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**MANAGING INNOVATIVE BUSINESS PROCESSES OF RURAL
AGRICULTURAL COMPANIES**

The article seeks to provide a robust framework to ensure effective management of innovative business processes at agricultural companies in rural areas. Based on different conceptual interpretations of the "innovation" and "business processes" terms, this study suggests to consider the innovative business processes as a goal-oriented set of operations (activities) performed sequentially or simultaneously (transforming inputs into outputs) that shapes a desired ultimate result with a focus to its application and R&D commercialization. Presenting innovation-based activities of rural agricultural companies in a business process format will facilitate their better adaptability to rapidly changing external environment, enable to assess the effectiveness of individual innovations as well as to detect the bottlenecks and errors and eliminate or mitigate them at the initial stage of innovation development. From the perspective of a process-based approach, the proposed model of managing innovative business processes of agricultural enterprises in rural areas provides an opportunity to: 1) benefit from effective use of innovative technology to achieve strategic goals of rural agricultural enterprises; 2) harmonize stakeholder interests of all rural agribusinesses and accumulate resources for their implementation) to provide rationale for agribusiness activities in rural areas in terms of ensuring their competitiveness; 4) to boost the profitability of rural agribusinesses and generate unused resources. The identification of such common elements contributes to better understanding of the logic of a systemic framework to manage innovative technology process based on business process compositional modeling. The findings demonstrate that step-by-step algorithm based on the proposed model will enable to carry out a sound assessment of the innovation potential of agricultural companies, build their sustainable competitive advantages along with contributing to creating a favourable environment to implement innovative development strategy in the agriculture industry and promote the application of technological innovations in manufacturing and management.

Keywords: *innovative development; business processes; agribusinesses; rural areas.*

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**УПРАВЛІННЯ ІННОВАЦІЙНИМИ БІЗНЕС-ПРОЦЕСАМИ АГРАРНИХ
ПІДПРИЄМСТВ СІЛЬСЬКИХ РЕГІОНІВ**

Статтю присвячено обґрунтуванню процесу управління інноваційними бізнес-процесами аграрних підприємств сільських регіонів. На основі дослідження сутності понять «інновація» та «бізнес-процеси» інноваційні бізнес-процеси запропоновано розглядати як цілеспрямовану систему операцій (робіт), послідовне або паралельне виконання яких (з перетворенням входів на виходи) формує бажаний кінцевий результат, спрямований на використання і комерціалізацію результатів наукових досліджень і розробок. Представлення інноваційної діяльності аграрних підприємств сільських регіонів у вигляді бізнес-процесів забезпечує адаптивність до швидкозмінних зовнішніх умов, дає можливість аналізувати ефективність окремих нововведень, здійснювати пошук «слабких місць», помилок і нейтралізувати їх ще на етапі розробки інновацій. Запропонована модель управління інноваційними бізнес-процесами аграрних підприємств сільських регіонів, із позиції процесного підходу, надає можливість: 1) ефективно використовувати інноваційні технології для досягнення стратегічних цілей аграрних підприємств сільських регіонів;

2) об'єднати всі інтереси аграрних підприємств сільських регіонів та акумулювати ресурси для їх реалізації; 3) обґрунтувати діяльність аграрних підприємств сільських регіонів у контексті забезпечення їх конкурентоспроможності; 4) значно підвищити прибуток аграрних підприємств сільських регіонів та зосередити незадіяні ресурси. Виділення таких типових елементів розкриває логіку системного уявлення організації процесу управління інноваційними технологіями на основі моделювання композиційних бізнес-процесів. Передбачено, що покрокові дії відповідно до запропонованої моделі дозволять адекватно оцінити інноваційний потенціал аграрних підприємств, сформувати стійкі конкурентні переваги, а також створити усі умови, необхідні для реалізації стратегії інноваційного розвитку аграрних підприємств та впровадження інноваційних технологій у виробництві та управлінні.

Ключові слова: інноваційний розвиток; бізнес-процеси; аграрні підприємства; сільські регіони.

