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REVERSE ENGINEERING STRATEGIES IN THE CONTEXT OF DIGITAL TRANSFORMATION OF THE ECONOMY

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Abstract. Reverse engineering is usually perceived as the existing technologies copying in order to reproduce them. However, the reverse engineering results can increase the resource efficiency level and also create opportunities for the new business models emergence and can be used in the Industry 4.0 technologies. The purpose of this article is to analyze how reverse engineering fits into the digital transformation of the economy paradigm. Thus, the article provides the areas in which reverse engineering based on 3D scanning allows additive manufacturing, augmented and virtual reality, and simulation. In addition, the author demonstrates how rapid prototyping in some areas of knowledge (for example, medicine, art, jewelry) increases the work flexibility, which allows implementing a customization strategy. The result of the study is to systematize the application areas for reverse engineering results and highlight the three main strategies for its use: copying strategies in the general sense, and its particular manifestations; the reverse engineering usage as an integral element of the 3D modeling process; customization through reverse engineering.

Keywords: reverse engineering; industry 4.0 technologies; simulation strategy; customization strategy; 3D modeling practical use.

JEL codes: O14; O31.

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