

Ministry of Education and Science of Ukraine

ODESA NATIONAL UNIVERSITY OF TECHNOLOGY

International Competition of
Student Scientific Works

BLACK SEA SCIENCE 2023

PROCEEDINGS



ODESA, ONUT 2023

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BLACK SEA SCIENCE 2023

Proceedings

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CAPSULE HOTELS: TRENDS AND PROSPECTS FOR IMPLEMENTATION IN UKRAINE

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Abstract. *The purpose of the scientific work is to investigate the theoretical aspects, ergonomic solutions in capsule hotels, foreign experience, and the practice of implementing capsule hotels in Ukraine. First, the essence of the concept of capsule hotels, the reasons and history of their emergence are highlighted in the scientific work. Next, the features and main ergonomic solutions in capsule hotels are described. In addition, foreign experience in the development of capsule hotels is studied. Then, the paper analyzes the trends in the development of capsule hotels in Ukraine. A general characterization of the capsule hotel “Capsule Hotel Constellation 89” located in Lviv is also made. Finally, on the basis of the conducted sociological survey and the carried out SWOT analysis, the idea of implementing the business project “Capsule Hotel Shangri-La” is substantiated.*

Keywords: *concept, conceptual hotel, capsule hotel, ergonomic solutions, innovations, hospitality, business project, Ukraine’s prospects.*

I. INTRODUCTION

Significant growth in the hospitality industry around the world creates positive prospects for the accommodation market. Consumers increasingly prefer hygiene, comfort, economical and budget accommodation when traveling. And various technological advances, ergonomic solutions, and innovations are driving the market growth.

Capsule hotels offer tourists an alternative option for budget and short-term accommodation in megacities. Recently, they have become increasingly popular due to their low cost and greater privacy than, for example, conventional hostels can provide. According to IMARC Group, the global capsule hotel market reached \$97.8 million in 2022. In the future, the market is expected to reach \$309.9 million by 2028, showing a growth rate of 10.2% [5].

Capsule hotels maximize comfort, which is now a key component of a good trip, especially when you want to relax in private after a busy day. A capsule hotel refers to a compact, unique accommodation facility equipped with basic amenities, which also makes it one of the most affordable.

The new direction of the service can successfully take root in the Ukrainian market, but it requires taking into account the specifics of the target audience, promotion and market positioning.

II. LITERATURE ANALYSIS

The theoretical foundations of conceptual hotels and their classification were studied by O. Shykina, G. Fadeeva [20]. Trends in the development and quality of service of small hotel forms in Ukraine are highlighted in the works of A. Dyakonova, L.

Titomir, K. Zhovtyak [7]. R. Kozhukhivska explored the use of international experience in implementing innovations in the hotel business [9]. Minimalism in capsule hotels is covered by foreign scholars Siyun Chen, Haiying Wei [16]. However, the issues of innovation, technology, and alternatives have not lost their relevance for hospitality companies and require further research on capsule hotels, taking into account industry specifics, modern business conditions, and current challenges.

III. OBJECT, SUBJECT, AND METHODS OF RESEARCH

The object of research is the features of the development of capsule hotels, ergonomic solutions implemented in capsule hotels.

The subject of the study is the theoretical and practical aspects of the functioning of capsule hotels, based on the study of foreign experience and implementation in Ukraine.

The research methods are primary methods for studying sources and collecting information; historical method and analysis and synthesis in the process of studying the peculiarities of capsule hotels development in Ukraine and the world; systematic approach in the study of ergonomic solutions in capsule hotels; brainstorming method and heuristic method in the development of the business project “Capsule Hotel Shangri-La”.

IV. RESULTS

4.1. The concept of capsule hotels: the essence and history of its origin

Today, one of the most unique and interesting types of hotels you can find while traveling is a capsule hotel. They have become a trend in the hospitality industry, as they are a cheap analog of regular hotels, and a more improved and comfortable option than hostels.

The first capsule hotel in the world, Capsule Inn Osaka, opened in 1979 in the Kansai region of Japan, on the island of Honshu, and has been attracting guests ever since. The concept of creating a capsule hotel was the brainchild of Kisho Kurokawa. He was a prominent Japanese architect and one of the founders of the post-war Japanese architectural trend – Metabolism. It was this trend that became the basis for the ergonomics of hotels and buildings in Japan in general, and the factor that led to the creation of this architectural trend was the larger population of people in Japan [12; 16]. In 1972, he designed a residence called “capsule house K”. It was an early conceptualization of a revolutionary idea that he later turned into a commercial version. This is how the world’s first capsule hotel was born [6; 20].