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УПРАВЛЕНИЕ ИННОВАЦИОННЫМИ БИЗНЕС-ПРОЦЕССАМИ
АГРАРНЫХ ПРЕДПРИЯТИЙ СЕЛЬСКИХ РЕГИОНОВ**

Статья посвящена обоснованию процесса управления инновационными бизнес-процессами аграрных предприятий сельских регионов. На основе исследования сущности понятий «инновация» и «бизнес-процессы» инновационные бизнес-процессы предложено рассматривать как целенаправленную систему операций (работ), последовательное или параллельное выполнение которых (с преобразованием входов в выходы) формирует желаемый конечный результат, направленный на использование и коммерциализацию результатов научных исследований и разработок. Представление инновационной деятельности аграрных предприятий сельских регионов в виде бизнес-процессов обеспечивает адаптивность к быстро меняющимся внешним условиям, даёт возможность анализировать эффективность отдельных нововведений, осуществлять поиск «слабых мест», ошибок и нейтрализовать их ещё на этапе разработки инноваций. Предложенная модель управления инновационными бизнес-процессами аграрных предприятий сельских регионов, с позиции процессного подхода, позволяет: 1) эффективно использовать инновационные технологии для достижения стратегических целей аграрных предприятий сельских регионов; 2) объединить интересы аграрных предприятий сельских регионов и аккумулировать ресурсы для их реализации; 3) обосновать деятельность аграрных предприятий сельских регионов с точки зрения обеспечения их конкурентоспособности; 4) значительно повысить прибыль аграрных предприятий сельских регионов и сосредоточить незадействованные ресурсы. Выделение таких типичных элементов раскрывает логику системного представления организации процесса управления инновационными технологиями на основе моделирования композиционных бизнес-процессов. Предусмотрено, что пошаговые действия в соответствии с предложенной моделью позволят адекватно оценить инновационный потенциал аграрных предприятий, сформировать устойчивые конкурентные преимущества, а также создать все условия, необходимые для реализации стратегии инновационного развития аграрных предприятий и внедрения инновационных технологий в производстве и управлении.

Ключевые слова: инновационное развитие; бизнес-процессы; аграрные предприятия; сельские регионы.

Formulation of the problem. The agricultural sector of the economy provides almost 50% of the consumption fund, occupies a leading position in the commodity structure of exports and plays a huge role in society. Agriculture, namely its industries such as crop production and animal husbandry, produce the vast majority of food and raw materials for many industries. Therefore, the economic development of society couldn't be imagined without a high organization of agricultural production.

Business processes of agriculture in the XXI century cannot be characterized without the use of automation, informatization and optimization of production business processes. Constant introduction of innovations into the industry allows to significantly increase not only production capacity, but also sales volumes. In turn, this seriously affects the profit that the company receives.

Literature review. Scientists who study the problems of business process management in the enterprise [1–5; 7–10] agree that the main classification is as follows: basic business processes, ancillary business processes and business development processes. In the context of digitalization, there is a need to classify business processes, including in agricultural activities. In theory and practice, various approaches to the classification of business processes have been developed, where they can be divided into several processes that have their own attributes and are aimed at achieving the goal of the main business process.

The aim of the study is to substantiate the process of managing innovative business processes of agricultural enterprises in rural areas.

Results of the research. The concept of "business process" is ambiguous, and at the present stage there is no universal definition. Let's turn to the essential understanding of the business process and give some definitions. A business process is a collection of interconnected and interacting activities that transforms "inputs" into "outputs." A business process is a set of internal steps (types) of activity that begin with one or more "inputs" and end with the creation of a product needed by the customer [5].

"Inputs" and "outputs" of the process can interact with a particular client, and with a certain other process in the external environment of agricultural enterprises, but not with another internal process.

The "input" of a business process is a resource needed to perform a business process. The "output" of the business process is the result (product, service) of the business process.

Resources – information, finance, materials, staff, equipment, infrastructure, environment, software needed to implement the business process.

