

Kyiv National University of Trade and Economics
Tourism and Recreation Department

FINAL QUALIFYING PAPER

on the topic:

«Innovative technologies for tourism company management»

Student of the 2^d year, group 5 a,
academic degree «Master»
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specialization «Tourism
Management»

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on “ ” 2018

Task
for a final qualifying paper

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1. Topic of a final qualifying paper (project)

«Innovative technologies for tourism company management»

Approved by the Rector's order from **25.10.2017 No. 3493**

2. Term of submitting by a student his/her terminated paper (project) **01.11.2018**

3. Initial data of the final qualifying paper (project)

Purpose of the paper (project) - to study theoretical and methodological aspects and develop the practical recommendations for implementation of innovative technologies by the tour operator “TUI”.

Object of the research - process of using of innovative technologies by the tour operator

Subject of the research – theoretical, methodological and practical instruments of realizing the innovative technologies in the tour operator “TUI”.

4. Consultants of the research and titles of subsections which were consulted:

Section	Consultant (last name and initials)	Date and signature	
		The task given	The task fulfilled
1	Zabaldina Y. B.		
2	Zabaldina Y. B.		
3	Zabaldina Y. B.		

5. Contents of a final qualifying paper (project) (list of all the sections and subsections)

INTRODUCTION

PART 1. THEORETICAL AND METHODOLOGICAL FRAMEWORK OF INNOVATIVE TECHNOLOGIES FOR TOURISM COMPANY MANAGEMENT

1.1 The concept of innovation technologies and its types

1.2. The mechanism for innovative technologies introducing in tourism

Conclusion to Part 1.

PART 2. INNOVATION TECHNOLOGIES OF TOUR OPERATOR "TUI"

2.1 The factors of innovation technologies using in tour operator "TUI"

2.2 Characteristics of business process of tour operator "TUI"

2.3 Analyzing of innovation technologies using in tour operator "TUI"

Conclusion of Part 2

PART 3. METHODS OF IMPROVING THE INNOVATIVE TECHNOLOGIES IN TOUR OPERATOR "TUI"

3.1 Providing or improving of business process technology

3.2 Economical effectivity

Conclusion to Part 3

CONCLUSIONS

REFERENCES

APPENDICES

6. Time schedule of the paper (project)

No.	Stages of a final qualifying paper (project)	Terms of a final qualifying paper (project)
1.	Choosing and approval of the final qualifying paper topic	
2.	Preparation and approval of task for the final qualifying paper	
3.	Writing and pre defense of the 1 st part of the final qualifying paper	
4.	Writing and pre defense of the 2 nd part of the final qualifying paper	
5.	Writing and preparation of scientific article	
6.	Writing and pre defense of the 3 rd part of the final qualifying paper	
7.	Preparation of the final qualifying work (title, content, introduction, references, appendices), the presentation of the finished work to the department for preliminary defense in commissions	
8.	Preliminary defense of the final qualifying work in commissions of the department	
9.	Additional processing, printing, preparation of material to final qualifying paper defense	
10.	Defense of the final qualifying paper in the Examination Board	According to the schedule

7. Date of receiving the task 01/11/2017.

8. Scientific adviser of the research

Zabaldina Y.B.

9. Head of educational and professional program

Mykhailichenko G.I.

10. The task received by the student

Semerich K.

11. Resume of a scientific adviser of a final qualifying paper

Student Katerina Semerych completed final qualifying paper in due time according to a calendar plan. Contents, structure and design of the work meet all the requirements. The work consists of introduction, three parts, conclusions, list of references and appendices.

In the final qualifying paper there were described theoretical bases of innovative technologies using in practice of mass tourism tour operator; there were developed the practical recommendations for implementation innovative technologies by the tour operator “TUI”, approaches of the promotional mix and promotional strategies as part of the total marketing program of the company. There was completed a diagnostics of the effectiveness of the economic activity of the tour operator “TUI”, especially there were researched the business activities of the tour operator “TUI”, and was evaluated the effectiveness of the digital marketing program of the company. On base of the detected shortcomings there was developed and justified (including economic justification) the expediency of implementation of the promotional marketing strategy for the tour operator “TUI”.

The work is recommended to defence at the EC.

Scientific adviser of a final qualifying research _____

Zabaldina Y.B.

12. Resume about a final qualifying paper research

A final qualifying paper can be admitted to defence in the State Examination Board.

Head of educational and professional program _____

Mykhailichenko

G.I.

Head of the Department _____

Tkachenko

T.I.

_____, _____, 2019

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INTRODUCTION

Actuality. The intellectualization of tourism in the world takes place also due to the development, adaptation and introduction of innovative technologies, whose action is aimed at ensuring the efficient use of all types of resources. At the same time, the Ukrainian tourism sector is quite inert in the use of modern technological advances, its subjects are soon imitators rather than innovators. And it significantly reduces the chances of tourism companies to take a leading place in the world tourist market. The theoretical foundations of modern innovation were laid in the works of P. Drucker, F. Valenta, and F. Perrault. Leading domestic and foreign scientists A. Chukhno, O. Kuzmich, V. Zhezhukha, O. Shevlyuga, O. Olefirenko, V. Ruban, V. Plaksin, O. Krayushkin, T. Stasyuk made a significant contribution to the research of innovation and innovation activities, D. Buchalis, S. Qui, R. Low, F. Gal, K. Veermajer, V. Novikov, G. Mikhailichenko were engaged in research of innovations in the field of tourism. The importance of studying the processes and mechanisms of innovative technologies implementation of in the field of tourism and the possibilities of using relevant foreign experience have made this research relevant.

Purpose of research: to study theoretical and methodological aspects and develop the practical recommendations for implementation of innovative technologies by the tour operator “TUI”.

In accordance with the purpose of research, **the tasks are:**

- to study the theoretical and methodological aspects and basis of innovative technologies using in tourism business;
- to find the advantages of implementation the innovative technologies in tourism business;
- to highlight the main stages of development the innovative technologies in tourism business;
- to characterize the business processes of the tour operator “TUI”;
- to analyze opportunities of using the innovative technologies by the tour

operator “TUI”;

- to make economical evaluation of innovative technologies of the tour operator “TUI”;
- to determine the effect of the implementation innovative technologies in the tour operator “TUI”.

Object – process of using the innovative technologies by the tour operator.

Subject – theoretical, methodological and practical instruments of realizing innovative technologies in the tour operator “TUI”.

During the writing of the work, the following **scientific methods** were used: bibliographic method: review of literature on this topic; system analysis: in the study of the essence of the concept historical background of innovation management; statistical and structural: to assess the state and determinants of the financial and marketing indicators of the tour operator “TUI”; scientific comparisons: to compare actual data of the reporting year with data for previous years; analysis and synthesis: for the detailed study of the object due to its dismemberment into separate components; observation: the process of innovative technologies development of the tour operator; sociological: questionnaires for workers and tourists with purpose of assessment the marketing activity.

Scientific innovation. In this scientific work was invented new approaches to innovative technologies implementation by the tour operator.

Practical value. Innovative program that was suggested by the author may be implemented in the process of realization marketing campaign of the tour operator “TUI”.

Publications. As the result of investigation of the final qualifying work was published the article «The innovation typology for the tourism sector» in digest of articles of master programs students «International tourist business» (appendix A).

Paper structure. A final qualifying paper consist of introduction, 3 main parts, conclusions, references, that includes 63 sources, 35 tables, 26 figures, 7 appendixes and 52 pages in total.

PART 1

THEORETICAL AND METHODOLOGICAL FRAMEWORK OF INNOVATIVE TECHNOLOGIES FOR TOURISM COMPANY MANAGEMENT

1.1. The concept of innovation technologies and its types

Regarding the topic of innovation types, a classification with four categories has been suggested: product, process, organizational and marketing innovations (Fig.1.1).

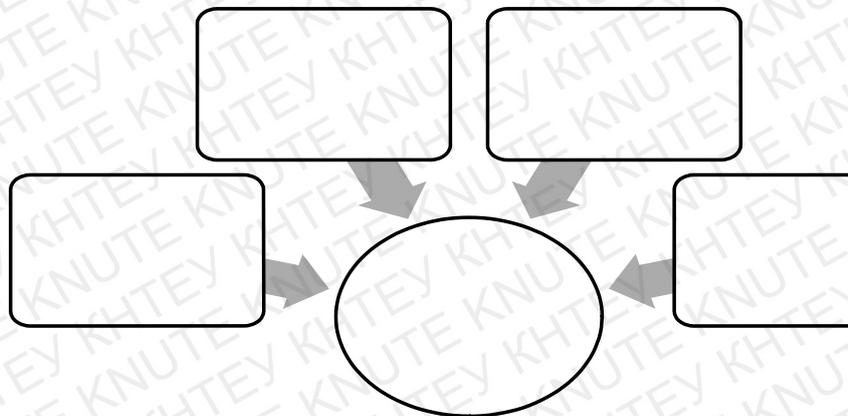


Fig.1.1. The main categories of innovations in tourism

Source: [7]

Although the four categories are relevant, the investment on one type or another depends on several factors, such as firms' strategy, sources of knowledge or technological opportunities. These innovation types may overlap. For instance, product and process innovations might be both part of the same service. Besides, the subject of degree of innovativeness has also been analyzed. It has been indicated that innovation in tourism is based on incremental changes rather than radical innovations. In this regard, the benefits of incremental innovations in the long term can be equivalent to those of radical innovations, or even greater. Furthermore, it has been pointed out that in the tourism sector tangible as well as intangible innovations emerge.

Next, the theory on sources of innovation has been adapted to the characteristics of the tourism sector in order to identify the determinants of innovation in tourism at organizational and macro levels. Since the determinants of innovation in the tourism sector can be found within as well as outside the sector, the suggested classification includes tourism organizations and institutions as well as external actors. At the level of the organization several determinants influence innovation performance. These are: type of activity, organization's size, diversification of innovation, organization's structure and strategy, innovation trajectory, collaboration with the environment, sources of external knowledge, knowledge and competences inside the organization, absorptive capacity, and type of innovation.

Besides, the determinants at the macro level are: heterogeneity, linkages between actors, institutional framework, technological trajectory, diversification and interaction with the demand.

The third and last contribution of this article has been the identification of an innovation typology for the tourism sector (table 1.2).

Table 1.2

The innovation typology for the tourism sector

Supplier dominated	Scale intensive	Knowledge intensive	Network intensive
SME's on site, e.g. hotels, restaurants and leisure activities	Large firms, e.g. leisure parks and hotel resorts	Public institutions, universities, research centres and KIBS	Large firms and support services, e.g. consultancy, financial services or IT-services
Process and product innovations	Process, organizational and marketing innovations	Product, process, organizational and marketing innovations	Product, process, organizational and marketing innovations

Source: [39]

Although innovation trajectories have been traditionally related to whole industries, intra-industry differences are possible. In fact, they are necessary, since heterogeneity enhances innovation. Therefore, in order to differentiate technological

trajectories within the tourism industry, a typology of innovation has been suggested. The level of the organization has been taken into consideration. Furthermore, groups of organizations may form a regional cluster. In this case, the characteristics of the typology might be applied at the macro level as well. Four categories have been developed: supplier dominated, scale intensive, knowledge intensive and network intensive [37]. Consider the introduction of these innovations in the tourism sector.

1.2. The mechanism for innovative technologies introducing in tourism

At the level of the organization, the main categories of innovative technologies is represented by SME's (small and medium enterprises), such as hotels, tour operators and tour agents. These SME's habitually provide services on site. They have few resources to invest in innovation. Therefore, innovations are mainly acquired from external sources. The acquisition of innovation is based on the purchase of capital goods and services, such as machinery, IT-services or financial services. Nevertheless, supplier dominated firms may also acquire knowledge from customers.

