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HOTEL BUSINESS ENTERPRISE ARCHITECTURE: BUSINESS PROCESS MODEL

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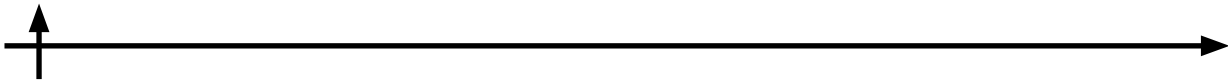
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Abstract. The article considers the methodology of developing a top-level business processes reference model for the construction of architectural solutions in hospitality industry. In this paper, the authors identify basic stages in the development of business architecture for hospitality enterprises and define the main differences between business functions and business processes. Classification of basic, managing and supporting business processes is also given. As a result of the research, the reference business processes model of top-level digitalization is developed. Development of a top-level business processes reference model allows to construct an optimal architectural solution that will create new opportunities for hospitality industry enterprises in the era of digitalization, when the increase of manageability, monitoring of performance indicators and security control will allow to move to predictive models and proactive (program-target) management of accommodation facilities.

Keywords: top-level business processes, basic business processes, supporting business processes, managing business processes, reference model, business architecture, architectural solution, business process modeling, accommodation, hospitality industry, hotel business, hotel chains

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АРХИТЕКТУРА ПРЕДПРИЯТИЯ ГОСТИНИЧНОГО БИЗНЕСА: МОДЕЛЬ БИЗНЕС-ПРОЦЕССОВ

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Аннотация. В статье рассматривается методология разработки эталонной модели бизнес-процессов верхнего уровня в предприятия гостиничного бизнеса. В работе авторы выделяют основные этапы развития бизнес-архитектуры предприятий отрасли и определяют основные отличия бизнес-функций от бизнес-процессов, дают классификацию основных, управляющих и обеспечивающих бизнес-процессов. В результате исследования предлагается эталонная модель бизнес-процессов верхнего уровня. Разработка эталонной модели позволяет построить оптимальное решение, которое создаст новые возможности для предприятий гостиничного бизнеса в эпоху цифровизации, когда повышение управляемости, контроль показателей эффективности и контроль безопасности позволят перейти к прогнозным моделям и проактивному (программно-целевому) управлению.

Ключевые слова: бизнес-процессы верхнего уровня, базовые бизнес-процессы, поддерживающие бизнес-процессы, управление бизнес-процессами, эталонная модель, бизнес-архитектура, архитектурное решение, моделирование бизнес-процессов, размещение, индустрия гостеприимства, гостиничный бизнес, гостиничные сети

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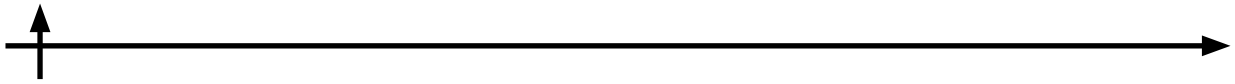
Introduction

Currently, the process of digital transformation has a significant impact on almost all sectors of the economy, but the hospitality industry in the Russian Federation has been undergoing dramatic changes since 2014. The main catalyst for the support of hotel business in Russia remains the placement of rooms in the cross-country areas. According to official data, almost 70 percent of industry is taken over by hotels in two Federal cities - Moscow and St. Petersburg (Oborin and Shostak, 2017; Voronova et al., 2019).

Enterprises of the hospitality industry in the Russian Federation continue to be in a rather difficult situation. According to official data, Russia continues to lag behind its European partners in terms of overall number of rooms per capita. However, most managers of the hospitality industry also noted the low level of customer demand. The result of low consumption is a sharp reduction in costs for hotels and, as a consequence, the deterioration of the services quality (Avilova and Lebedeva, 2017).

Competition in the hospitality market remains very high. External growth reserves are almost exhausted, special attention is paid to the optimization of companies own resources. In addition, the cost of hotel product continues to be an important factor for end users.

In these conditions, successful companies are the most effective in their business processes, in ac-



cordance with which, the main emphasis of the companies development is digitalization and even greater focus on consumers.

Materials and Methods

Effective management of business processes is impossible without the construction of process architecture, which is associated with construction of business architecture for the company as a whole (Lankhorst, 2013). The main stages of business architecture development within hospitality industry are shown in figure 1.