The purpose of each business process is to offer the customer a product or service that satisfies him in all attributes. It should be noted that the term "client" should be understood in a broad sense. This can be either a real customer or a process that takes place in the external environment of agricultural enterprises [10].

According to the Law of Ukraine "On Innovation", innovation is an activity aimed at using and commercializing the results of research and development and causes the release on the market of new competitive goods and services [6]. To define the concept of "innovative business processes", it should be borne in mind that in addition to research and development during innovation activities are implemented technical, commercial and financial actions necessary for the production of new or improved products or services and commercial use of new or improved processes [1].

Thus, based on the above, we can conclude that innovative business processes are a purposeful group of operations (works), sequential or parallel execution of which (with the conversion of inputs to outputs) provides the desired end result, which ensures the use and commercialization of research results and development.

Representation of innovation activities of agricultural enterprises in rural areas in the form of business processes provides adaptability to rapidly changing external conditions, allows to

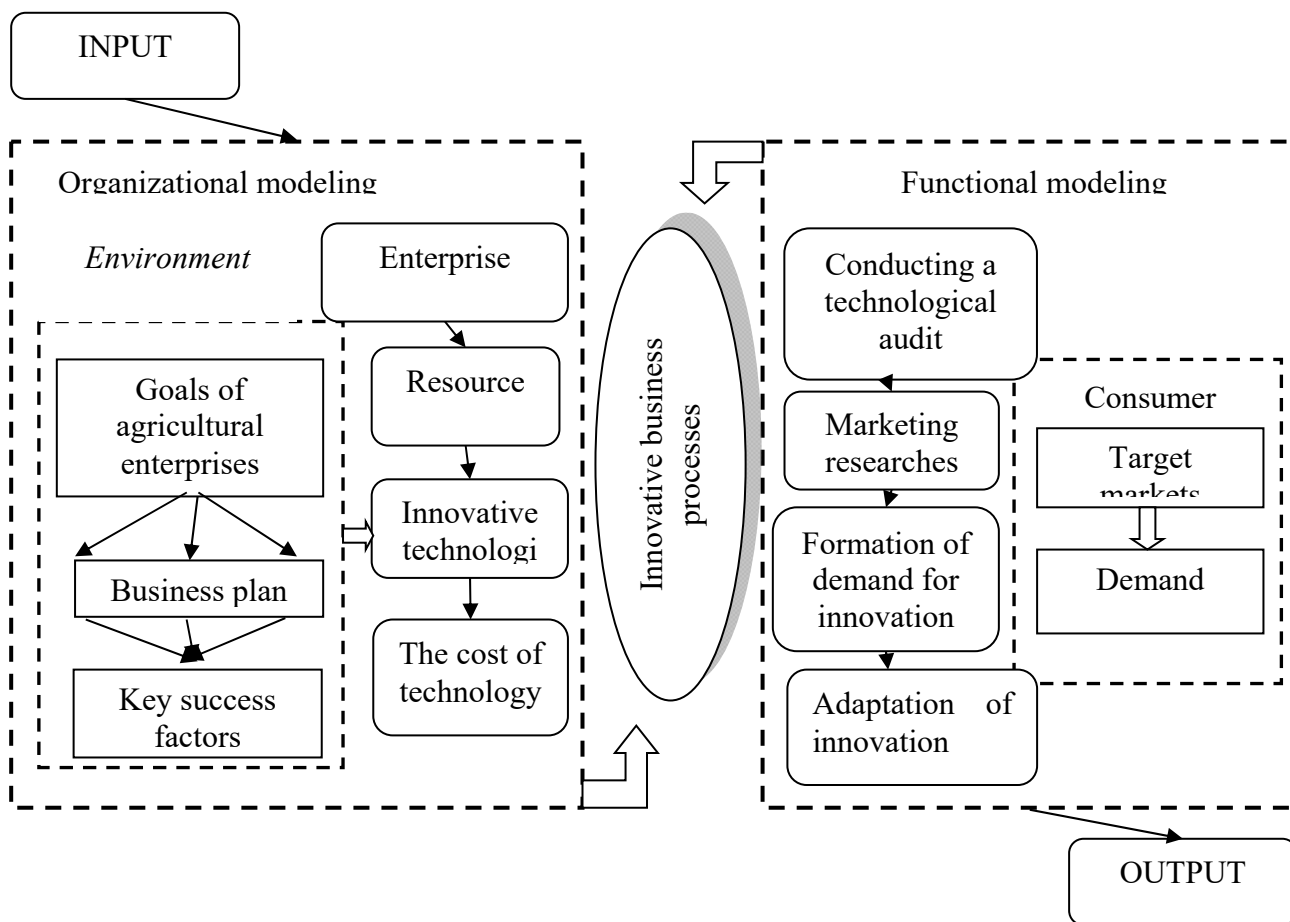
analyze the effectiveness of individual innovations, search for "weaknesses", errors and neutralize them at the stage of innovation development.