The two main types of innovations introduced by these firms are process and product innovations. First, process innovations are mainly acquired externally and are directed towards the reduction of costs. Next, product innovations may be generated from the interaction with customers. However, product innovations are the result of problemsolving situations rather than formalized processes of innovation. Innovations in supplier dominated firms are new to organizations rather than new to the market. In situations, in which the majority of firms that operate in a destination are supplier dominated firms, institutions play a major role in maintaining the cohesion of the tourism product. The main reason is that linkages between supplier dominated firms in a destination are low or inexistent. Collaboration is mainly hampered because firms see each other as competitors rather than collaborators. Consequently, organizations in such destinations do not benefit from synergies. As a result, the lack of cohesion influences the fragmentation of the tourism product. Therefore, the

labour of institutions plays a major role in creating services at destination level, motivating sustainable development, or enhancing collaboration between actors. At the macro level, concentrations of supplier dominated SME's can be found in traditional mass tourism destinations. Nevertheless, groups of supplier dominated firms can also be found in other alternative destinations [40].

Organizations in the tourism sector that can be defined as scale intensive are large firms that offer standardized products and services. Thus, firms such as hotel chains or leisure parks might be included in this category. These firms habitually have enough resources to invest in innovation. Therefore, they have the capacity to innovate regularly. Furthermore, these large firms diversify their innovation activity. Consequently, they can adapt knowledge from different sources and increment the possibilities to innovate. Scale intensive firms have a hierarchical and managerial structure. Decisions of managers play a major role in the innovation process. Furthermore, the process of innovation is habitually formalized. Therefore, bottom-up processes are included in development processes. In this context, scale intensive firms enhance the production of knowledge and competences inside the organization. For instance, these firms employ high qualified personnel, by offering career perspectives. Furthermore, innovation processes are based on the codification of knowledge, which enhances its transferability. Therefore, scale intensive firms have also the capacity to produce and use their own innovations. These organizations acquire external knowledge embodied in capital goods and services from specialized suppliers. In this matter, several sectors such as IT or KIBS play a major role. Thus, scale intensive suppliers are able to adapt technology and develop it into innovations. This is mainly due to the fact that firms in this category have high levels of absorptive capacity. Nevertheless, since services are standardized, personalization is infrequent and innovations seldom emerge from the interaction between suppliers and tourists [39].

Innovations in these firms follow a price differentiation strategy. Production of innovation is focused on process innovations in order to increase efficiency and decrease costs. Moreover, organizational innovations are directed towards the

formalization of processes. Besides, there is less investment in product innovation. As a result, products are less differentiated from those of competitors. Therefore, marketing innovations play a major role in the enhancement of market share. Given that services in such firms are less differentiated, changing conditions in the demand may influence trajectories of such firms. Although scale intensive firms combine periods of cumulative change with the introduction of radical innovations, these innovations are new to the organization rather than new to the market. Therefore, the lack on linkages with the demand may lead to periods of stagnation. At the macro level, destinations such as coastal resorts, whose structure is mainly based on one or several scale intensive firms have also difficulties in adapting to changes in demand needs. Furthermore, because firms in these destinations have enough capacity to produce their own innovations they rely less on the interaction with other actors in the destination. Linkages are mainly limited to specialized suppliers outside the destination. Furthermore, given that one or several scale intensive firms in the destination dominate the market, institutions are less able to develop a framework based on sustainable development [37].

The activities included in such category as Knowledge Intensive Tourism Organizations are related to the production of different types of knowledge. Knowledge intensive tourism organizations carry out science-based research as well as applied research. These organizations are mainly universities, research centres, government and other public institutions [39]. Nevertheless, some KIBS and entrepreneurs may also implement processes that have knowledge intensive characteristics. Although not based on research, often the processes of development of innovations in these SME's are similar to those carried out in research centres. Furthermore, KIBS play a major role in transferring the results of research developed in universities and research centres to other organizations in the tourism sector. Knowledge intensive tourism organizations invest more in research than other types of organizations. Furthermore, they enhance knowledge and competences inside the organization by investing in social capital. They employ high qualified personnel as well as enhance learning processes. Consequently, the level of professionalization

influences innovation performance. In this context, tacit as well as codified knowledge play a major role. These processes are also enhanced by the structure of such organizations, which is usually a dynamic and flexible one. Accordingly, knowledge production within organizations is based on bottom-up processes. This structure benefits also the adaptation to changing conditions in the environment. Besides, some managerial elements are introduced in the structure, such as formalization of innovation, which benefits a more systematic implementation of innovation processes. Moreover, these organizations diversify the modes of knowledge production. As a result, they have a high level of absorptive capacity. Therefore, they are able to acquire knowledge from different sources and transform them into innovations. Knowledge intensive tourism organizations are less demand driven. Since they usually deal with the production of knowledge through research processes, they habitually base their activities on the opportunities that offer technology. Innovations produced by these organizations are habitually used by other tourism organizations in the sector. Knowledge intensive tourism organizations are the main providers of innovation based on research in the sector. In this context, product, process, organizational and marketing innovations are developed. In developing such innovations, knowledge intensive tourism organizations have several objectives. They do not only aim to improve quality and efficiency in the tourism industry. They also invest in research in other important areas, such as sustainability, needs of the local population or environmental protection. Trajectories in such organizations are based on research processes. Accordingly, the development of radical innovations is preceded by cumulative development processes and a series of incremental changes. Innovations in such organizations are often new to the market. Destinations can be highly influenced by the existence of one or several important knowledge intensive tourism organizations. Innovations emerging in such environments are habitually alternative products [35]. These innovations can be very successful. Furthermore, since they are steered by public institutions, they habitually take into consideration the cohesion of the several actors in the destination. Furthermore, aspects that enhance sustainable development and benefit the local

population are taken into consideration. Accordingly, innovations are developed on the basis of internal competences [39]. In contrast, although demand needs are important, they are not the main inputs of the innovation process. Therefore, the success in the market of product innovations developed by knowledge intensive organizations is related to high levels of uncertainty. Examples at the macro level of such innovations are the transformation of old railways in tourism paths, the creation of routes among small villages with important cultural heritages, the development of the services in a national park with the aim of receiving tourists, or the adaptation of old industrial villages as tourism destinations [38].

Network Intensive Tourism Organizations This category is mainly formed by private firms. Within the tourism industry, large intermediaries such as Central Reservation Services and tour operators have network intensive characteristics. Besides, in order to enhance innovation performance, several SME's such as entrepreneurs may also rely on the linkages with the environment [40]. Outside the tourism sector, network intensive activities that support innovation in tourism are consultancy, financial services or IT-services. Furthermore, some public institutions can be included in this category as well. For instance, innovation activities of tourism offices in large cities are based on the knowledge provided by the tourism industry as well as by the demand. The activities of network intensive organizations are related to the storage and use of large amounts of information. In this context, IT-services are fundamental producers of technology for the tourism sector. Network intensive organizations also rely on IT for data processing [39]. Commercialization through internet plays a major role in these organizations. The structure of such organizations is dynamic and flexible, which makes easier the adaptation to changing conditions in the market. Moreover, innovation performance is generated through bottom-up processes. Thus, in order to produce new knowledge, interactions between individuals are enhanced within organizations. Furthermore, these organizations generally employ high qualified personnel, thereby increasing knowledge and competences inside the organization. Collaboration with the environment is an endogenous characteristic of such organizations. Network intensive tourism

organizations are linked with actors within the sector and with external actors [41]. Furthermore, they participate in local and nonlocal networks. Therefore, these organizations often develop innovation processes beyond the geographical boundaries. Although they interact with local, regional, national and global institutions, they also operate in other less institutionalized networked environments. Network intensive organizations diversify innovation processes, which benefits absorptive capacity. They also offer diversified services. As a result, they are able to acquire knowledge from different sources and transform technological opportunities into innovations. Furthermore, they acquire knowledge from users and follow changes in demand needs. The rate of innovation in these organizations is very high [42]. Accordingly, radical innovations must be introduced regularly. Innovation trajectories thus combine periods of cumulative change with the introduction of radical innovations. Furthermore, innovations in this category may be both new to the organization and new to the market. These types of organizations develop product, process, organizational and marketing innovations. Innovations have the aim of increasing product differentiation through more effective ways of producing as well as quality improvements. Only some destinations are structured with a majority of such organizations. This is the case of some large cities, where several network intensive organizations are clustered regionally. Nevertheless, these types of organizations habitually operate at national and global levels. Since they motivate linkages with the environment, other organizations may benefit from knowledge spillovers. At the macro level thus these kinds of organizations enhance innovation performance of other organizations. To sum up, there was traditionally a common belief that technological change in tourism was exclusively provided by external sectors [39].

As a result, most of tourism organizations would have been identified as supplier dominated. A new approach to knowledge production based on the interaction between individuals has shown that service activities can be high innovative as well.

Conclusion to Part 1

To sum up, in this part a classification of innovation types has been developed, the determinants of innovation in tourism have been identified and an innovation typology has been suggested. The main types of innovative technologies in tourism sector are product, process, organizational and marketing.

It's the fact that the tourism sector is represented mainly by small and medium-sized enterprises, which constantly feel a lack of funds for innovation. So, a special innovation infrastructure is needed.

Scientific and educational institutions and other special institutions could become elements of such an infrastructure, since they have great potential for accumulating funds for the introduction of innovations.

Another mechanism for introducing innovative technologies is the joint efforts of tourism market entities and co-financing of development and implementation.

PART 2

INNOVATION TECHNOLOGIES OF TOUR OPERATOR TUI UKRAINE

2.1 The factors of innovation technologies using in tour operator TUI Ukraine

TUI Ukraine is a part of the transnational corporation TUI Group. TUI Ukraine was founded in 2009 on the basis of the Ukrainian company “Voyage Kiev” and the network of travel agencies “Gallop across Europe”. In 2013, one of the strongest tour operators in Ukraine Turtess Travel became a part of TUI Ukraine, which ensured TUI leadership in the Ukrainian market as the largest multi business tour operator. TUI Ukraine serves more than 100 thousand tourists a year and includes 250 travel agencies (own and authorized). The company offers beach, sightseeing and ski vacations in mass tourist destinations, including Turkey, Egypt, Spain, Bulgaria, the Czech Republic, Italy, Croatia, Montenegro, Greece and other countries. TUI Group serves more than 30 million customers a year and offers holidays in 180 countries. TUI is one of the most profitable travel companies in the world. In the 2016/2017 fiscal year, the company increased its net profit 3 times to 1.037 billion euros, compared with the same period last year, sales amounted to 17.184 billion euros. The TUI group includes tour operators, a network of travel agencies, more than 300 hotels, 14 cruise liners, 6 airlines with the largest charter fleet in Europe - more than 130 aircraft, etc. Only in Europe TUI has more than 3,000 sales offices. The holding includes the well-known hotel chains RIU, Club Magic Life, Suntopia, Iberotel, Robinson Club, Sol Y Mar Club, Coral Sea, Jaz Resort and many others. TUI Group is a multiple winner of the prestigious international World Travel Awards. The company employs more than 76,000 people in 130 countries. The headquarters of the combined company TUI Group is located in Germany.

The legal name of the company TUI Ukraine is LLC "TTVK". TUI Ukraine operates on the basis of a tour operator license (AE series No. 272718) issued on March 13, 2014. Financial security is a bank guarantee No. 618/15-G. The amount of financial security is 20,000 (twenty thousand) euros. Financial support was provided

by PrJSC Bank for Investments and Savings. The central office of the company is located at: 03057, Kiev, st. Vadim Getman, 1-in, office 1027, 2nd floor. The company has representative offices in the following cities of Ukraine: Dnipro, Lviv, Odessa, Kharkov. General Director of TUI Ukraine is Nurkhan Chaly.

