Official Critique to the TRIZ Master Thesis:

"Features of TRIZ applications for solving organizational and management problems: schematization of an inventive situation and working with models of contradictions"

by Anton Kozhemyako

Overview

The dissertation consists of 2 sections. The first section is devoted to schematization which is applied at the stage of analyzing an inventive situation in the process of solving organizational and management problems. The second section is devoted to the choice of the operational zone and resource allocation of the operational zone for resolving organizational contradictions. The dissertation contains case studies explaining application of these tools and provides recommendations when these tools can be applied.

Significance

There is a significant interest to apply TRIZ tools, originally developed to solve problems of improving technical systems, to solving organizational and managerial problems. Indeed, there is a notion that recommendations for reformulating and solving technical problems in the engineering systems are defined in such a way that their application to organizational problems can be useful. For example, coordination, evolution, completeness of system, and any elements of system analysis. This is a natural assumption considering that one can argue that some of the tools were originated in the business analysis and were adopted by TRIZ community for engineering analysis. Examples would include S-curve analysis, which usually describe company's lifecycles in terms of revenue or cash flow, structural analysis of the industry, SWAT analysis, etc. Therefore, the task of combining system analysis and TRIZ solving tools for solving business problems is significant.

Analytical instruments developed to transition weakly defined business problem in to the set of specific technical requirements and contradictions became standard elements of the technical consulting practices. The similar structural approach would be beneficial in the analysis of business organization.

In addition, when trying to apply the most powerful TRIZ concept of contradiction to business situation there is a need for guiding principles to define contradictory requirements, operational zone and time, as well as available resources. It is more difficult in the relatively abstract and qualitative organizational situation than in the course of analysis of the engineering system. The set of such guiding principles would be very beneficial for practical application of TRIZ tools in the solving of organizational contradictions.

Scientific Novelty

In general, the work contains elements of novelty, since it considers principles of practical application of tools developed by the author to the new set of organizational problems which loosely defined in the beginning.

However, the enthusiasm is diminished since there is a plurality of tools and methodologies developed for analysis of business situation in the management consulting. Some of them were borrowed by the TRIZ methodologists and adapted for solving technical problems. The question would be why not to take a step back and to apply those original tools to the business situation in a way that would lead to better definition of possible organizational contradictions. Such combination of known business analysis tools and suggested TRIZ analytical instruments could derive a truly universal project roadmap.
The particular novelty lays in the author's definition of layers and places for the elements of the organizational system and their use in the schematization methodology. Schematization was enhanced by connection with MPVs for various stakeholders. Also novel is a broader definition of the operational zone including a tool, a product, and their environment as a part of the operational zone. This way all components of the operational zone can be later explored to extract specific resources for further problem solving.

Approach

Author presented the thorough analysis of existing methods and developments in the modern TRIZ practice. The description of the developed tools contains necessary details for their practical application. The recommendations are supported by the real-life case studies. These case studies significantly contribute to the credibility of the work and bring it to the standards of research in the area of business analysis.
The approach would benefit from review of methods of the modern organizational strategy particularly in the view of some of the presented examples. The potential sources might include Michael Porter's Competitive Strategy or corresponding publications from Harvard Business Essentials. The reviewer's specific request would be to compile and present the typical roadmap of the analytical project, where developed tools would be allocated to the corresponding stages of the analysis.

Conclusions

In conclusion, the presented work of Anton Kozhemyako demonstrates the sufficient level of candidate's qualification, is based on the significant amount of theoretical research and practical implementation, satisfies main requirements for MATRIZ TRIZ Master and is recommended for certification.

Sincerely,

Ilya Ilyin, PhD, MBA, Level 4 TRIZ certification
Official Opponent
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