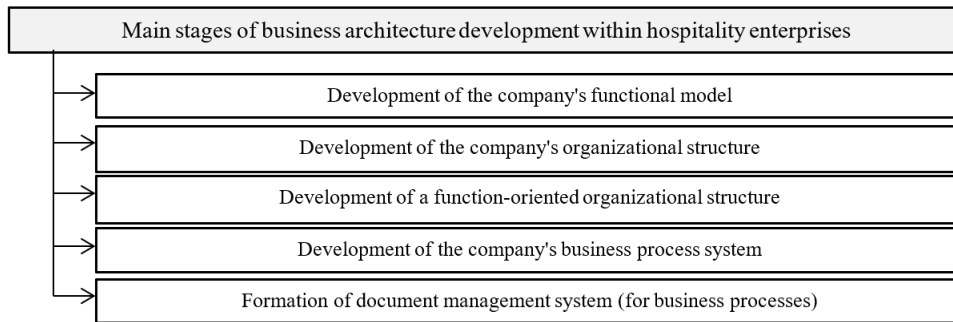


Fig. 1. Main stages of business architecture development within hospitality industry enterprises

The consumer value chain of each major hospitality company is implemented through the performance of its functions by individual structural units. Building a function-oriented model of the organizational structure is a fundamental element for designing the business architecture of the company. At the same time, according to figure 1, the next important step in the business architecture development is to build a model of business processes (Lankhorst, 2017).

At the initial stage of building a reference model, it is necessary to present the definition of business processes. Since the construction of a business process model is the stage following the development of a functional model, it is advisable to focus on identifying the differences between business functions and business processes (Dijkman et al., 2016).

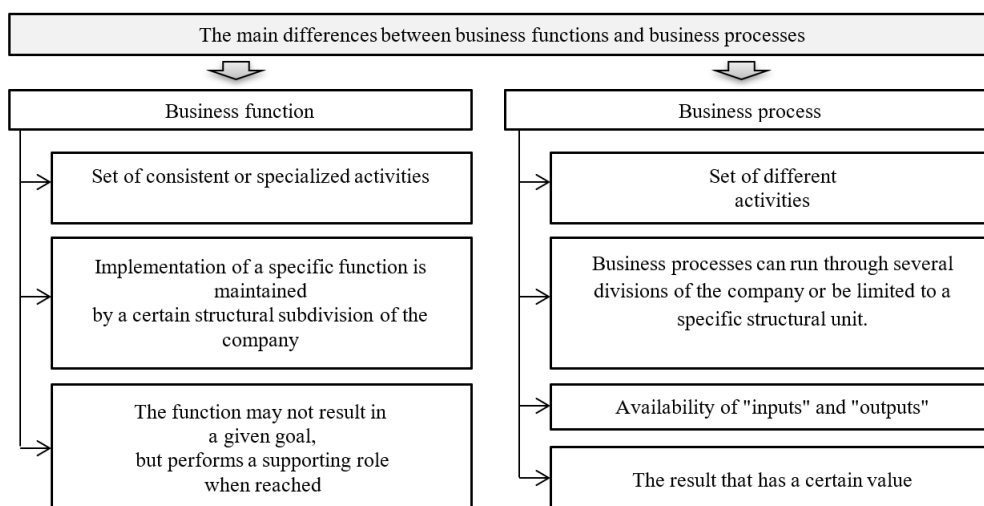
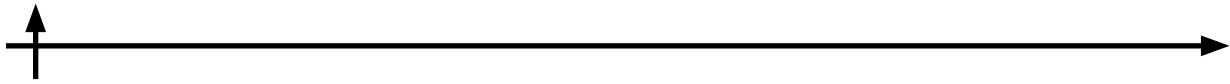


Fig. 2. Main differences between business functions and business processes



Business process is the cumulative sequence of actions to convert the resources received at the input into the final product that has value for the consumer at the output (Weske, 2007).

The consumer can be both external and internal in relation to the company. At the same time, external consumer is not part of the network company, and the internal consumer is inside the company (Tregubova and Zasenkov, n.d.). In addition, it is important to know the consumer of the business process because it is he, who explicitly or implicitly sets the requirements for the process and, therefore, can have an impact even on the very existence of a particular process.

When considering business processes, it is necessary to take into account the levels of detail. Thus, at the initial construction stage it is essential to select top-level business processes.

Top-level business processes should be understood as key or most important business processes for the organization, which perform the target functions of the company and determine their structure (Ignatenko, 2018).

Building a top-level model is a tool for analyzing the company's activities used to form a system of processes. The top level business processes model is necessary, first of all, for reasonable formation of structure of process categories and groups in system of processes at the hospitality enterprises (Becker et al., 2003).