Unfortunately, such a novel idea in the 70s was only available for men. Today, almost all modern capsule hotels are shared, and to be competitive with the new capsule hotels in Osaka, the rules and interior of the Capsule Inn were updated to give it a fresh look and be able to compete. Today it is called New Japan Umeda [6].

In general, capsule hotels have small rooms. The long cube-shaped capsules are usually 1.25 m wide, 2 m long and 1 m high. Thus, they are not exactly suitable for standing or sitting. The idea is to provide people with enough space to feel comfortable and get a good night’s rest, without unnecessary glamor that takes up space and costs money [13].

Capsule hotels are intended for students and business travelers who are not particularly demanding in terms of comfort and are not ready to overpay for amenities they will not use. The second group to whom such hotels are suitable is budget tourists, especially among the millennial generation. It should be noted that in recent years, the target audience that is particularly interested in capsule hotel accommodation offers has tended to grow rapidly.

4.2. Ergonomic solutions in capsule hotels

Ergonomic solutions, as well as design solutions, are the results of creative activity when creating capsule hotels (Fig. 1). They have a large number of extremely small rooms (capsules) to provide cheap and basic overnight accommodation for guests who do not need the services offered by traditional hotels [21].



Fig. 1. Ergonomic solutions in capsule hotels

Source: photo taken from open Internet sources

The main ergonomic solutions in capsule hotels are generalized:

1) The size of a standard capsule is 2 x 1 x 1.25 m, which does not require much space to create such a hotel. The capsules are made using metal, wood and hard materials such as plastic and fiberglass. The capsules are integrated into the hotels, arranged in rows and equipped with a locker, alarm clock, charging sockets and single or double beds.

2) LED lights next to the guest capsule make it easier to find it, as all capsules look exactly the same.

3) The light inside the capsule can be changed and there is also a TV remote control.

4) Quality capsule hotels include a small TV in the capsule, as well as free Wi-Fi access; curtains or doors in the capsule that can be closed to make the capsule more private. They also have their own air conditioning controls inside the capsule to make your stay as comfortable as possible.

5) Capsules can only provide a place to sleep, as they are quite small. In these hotels, luggage is stored in a luggage room. Each guest has their own locker for their belongings so that everything is private and safe.

6) Showers and toilets are shared in capsule hotels, but they are comfortable and cozy. And if the guest is concerned that he or she will not feel comfortable climbing into the capsule in pajamas at night, it's for nothing, as these hotels also offer separate groups of capsules for men and women.

Thus, the concept of capsule hotels is widely implemented by entrepreneurs in many countries, such as the Great Britain, China, Hong Kong, Japan, where it may also be known by another name, such as "pod hotel" [14; 22].

4.3. Foreign experience in the development of capsule hotels

For many years, capsule hotels have remained popular. After all, traditional capsule hotels are designed as cheap accommodation for those who do not want to pay for a standard hotel room. But the experience has changed dramatically as capsule hotel owners compete to provide guests with the most stylish and luxurious experiences. That being said, newer, more elegant and spacious capsule hotels don't necessarily come cheap. Recently a few premium and themed capsule hotels have been opening around Tokyo, Kyoto and Osaka with slightly higher prices.

Whether they are located in prime locations (for example, Tokyo Narita Airport) or offer unique features (for example, a view of the Mediterranean Sea), some capsule hotels can even compete with traditional hotels in terms of price. However, you can still find many cheap capsule hotels all over Japan (Japan is the birthplace of capsule hotels, so there is a large concentration of them in this country), and not only that, some capsules cost as little as \$15 per night.

Therefore, Table 1 presents the top 10 best capsule hotels from around the world in terms of price, originality, and convenience, with consumption prices ranging from UAH 490 to UAH 3 686 per night [3; 19].

In general, a standard capsule is a fiberglass unit built around a single size futon mattress. The typical capsule includes a TV and Wi-Fi internet inside, and a privacy curtain or door to cover the entrance. In addition, sheets, blankets and pillows are provided, and each capsule is also equipped with a light.

