

Секція № 9. АКТУАЛЬНІ АСПЕКТИ ПІДНЕСЕННЯ ЕКОНОМІКИ МОРЯ В УКРАЇНІ

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EXPANSION OF TOURIST ACTIVITY OF THE AZOV-BLACK SEA REGION OF UKRAINE WITH THE USE OF ROBOTIC AND TELECOMMUNICATION TECHNOLOGISTS

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Abstract. Strengthening the competitiveness of Ukrainian business in both the domestic and international economic space is a priority for the government and local governments. Virtual tourism is being actively introduced into the daily lives of ordinary citizens around the world, so its commercialization is an urgent task. To provide services in this area of business, it is necessary to create an effective technology of virtual tourism, justify its effectiveness, determine the amount of investment and attract investors. One of the key elements of this type of service is provided by transport robotic systems, which will perform the functions of mobile photo-video platforms.

Key words: virtual tourism, drone, regional economy, robotic transport platform.

Marine robotics, as well as robotic air and surface land mobile works, are seen as universal transport systems in the service of a scientist to deliver measuring instruments, physical field recorders, photo-video and acoustic equipment to hard-to-reach or dangerous locations. From the point of view of "business" such systems are considered either as products of the entertainment industry (low price segment of the market having a mass character) and are more characterized as "toys", or as difficult engineering systems for the same needs, as in the scientific world. or single-exclusive samples). In the latter case, it is relatively expensive in the production and operation of the system and the scope of their application is limited to geological exploration, exploration work for the survey of underwater communications, maintenance of mineral deposits, etc.

In the middle price range, the market has a limited demand for robotic transport systems (drones) due to the limited technology that uses them. There are isolated proposals for the use of drones in postal operations, in agriculture to control pests and diseases, in the film, television and multimedia industries, etc. [1]. Widespread implementation of business projects using transport robots is not common. However, such business projects have a place. This applies to sectors of the economy that are booming. These include agriculture, utilities, own transport and transport links, tourism. In this regard, special attention should be paid to the latter sector as one that has significant potential for development in the southern regions of Ukraine [1].

Admiral Makarov National University of Shipbuilding has repeatedly proposed the idea of creating a "Virtual Underwater Museum of Ukraine" [2].

This innovative project is proposed by prof. Ryzhkov S.S. and prof. Blintsov V.S. as a variant of Ukraine's entry to the international level with unique objects of underwater cultural heritage, which can

be made the property of mankind through modern robotic underwater technologies in combination with the telecommunication capabilities of today.

Scientific research in this regard, conducted by domestic scientists, indicate the prospects for the development of underwater archeology in the Black Sea [3-5]. According to the latest data, thousands of underwater cultural heritage sites have been discovered in the territorial waters of Ukraine, which are located at depths of 100 meters and more and are of national and international importance. Separate expeditions of foreign and domestic scientists testify to the presence of unique underwater objects of different historical epochs [6, 7].

In addition, a significant area of Ukrainian territory is occupied by rivers, canals, lakes, artificial seas. In total, the length of highways is 2547 km (of which artificial - 1891 km). The waters of Ukraine, which belong to the Azov-Black Sea basin in the south, have unique natural formations, many of which have the status of protected areas. Access to them can be completely virtual in real time with the use of underwater robots on its surface in the air and on land. According to [8], there are more than 50 nature reserves in the coastal areas of southern Ukraine (excluding the territory of Crimea) (Fig. 1).

