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## **ENTERPRISE ARCHITECTURE AS A TOOL FOR SUSTAINABLE BUSINESS MODELS ENGINEERING**

*Abstract: the business model is a mandatory part of any firm's business plan, regardless of its size, profit level, or other characteristics. Based on it it's possible to reveal problem areas of the business and direct the efforts to fix them. However, using only this model does not allow observing a business in detail, so it is important to be able to apply other methods. In the course of the work, it is planned to show the effectiveness of applying the methods of architectural approach to business improvement, especially in the field of sustainability.*

*Keywords: Industry 4, enabling technologies, sustainable development, architectural approach.*

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## **АРХИТЕКТУРА ПРЕДПРИЯТИЯ КАК ИНСТРУМЕНТ РАЗРАБОТКИ УСТОЙЧИВЫХ БИЗНЕС-МОДЕЛЕЙ**

*Аннотация: бизнес-модель – обязательная часть бизнес-плана любой фирмы, независимо от ее размера, уровня прибыли и других характеристик. На ее основе можно выявить проблемные зоны бизнеса и направить усилия на их устранение. Однако использование только этой модели не позволяет детально изучить бизнес, поэтому важно уметь применять и другие методы. В ходе ра-*

боты планируется показать эффективность применения методов архитектурного подхода к улучшению бизнеса, особенно в области устойчивого развития.

**Ключевые слова:** *Индустрия 4, вспомогательные технологии, устойчивое развитие, архитектурный подход.*

### *1. Introduction.*

In today's reality, it is important to respond quickly to constant changes in market conditions to not be among the laggards and not lose competitiveness. To ensure the effective functioning of the enterprise, it is necessary to review the business model regularly and transform it to meet existing realities. However, analyzing the business model without applying any business analysis techniques will not bring decent results, and therefore the task of the author is to show how using two existing methods (the architectural approach) it is possible to analyze the business effectively and make rational suggestions for improvement.

### *2. Architectural approach and sustainability.*

The enterprise architecture, for example, allows directing all attention to solving specific problems: the needs and requests of a particular user are in the centre, and then it is possible to look for intersections between the subjective opinions of each of the parties and output the result. This allows for finding compromises and coming up with an absolutely correct solution for everyone.

The architecture of the organization is presented in the form of the following layers:

- corporate mission and strategy, strategic goals and objectives;
- business architecture;
- system architecture.

Each of the layers illustrates a specific part of the business structure. The first point defines the main directions of the organization's development and helps to set long-term goals and objectives. The layer of business architecture based on the above allows you to determine the necessary business processes, information and material flows, as well as the organizational and staff structure supporting them. And finally,

the system architecture includes application architecture, data architecture and technical architecture, thereby allowing to provide information support for the organization's activities.

All of this together is a powerful change management tool. The purpose of this paper is to show the effectiveness of the architectural approach in practice and to create a target sustainable business model for the enterprise [1–2]. Main tasks are:

- to create the current business model of the enterprise;
- to analyze business problem areas through an architectural framework [5];
- to put forward suggestions for transfer the business to a sustainable one;
- to create a target business model for the company.

A business model is a conceptual tool for business system research that reflects a sustainable business logic. It characterizes the main elements of the business, their relationships and the system of connections between the object and the external environment, which allows for creating a simplified holistic view of the business and reflecting on its most significant characteristics: what and how value is created for the consumer, to whom and how it is delivered, how resources and opportunities are used to create a sustainable competitive advantage, revenue and profit generation.

Enterprise architecture (EA) is the fundamental organization of a government agency or a corporation, either as a whole, or together with partners, suppliers and/or customers («extended enterprise»), or in part (e.g. a division, a department, etc.) as well as the principles governing its design and evolution [5].

### 3. *Conclusions.*

In the course of the work, a clear structure is built that allows taking into account the implementation of the goal and main tasks. Firstly, two ways of analyzing business (design thinking and architectural approach) are studied by reviewing the literature. Moreover, real examples of their application and real cases are studied as reference instances. In the practical part, the goal of the work is achieved: the target business model is formed after a multi-stage analysis. In the future, it is planned to implement all changes in the business and observe what positive effect this brings to the existing enterprise in the long term, as well as consider how significant the costs are.

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