All other facilities at the capsule hotel, such as washrooms, toilets and showers, are shared by guests. Many capsule hotels also usually have large communal baths where you can enjoy a soak before bed. In addition, they often have restaurants, vending machines, laundromats, internet kiosks, lounges, entertainment rooms, game rooms, libraries, etc. The procedure to stay at a capsule hotel is basically the same in most capsule hotels. Capsule hotels often provide English check-in instructions at the counter or may have English-speaking staff.

Table 1. Top 10 best capsule hotels in the world

Capsule hotel	Features of the capsule hotel	Price	Rating on Booking.com
Nonze Hostel (Pattaya, Thailand)	It combines rustic, modern and vintage design, and offers free Wi-Fi, a 24-hour reception and a choice of single and double capsules. The air-conditioned pods are equipped with their own sliding doors, reading lamps and power outlets.	from UAH 490	8,7 / 10
Dream Lodge (Lavender, Singapore)	The hotel is decorated with inspirational quotes. The connection to Lavender Airport makes it popular with tourists. Bicycle rental is also available.	from UAH 2 322	8,9 / 10
Book And Bed Tokyo Shinjuk (Tokyo, Japan)	This is a hotel where you can sleep in bookcases. These unique capsule hotels look and function like a bookstore. Here you can find the perfect book and then lie down in your capsule, hidden in a bookcase.	from UAH 1676	7,4 / 10
Nine hours (Minato-ku Akasaka, Japan)	The hotel has a sophisticated design, very convenient pointing arrows on the floor, which make it seem like you are flying away in a spaceship. The name is based on the fact that 9 hours is enough for a stay: you spend 1 hour washing your face, 7 hours sleeping, and 1 hour getting ready in the morning.	from UAH 1174	8,0 / 10
CityHub (Amsterdam, Netherlands)	Guests can make their own drinks in the hotel bar. Using the mobile app, guests can control their room and communicate with CityHosts. Guests will stay in a separate sleeping cabin with a king-size bed. The bathroom has a tropical shower.	UAH 2849	9,0 / 10
YOTELAIR (Gatwick Airport South Terminal, UK)	The Japanese-style hotel offers free Wi-Fi and a 24-hour front desk. The capsules are equipped with a music system, relaxing lighting and a work desk. All rooms have a TV. Bathrooms are fitted with a monsoon shower.	UAH 3686	9,1 / 10
First Cabin Akasaka (Akasaka, Japan)	This is a Japanese chain consisting of about a dozen establishments and offering four different rooms - from premium economy class capsule cottages to standard first class rooms.	price is not specified	8,2 / 10
Petra Capsule Hostel (near Petra, Jordan)	Perched high above the city, the capsules offer incredible views of Wadi Musa and are just a short walk from the archaeological site of Petra.	from UAH 700	9,6 / 10
The O Pod (Tel Aviv, Israel)	The hotel offers capsules of various sizes, from traditional stacked capsules to full-length mini-rooms. The capsules have doors.	UAH 1605	8,4 / 10
The Pod Sydney (Sydney, Australia)	Each room has a king-size bed, reading lamp, chargers and air conditioning. There is a shared kitchen.	from UAH 1539	9,0 / 10

Source: compiled by the author based on [3; 19]

Thus, among Japan's many ingenious inventions, capsule hotels have probably attracted the most attention worldwide, including in Ukraine. After all, the smallest hotel rooms in the world have made overnight stays affordable. There are many different types of capsule hotels at different price ranges.

4.4. Trends in the development of capsule hotels in Ukraine

Despite the decline in tourist traffic, the Covid-19 pandemic, and the full-scale war in Ukraine, new areas of the hotel business are emerging, and the hospitality industry continues to develop despite all the challenges. Innovative capsule hotels have become increasingly popular in recent years. The trend for capsule hotels came from Japan. It was unlikely that such small rooms would be to everyone's taste. However, recently their popularity has been growing due to their low cost and greater privacy than conventional hostels can provide. The trend of blending business with leisure activities on business is becoming increasingly popular, especially among the millennial generation (Bleisure Travel by Millennials) [7; 10].

It should be noted that in recent years, the target audience that is particularly interested in capsule hotel accommodation offers has tended to grow rapidly. The reason for this is the increasing mobility of the population, but, most importantly, it is a decreasing willingness to pay for real but unnecessary comfort. At the same time, capsule hotels compare favorably with hostels, primarily because of their privacy and technology.

In 2019-2022, a number of interesting hostels and hotels in Ukraine were opened and are currently under construction, including the A-Hostel capsule hotel, The Tower Hostel, Sheraton Kyiv Olimpiyskiy, Ibis Red, the futuristic Monotel Space (Monotel capsule hotel chain), and the world's first hostel built from two decommissioned subway cars in Podil, Kyiv.