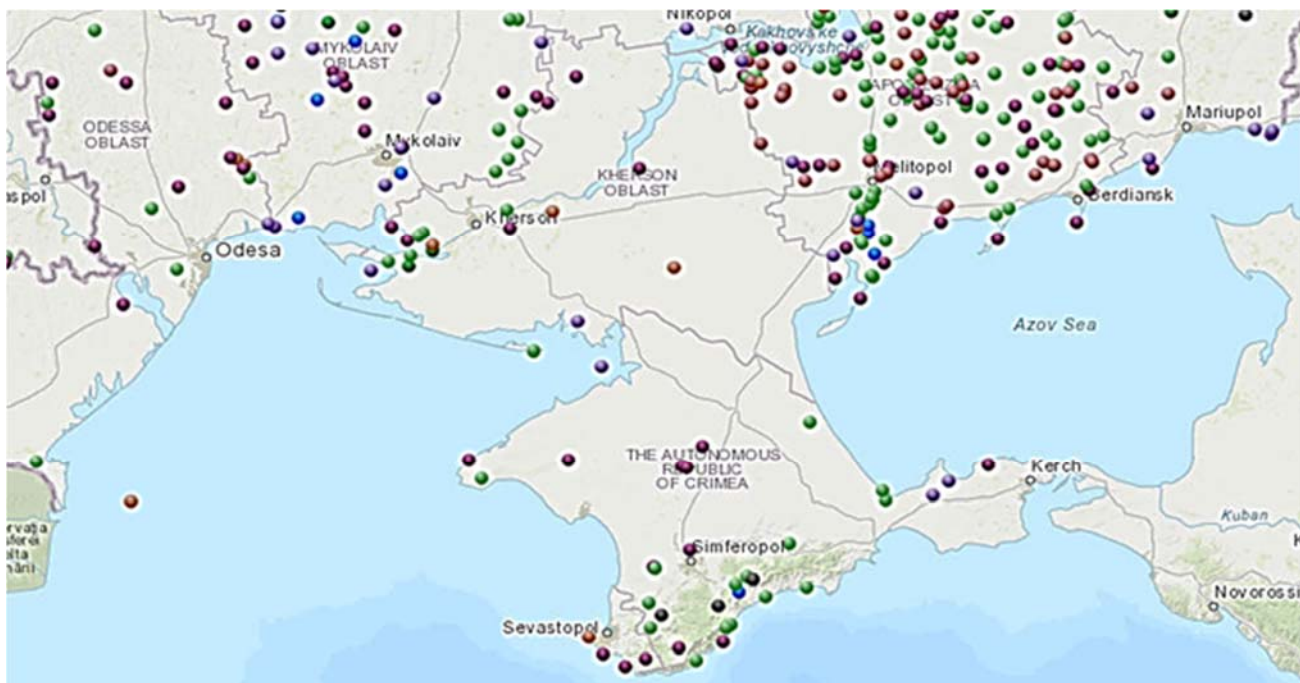


Fig. 1 Nature reserves of the south of Ukraine

This creates preconditions for the development of this type of business activity as the provision of services in the field of virtual tourism. This category of business already exists in the world [9, 10].

The advantage of virtual tourism over other, more active varieties, is its territorial, social and age accessibility, which allows us to estimate its global capital turnover in the hundred In general, the structure of a virtual travel agency is seen as follows (Fig. 2)s of millions of dollars.

When connecting the consumer's workstation to the server of the operations center, the necessary control and communication channels with the selected drone are allocated. With the help of special software after a test connection and verification of the "adequacy of the pilot", the consumer independently controls the drone. To prevent emergencies, the drone control system shall provide appropriate warning, locking and safe switching systems. The operations center provides transmission to the consumer of video and photo streaming, navigation information and telemetry, as well as its temporary storage on the server.