Since the purpose of the research is innovative activity, first of all, it is necessary to analyze the innovative potential of the enterprise, which is the object of research. The presence of innovative potential is a determining factor for the successful implementation of innovations. In turn, the key element of innovation potential is quality management. The basis for management is a clear definition of the mission, vision and key success factors.

TUI's mission is “We create a holiday that makes people happier.” TUI Vision:

- No. 1 clients' choice for a quality family vacation;
- a company characterized by a flexible differentiated product;
- sustainable and efficient company using advanced technologies;
- a company where everyone can realize themselves.

Values of the company: customer focus, teamwork, respect for people, efficiency and effectiveness, continuous improvement.

Key leisure concepts at TUI Ukraine are:

1. Close attention to the service – European standards. At all stages of working with a client, TUI brings European standards of service and a high level of service. TUI is the first travel company in Ukraine to implement and actively use the Mystery Shopper program to stimulate the quality work of travel agency staff.

2. Exclusive products. TUI focuses on providing customers with unique, differentiated products that other tour operators do not have. These are exclusive hotels that were previously available only to Western European tourists, and new leisure concepts that work in many resorts.

3. Reliable insurance partner. TUI is constantly collaborating with the insurance company ERV. Clients are provided with all types of travel insurance: medical insurance, insurance against flight delays and not to leave the city. Thanks to

the long-term relationship of the two companies and a streamlined system, customers receive guarantees that all possible problems will be effectively and quickly resolved.

4. Round-the-clock customer service. 24 hours a day, 7 days a week, TUI has a customer support service, client can contact it by phone 0 800 50 97 96. The hotline staff is always ready to help, offering a solution to any problem that arises, as well as tell you what hot offers company.

The official partners of TUI Ukraine, which are indicated on the website, are Raiffeisen Bank Aval, Accord Bank, UIA Airlines, Wind Rose.

The main factor of innovation is the resource potential of the enterprise. An active part of the resource potential is labor resources. The workforce of the enterprise is a personnel staff, a set of employees of different professional-qualification groups working at the enterprise. The tourism company is staffed with skilled employees. All staff have higher education, including in the field of tourism business. The system of material and moral incentives operates at the enterprise. Material incentive methods include: bonuses, giving free tickets. Moral methods include praise, gratitude, feedback, extraordinary holidays. The employee remuneration system is a fixed high salary in the summer months and a percentage of sales during the off-season and winter months. During these periods of work, the income of each employee is determined by his personal labor contribution, taking into account the final results of the firm.

Before making an analysis of the business processes of the tour operator TUI Ukraine, it is necessary to consider the organizational structure of the enterprise (Fig. 2.1), as it affects the distribution of responsibilities, information flows, the role in management decisions.

Now 20 employees work in the head office of a tourism company. Each employee fulfils the authority approved by the CEO of the enterprise.

The linear-functional type of organizational structure of TUI Ukraine provides a stable position of the enterprise in the tourist market, which was formed due to the serious and professional approach of each employee of the enterprise to the organization of business. Let's analyse the work of some important departments.

Marketing department develops and implements advertising strategy. In addition, marketing staff should identify which hotels are in high demand, which tours are most popular; what categories of people and in what quantitative composition are used by the services of the tourist enterprise; what time of the year (month) and where people prefer to go on vacation. Control over the work of the company is carried out through the accounting department, which receives information about the availability and movement of funds and various economic transactions. The legal department deals with the development of contracts and monitors their conclusion according to the wishes of the parties, both with foreign tourist enterprises and with private clients.

*Fig. 2.1. Organizational structure of the company TUI Ukraine
Source: made by author based on[62]*

In general, it can be noted that the enterprise has a rational use of staff, which is due to such factors as: ensuring the rational employment of employees; ensuring a stable and even workload of employees during the working period. This creates the conditions for successful innovation activity.

2.2 Characteristics of business process of tour operator “TUI”

When researching the innovation activity of TUI Ukraine, it is important to research the business processes of the enterprise with aim to determine what processes are automated or need automation. The main business processes of TUI Ukraine are described in Table. 2.1, among which there are 7 basics: business processes of development, marketing and others.

In the process of managing business processes, it is important to take into account information flows to enterprises. The basis of the formation of tourist flows in the conditions of digitalization of the society should be the movement of the necessary internal and external information.

Table 2.1

Characteristics of TUI Ukraine business processes

Development	Itinerary development, market analysis, selection of contractors, acquisition of purchase prices, costing and pricing, output of product price, dates of arrivals
№1 Product Development	
Marketing	Publishing on the site, uploading photos and supporting information, creating forks based on tourists / agents, creating posts on social networks, presentation of the product sales team
№2 Ready product for sale	
Sale	Advising tourists on products, reception and registration of orders, sale of tours
№3 Group set	
Reservation	Booking tours, contacting the client and consulting him at the booking stage, creating a contract and account, keeping the Terrasoft database accurate and entering into the database of contractors and clients with all data, control payments
№4 Trip Organisation	
Organisation	Contractor booking, bill payment, tour arrangements, guide submission, check outs, reporting
№ 5 Quality control	
Service	Feedback with the tourist after the trip, quality control of the realized tour, problem identification, support of tourists and agents, establishment of resale.
Resale	

Source: made by author

The study of information flows related to the formation of tourist flows on the basis of logistics allowed us to develop a scheme of movement of input and output information of the tour operator TUI Ukraine (Fig. 2.2).

Among the environmental factors that directly influence on the formation of tourist flows, the first is the demand of potential tourists and the supply of tourist services suppliers. The efficiency of movement of information flows at the tourism enterprise TUI Ukraine is ensured by automation of business processes, as logistic management of the enterprise operates with a large number of indicators and characteristics of information flows. The business process is considered as a complex of operations in business activity, which, constantly changing, influences the activity of the whole enterprise. It is through business processes that the collection,

processing, accounting, analysis and control of information used in logistics management is carried out.

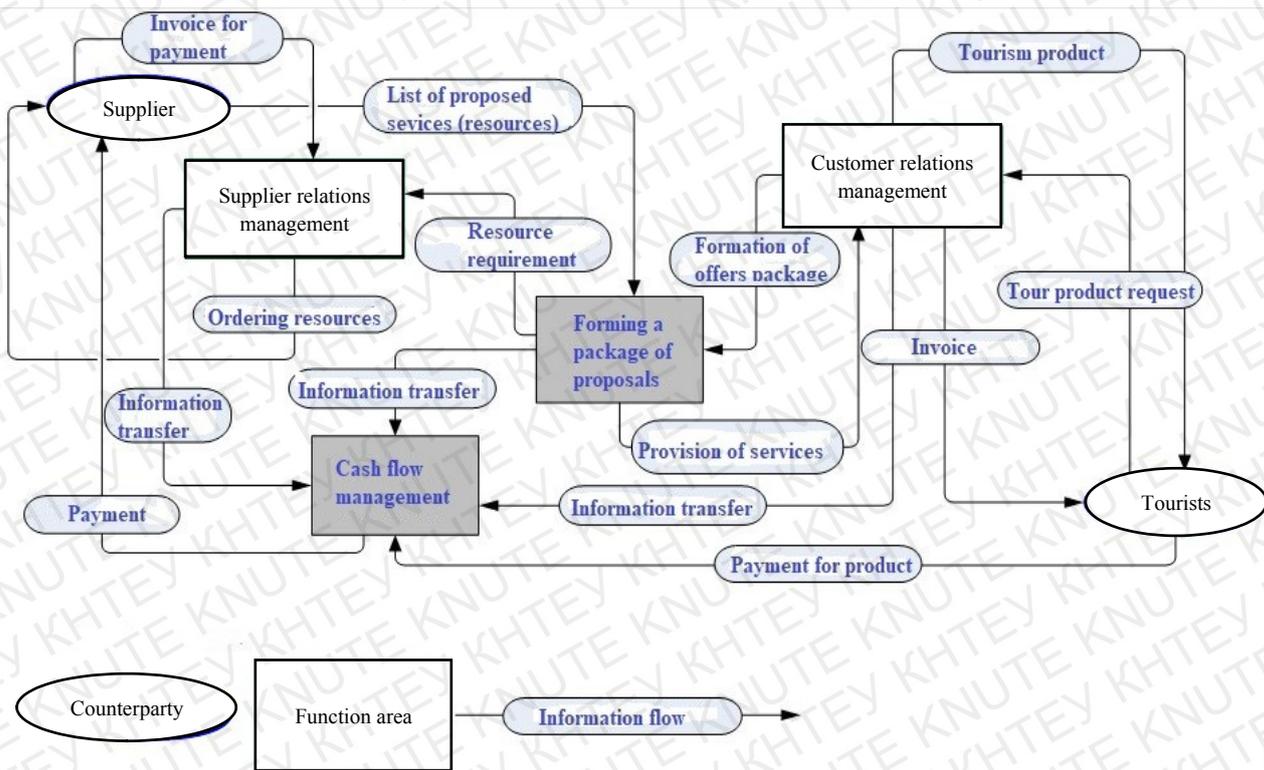


Fig. 2.2. Flow chart of information flows of the tourist enterprise TUI Ukraine

Source: made by author

The defining business processes of the tourism enterprise TUI Ukraine are relationships with customers and suppliers (Fig. 3.2).

The nature and saturation of business processes of any enterprise depend on information support of activity. Since clients order a tourist product and are willing to pay for it, and contract suppliers agree to provide the appropriate services at market prices, the management functions of the enterprise are reduced to balancing customer demand with its satisfaction through the involvement of suppliers of tourism resources and services.

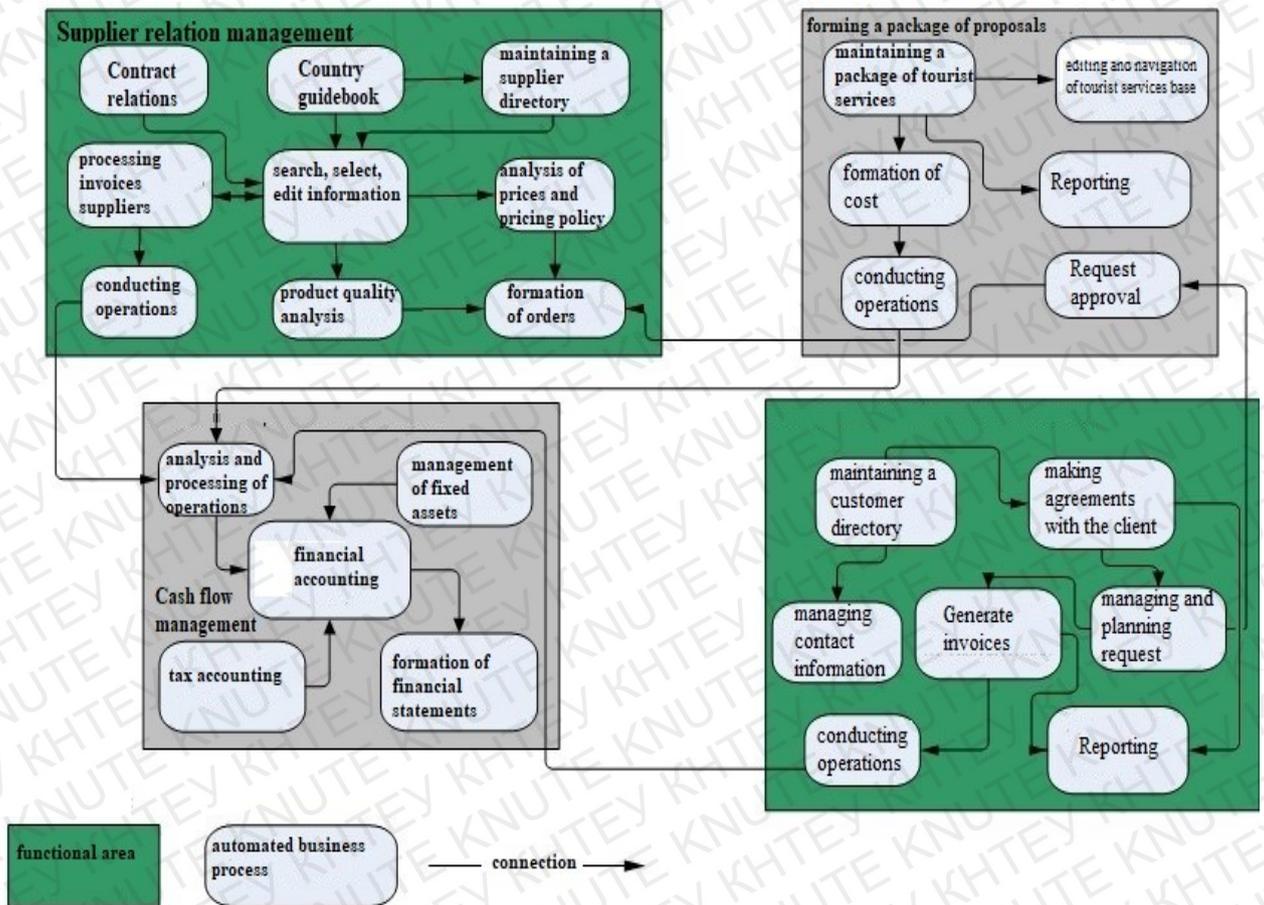


Fig. 2.3. Management of business processes of the tourist enterprise TUI Ukraine on the basis of information support

