

“Grand Challenges”: Essence and Basic Directions of Analytical Research.

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- **Abstract:** The subject of the study is the concept of “Grand Challenges”. Grand Challenges, as a combination of theoretical, methodological, organizational and methodical, and applied problems aimed at solving complex and large-scale scientific problems in conditions of limited resources, began to be studied in the early 90s of the last century. The increased attention to this concept is caused by the fact that Grand Challenges, creating risks for the development of society and the economy, are an important factor for the emergence of new opportunities and prospects for scientific and technological development. The aim of the study was to systematize, classify the studied concept for purposeful management in conditions of limited resources by a set of external and internal factors that form Grand Challenges. The methodological basis of the scientific study was general scientific principles and research methods: analysis and synthesis, groupings and comparisons, abstracting, analogy, modeling. Based on the available signs, the concept of “Grand Challenges”, the main signs that the Grand Challenge should meet, has been clarified. The directions of further research on the quantitative assessment of the factors determining Grand Challenges have been shown. The formulated areas of the study will allow developing a system for managing Grand Challenges.
- **Keywords:** Grand Challenges, technological development, new opportunities