There are different classifications of business processes. Classification of business processes helps to determine how to distinguish a particular process from their total mass.

As a rule, the basic processes are based on the result that is valuable for the consumers. Supporting processes are allocated by the resource that they supply to the company, and control processes - by the object over which the control action is carried out.

While studying business processes of hospitality enterprises, the authors define a key feature that determines the belonging of specific business processes to a certain type, as which the directed action of each business process in creating consumer value is taken. At the same time, the flow of consumer value creation should be understood as a set of all actions to transform resources and information into an end product for the consumer. It should be noted that the value stream is better represented graphically — in the form of business processes map (“ArchiMate® Specification | The Open Group Website,” n.d.; “The TOGAF® Standard, Version 9.2,” n.d.).

According to this, basic business processes are the processes that directly create customer value, constitute the core business of the company and create the main revenue stream.

Managing business processes include processes that increase customer value, which cover the entire range of management functions at the level of each business process and the business system as a whole (Anttila and Jussila, 2013).

Supporting business processes are designed to provide basic and managing business processes and are focused on supporting their universal features.

Let us consider each separate type of business processes of the top-level hospitality enterprises in more detail.

The basic top-level processes of the hospitality enterprises are presented in figure 3.

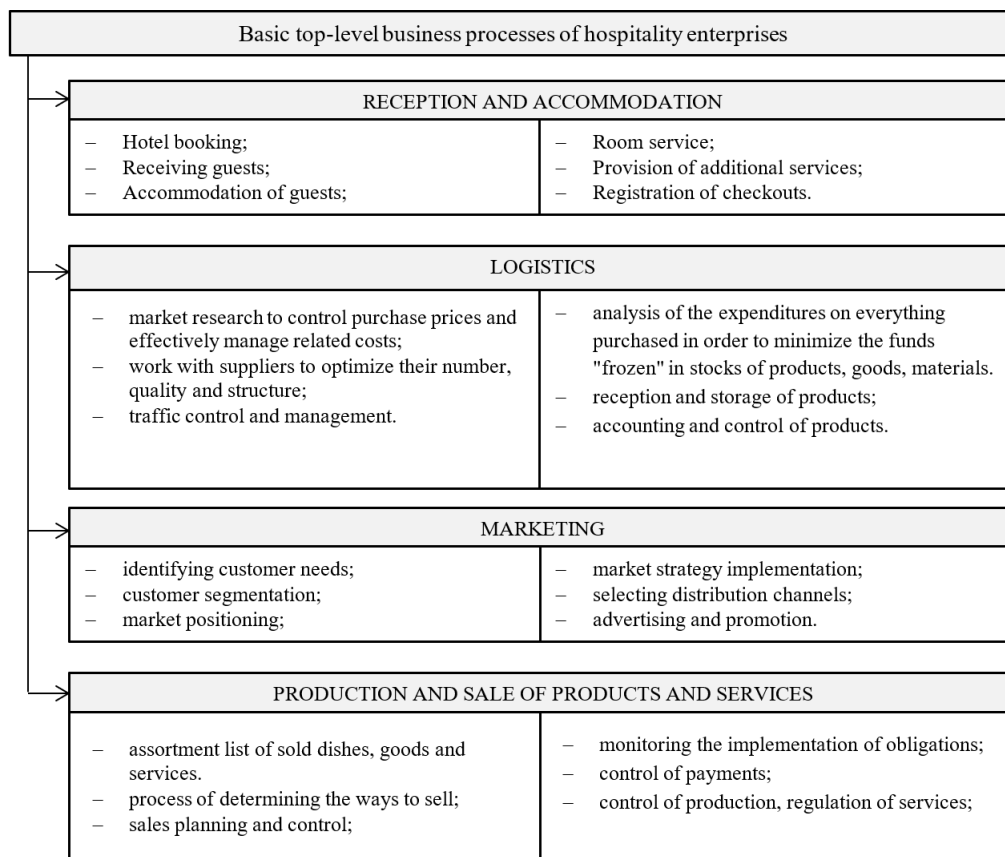
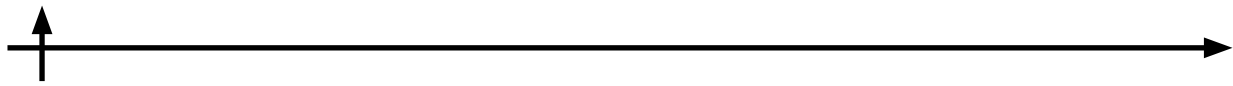


Fig. 3. Basic top-level processes of hospitality industry enterprises

The processes presented in figure 3 are referred to as the ‘basicones’, since they create the consumer value of the hospitality industry enterprises. Let us consider them in more detail.