Source: made by author

The basis of the business process formation of the tourism enterprise is the creation, promotion and sale of the tourism product. The concept of the most complete satisfaction of the needs of potential consumers is at the heart of the generalization of the tourism product. This means that all operations of preparing a new or upgrading an existing tourist product must be coordinated not only with the purpose of the tour, but also with the requirements of ensuring a certain level of quality of service. A more general idea of the tour operator's activity in the production and further sale of the tourist product can be illustrated by the management procedures presented in Fig. 2.4.

Thus, the efficiency of informatization of the management of the relationship of the tourist enterprise TUI Ukraine with the buyers of the tourist product and suppliers of tourist resources and services is determined by the optimization of the net

cash flow, which is the basis for ensuring the self-development of the enterprise. Consequently, net cash flow is directly dependent on the informatization of the processes of formation, promotion and marketing of tourism product according to demand.

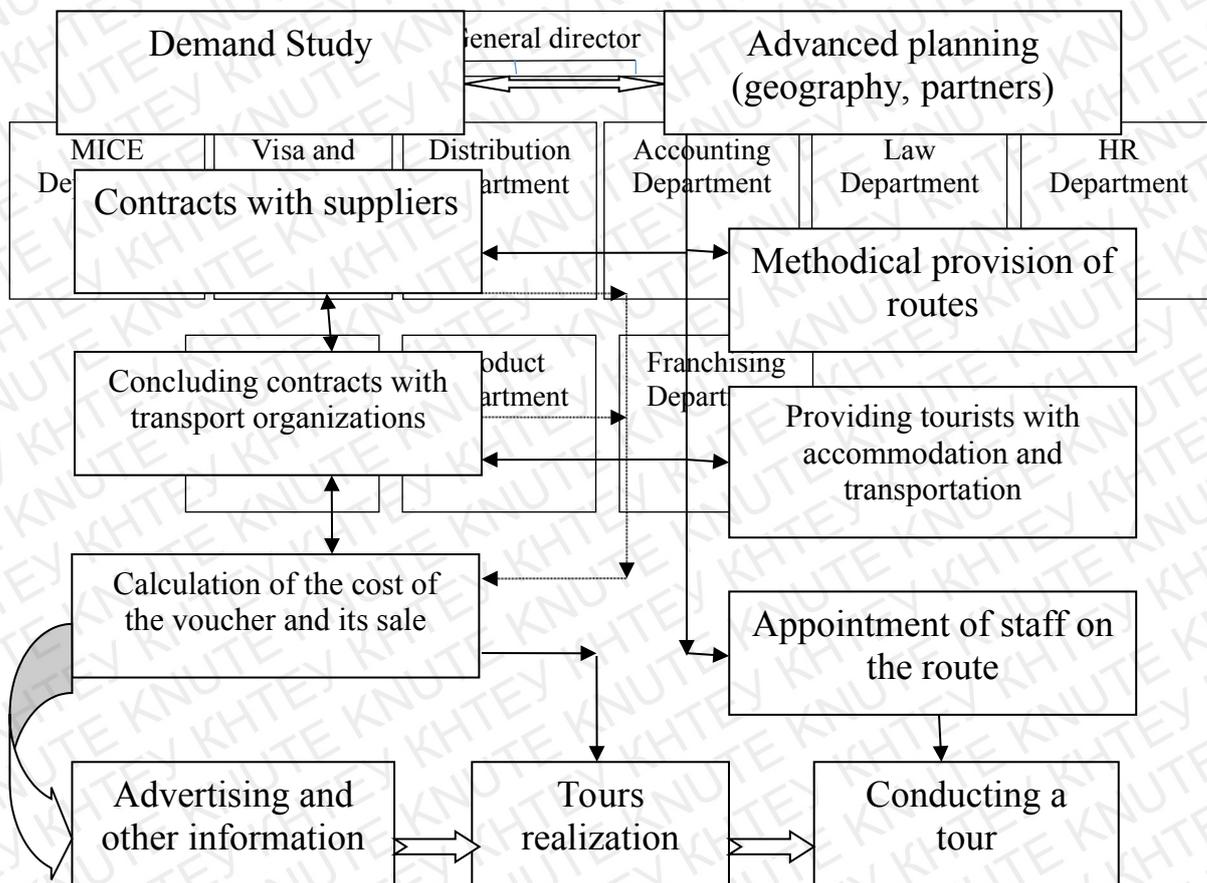


Fig. 2.4. Procedures for managing tourist product formation at TUI Ukraine

Source: made by author

For a more accurate view of the overall management picture, let us consider an assessment of the internal processes that require management decisions. Thanks to their evaluation, heads of departments will understand that, in the first place, it is worth paying attention to management. After all, these aspects affect the speed of development of the company as a whole (Table 2.2).

Table 2.2 shows that the use of internal reserves in the process of solving the tasks in the enterprise management system is at a satisfactory stage of implementation, which is associated with a high degree of workload of employees.

However, the tour operator meets the requirements of the tourist market on other indicators.

Table 2.2

**Assessment of efficiency of internal business processes of
tour operator TUI Ukraine**

№	Indicator	Characteristic	Evaluation of the degree of implementation
1	The level of involvement of executives in problem solving	Executives are aware of any changes and issues related to staff workflow.	10
2	The degree of involvement of staff in the decision-making process	Collective decisions are made at the unit level. The business owner uses comprehensive control	5
3	Timeliness of decision making	Current tasks are solved in the short term, as soon as they arise. Strategically, more time is spent.	7
4	Share of wrong decisions	Mistakes are most often caused by misunderstandings in joint projects.	4
5	The effectiveness of the decisions made	The number of interested clients in the last year of the tour operator's activity has increased, as well as the level of profit which indicates effective HR management.	8

Source: made by author

We will evaluate the quality indicators of management effectiveness TUI Ukraine in 2016-2018 and we will present the results of calculations in table. 2.3. The maximum value of an indicator is 1. The calculations are made as a result of observing the work of the company during the prediploma training.

According to the table. 2.3 we can conclude that the level of management at the enterprise had dynamics to increase from 9 to 9.8. An increase in the level of management at the enterprise indicates an increase in the number of subordinates in the manager. At the same time, the structure becomes more rational, the centralization of management functions decreases.

Table 2.3

**Assessment of quality indicators of management effectiveness of
TUI Ukraine in 2016-2018**

Indicators	Years			Absolute deviation	
	2016	2017	2018	2017-2016	2018-2017
Level of controllability	9,00	9,60	9,8	0,60	0,2
The coefficient of rationality of the structure	0,30	0,39	0,41	0,09	0,02
The degree of centralization of management functions	0,8	0,8	0,9	-	+0,1
The ratio of the number of linear and functional staff	0,29	0,30	0,27	0,01	-0,03
The purpose factor of the management structure	0,75	0,70	0,77	-0,04	0,07
Duplication ratio of functions	0,94	0,94	0,94	-	-
Depth coefficient of specialization of management work	0,79	0,89	0,92	0,10	0,02
The reliability factor of the control structure	0,32	0,95	0,64	-0,37	-0,31

Therefore, we can conclude that the tour operator is doing everything possible to meet the needs of its customers and support and further growth of its part in the tourist market of Ukraine. The tour operator provides a sufficiently high level of tourist services and has a high degree of competitiveness in the tourist services market.

In order to evaluate the quality of work of the company with clients and partners, we use the results of the study of the Ukrainian Association of Travel Agents (UATA). From March 18 to April 14, 2019, UATA conducted a survey among directors and managers of travel agencies of Ukraine about tour operators having their own charter programs in the most popular areas.

Let us analyze the results of the study. The smallest values at TUI Ukraine are such as the use of promo prices and the presence of hidden payments. For the

convenience of the site, TUI Ukraine is also not a leader. Even worse is the indicator of the relevance of prices in the selection and the fact of booking. The problem is double booking. These are problematic points that need to be improved, above all, by improving information technology innovation.

Table 2.4

Results of the evaluation of the quality of the tour operator's work in terms of convenience for the travel agent based on the winter season 2018/2019 [15]

Tour operator	1	2	3	4	5	6	7	8	9	10	GPA
Tez Tour	4,1 5	4,04	4,4 7	4,57	4,33	4,3 5	3,84	4,1 1	4,30	4,3 4	4,25
Join Up!	4,3 2	4,39	4,0 4	4,65	4,09	3,3 8	3,47	3,4 2	4,38	4,5 5	4,07
Pegas Touristik	4,0 7	3,99	4,3 7	3,87	4,15	4,1 6	3,56	3,7 8	4,09	4,4 0	4,04
Compass	3,8 6	3,55	4,1 0	4,22	4,06	3,7 6	3,49	3,6 7	3,98	4,2 0	3,89
TUI Ukraine	3,9 1	3,73	3,7 3	2,43	3,47	3,8 9	3,45	3,6 5	4,17	4,3 6	3,68
Coral Travel	3,4 6	3,11	3,9 9	2,01	3,73	4,0 3	3,37	3,5 3	4,10	4,2 6	3,56
Annex Tour	3,9 6	3,85	3,0 6	3,72	2,02	4,0 6	2,24	2,6 2	3,07	4,0 7	3,27
TPG	3,1 7	3,21	2,8 4	1,65	2,84	2,6 3	3,07	2,7 8	3,69	4,0 1	2,99
GPA	3,8 6	3,74	3,8 2	3,39	3,59	3,7 8	3,31	3,4 4	3,97	4,2 7	3,72

Note. 1 - the validity of the commission program (size, scale), 2 - site (convenience, speed), 3 - the relevance of prices in the selection and upon booking, 4 - the use of promo price, 5 - hidden payments (surcharge for the flight, fuel collection), 6 - non-confirmation of orders, 7 - evaluation of the hotline (off-hours), 8 - loyalty in resolving disputes, 9 - payment terms for early booking, 10 – invoicing

Informatization of the tourist business will simplify the processes of ordering the tourist product and the formation of tourist flows. The implementation of automation of all information flows of the tourist enterprise TUI Ukraine will help to satisfy the demand of tourists and increase the profits of participants providing tourist travel. The emotional state of the tourist depends not only on the age and

physiological features of the organism (state of health or psychological state at the time of service), but also on the education and cultural traditions of the national environment of which he is a representative, on his habits and ideas about comfort in the changing environment of existence.