Gett Sleep Boryspil became the first representative of capsule hotels in Ukraine. A large number of innovations have been implemented in the new project of the capsule hotel chain Monotel, which has already launched its first capsule hotel in Kyiv [18]. Monotel is a hotel of the future for those who value sleep in their aura and technology at a reasonable price. There is everything you need for business travelers and residents of a big city: monocapsules for sleep, personal lockers, separate showers and toilets, luggage storage camera, silent service. In addition to individual sleeping capsules, there are also capsules for couples. The capsule is opened using an electronic key. As Monotel is a hotel chain, the franchise project envisages opening several more hotels in Kyiv, Lviv and Odesa [1; 8].

As of January 1, 2023, there are 9 capsule hotels in Ukraine, including 3 capsule hotels in Lviv – AntiHostel Forrest [2], Capsule Hotel Constellation 89 [4], Lounge Capsule Hotel [11]; 1 hotel in Boryspil – GettSleep; 5 capsule hotels in Kyiv – A-Hostel, Maidan Monotel, Monotel Khreshchatyk, Monotel Velodrome, and AV-2 Capsule Hotel [1]. Unfortunately, after the start of Russia's full-scale invasion of Ukraine, the AV-1 Capsule Hotel in Kyiv ceased to function.

It is advisable to pay attention to a worthy representative – Capsule Hotel Constellation 89 [4]. This capsule hotel is located in Lviv, at 21 Shevchenka Street (Fig. 2), 1.7 km from Lviv Railway Station and 2.1 km from Rynok Square. Hotel mission: if you want to spend your time in Lviv comfortably and plunge into the atmosphere of space travel, Capsule Hotel Constellation 89 is the best option.

It offers a restaurant, a shared kitchen and a shared lounge, as well as free Wi-Fi throughout. The capsule hotel also offers a terrace and a 24-hour front desk. An à la carte breakfast is served every morning at the capsule hotel.



Fig. 2. Capsule Hotel Constellation 89, Lviv
 Source: photos taken from the official website of Booking.com

Since the name of the hotel “Constellation” means “Constellation” in English, the design naturally corresponds to the name. The capsules themselves are designed in the form of space shuttles (Fig. 3). In the middle of the capsule there is lighting in the form of a night starry sky. The overall interior of the capsule hotel has a minimalist design, including corridors, a restroom, a reception, etc. They are decorated in classic black, white, and gray colors, with green accents in the form of live plants.

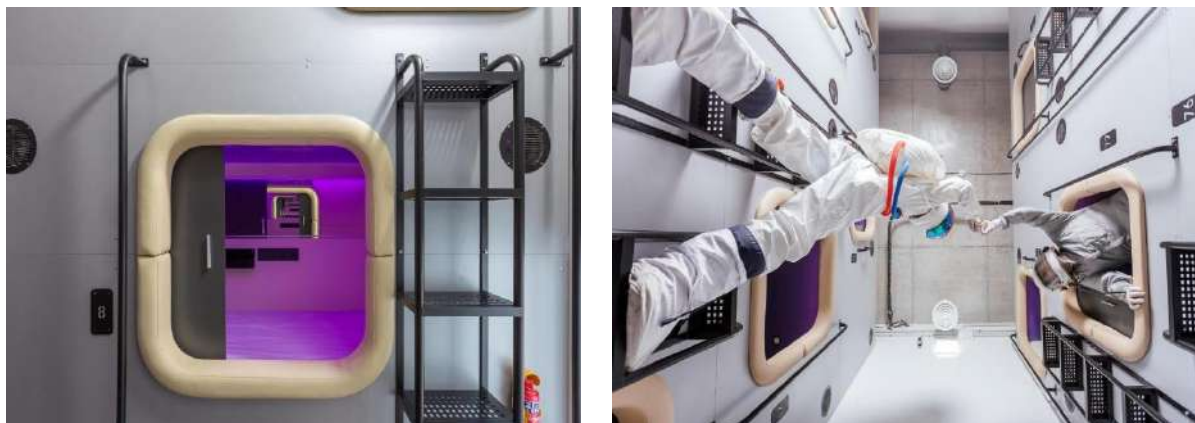


Fig. 3. Design of the capsules of the Capsule Hotel Constellation 89
 Source: photos taken from the official website of Booking.com

Upon check-in, guests receive a personalized locker, access card, crocs and a towel. There is Wi-Fi coverage, snacks and drinks. The snack area is open from 9 to 22. You can also purchase breakfast: or include it in your reservation. On the territory of the hotel (there is a kitchen) you can prepare your own food. The hotel has two separate areas – a lounge for leisure, work and a quiet area for sleeping. Additional services provided by the hotel: snack bar, restaurant, terrace, board games, jigsaw puzzles, ironing service, laundry service (extra charge).