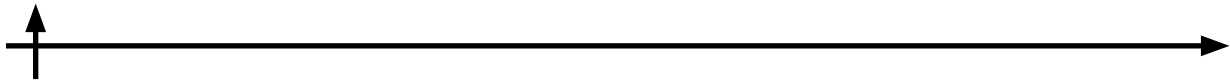
Reception and accommodation. The technological cycle of service implies a process that covers the period of time from the moment when a potential consumer contacts the hotel by phone or otherwise, to the payment bill and the checkout. The process of guest service in hotels of all categories has the following stages (Saenko et al., 2017):

1. Preliminary hotel booking (reservation);
2. Reception, check-in and accommodation;
3. Providing accommodation and food services;
4. Providing additional services to residents;
5. Final payment and check-out.

One of the most important services in the hotel is to book a room, as it allows you to guarantee the accommodation in advance and stay in a particular hotel. When booking a room, the first impression of staff and the hotel as a whole is shaped. As an example, let us consider the "Booking" business process in more detail.

Elements of "Booking" include:

1. "input" – booking request, customer data, date of arrival, length of stay, availability, additional data, means of payment;
2. "output" – mark in the booking log, booked room, confirmation letter to the client, booking re-



port, payment for the room or a refusal to book;

3. "control" – journal of booking, booking manual;
4. "mechanism" – staff, office equipment (computer, telephone, MFP), software and Internet.

Business processes modeling of hotel reservation allows to:

1. determine what enters the service at the "input", which is important for a detailed understanding of the process;
2. what functions and in what order one's are performed within the department responsible for this process or sub-process;
3. what is the executor guided by when performing each process;
4. identify the resources that are required to implement certain operations and analyze their availability and quantity;
5. what is the result of the service (output).

In accordance with the established rules of hotel services, hotels must provide round-the-clock check-ins and check-outs. To make the stay comfortable for a client, hotels, in addition to offering rooms, must provide a certain amount of additional services according to its category, specialization, size, etc. Regardless of the functional characteristics, any hotel should set a main goal which is to bring the living conditions of the client to home ones during the entire stay of guests, to create conditions for effective work, recreation, entertainment. High level hotels require a business center, service bureau, spa-center, car hire, etc. Additional services are also important in ensuring the income of hotels. The share of income from the offer of additional services can reach 30%.

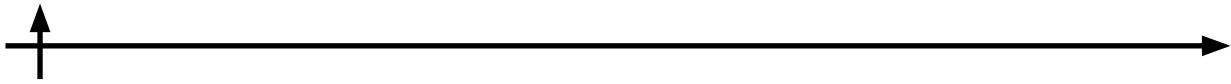
Logistics. Logistics or the organization of supply of the enterprise with products and expendables for production of dishes, goods for resale (alcohol, drinks, etc.), expendables for rendering services to guests and ensuring economic activity is the most important business process. This is explained by its costly nature. Therefore, the strictest formalization and control are extremely necessary in the process of managing this unit. When purchasing food, the hotels follow the laws of the country regulating this sphere of activity, internal rules and methods (for example, contracts concluded with suppliers, production technology used in this enterprise, service methods, etc.), norms of ethics, aesthetics and psychology, which are of particular importance in the subsequent stages, current orders and orders of the management (hotels and catering services).

Studies show that a 3% reduction in logistics costs results in a 1-2% increase in return on sales. This is achieved by a clear organization of a single process of raw materials movement from the supplier to the end user (guest), the purpose of which is to minimize costs for the purchase, transportation, storage of products and accelerate the turnover of capital by minimizing stored reserves. This solves the following problems:

1. development and implementation of a common procurement policy and strategy;
2. development and implementation of search methods, selection methods and evaluation methods of supplier, methods of contractual work;
3. creation and strict observance of the uniform cycle of the organization of deliveries and movement of production in the enterprise on points of production and sales;
4. formation of reports on logistics processes, including the balanced scorecard;
5. control of movement, safety and correct consumption of products within the enterprise at the points of production and sales.