2.3 Analyzing of innovation technologies using in tour operator “TUI”

Let us analyze the current state of TUI Ukraine's use of innovative technologies. The first step is to determine the level of use of information technology. Computers and specialized software for them save staff time, simplify work on the registration of tourists, provide printing of all necessary documents, reduce the likelihood of errors in the work of staff. The TUI Ukraine makes extensive use of innovative technologies in its daily work that can greatly facilitate and automate the work of managers, improve product quality and reduce costs. The work of managers of the company constantly uses a personal computer for accounting, storage, processing of information. They use various computer programs, such as Excel and a Word text editor, which simplifies the process of working with data. TUI Ukraine uses printers, scanners, computers, telephones to produce documents and their copies, to store and receive information on the activity of the enterprise, to make the necessary calculations. All this helps to reduce the time spent on the performance of certain services and the work of managers, increase the efficiency and validity of management decisions.

In addition, TUI Ukraine uses this type of modern advertising as open groups on social networks. TUI Ukraine has 6,823 members at Telegram, 428 subscribers at TUI Ukraine YouTube channel. This type of advertising gives the potential tourist the maximum amount of information about the tourist destination, helps to perceive the information through a photo gallery. In addition, the main advantage of creating a group in a social network is the ability to quickly inform about promotions, burning tours, etc. In addition, the specificity of tourist services implies the need to perform visual aids that more fully reflect objects of tourist interest, such a means is online advertising, which provides a strong effect and due to the fact that it can not only tell

and show information qualitatively, in color, but also present with sound, in motion, in a certain sequence, in an interactive mode. In this regard, the buyer can make a broader and more accurate view of the tourist product. In order to evaluate the effectiveness of official social media pages, we will compare TUI Ukraine pages with those of our main competitors (table 2.5).

Table 2.5

Popularity of official pages of the main tour operators of Ukraine on social networks

Tour operator	Facebook official page		Instagram official page	
	Number of people who like this	Number of people people follow this	Number of tweets	Number of people people follow this
TUI Ukraine	143542	148059	1 389	34900
Join Up!	36101	44439	606	28700
Tez tour	48389	51259	-	-
Annex tour	15191	19245	-	-
Coral travel	93871	106858	4265	189000

Table 2.5 shows that TUI Ukraine effectively uses social media pages as there are many posts and people who subscribe to it.

The official site is very important for the modern tourist enterprise. Table 2.6 shows the opportunities offered to travel agents through the TUI Ukraine tour operator website.

Table 2.6

Characteristics of opportunities provided by travel agents through the site of the tour operator TUI Ukraine

Functional option	Feature of site function
Download flights	quickly search for free dates for sale, including the closest ones; filtering at departure and arrival airports; indication of the number of seats (there are few, none or a specific number if there are very few places); quick access to available hotel reservations; online departure / arrival time information and flight number

Availability
of hotels

fast availability of seats for all hotels and room types in the selected region;
the ability to display only instant confirmation hotels;
hotel category filtering (for example, you can only show 5 * and 4 * hotel availability)

Search for tours	is designed to search for tours provided by the Tour Operator, with real time booking options.
Work with applications	View company history with a tour operator. Each application is stored in a database, and you can find it at any time and view all the necessary information.
Stop Sales	information on all stop sale hotels is provided. If STOP is declared during the specified period, the hotel cannot be booked

In order to check the quality of the site, Serpstat has identified the sites that are most often displayed on the popular request for "tours to Turkey" (Fig. 2.5). TUI Ukraine is not in the Top 10. It is ahead of companies that are not the largest tour operators and do not even have their own charter programs.

In order to find out the reasons for this situation, a site analysis was performed using the resource be1.ru. It is found that the site does not have keywords, which is the reason for this situation with the results of the search for the desired tours. Also, the site is not adapted for the smartphone. The page does not have some of the required attributes: the links you don't specify, the page can have only one built-in style sheet, you must make sure that you attach a custom application and more when using forms.

Keyword Research / SEO Research / Top Pages

Top Pages

Filter Total number : 259 099 Export

Filtering and sorting are not available for your account. Please upgrade to Lite or higher to get access to the tool.

#	URL	Organic Keywords	FB shares	Potential Traffic
1	https://joinup.ua/strany/turtsiya/	12 946	3	81.2K
2	http://www.coraltravel.ua/main/turkey.aspx	11 560	17	104.2K
3	https://www.poehalisnami.ua/tour/turciya	10 618	662	49.5K
4	https://brontravel.com.ua/country/turciya/	10 544	0	15.5K
5	https://www.otpusk.com/search/turkey/	10 147	151	18.5K
6	http://www.anextour.com.ua/destination/3/turkey	10 082	1	35.6K
7	https://xo.ua/turkey/	9 834	24	208.5K
8	https://farvater.travel/vse-tury-tury-v-stranu-turkey/	9 783	0	84.6K
9	https://www.aptravel.ua/turtsiya	9 691	3	7K
10	https://hottours.in.ua/catalog/turtsiya/	9 586	8	7K

Fig. 2.5. Website popularity as a result of search "tours to Turkey" (Serpstat)

You can see a graph of page visits and traffic sources in Fig. 2.6.

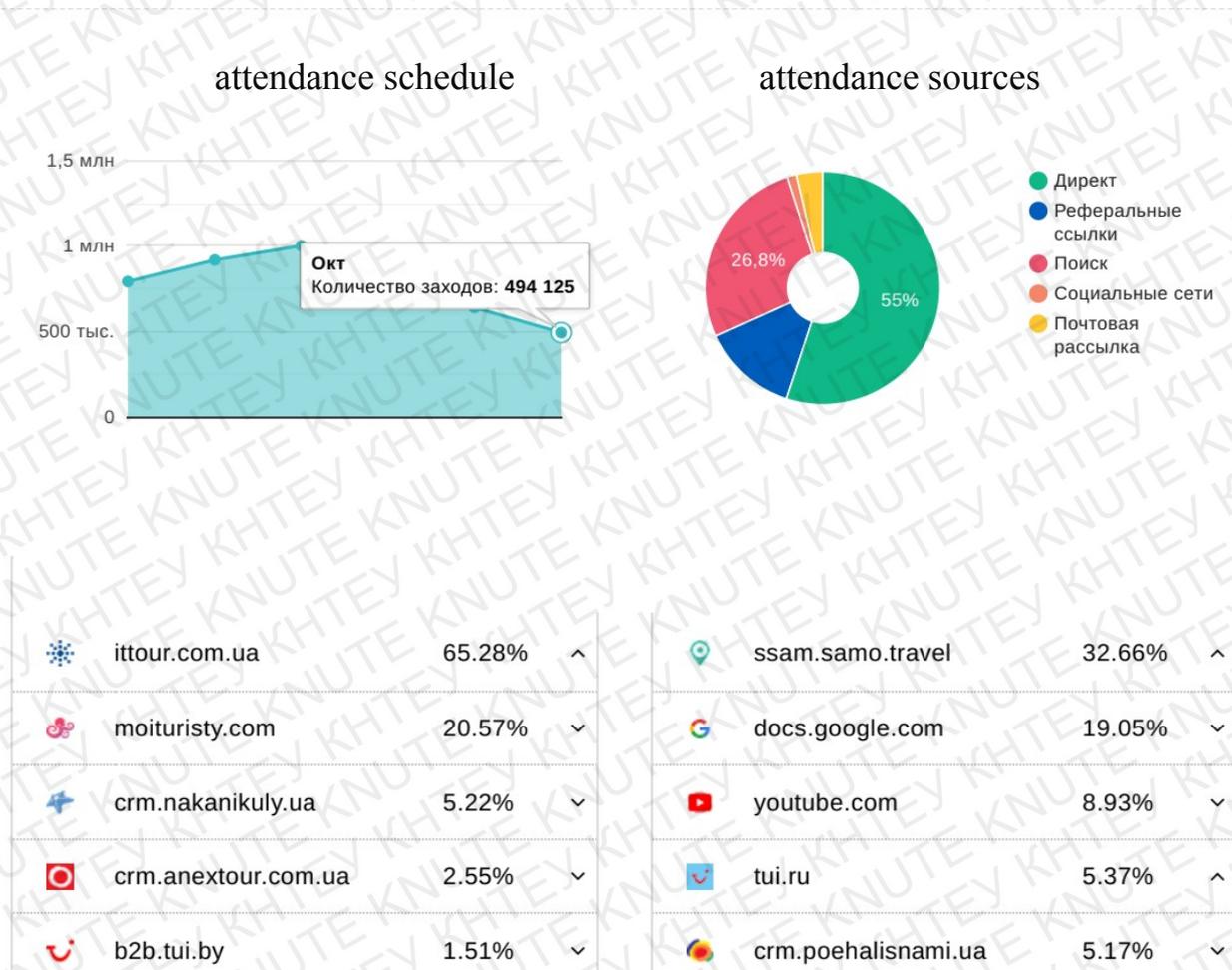


Fig. 2.6. The results of the study of TUI Ukraine site (traffic and involvement, in Russian as original)

The research of information innovative technologies of the company will be incomplete without the analysis of the specialized tourist program complex. The formation of tourist flows depends on the special information support of complex automation of tourist enterprises. The company uses the Samosoft complex. It is proposed to evaluate this software complex in comparison with two other popular software complexes used by Ukrainian tour operators (Table 2.7).

Table 2.6 shows that, despite the higher cost, Samotour meets all TUI Ukraine needs. Samotour is intended for automation of work of tourist operators and provides flexible mechanisms of pricing and determination of commission of travel agents. However, this software complex is characterized by low integration with internal

functional areas and response to external influences. The tourism product is created with the help of this software complex on the basis of individual services ordered by the client. According to the experts, the customized tourist product created in this way allows the tourist to choose the best option using the standard program parameters, and to the tourist operator to track the payment of the tour and to quote already purchased services, to control the occupancy of transport and hotels and to cooperate with the travel agents via the electronic queue system.

Table 2.7

Comparison of Samotour with other software complexes by technical parameters

Indicators	Software		
	Samotour	TurWin	Master Tour
Developer	Self-Software	Arim Soft	Megatech
The implementation environment	Delphi 3.0	-	-
Outbound tourism service	+	+	+
Inbound tourism service	+	-	+
Tour Operator Features	+	+	+
Travel agent functions	Self-Travel Agent	+	+
Source reports (number of standard forms)	More than 100	10 standard	130 reporting forms
Statistics (number of statistical reports)	12	3 charts, 2 reports	50 statistical reports
Accounting	+	+	+
Compatibility with accounting programs	+	+	+
Financial analysis	Settlement analysis	Payment procedure, payments with agencies	+
E-mail newsletter	+	+	+
Work in the locale network	+	+	+
Communication tour operator - travel agent	+	-	+
Integration with Microsoft Office	+	Complete	+
Integration with the Internet	+	-	Master Web
Cost, USD USA	From 300	450 + VAT	From 200

In September 2019, TUI Ukraine together with the Rixos hotel chain in Turkey opened in the RiverMall shopping center the first in Ukraine interactive sales office - TUI Showroom. The visitors of the interactive office are offered not only advice on choosing a tour from the manager, but also test the unique technology of immersion in the dream country with the help of such innovative features:

1. An interactive chair that reads emotions. Conveniently located in the chair of the showroom, the guest will have to watch a two-minute video and, based on his emotions and facial expressions, the gadget will recommend a country, resort or type of vacation.

2. The helmet of virtual reality. A visitor will plunge into the land of dreams right in the TUI Showroom. Underwater worlds, hotels, the best beaches in 360° format.

3. Interactive touch panel with 3D tours to the best hotels in the world. The guest will be able to virtually walk around the hotel territory before being there. Located in the waiting area, the manager will help him go on an excursion to the specified hotel.

4. Photo zone The Land Of Legends is a thematic photo zone that allows you to make a vivid photo for memory and print it in the office.