The price of staying in such a hotel ranges from UAH 315 to UAH 824 in the off-season, and can reach a price of UAH 600 to UAH 1 216 on holidays (prices include taxes and fees). And if you are an experienced traveler who constantly uses booking sites, then, for example, the discount on booking for non-holidays can even reach 43%, i.e. a single capsule room for men and women (mixed) without breakfast can cost UAH 180 instead of UAH 315.

As for the hotel's rating on booking sites and reviews, we compared ratings from different sites. If we consider the rating of the hotel from Booking.com, it is 9.2/10, which indicates a high quality of service in this hotel. Guests from Booking.com rated the staff and price-performance ratio at 9.5/10, cleanliness at 9.2/10, comfort and quality of free Wi-Fi at 9.1/10. The lowest score out of all 9.0/10 was given to location and amenities. As for the ratings on the Airbnb booking site, consumers rated the hotel at 4.68/5, which is also an excellent result. Guests who used this site liked the arrival aspect of the hotel the most, with 4.9/5 points, followed by communication, accuracy and value for money at 4.8/5, and cleanliness and location at 4.7/5. The latter parameter is almost identical to the rating on the parallel site, which indicates that most guests do not like the location of the hotel.

Analyzing the reviews from both sites, most tourists like the Capsule Hotel Constellation 89, especially its uniqueness, design, high-quality internet and breakfast. As for the negative feedback, some guests did not like the staff who did not meet the customer's needs, as well as poorly working ventilation during daytime blackouts, which causes a musty smell.

Thus, analyzing the Capsule Hotel Constellation 89 in Lviv, it is worth noting that it confirms that an economy hotel, essentially a hostel, can surprise with the quality of services and design, and it does not have to be an almost destroyed building that has been used by more than 1 million tourists and has not been renovated for 20 years. It is possible to provide cheap, clean and comfortable accommodation without spending large sums of money on its construction. The Capsule Hotel Constellation 89 is a perfect example of how ergonomic, small hotels care more about nature and quality of service. Therefore, opening a capsule hotel is a deliberate and financially sound decision, especially for beginners who have decided to enter the hospitality industry.

4.5. Justification of the implementation of the business project “Capsule Hotel Shangri-La”

The implementation of a capsule hotel is a profitable and fairly good business in terms of payback, which will also be very modern, ergonomic in its plan and original in its idea. Therefore, an author's business plan for opening a capsule hotel has been developed, in which you can make sure of the success of your capital investments.

Since the opening of capsule hotels as a business is quite new for Ukraine, this concept is suitable for large transport hubs and large cities, where rooms for short stays are in demand. Such an idea is very suitable for its implementation in Lviv. Lviv is a city in the western part of Ukraine. The historical center of Lviv is included in the UNESCO World Heritage List. The city has the largest number of architectural monuments in Ukraine. In 2009, Lviv was awarded the title of the Cultural Capital of Ukraine. The city periodically occupies prominent places in the ratings of tourist and investment attractiveness.

SWOT analysis [17] was used to study the idea of implementing a capsule hotel, its strengths and weaknesses (Table 2).

Table 2. SWOT analysis of the implementation of a capsule hotel

	Strengths (S)	Weaknesses (W)
Internal environment	- higher comfort compared to a hostel; - availability of personal space; - lower cost compared to a separate room; - possibility of daily rent; - budget accommodation option; - easy maintenance of capsule rooms, quick cleaning and cleaning.	- the complexity of producing capsules; - difficulty of promoting advertising; - focused on a specific segment of consumers; - not suitable for people with a phobia of closed spaces.
	Opportunities (O)	Threats (T)
External environment	- passive business; - fast payback period; - uniqueness of the idea; - relatively small costs compared to other forms of hotel business.	- unsuccessful accommodation of the hotel leads to a decrease in demand; - strengthening of quarantine measures; - military situation in the country; - increase in taxes.