Since the specifics of hospitality enterprises is that suppliers usually deliver products by their own vehicles, it is not advisable to consider the transport part of logistics in the main business processes. In any case, the management company performs delivery for individual restaurants in a chain, so it would be more correct to consider only two areas of logistics. The first is purchasing, the second is storage and movement of the purchased goods within the enterprise (Odoom, 2012).

Marketing. Marketing in the hotel business is often identified with the sale and advertising of hotel



services. In fact, sales and advertising are the only components of "marketing mix", and often are not the most important. Advertising and sales are part of the policy of promoting goods and services to the market. There are other elements of marketing — the product itself, its price and distribution. Marketing also includes comprehensive research, information systems, planning and strategies. Development involves designing innovations that can provide new opportunities for sales. Such innovations should meet the needs and preferences of potential customers (Dagdiev et al., 2017).

Monitoring involves the analysis of the results of activities to promote services to the market and checking whether these results reflect a truly full and successful use of existing opportunities in the tourism sector.

However, marketing expands its functions, placing special emphasis on relationships with consumers. Long-term relationships with customers are much cheaper than the marketing costs required to increase the interest of the new consumer to the hotel services.

Production and sales of products and services. Food service in hotels is an important structural subdivision in the formation of the main product of hospitality - the provision of food services and a number of additional services, which are determined by the functional type of catering establishments. The enterprises of restaurant economy in structure of hotel complexes public, however are obliged to serve first of all clients of hotel. In specialized accommodation facilities - boarding houses, hotels, clubs, hotels with treatment and other - services are provided only to guests of the institution. In the structure of hotel complexes the functional organization of food services is solved taking into account the category of accommodation.

In modern conditions, the management of the hotel company must be simple and flexible to be competitive. It should have the following characteristics (Karmysova, 2017):

1. a small number of control levels;
2. small units staffed by qualified personnel;
3. production and organization of work based on the principles of effective communication.

Strategic management of the hospitality industry includes the following (Bokareva and Yudina, 2020; Enz, 2009):

4. development of a strategy consistent with marketing strategies and analysis of the tourism market;
5. identification of economic factors affecting the efficiency and completeness of the hotel management implementation;
6. preparation of the budget plan and pricing policy; long-term and short-term planning of the structural units of the hotel;
7. assessment of risks associated with the hotel business;
8. planning of loading the number of rooms, seats at catering establishments, animation and health centers and vehicles.

Top-level management processes of the hospitality industry are shown in figure 4.