There is a list of enterprise innovations that distinguish TUI Ukraine among other tourism enterprises. Recreation innovative concepts are developed taking into account demand (Table 2.8).

Analyzing last year's requests, the company management realized that customers want a specific product, that 3-5 elements are important for them. On this basis, we created a concept for Turkey - a service for young people and for families. The concept for young people is called TUI Day & Night Connected. Based on the fact that the youth rhythm of life is a constant movement, parties have offered a product that includes entertainment. For example, next to the Hydros Hotel, which participates in the program, there are the most popular discos in Kemer, where customers can walk.

It should be noted that the tour operator uses innovative technologies when working with regular customers (TUI Friends) (Fig. 2.7). The TUI Friends program started on June 1, 2011 and has three options: TUI Start (1-3 trips), TUI Active (4-6

trips), TUI Premium (7 or more trips).

Table 2.8

Innovative vacation management concepts developed by TUI Ukraine

Concept	Description
Smart holiday concept	<p>SMART is a concept for everyone: for families and for young people who share one goal and one desire - to enjoy a quality vacation for a reasonable price. This service is a star above: animation, kids club, food and drinks, free Wi-Fi, recognizable design style and quality at an affordable price. SMART brings pleasure for everyone: natural coffee and a bakery cafe, a kids club and free ice cream, live music and a beer bar with imported drinks.</p> <p>In addition, SMART takes care of the environment, which means an environmentally friendly concept. No plastic cups and tubes, a reasonable approach to the waste of water and energy, trash bins for the separation of waste.</p>
Family Vacation Concept FUN & SUN	Family vacation thought out in detail. Includes Toucan Club for children from 4 years old, Chill Out Lounge for adults, ice cream, workshops on photo, cooking and a foreign language, Fitness & Wellness with virtuoso instructors
Youth Vacation Concept DAY & NIGHT CONNECTED	Fashionable DJ sets, branded coffee shop, free admission to the most fashionable clubs in the resort, fast Wi-Fi, workshop workshops, fresh breakfasts, parties, bathrobes and slippers in the room, outdoor sports grounds
Kids Club Mini Toucan	Animators, children's menu in the buffet "Toucan", mini-disco, smart games that develop, a modern playground
TUI Premium	<p>Specializes in serving class A + guests</p> <ul style="list-style-type: none"> • Extended insurance: coverage - 50,000 USD, without deductible; • Separate front desk and / or TUI Premium plate at the arrival airport; • Premium transfer airport - hotel - airport (max. 3 TUI Premium hotels); • TUI Concierge (24 hours support service).

Since TUI Ukraine is part of the TUI Group and meet company is also TUI Group representative, the corresponding quality and service are guaranteed both from the Ukrainian office and from the host companies. This is the choice of the best hotels, the best airline, bus company, but at the same time keeps the price policy competitive.



Fig. 2.7. CardKit mobile application for TUI Friends loyalty program members

The results of the analysis of the victorious technology of the innovations show that the real-time policy of the innovation policy is straightforward: information, product and marketing.

Conclusions on part 2

Thus, the tourist operator TUI Ukraine is a key player in the tourism market of Ukraine. This is ensured, first of all, due to the fact that TUI Ukraine is a representative of TUI Group - the leader in the global tourism market. The key factors of the innovative potential of the enterprise are its professional staff, financial stability, the company's experience, a wide network of representative offices in Ukraine, the presence of its own host companies in key tourist destinations.

At the same time, a study of the use of innovative technologies showed that the company has problems with working with travel agents related to processing requests, double booking, and the discrepancy between the price indicated on the website and the price indicated on the invoice. Another problem is the imperfection of the official website of the company. This affects the overall assessment of the effectiveness of the enterprise.

Despite these problems, enterprises are actively using information technologies (specialized computer technologies and social networks) and are developing their

own innovative concepts for organizing leisure and working with regular customers.

PART 3

IMPROVING THE BLOCKCHAIN TECHNOLOGY IN TOUR OPERATOR “TUI” (UKRAINE)

3.1. Providing or improving of blockchain technology for TUI Ukraine

Innovation is at the heart of any successful company's agenda so it is very worthy of consideration on the role that innovation plays in securing competitiveness. This paper attempts to examine the ways in which TUI Ukraine could approach the issue of innovation and competitiveness.

Nowadays TUI group pays a great attention to improving of blockchain technologies in its European offices. That's why its so important to understand the essence of blockchain.

One of the most crucial aspects of blockchain technology is that data is decentralised, with information shared across a peer-to-peer network. Each block contains transaction information and a time stamp. Blocks are also permanent and cannot be altered without consensus from the entire network and without altering all subsequent blocks [57].

The decentralised, permanent, time stamped and unalterable nature of the data recorded in the blockchain means that data is more secure, traceable and transparent. After all, there is no central point of vulnerability or failure, and the data itself is resistant to modification and unwanted tampering.

In terms of the advantages blockchain technology can offer within the travel industry, stability and security rank very highly. The decentralised nature of the blockchain means that information can never go 'offline' or be lost through accidental deletion or a malicious cyber-attack, ensuring transactions are always traceable [58].

The travel industry relies upon different companies passing information between one another. For example, travel agents need to pass customer details on to flight companies and hotels, while the personal belongings of travellers are often

passed between companies and tracked too. Blockchain can make accessing and storing important information easier and more reliable, because responsibility for storing it is shared across the whole network.

Of course, financial transactions are a vital part of the travel industry too, and blockchain technology has the capacity to not only simplify, but also secure payments. This is especially true when dealing with overseas payments. As a consequence of this, blockchain has the potential to improve the level of trust among all parties [58].

In table 3.1 the most exciting uses for blockchain technology within the tourism are presented.

Table 3.1

The most exciting uses for blockchain technology within the tourism

#	The field of using	The essence
1	Tracking Luggage	Blockchain technology can be extremely valuable for tracking the movements of luggage, especially when dealing with international travel. In many cases, a customer's luggage changes hands multiple times over the course of their journey. Using a decentralised database makes sharing tracking data between companies a lot easier.
2	Identification Services	Identification services are enormously important for the travel industry, and blockchain could potentially become the industry standard for storing this information. Used in this way, the technology has the capacity to drastically reduce check-in times, or queues in airports, as a simple finger print or retina scan can replace showing documents
3	Secure, Traceable Payments	Perhaps the most important use of blockchain technology within the hotel and tourism and travel industry is related to payments. Here, its applications can range from serving as a global ledger, making bank payments more simple and secure, through to allowing travel companies to accept payments using Bitcoin and other cryptocurrencies
4	Customer Loyalty Schemes	Blockchain can also assist with these programs, simplifying the process, allowing customers to more easily access information about their loyalty points, and allowing tokens to be distributed. It can also help to combat fraud in this area

Source: made by the author based on the data [58]

In addition to these more general examples of the way blockchain can help to transform the travel industry, there are also some more specific examples of the technology being put to good use already, such as presented in table 3.2.

Table 3.2

Examples of Blockchain Technologies In Tourism

Project	Description
LockChain	operates as a direct marketplace for hotels and hospitality companies looking to rent out property. The platform covers payment, property management and various other aspects of the booking process. Best of all, because it uses a decentralised system, there are no middlemen and no commission fees
BeeToken / Beenest	Home-sharing platform, the technology is used to put customers in touch with hosts, so that they can arrange and pay for stays. There is no commission, while payment, reputation and arbitration protocols are all in place, keeping users safe
Winding Tree	Baggage tracking via blockchain, and it also includes a booking element. The lack of third-party involvement means that booking and tracking can be achieved easily, safely and securely, with all processes benefiting from greater transparency
ShoCard & SITA	the platform will soon pave the way for a decentralised ID database, using a standard format, to allow travel companies to verify customer identification quickly and easily.
Trippki	An example of a customer loyalty reward system. Here, customers and hotel chains, or hospitality companies, are put in direct contact. Eligible customers are allocated 'TRIP' tokens for staying in a hotel and these tokens are permanently recorded in the blockchain, meaning they do not expire and can be used at any time.
TUI Bed-Swap	Using this technology, the company is able to move inventories between different points of sale and flex selling margins, in real-time, based on the level of demand that is present at that time.

Source: made by the author based on the data [58]

So, international tourism company TUI Group has apparently recognized the signs of the times and is currently implementing its own internal blockchain called Bed Swap. It optimizes the load control of hotel beds and transnational transaction processes. [57].

Blockchain is an open, distributed database that is highly secure and is the underlying technology behind cryptocurrencies such as Bitcoin. Basically, it's a computer file used for storing data that is duplicated entirely across many computers. Not one person or company controls the file. The data in the blockchain is encoded, and the only way to edit it is if you have the "key" to the block of chain you wish to edit or read. Historic data on the chain cannot be lost or corrupted. In addition to its uses in the financial world, blockchains are used whenever transactions need to be recorded securely such as in supply chains, shipping details, for government records, ownership rights, patient files, charitable contributions and more.

While TUI Group manages its internal smart contracts that can execute automatically with blockchain they eventually see how blockchain could be the foundation for a system that maintains real-time records as needed in the travel industry. For example, hotels that have extra inventory to sell could update the blockchain with that inventory and everyone could see the price and engage directly with the hotelier.

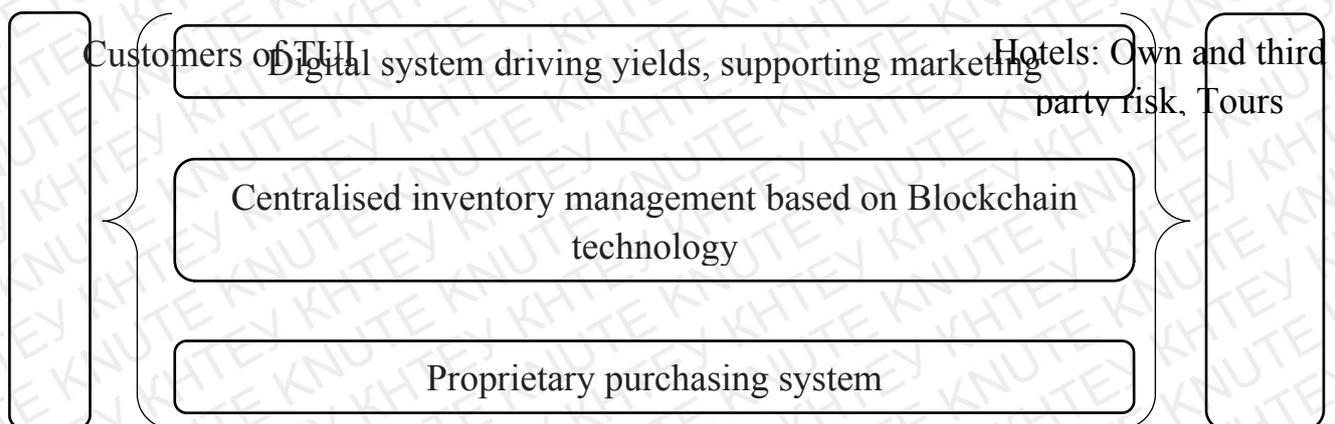


Fig. 3.1. Concept of TUI's Bed Swap project

Source: created by author on the base [55]

The company's Bed Swap project uses a blockchain-enabled system to maintain records of hotel bed inventories in real-time. That bed inventory can then be offered across markets within seconds, and there is no need for an intermediary such as Expedia to manage the information. If this technology is rolled out to the industry, and anyone can view real-time availability of rooms or flights.