Source: author's own elaboration

So, during the SWOT analysis, it was found that the implementation of the capsule hotel has more positive aspects. Of course, it is risky to open this kind of hotel during the military situation in the country, but this idea should be, as it is a good step to improve the tourism and hotel business, especially in the direction of wellness.

In order to determine the consumer segment, a survey was conducted in Google Form (https://docs.google.com/forms/d/1ZBQnlWsY_PaWHU_CY7rMdf_pyUojNjWohFiNa7DxaA8/edit?usp=sharing), in order to create a better marketing strategy for the implementation of the capsule hotel. 23 respondents participated in the survey, the answers in some questions are very similar, and in some they differ from each other altogether. Therefore, the analysis of respondents' answers is presented below.

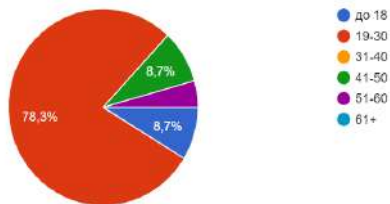
Analyzing the answer to the question "What do you miss in accommodation facilities?", the respondents had their own interesting and diverse answers. Thanks to this question, hoteliers can improve the operation of the hotel.

Examples of answers to this question:

- Bonuses or services included in the price of accommodation;
- Sometimes there is not enough food directly in the accommodation facility;
- Sometimes a small workplace;
- Privacy, in some case – personal hygiene products;
- A nice and clear city guide as a gift, etc.

As a result of the survey, the age structure of the respondents and the type of tourism chosen by consumers were compared (Fig. 4). Almost all respondents up to 18 and older chose the cultural and educational type of tourism. Respondents from 41 to 50 and 3 people under 30 choose beach tourism. And only one person chose some other type of recreation. It can be concluded that most tourists travel in order to gain knowledge and learn the culture of other countries or regions.

1. Вкажіть ваш вік:
23 ответа



6. Який вид подорожі Вам до вподоби?
23 ответа

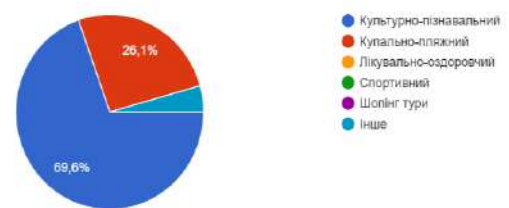


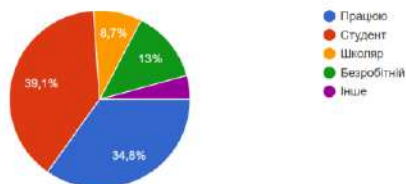
Fig. 4. Respondents' answers to the question "What kind of tourism do you like?" depending on age

Source: author's own research

The next questions for comparison were questions about the profession and which accommodation facility a person with the appropriate status would choose (Fig. 5). The following results were obtained:

- 9 respondents answered that it does not matter where to stay (worker – 2; student – 5; schoolboy – 1; unemployed – 1);
- 6 respondents answered that they would choose a hotel (worker – 3; student – 2; unemployed – 1);
- 5 survey participants prefer to rent housing (worker – 3; student – 1; unemployed – 1);
- 1 person-student said that he would most likely choose a hostel;
- 2 respondents cannot answer this question (schoolboy – 1; other – 1).

3. Ваша професія:
23 ответа



9. Де віддасте перевагу зупинятися?
23 ответа

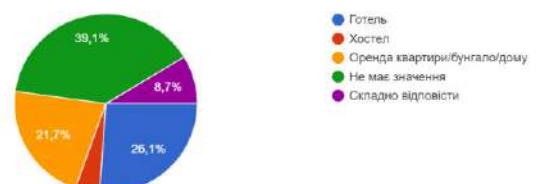


Fig. 5. Respondents' answers to the question "Where do you prefer to stay?" depending on the profession

Source: author's own research

Summarizing, it is highlighted that in most cases people don't care where to stay. Employees prefer to rent housing and some choose the "classic" – to stay in a hotel.

The survey also raised the question of what is the most important thing in a hotel (Fig. 6) and room (Fig. 7) for a tourist.

If we are talking about a hotel, the price, staff qualifications, interior service quality, and location are used to compare the degree of significance.

- 1) In the first place for the respondents is the price;
- 2) The second place is taken by the location;
- 3) The third place is taken by the quality of service;
- 4) On the fourth – personnel qualification;

5) The fifth place remains for the interior.