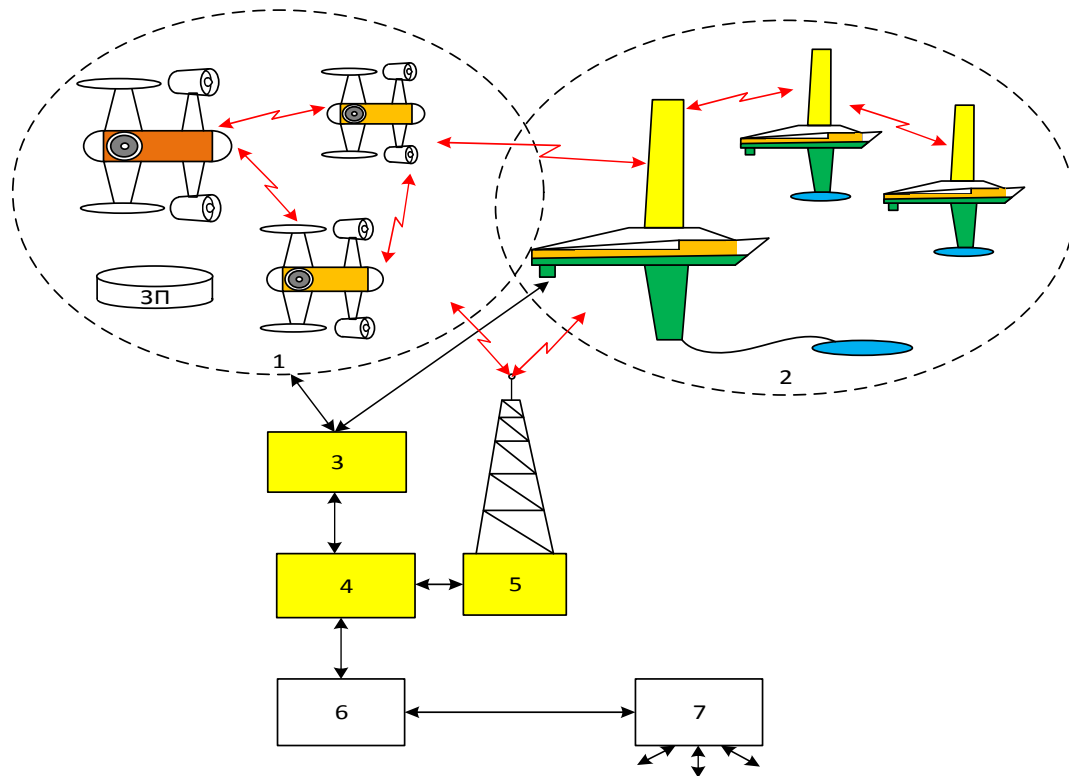


Fig. 2. The structure of a virtual travel agency: 1 - grouping of air drones is constantly in the airspace of the nature reserve, on the territory of which there are also several automatic charging platforms (CP); 2 - a group of surface unmanned boats with submarines drifting on board near interesting, from the point of view of virtual tourism underwater and surface objects. These groups are equipped with high-quality photo and video equipment, as well as telecommunications equipment as a payload; 3 - the support center performs the functions of service maintenance, replenishment of energy resources, repair and maintenance of the reserve fleet of drones; 4 - the operations center provides control of drones in the air and at sea, also performing the function of a backup pilot. The main control of drones is done by virtual tourists through special software that is downloaded for a (cheap) fee to consumer workstations from the server of the operations center; 5 - multi-channel radio modem 544 (2,4) MHz or GSM technology, which provides communication of the operations center with drones; 6 - communication with consumers through a local provider; 7- communication with consumers through a regional provider.

The estimate of investments for the organization of a virtual travel agency is given in the table gives reason to believe that the investment basket can reach from 10 to 13 million UAH.

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УДК 657

ОСОБЛИВОСТІ РЕГУЛЮВАННЯ БУХГАЛТЕРСЬКОГО ОБЛІКУ В ПОЛЬЩІ

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Анотація. Процес гармонізації регулювання бухгалтерського обліку відповідно до кращої світової практики в Україні відбувається в контексті євроінтеграційних перетворень. Охарактеризовано основні складові нормативного забезпечення бухгалтерського обліку в Польщі. Розглянуто форми фінансової звітності, що вимагаються для складання в Польщі.

Ключові слова: бухгалтерський облік, Директива 2013/34/ЄС, фінансова звітність.

Кожна країна має власну систему бухгалтерського обліку, яка склалась під впливом політичних, економічних, історичних, соціальних чинників. В умовах глобалізації економічних процесів і систем особливо важливою стає задача вивчення досвіду особливостей обліку зарубіжних країн, зокрема держав-членів Європейського Союзу. У свій час Польща входила до соціалістичного табору і разом з СРСР мала атрибути радянських підходів до ведення обліку. У зв'язку з посиленою інтеграцією України до ЄС вивчення особливостей бухгалтерського обліку саме у Польщі та досвіду цієї країни є актуальним [1, с. 971].

Польща має розвинений ринок в Центральній Європі з найбільшою фондовою біржею у Східно-Центральноевропейській зоні. Країна посідає шосте місце за величиною економіки в Європейському Союзі і є лідером економічного зростання в Європі за останнє десятиліття. Це одна з найдинамічніших економік світу за Індексом людського розвитку [2].

Польща є членом таких міжнародних організацій, як ЄС (2004), НАТО (1999), ОЕСР (1996), СОТ (1995), ООН (1945). При цьому ВВП у номінальних цінах у 2019 році становив 527 млрд. євро, ріст реального ВВП у 2019 році (5,1% у 2018 році) – 4,1% [3, с. 14].

Польща протягом останніх десятиліть зазнала багатьох політичних, структурних, соціальних та економічних змін та перетворень. Ці зміни особливо вплинули на систему бухгалтерського обліку, оскільки бухгалтерський облік є основною системою збору, зберігання та обробки фінансових та нефінансових даних, що використовуються управлінським персоналом [4, с. 55].

Польща підпорядковується Регламенту ЄС 1606/2002 та Директиві 2013/34/ЄС, що затверджено Комісією Європейського Союзу. Польське законодавство про бухгалтерський облік вимагає підготовки фінансової звітності згідно з польськими загальноприйнятими