According to the above definitions, the process of managing innovative business processes of agricultural enterprises in rural areas can be considered as a model of creating an innovative proposal for employees, partners, on the one hand, and the consumer – on the other, focused on enterprise capabilities and consumer demand.

The concept of managing innovative business processes has the following advantages:

- provides an opportunity to effectively use innovative technologies to achieve the strategic goals of agricultural enterprises in rural areas;
- unites all the interests of agricultural enterprises in rural areas and accumulates resources for their implementation;
- substantiates the activities of agricultural enterprises in rural areas in terms of ensuring their competitiveness;
- significantly increases the profits of agricultural enterprises in rural areas and accumulates unused resources.

The key components of the model of management of innovative business processes of agricultural enterprises in rural areas from the standpoint of the process approach are presented in Fig. 1.



Source: author's development.

Fig. 1. Model of management of innovative business processes of agricultural enterprises in rural areas from the standpoint of the process approach

For agricultural enterprises resources are: land, equipment, information, personnel, transport, software, working and productive livestock, etc. The result is a ready-made innovative product, service, information, new consumer value.

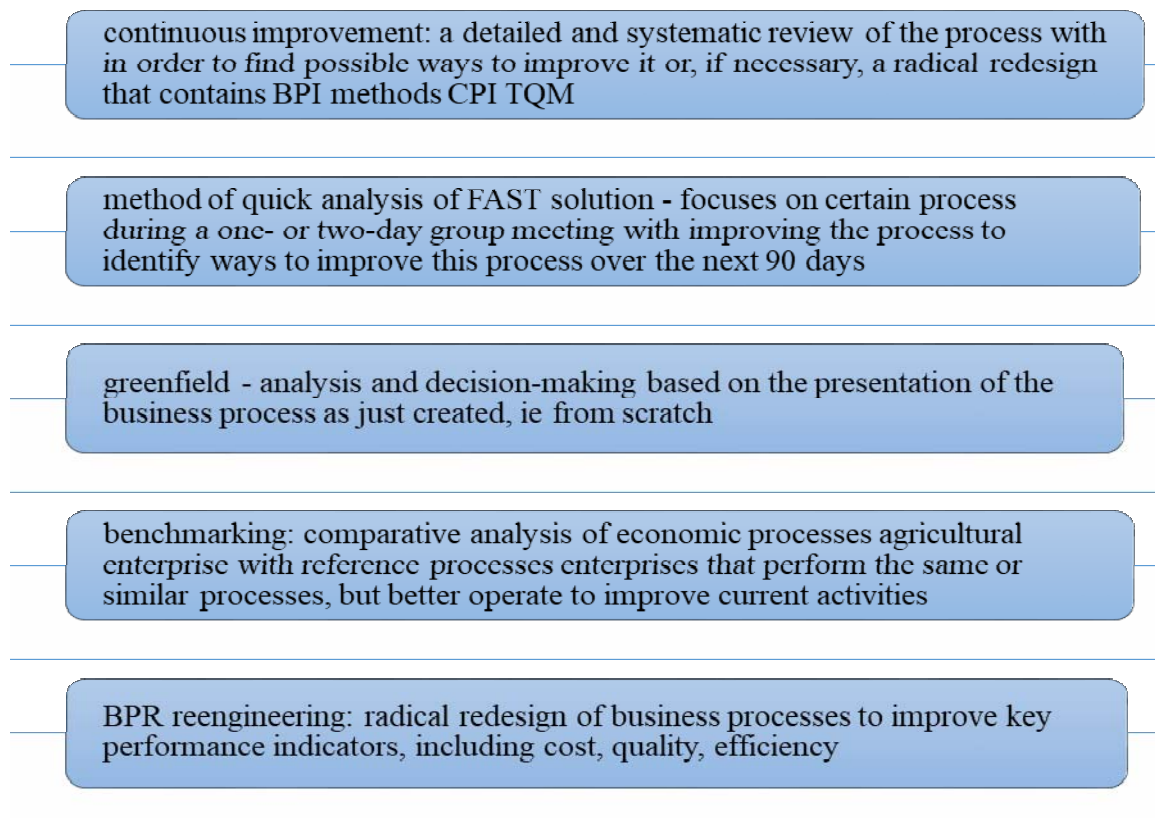
The effectiveness of management of innovative business processes in agricultural enterprises directly depends on the quality and completeness of information used in the implementation of business process management system. The more factors the management system chosen (developed) by the enterprise takes into account, the faster, more accurate and adequate the management will react to the change of the internal and external environment of the enterprise.