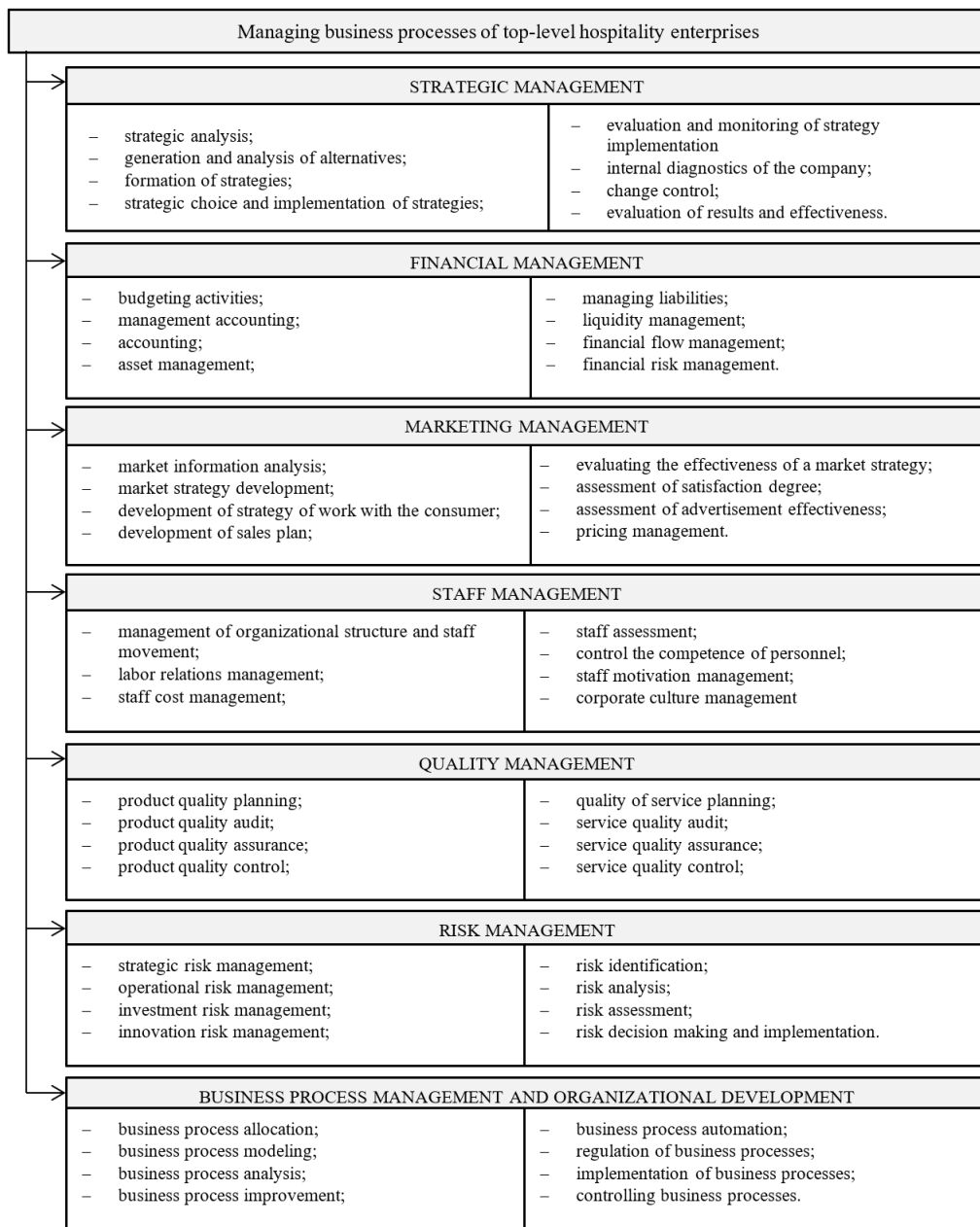
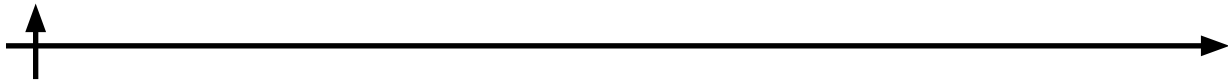


Fig. 4. Top-level management processes of hospitality enterprises

Supporting technological processes provide the conditions necessary for the implementation of the main processes: staffing, financial and accounting, security, control of technological and aesthetic condition of equipment and premises, their maintenance and repair. Supporting processes of top-level enterprises of the hospitality industry are shown in figure 5.