While blockchain technology is only used in the UK and German markets. The Ukrainian branch of TUI has not implemented this technology so far. Therefore, the author suggests the considering the introduction of Bed Swap technology into the work of TUI Ukraine. This will help to distribute reservations in popular TUI hotels among all regions of Ukraine more correctly and logically, to optimize the process of tour packages booking (fig. 3.2)

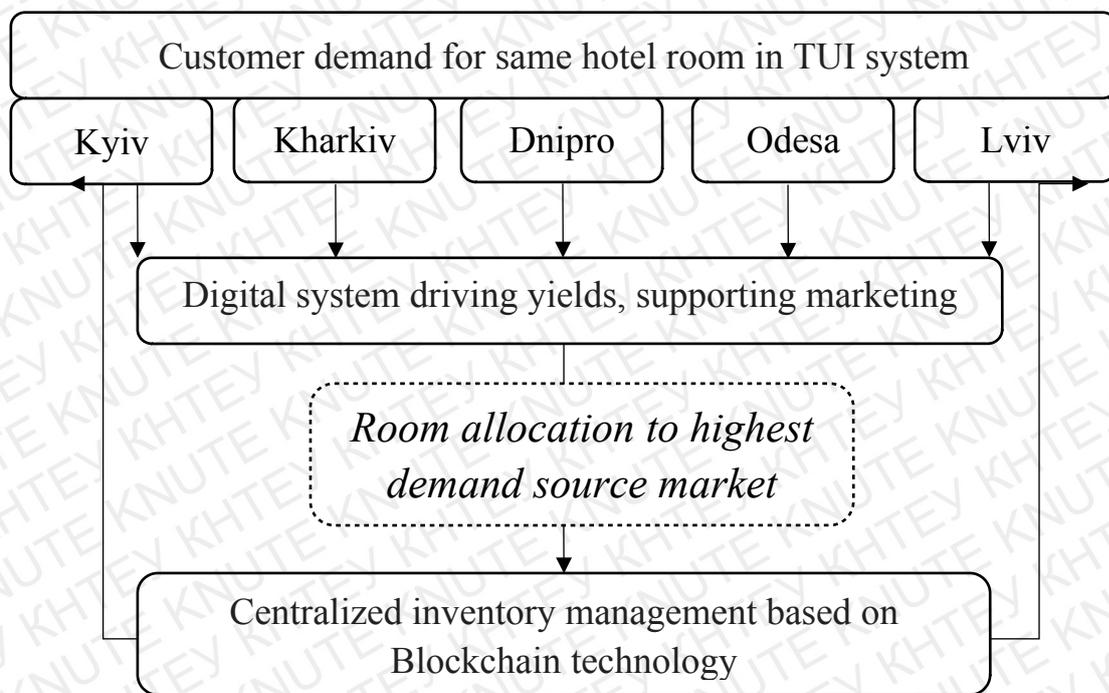


Fig. 3.2. Concept of Bed Swap for TUI Ukraine

Source: created by author

The growing Ukrainian tourist market already requires such intervention, as cases of incorrect booking, increase in the number of overbooking, double booking are quite frequent. Using blockchain technology allows to national branch of TUI to solve these problems and to distribute more correctly TUI hotel rooms in basic hotels between regional markets within Ukraine.

For a deeper understanding of the proposed technology, we consider its individual components in more detail.

The first component is yield management system. Yield management is a variable pricing strategy based on anticipating and influencing consumer behavior. The goal is to maximize revenue from a fixed, time-limited resource such as airline seats, hotel room reservations, or advertising inventory. By optimising yield management, an independent hotel, tour operators or a chain of ones can adjust its prices, to meet the total demand characteristics of its markets. Prices can be determined by service, group of services, market (consumer type or geographical), or a combination of the above. Yield management models are most effective where the service being supplied is characterised as capital intensive; perishable (revenue is lost if the product/service is not sold by a particular point in time). And the demand side is characterised with variability of demand, and variability of value [60].

These days, smart yield managers or yield management teams use specifically-developed software, particularly when formulating variable pricing strategies. Such software is a useful support for hoteliers what concerns dynamic pricing.

The core element of the system is a smart algorithm, which is based on factors such as historical bookings, events, market demand and many others. Since the heart cannot work without inflows, software can't work without being connected to the hotel program in order to elaborate historical data.

In the frontend, the result of the calculation process will be visualized in form of a calendar with price suggestions. Through the price calendar, data can be modified and sent to all channels. In addition to price suggestions, special software offers analysis tools that give a better insight into revenue management and the world of statistics and KPI. These are used to quickly and easily answer all the above questions before changing prices.

The second component of proposed technology is a inventory management system. It is by far one of the most complex tasks on travel providers' list. Time-consuming, rigid and fragmented across multiple suppliers and travel services, it is less efficient and transparent when done manually. With inventory management

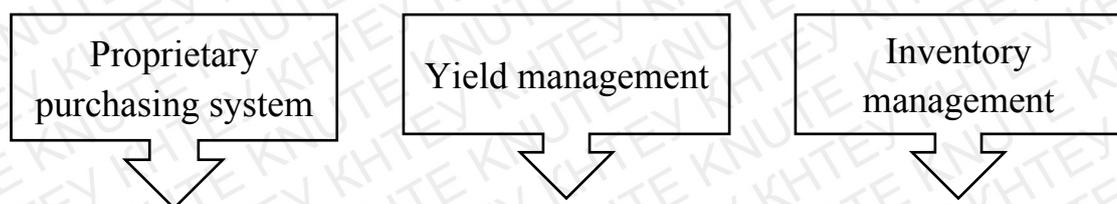
systems, hotels and tour operators receive reports on vendor performance, vendor accountability, and order management [59]:

- vendor performance: these reports show hotel/tour operator how quickly orders are being received, the cost of items, accuracy of delivery, and amount of damaged inventory received.
- vendor accountability: these help hotels/tour operators track any errors in the deliveries.
- order management: these help hotels/tour operators prevent overbooking or having out of stock items.

These are all very important, and using proper inventory controls help provide the most accurate reports and allow the hotels to order the correct amount of stock. While the main purpose of inventory control is to prevent shrinkage, hotels are also required to have controls in place to maintain compliance, such as compliance with vendors and accounting practices.

Poor visibility on the inventory often leads to overbooking, cancellations and refunds. In a blockchain, each confirmed booking, be it a direct sale or a booking made by an agent, will be added as a transaction block. All participants will thus have a unified view of the remaining inventory. It can also help airlines and hotels monitor the fill rate.

And the last component of the proposed system is proprietary purchasing system. As a rule, it is a tool to upload own direct contracts with properties and sell rooms through B2C, B2B, Mobile Apps and XML Out channels. The system supports multichannel content exchange feature where the inventories can be instantly distributed through existing customers using the same platform.



is used here to describe the implementation of a communications facility and business services utilising Internet technologies, but with access limited to authorised users. In the case of the Imminus Intranet, authorisation is limited to members of the travel and tourism trading community, as well as some organisations outside the core industry such as technology suppliers and insurance companies.

DESTIMO

CYRUS

BLOCKCHAIN

Fig. 3.3. Special solutions for TUI Group

Source: created by author on the base [55]

Now TUI Group uses special solutions for building its own yield management, inventory management, proprietary purchasing systems (fig. 3.3), and it is necessary to develop the special project to implement such solutions for TUI Ukraine.

3.2 Economical effectivity

The development of the innovative project should be assessed from the point of view of economic efficiency. The economic effect of the introduction of new blockchain tools by the tour operator “TUI Ukraine” should be reflected in increased profitability, the growth of the tourists flows, productivity, and the improvement of product quality.

To determine economic efficiency, it is necessary to determine the main cost items and reduce costs through the use of blockchain technology. Sources of expenditure can be divided into one-off capital costs and operating costs. Unique capital expenditures include: investments for initial analysis and planning, software cost, investment in training and retraining of staff. Operating expenses include: wages of service staff, costs for support materials, depreciation charges, additional costs, costs of the advertising campaign, etc.

So, in conclusion, the plan of tour operator «TUI Ukraine» blockchain technology development and implementation have been defined. The main characteristics of all Stages were considered and submitted in general table 3.3.

Table 3.3

The plan of technology Bed Swap implementation for tour operator «TUI Ukraine»

Main Stages:	Time for implementation:	Responsible employees:	KPI
Stage I. Creating a	3 weeks	Deputy General	Project team

project team		Director	with project leader
Stage II. Coordination with the headquarters of TUI Group	2 weeks	Deputy General Director	Plan of Bed Swep implementation

Continuation of Table 3.3

Stage III. Communication with software developers and software installation	3 months	IT Department.	Reports from IT Department Protocols of installation
Stage IV. Adaptation of the TUI Ukraine database	6 months	Agency Network Development.	Report from Agency Network Development about adaptation of databases
Stage V. Project's Launch	1 week	Deputy General Director	Event devoted Project Launch
Stage VI. Marketing campaign aimed at the project promoting	12 months	Marketing Department	Information about project in media (not less than 10 per month)

*Source: made by the author

Implementation of the proposed activities will also require changes to the organizational structure of TUI Ukraine. It is proposed to reorganize the company's IT department and the introduction of two staff units responsible for the implementation and technical support of the project. Also, the project team should be created for the entire period of implementation of the project. The estimated composition of the working group should include specialists from account, marketing, networking development and IT departments.

Approximate expenses for implementation the blockchain technology by the tour operator "TUI Ukraine" are calculated in the table 3.4.

As seen from the table 3.4 the total sum of initial costs in amount of 286.28 million UAH is needed for implementation of blockchain technology. Thus, the introduction of technology will become quite expensive, but a long-playing project for TUI Ukraine.

Table 3.4

Expenses for implementation the blockchain technology by the tour operator “TUI Ukraine”

№	Cost item	Expenses (UAH)	Financial Source
1.	Staff costs	480000	TUI Ukraine
2.	Implementation into Destimo	1200000	TUI Group
3.	Implementation into Cyrus	4200000	TUI Group
4.	Implementation the blockchain technology	280000000	TUI Group
5.	Event	100000	TUI Ukraine
6.	Marketing campaign	300000	TUI Ukraine
Total		286280000	

*Source: made by the author

Its implementation will require financial assistance from the headquarters of the TUI Group mainly for the implementation of software products. Such assistance can be expected only if the project is proven to be effective. That’s why we have calculated level of the income that will be achieved after using this proposes for the tour operator “TUI Ukraine” in the table 3.5. So, our advantageous proposals are really profitable and can bring to the tour operator “TUI Ukraine” the sustainable income.

Table 3.5

Expected indicators of the «TUI Ukraine» from the implementation of the blockchain technology without taking into account other factors

Increase in net income, %	Additional net income, million UAH	Costs related to the proposed improvements, million UAH	Additional income, million UAH
0	0	0,6	-0,6
1	2	1,06	0,94
2	4	4,06	-0,06

Continuation of Table 3.3

3	8	50,06	-42,06
4	14	50,06	-36,06
5	20	30,06	-10,06
6	25	30,06	-5,06
7	30	30,08	-0,08
8	34	30,08	3,92
9	38	30,08	7,92
10	40	30,08	9,92

*Source: made by the author

If we assume that the implementation of the project will bring at least 50 million UAH of income, then the payback period will be 5.7 years.

As we can conclude from the table 3.5, financial effectiveness from proposed innovation strategy will lead to positive increasing of such index as net profit.

During the first two years of strategy implementation by tour operator «TUI», we will see the overall decreasing of all expenses, but in the same time increasing of revenue from sales of tourism services. During the 2022, when the company will continue to develop, new expenses will arise, so the amount of costs for satisfying company's needs will be required. However, with the implementation of new plans, income will raise and overlap all expenses.

Conclusion to Part 3

Blockchain-based decentralization methods are the hottest topic in many industries. The blockchain helps to make data unchanged and transparent, and also offers to share it in a reliable way, eliminating the need to contact intermediaries. This approach makes transactions highly secure and efficient.

The most exciting uses for blockchain technology within the tourism are Tracking Luggage, Identification Services, Secure, Traceable Payments, Customer Loyalty Schemes. International tourism company TUI Group has apparently recognized the signs of the times and is currently implementing its own internal blockchain called Bed Swap. It optimizes the load control of hotel beds and transnational transaction processes.