Innovative business processes involve the introduction of innovative communication management technologies; introduction of resource-saving, knowledge-intensive technologies; modernization of technological lines, equipment, buildings, premises, storages; introduction of high-yielding varieties of agricultural crops and highly productive breeds of farm animals.

Management of innovative business processes of agricultural enterprises, dependence on natural factors, in particular soil and climatic conditions, bioclimatic potential of the management area, determines the specialization of production and, accordingly, is the most important criterion in the selection of major business processes.

At the present stage, we can identify several methods of managing innovative business processes (Fig. 2).

The need to improve business process management is caused by dynamically changing environmental conditions, so it is advisable to take timely corrective and preventive action to eliminate or reduce the impact of negative factors, as well as smoothing the impact of cyclical fluctuations in the environment.



Source: compiled on the basis of [1, 4, 8, 10].

Fig. 2. Methods of managing innovative business processes of agricultural enterprises in rural areas

It is worth noting that the proposed sequence of works on the organization of regulatory management of ISB brands focuses on these goals and the context of application of key success factors of brands. In addition, the outlined sequence envisages the simultaneous formation not only of a control cycle, but also of a market share monitoring cycle, which will be subject to corporate strategic imperatives covering all areas of ISB activity.

It is also worth noting that the proposed model contains typical structural elements, on the basis of which you can form a new project for each individual enterprise in the sequence of the following stages:

Stage 1: determining the significance of the impact of control levers on business processes.

Stage 2: identification of priority indicators for improving the effectiveness of the business process.

Stage 3: determination of measures to improve business processes at the enterprise according to the selected indicator.

Stage 4: analysis of the impact of innovation on the overall activities of the enterprise.

Stage 5: assessment of the effectiveness of the management mechanism of the enterprise.

Representation of such typical elements reveals the logic of a systematic representation of the organization of the process of managing innovative technologies based on the modeling of composite business processes.

Conclusions and suggestions. Thus, step-by-step actions in accordance with the proposed model will provide an opportunity to adequately assess the innovation potential of agricultural enterprises, create sustainable competitive advantages, and create all conditions necessary for implementing the strategy of innovative development of agricultural enterprises and introduction of innovative technologies in production and management. Management of innovative business processes in agricultural enterprises is a continuous implementation of a set of certain interconnected types of innovative activities and general management functions. The implementation of individual works, as well as management functions can be considered as an innovation process, where the overall process is a set of interconnected continuous actions that will turn resources at the input into results at the outputs.

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