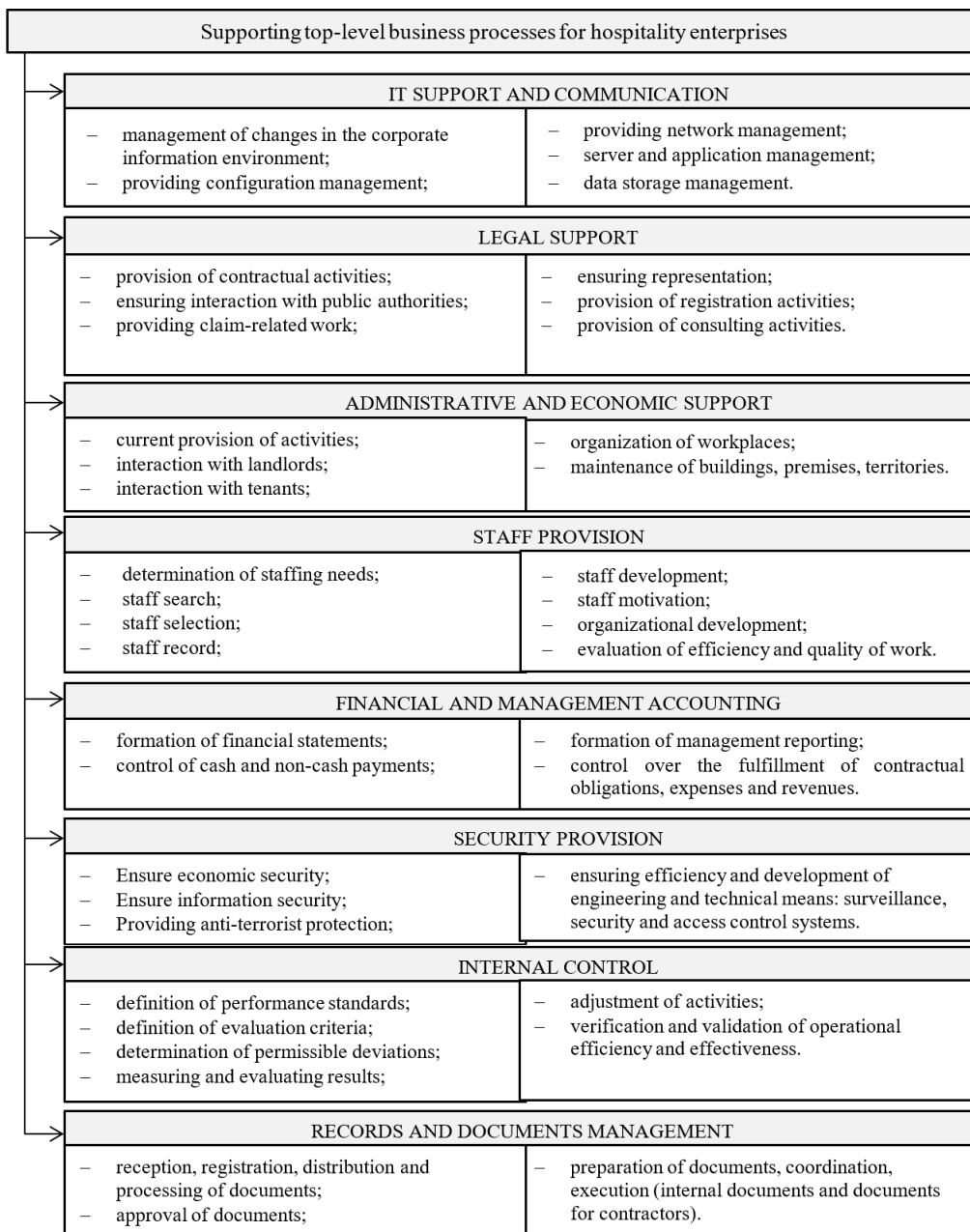
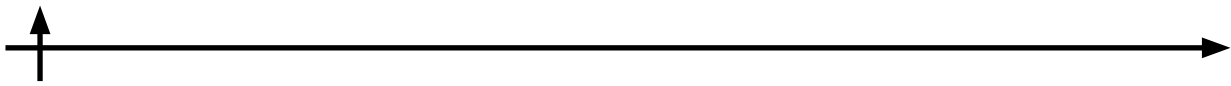
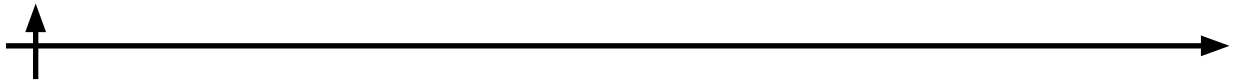


Fig. 5. Supporting top-level processes of hospitality industry enterprise

Supporting processes are associated with the operation of equipment and premises (cleaning, cleaning), storage and movement of raw materials, semi-finished products, finished products. They are held in the hotel warehouse, transport, engineering and technical services. Service processes also include social services provided to employees in the enterprise (Evgrafov and Ilyina, 2017).

Supporting and servicing technological processes can be performed by other specialized enterprises, for which these processes are the main ones. Specialization leads to better service. The organization of such technology is beneficial for small businesses. However, the hotel supporting and servicing processes are provided by their own services (own Laundry, maid service, catering service, tourist information Agency, etc.).



Results

Consistent consideration of basic, managing and supporting business processes, as well as the identification of their relationships, allowed to build a reference model of top-level business processes, presented in figure 6, which is a necessary condition for the development of architectural solutions for the hospitality industry.

