

2. World Bank. Resilient Recovery for MSMEs in Ukraine. Washington, D.C.: World Bank, 2023.
3. OECD. Tourism Trends and Policies 2022. Paris: OECD Publishing, 2022.
4. UNWTO. Guidelines for Tourism Recovery. Madrid: World Tourism Organization, 2021.
5. Ministry for Communities, Territories and Infrastructure Development of Ukraine. National Tourism Strategy 2030. Kyiv, 2023.
6. European Commission. European Green Deal: Tourism and Mobility Guidelines. Brussels, 2021.
7. World Bank. Urban Infrastructure Project II – Final Report. Washington, D.C.: World Bank Group, 2022.

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### **SMART RECREATION: EXPERIENCE IN IMPLEMENTING DIGITAL TECHNOLOGIES IN MANAGEMENT**

In the current conditions of the digital transformation of society, there is a growing need to introduce innovative technologies in the field of recreation management. The concept of smart recreation involves the use of digital solutions to increase the efficiency of recreational areas management, improve the quality of tourist services and form sustainable development of destinations [1, p. 6]. This approach combines environmental responsibility, comfort for visitors, and economic feasibility of the recreational system in the face of dynamic changes.

Digital technologies allow to improve the processes of planning, monitoring and management of resources, to ensure interactive interaction with tourists, to adapt services to the needs of different target groups. The most promising tools are geographic information systems (GIS), mobile applications, virtual and augmented reality (VR and AR), big data analysis systems, the Internet of Things (IoT), block chain solutions for secure service booking [2, p. 22].

European countries have successfully integrated smart technologies into recreational management. For example, Finland has created a digital platform for national parks that allows planning routes, checking the load on the territory, and leaving feedback. The Netherlands has integrated contactless systems for booking and visiting museums and eco-sites. Austria uses interactive mapping of mountain routes with real weather conditions, as well as real-time analysis of tourist mobility [3, p. 45 : 6, p. 61].

In Ukraine, the practice of implementing smart recreation is still in its infancy. However, some initiatives are already showing a positive impact. For example, in the Carpathian region, mobile applications with navigation, digital tours, and QR codes at locations have been created, which provides convenient access to information and reduces the burden on the environment. Local authorities in Ivano-Frankivsk region are actively implementing the principles of smart tourism, in particular through EU grant programs and support for youth IT startups [4, p. 31]. Among the most promising models in Ukraine are smart trails, which combine GPS navigation, environmental information, interactive audio guides, and educational blocks for children. Such trails already operate in the Hutsul region and in the Shatsk National Nature Park. In addition, tourist information centers are increasingly equipped with touch screens, Wi-Fi access points, and online service evaluation systems [6, p. 72].

One of the main challenges is the insufficient level of digital literacy of staff, limited funding, and fragmented approaches. The lack of a single national standard for smart recreational services is also problematic. To overcome these problems, it is necessary to create national and regional strategies for the development of smart recreation, introduce a system of personnel training, stimulate public-private partnerships, and promote the transfer of technologies from research institutions to practice.

The benefits of smart recreation are obvious: increased tourist satisfaction, reduced operating costs, increased environmental responsibility, and an increase in the number of repeat visits. Smart recreation also allows for a more accurate assessment of the recreational load, a faster response to changes in tourist behavior, inclusive activities for people with special needs, and the formation of sustainable local economies [1, p. 9; 6, p. 112]. The introduction of innovative solutions in the management of recreational resources is the key to the competitiveness of Ukrainian destinations in the global space. To achieve this, it is also necessary to develop digital maps of tourist flows, intelligent booking systems, and create open data networks for tourism operators and local governments.

Among the common digital solutions that are currently being effectively used in the field of recreation are the following: mobile applications and online platforms, activity tracking gadgets, virtual and augmented reality (VR/AR), smart platforms, social networks and media platforms, and analytical tools.

Thus, smart recreation is a strategic direction of modern tourism management that requires an integrated approach, government support, and active participation of business and the community. A smart combination of technology, culture, and nature will ensure the development of innovative, affordable, and environmentally friendly recreation in Ukraine, increasing its attractiveness and resilience to global challenges.

### **References:**

1. Цифровізація в туризмі: міжнародний досвід і українські перспективи / За ред. Т. Омельченко. Київ: Академперіодика, 2021. 176 с.

2. Пелешенко Л. Смарт-туризм і рекреація: інноваційні рішення. Харків: Фоліо, 2020. 208 с.
3. Digital Tourism in Europe. Brussels: EU Digital Projects, 2019. 198 p.
4. Стратегія розвитку Карпатського регіону до 2030 року. Львів: Центр регіональних ініціатив, 2022. 132 с.
5. Бондаренко С. Менеджмент природних територій в умовах цифрової трансформації. Черкаси: Вертикаль, 2020. 256 с.
6. Smart Recreation: Global Concepts and Local Solutions / Ed. by M. Fischer. Vienna: Alpine Institute, 2021. 164 p.