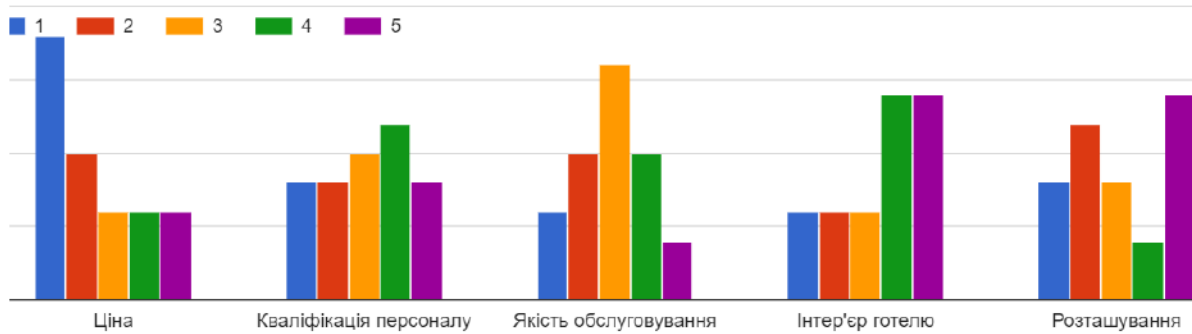


Fig. 6. Respondents' answers to the question "Estimate the value of the components of the hotel"

Source: author's own research

Therefore, the majority of consumers choose the price-to-quality ratio.

Analyzing respondents' answers to the question "Estimate the criteria for staying in the room", criteria such as silence in the room, bed, interior, view from the window, and availability of a safe were used for comparison.

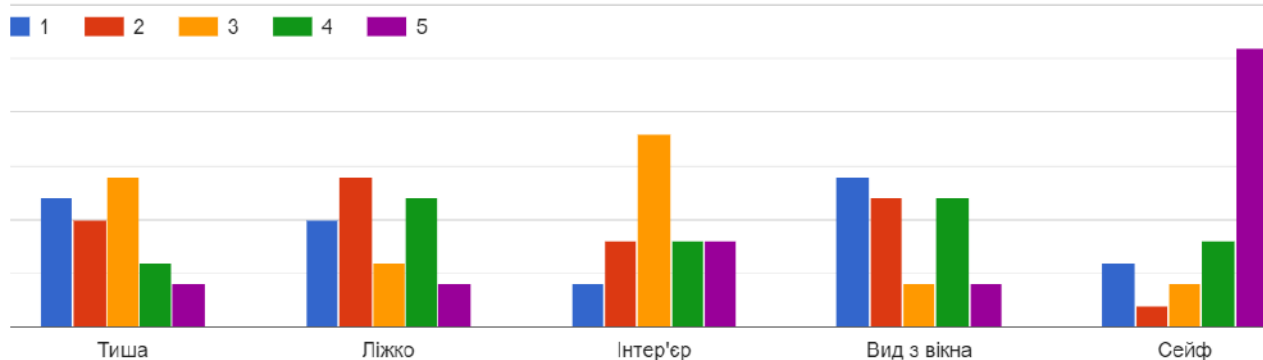


Fig. 7. Respondents' answers to the question "Estimate the criteria for staying in the room"

Source: author's own research

The following results were obtained:

- 1) The view from the window takes first place by a large margin;
- 2) The second place for most is the bed;
- 3) The third place was divided between interior and silence;
- 4) For many respondents, the safe is not an important part of the room, therefore it takes the last place.

Based on the results of this survey, hoteliers should take into account the location of the hotel and the attractive view from the window that the consumer will have. It is certain that the location is a criterion that should be given more attention, the popularity of the accommodation depends on it.

It can be concluded that the ergonomics of the capsule hotel allows it to be built, even indoors, in the center or in a part of the railway station or airport, with a small area, which will significantly reduce searches and energy consumption when implementing the hotel's business plan.

Like every hotel enterprise, a capsule hotel needs equipment, decor and material and technical base. Therefore, in the table 3, the initial investments required for the initial stage of realization of the capsule hotel are presented.

