the Technology Readiness Level (TRL) scale for measuring social impact of startups, In Science-Policy Brief for the Multistakeholder Forum on Science, Technology and Innovation for the SDGs, 2022.
4. Technology Readiness Assessment Guide: Best Practices for Evaluating the Readiness of Technology for Use in Acquisition Programs and Project, US Government Accountability Office, 2020.
5. Hirshorn S., Sharon J. Final Report of the NASA Technology Readiness Assessment (TRA) Study Team, NASA, 2016, 63 P.
6. DAU Tools, 2022; https://www.dau.edu/cop/stm/lists/tools/allitems.aspx (acc.: 15.01.2025).
7. Granich V.Yu., Dutov A.V., Miroshkin V.L., Sypalo K.I., *Ekonomika nauki*, 2020, vol. 6, no. 1–2, pp. 6–10.
8. Dmitrenko I.P., *Aktual'nye problemy gumanitarnykh i estestvennykh nauk*, 2017, no.1-1, pp. 64–66.
9. Xavier Jr. A., etc., *Journal of Aerospace Technology and Management*, 2020, vol. 12.
10. Bukharin S.N., Gukasov V.M., Lazarenko N.E., *Innovatika i ekspertiza*, 2011, no. 2(7), pp. 58–66.