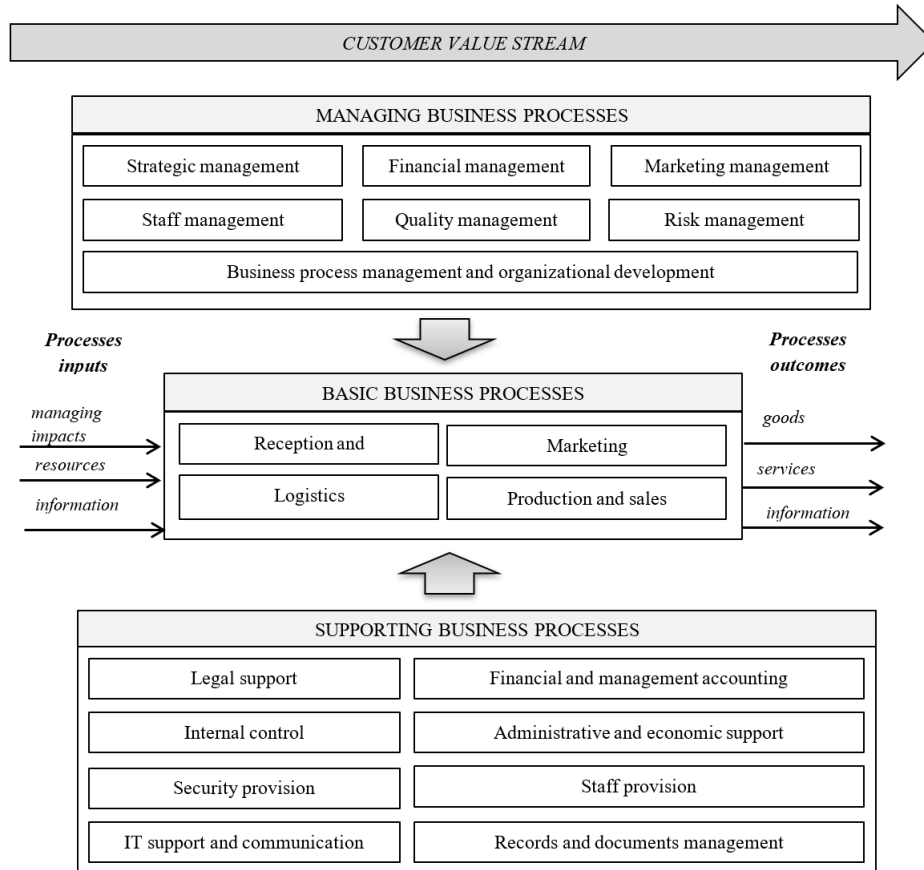
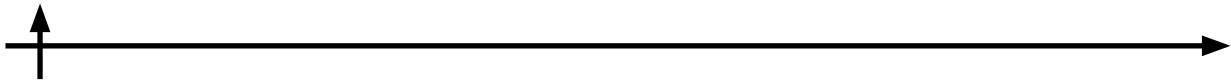


Fig. 6. Reference model of top-level business processes of the hospitality enterprises

The developed reference model of top-level business processes will allow to develop an optimal architectural solution that will create new opportunities for the hospitality industry enterprises in the era of digitalization, when the increase of manageability, monitoring of performance indicators and safety control will allow to move to predictive models and proactive (program-target) management of accommodation facilities.

Conclusions

Further modeling of basic, managing, and supporting business processes of enterprises of the hospitality industry on the basis of a reference business model, the upper level will allow optimizing the information with respect to the data describing the current or future (forecast) state of business processes and analysis and presentation of data in the form required to solve strategic and tactical challenges facing the hospitality industry. Underestimating business processes, hotels lose not only the opportunity to improve the quality of service, but also the ability to respond to customer criticisms. By noticing only individual "details" indicated by the guests and focusing on them, it is not possible to see the full picture



until the entire business process associated with this detail has been carefully worked out and modeled.

The described processes are examined for the presence of empty points (when the staff does not know how to act with guests), critical points (when conflicts with guests occur most often) and points of inactivity (when the process begins to move in a vicious circle). After these points are identified, the processes are improved and put into practice (internal trainings, work standards).

The conducted research will provide an opportunity to gain a competitive advantage, reduce financial and commercial risks of business activity, to determine the attitude of customers to the provided service, to assess strategic and tactical activities of the hotel, improve the effectiveness of communication markets, to determine the optimal segment positioning processes and the nature of their life cycle.

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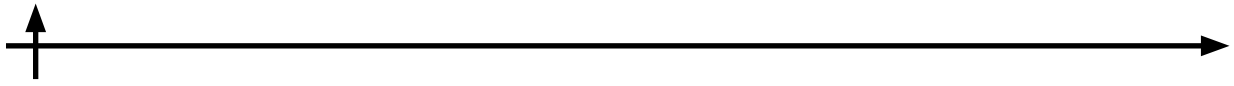
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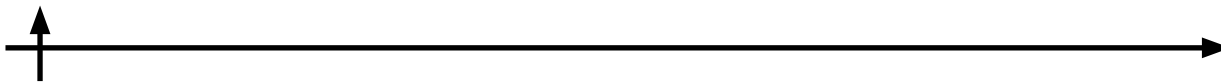
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