Table 3. Start-up investments for the realization of a capsule hotel

No	Cost elements	Cost, UAH
1	Capsules	660 000
2	Materials for the preparation of the hotel premises	150 000
3	TV and other electronics	33 000
4	Furniture	45 000
5	Office equipment	22 000
6	Security system	15 000
7	Plumbing	50 000
8	Capsule decor	5 000
9	Other	20 000
Total costs		1 000 000

Source: author's own research

According to the table 3 initial investments amounted to UAH 1,000,000 (a price difference of 10-15% may be observed, which is connected with the choice of equipment of different quality, as well as taking into account the exchange rate of foreign currency).

In the operation of a hotel enterprise, there are always costs, such as the payment of wages, the purchase of additional equipment, and the payment of rent. And in order to understand the payback period of the business plan, the hotelier needs to sum up all these costs and have an idea of how much of the income will fall on these costs (Table 4).

Table 4. Expenses for maintaining a capsule hotel per month

Cost elements	Cost, UAH
<i>Conditional fixed costs</i>	
1. Wages for hotel employees	62 000
2. Advertising	3 000
3. Internet, Wi-Fi	1 000
4. Payment for services of outsourcing firms	8 000
5. Renting the premises	40 000
<i>Conditional variable costs</i>	
1. Premium payments	3 000
2. Costs of materials (linen, hygiene products, stationery, etc.)	7 000
3. Payment for utility services	10 000
4. Other expenses	10 000
Total costs	144 000

Source: author's own research

So, in the table 4, the monthly expenses of the capsule hotel are indicated. Of course, they can change depending on the needs. But the table shows the line "other expenses", which makes it possible to save and redistribute funds for emergencies.

To understand how the launch of the capsule hotel will be implemented, a calendar plan-schedule has been developed, which gives us the details of the steps and their execution time, and also shows the costs at each of the stages (Table 5).

Table 5. Calendar plan-schedule of the implementation of the business project “Capsule Hotel Shangri-La”

No	Content of the stage	Implementation period, week number from the start of work												The cost of the stage, UAH	
		1	2	3	4	5	6	7	8	9	10	11	12		
1	Business registration														3 000
2	Market analysis														0
3	Search for partners														0
4	Search for premises														2 000
5	Repair work in the premises														1 000 000
6	Purchase and installation of equipment														
7	Purchase of household appliances, electronics														
8	Recruitment and training of hotel staff														0
9	Marketing activities to promote the hotel														3 000
10	Opening of a capsule hotel														3 000
Total costs														1 011 000	

Source: author's own research

According to the schedule, the process of opening the hotel will take 12 weeks (approximately 3 months). It involves the stages of analysis and search, as well as the stages of direct performance of work.

Let's calculate the revenue of the capsule hotel as follows: 50 (number of capsules) x 400 (cost per night (UAH), cell rental rate) x 0.45 (lowest indicator in the range of occupancy of the hotel) x 30 (days per month). Thus, with a hotel occupancy of 45-50% and a cost of UAH 400 per night, the revenue will be about UAH 270,000 per month. The annual revenue of the business will be UAH 3,240,000. If the costs are deducted, a net profit of UAH 501,000 per year will be obtained.

As can be seen from the calculations, the payback period of this business is quite short and will be at least 5 months, taking into account the pandemic situation and the military situation in the country. In practice, such successful projects have a payback period of 6-12 months. But there are also large projects that have a payback period of up to 2 years.

It should also be noted that the calculations take into account the use of own (non-borrowed) funds. The efficiency of this business will make it possible to use loan resources (bank loan). At the same time, of course, profitability will decrease, and the payback period of the business will increase.

V. CONCLUSIONS

So, a capsule hotel is a promising and profitable business in the hotel industry of Ukraine. Various technological advances, use of artificial intelligence in capsule hotels will contribute to the growth of the market.

Taking into account modern business conditions, reality forces to invest in well-thought-out projects that require less expenses and that will bring the greatest possible profit. Especially if such a business (capsule hotel) will not occupy a large area. Even if we consider this issue from the perspective of demography and ergonomic use of the territory, location, then such a business as a capsule hotel meets all the above-mentioned requirements. It does not need a lot of space and can accommodate most people, while large hotels have 60 rooms, capsule hotels can have 100 capsules and it will take up much less space.

It is worth noting that recently, experienced tourists pay less attention to the luxury, grandeur and stardom of the hotel, and more to comfort and price. Travelers are increasingly removing excess from the trip. BB – Bed and Breakfast – everything you need to have in an accommodation facility. And if such a hotel also provides privacy, compared to another cheap alternative – a hostel, then capsule hotels are an ideal option for temporary accommodation.

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