It is proposed to implement Bed Swap project in Ukrainian branch of TUI Group – TUI Ukraine. This will help to distribute reservations in popular TUI hotels among all regions of Ukraine more correctly and logically, to optimize the process of tour packages booking.

The project will be build on the base of 3 main software solution: yield management system Cyrus, inventory management system as Destimo and hotel proprietary purchasing system.

The plan of tour operator «TUI Ukraine» blockchain technology development and implementation includes creating a project team, coordination with the headquarters of TUI Group, communication with software developers and software installation, adaptation of the TUI Ukraine database, project`s launch, marketing campaign aimed at the project promoting.

The estimated composition of the working group should include specialists from account, marketing, networking development and IT departments.

Project implementation will require financial assistance from the headquarters of the TUI Group mainly for the implementation of software products.

If we assume that the implementation of the project will bring at least 50 million UAH of income, then the payback period will be 5.7 years.

CONCLUSIONS

In the master's thesis was made theoretical generalization of the innovative technologies in tourism business substantiation, the importance of the role of the main tools of digital technologies in tourism business and stages of implementation of blockchain technologies are described.

Results of the conducted research made it possible to draw the following conclusions.

1. Regarding the topic of innovation types, a classification with four categories has been suggested: product, process, organizational and marketing innovations. The theory on sources of innovation has been adapted to the characteristics of the tourism sector in order to identify the determinants of innovation in tourism at organizational and macro levels. Since the determinants of innovation in the tourism sector can be found within as well as outside the sector, the suggested classification includes tourism organizations and institutions as well as external actors. At the level of the organization several determinants influence innovation performance. These are: type of activity, organization's size, diversification of innovation, organization's structure and strategy, innovation trajectory, collaboration with the environment, sources of external knowledge, knowledge and competences inside the organization, absorptive capacity, and type of innovation.

2. The tourism sector is represented mainly by small and medium-sized enterprises, which constantly feel a lack of funds for innovation. So, a special innovation infrastructure is needed. Scientific and educational institutions and other special institutions could become elements of such an infrastructure, since they have great potential for accumulating funds for the introduction of innovations. Another mechanism for introducing innovative technologies is the joint efforts of tourism market entities and co-financing of development and implementation.

3. The tourist operator TUI Ukraine is a key player in the tourism market of Ukraine. This is ensured, first of all, due to the fact that TUI Ukraine is a

representative of TUI Group - the leader in the global tourism market. The key factors of the innovative potential of the enterprise are its professional staff, financial stability, the company's experience, a wide network of representative offices in Ukraine, the presence of its own host companies in key tourist destinations. At the same time, a study of the use of innovative technologies showed that the company has problems with working with travel agents related to processing requests, double booking, and the discrepancy between the price indicated on the website and the price indicated on the invoice. Another problem is the imperfection of the official website of the company. This affects the overall assessment of the effectiveness of the enterprise.

4. Despite these problems, enterprises are actively using information technologies (specialized computer technologies and social networks) and are developing their own innovative concepts for organizing leisure and working with regular customers. Computers and specialized software for them save staff time, simplify work on the registration of tourists, provide printing of all necessary documents, reduce the likelihood of errors in the work of staff. The TUI Ukraine makes extensive use of innovative technologies in its daily work that can greatly facilitate and automate the work of managers, improve product quality and reduce costs. The work of managers of the company constantly uses a personal computer for accounting, storage, processing of information. They use different types of modern advertising as open groups on social networks. This type of advertising gives the potential tourist the maximum amount of information about the tourist destination, helps to perceive the information through a photo gallery. In addition, the main advantage of creating a group in a social network is the ability to quickly inform about promotions, burning tours, etc. The specificity of tourist services implies the need to perform visual aids that more fully reflect objects of tourist interest, such a means is online advertising, which provides a strong effect and due to the fact that it can not only tell and show information qualitatively, in color, but also present with sound, in motion, in a certain sequence, in an interactive mode

5. It is proposed to implement Bed Swap project with using of blockchain technologies within Ukrainian branch of TUI Group – TUI Ukraine. This will help to distribute reservations in popular TUI hotels among all regions of Ukraine more correctly and logically, to optimize the process of tour packages booking. The project will be build on the base of 3 main software solution: yield managerment system Cyrus, inventory management system as Destimo and hotel proprietary purchasing system. The plan of tour operator «TUI Ukraine» blockchain technology development and implementation includes creating a project team, coordination with the headquarters of TUI Group, communication with software developers and software installation, adaptation of the TUI Ukraine database, project`s launch, marketing campaign aimed at the project promoting. The estimated composition of the working group should include specialists from account, marketing, networking development and IT departments.

6. Project implementation will require financial assistance from the headquarters of the TUI Group mainly for the implementation of software products. If we assume that the implementation of the project will bring at least 50 million UAH of income, then the payback period will be 5.7 years.

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APPENDICES

Appendix A

Financial reports of the tour operator “TUI Ukraine”

WEB site of TUI Group

The screenshot shows the top section of the TUI Group website. At the top left is the TUI Group logo. To the right, there is a search bar with the text "Discover our global brands" and "EN DE". Below the logo and search bar is a horizontal navigation menu with the following items: ABOUT US, INVESTORS, MEDIA, RESPONSIBILITY, CAREER, and CONTACT. Below the navigation menu is a large banner image of a tropical beach with a white building and a sailboat. Overlaid on the banner is the text "About TUI Group". Below the banner is a breadcrumb trail: Home > About us > About TUI Group. To the right of the breadcrumb trail are social media icons for Twitter, Facebook, and LinkedIn. On the far right, there is a vertical green button that says "DONATE" with the TUI CARE FOUNDATION logo.

This section shows the main content area of the "About TUI Group" page. On the left is a vertical navigation menu with the following items: About TUI Group, Management, Vision & Values, and Strategy. In the center is a photograph of a modern office building. To the right of the photograph is a text block that reads: "TUI is the world's leading tourism group. The broad portfolio gathered under the Group umbrella consists of strong tour operators, 1,600 travel agencies and leading online portals, six airlines with around 150 aircraft, over 380 hotels, 17 cruise liners and many incoming agencies in all major holiday destinations around the globe. It covers the entire tourism value chain under one roof. This integrated offering enables us to provide our 27 million customers with an unmatched". On the far right, there is a vertical green button that says "DONATE" with the TUI CARE FOUNDATION logo.

TUI Stories

- Annual General Meeting 2019 and Q1
- Key financial information
- Interviews, speeches & presentations
- AGM
- Photos >
- Calendar
- Contact

TURNOVER						
€ million	Q3 2019	Q3 2018 adjusted	Var. %	9M 2019	9M 2018 adjusted	Var. %
Hotels & Resorts	154.5	161.0	- 4.0	425.5	448.9	- 5.2
Cruises	256.3	222.7	+ 15.1	680.9	619.6	+ 9.9
Destination Experiences	259.4	65.8	+ 294.2	562.2	131.4	+ 327.9
Holiday Experiences	670.2	449.5	+ 49.1	1,668.6	1,199.9	+ 39.1
Northern Region	1,599.6	1,616.0	- 1.0	3,722.9	3,842.6	- 3.1
Central Region	1,598.4	1,525.7	+ 4.8	3,823.1	3,761.3	+ 1.6
Western Region	804.3	846.6	- 5.0	1,861.4	1,911.2	- 2.6
Markets & Airlines	4,002.3	3,988.3	+ 0.4	9,407.4	9,515.1	- 1.1
All other segments	72.5	138.9	- 47.8	345.4	427.6	- 19.2

On the far right of the table area, there is a vertical green button that says "DONATE" with the TUI CARE FOUNDATION logo.

WEB site of TUI Ukraine


0 800 50 97 96 Многоканальный 24/7
0 800 500 394 Для экстренных звонков (после 19:00)
Подобрать тур
Офисы продаж
Статус заказа
Личный кабинет
Для агентств

ТУРЫ ГОРЯЩИЕ ТУРЫ ОТЕЛИ СТРАНЫ АКЦИИ ДОП. УСЛУГИ КОНЦЕПЦИИ ОТДЫХА TUI PREMIUM

О компании

Лицензия на Туроператорскую деятельность — серия АЕ № 272716, выдана 13 марта 2014 года. Период действия Лицензии с 20 марта 2014 года на неограниченный срок. Финансовым обеспечением ООО "ТТВК" является Банковская гарантия (срок действия с 22.10.2018 по 21.10.2019) № 618/15-Г. Размер финансового обеспечения составляет 20 000 (двадцать тысяч) евро. Финансовое обеспечение предоставлено: ЧАО «Банк инвестиций и сбережений», находящееся по адресу: 04119, г. Киев, ул. Мельникова, 83-Д. Срок действие банковской гарантии до 21.10.2019г.

TUI в мире

TUI Group (www.tuigroup.com)

Крупнейшая в мире группа компаний в сфере туризма с 40-летним опытом, образована в 2014 году в результате слияния двух холдингов: немецкой TUI AG и британской TUI Travel PLC.

TUI Group обслуживает более 30 млн клиентов в год и предлагает отдых в 180 странах мира. TUI является одной из самых прибыльных туристических компаний в мире. В 2015/2016 финансовом году компания увеличила чистую прибыль в 3 раза до 1,037 миллиарда евро, по сравнению с аналогичным показателем прошлого года, товарооборот составил 17,184 млрд евро. В группу TUI входят туроператоры, сети турагентств, более 300 отелей, 14 круизных лайнеров, 6 авиакомпаний с самым большим чартерным флотом в Европе – более 130 самолетов и др. Только в Европе TUI имеет свыше 3 000 офисов продаж. В концерн входят известные цепочки отелей RIU, Club Magic Life, Suntopia, Iberotel, Robinson Club, Sol Y Mar Club, Coral Sea, Jaz Resort и многие другие.

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Структура TUI



Перезвоним в удобное Вам время

Компания TUI предлагает самые разнообразные туристические маршруты и продукты

Направления TUI Ukraine в 2018 году



BLOCKCHAIN in Travel

& how it can create a smoother & more secure digital experience for everyone



Top Benefits

-  Cryptocurrency enables greater payment security & traceability
-  Faster payments as there are no intermediaries
-  Lower distribution costs for OTAs
-  Decentralized distribution & lower transaction fee for Hotels
-  Creation of universal reward programs & greater customer data security
-  Flight ticketing can be tokenized & dematerialized for a more secure & efficient reservation process

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Concept of TUI Group project “Bed Swap”

2 Launched 2017: Destimo purchasing and Blockchain Inventory – Opportunity to commercialise our risk inventory of 100m bed nights and our €5bn purchasing volume from 3rd party hoteliers

20m customers - Cyrus Yield Management

BLOCKCHAIN / Inventory + Destimo purchasing

Hotels: Own and third party risk, Tours

Our vision:

- Centralised inventory management based on Blockchain technology
- Cyrus: Digital system driving yields, supporting marketing of 100m bed nights to 20m customers
- Destimo: Proprietary purchasing system

CENTRALISED INVENTORY DATA BASE **BLOCKCHAIN TECHNOLOGY** **COST EFFICIENT** **ENABLING ARTIFICIAL INTELLIGENCE**

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2 Blockchain Inventory: first feature launched in July 2017 – bed swap

UK customer → **UK source market**

Customer demand for same hotel room

German customer → **German source market**

CYRUS YIELD SYSTEM → **Room allocation to highest demand source market** → **One Inventory Base** (BLOCKCHAIN)

Our vision:

- Bundling of inventory across source markets
- Artificial intelligence based demand analysis
- Bed swapping mechanism optimizes yield across source markets

INTRODUCTION IN JULY 2017 **GERMANY, UK & NORDICS** **PROPRIETARY TUI SYSTEMS** **ARTIFICIAL INTELLIGENCE BASED**

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