

POTENTIALS OF APPLYING SYSTEMS ANALYSIS AND SYNTHESIS AT OPTIMISATION OF THE STRUCTURE AND BEHAVIOUR OF THE AIRPORT COMPANY

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System Analysis and Synthesis (SAS) is one of the youngest disciplines and is an important stage in the development of systemic thinking. Her character resides in the fact that a general methodological approach to the system, to his explanation and understanding. The starting point for a multitude of other areas associated with the investigation and the proposed system. Part of the system analysis is a synthesis system, which issue is more difficult than problems of analysis. The procedure of synthesis is dependent on the results of analysis and its activities are hardly separable from the analytical work.

Key words: system analysis and synthesis, system, subsystem, an airport company

1 INTRODUCTION

In theory and in practice is growing effort to understand and solve problems as much as possible and complete search objective access to the examinee. Gradually overcoming obstacles, and solve the contradiction between the dynamics of science and practice of inertia.

System analysis and synthesis, allows the management of the new approaches in an objective discussion of problem solving and use of knowledge from different disciplines.

Using the system analysis and synthesis problem is to determine subsystems of the airport, get information on the structure and behaviour problem subsystem and rigorous analysis to ensure efficiency and improvement of the investigated object.

2 SYSTEM ANALYSIS AND SYNTHESIS

A *systematic approach* can be characterized as a major qualitative change in the way of thinking in solving specific tasks and understanding of issues.

System science seeks to ensure that the individual disciplines, which should have its own object and method. The objects of the system are systems.

Each object or phenomenon can be considered as system constitutes the basic concept of system science. It is a complex or abstract object, which are in mutual interaction and interaction with the system as a whole system of which constitute elements of the system and relations between them are called links (interactions) system.

2.1 Stages of problem solving using the systems analysis and synthesis (SAS)

A systemic analysis and synthesis is different and depends on the solution options. It is divided into seven stages:

1. Analysis of the problem situation
2. Formulation of problem and solution goals

3. Define, identify, display system
4. Analysis of the structure and behaviour of the system
5. Synthesis of system
6. Interpretation and communication solutions to the problem
7. Implementation and execution solutions

- 4 837 316, 21 € For this loss had a significant impact - increase in depreciation of 2 689 633 € and the provisioning of tangible fixed assets amounting to €1 955 267 €

3 ANALYSIS OF AIRPORT - AIRPORT BRATISLAVA (M. R. ŠTEFÁNIK AIRPORT)

Airport M. R. Štefánik is an international, national, civil, public airport, on the regular and irregular air operations.

Airport Company is state owned. The company's shares are owned National property fund of the Slovak Republic (50,30%) and the Slovak Republic by the Ministry of transport, construction and regional development of the Slovak Republic (49,70%).

3.1 Financial analysis

In 2010 occurred the previous year to increase the total value of the assets of 20 702,843 € The crucial item consists of a newly built terminal, and it mainly due to increase in tangible assets in the separate items of construction and movable assets and sets of movable assets by the amount of 67 691 793 €

Substantial changes occurred in the structure of current assets, mainly to a reduction in short-term receivables and cash - the total amount of 17 464 001 € The total loss of the company in 2010 was

3.2 Analysis of air carriers

The major contractors (airlines) Bratislava Airport, which involved the largest number of passengers carried include:

- **Ryanair**, which is the Irish low-cost airline based at Dublin Airport.
- **ČSA** is a Czech national air carrier, which is based in Prague Ruzyně airport.
- **Slovak Danube Wings** is an airline based in Bratislava, which offers regular and charter flights.
- **Travel Service** is a charter market leader in the Czech Republic, Slovakia, Hungary and also has a significant share of the Poland.

3.3 Analysis of passenger air transport

Furnished the Bratislava Airport in 2011 for arriving and departing with 1 585 064 passengers. From the 1 122 907 passengers used the offer of regular lines to / from Bratislava and 457 735 passengers chose air stay including accommodation of the travel agency. 4 422 passengers used during any other type of aviation (private flight, rescue flight, State flight and below).

3.4 Analysis of air cargo

Year of 2010 is known as the best in the history of aviation in freight traffic. This year has been a positive development and the occasional freight segment, which grew nearly 5 - fold.

The year 2011 was characterized by year-round performance of 20 530 tonnes. The power to break the record of the Bratislava airport in 2010. Equipped with air cargo volume increased by 2 813 tonnes, an increase of 16%. International freight traffic showed a regular annual growth amounting to 38%.

4 ANALYSIS SUBSYSTEMS – MARKETING DIVISION AND TRADE BRATISLAVA AIRPORT

Division of marketing and trade is a subsystem of the Bratislava airport, which deals with the analysis and forecast, supply of aviation market analysis and forecast, marketing background, market research, planning, marketing mix, marketing, organization and management, marketing control, setting business objectives in line with business plan and setting the overall strategy activity in the market.

4.1 Analysis of the structure

Division of marketing and trade has a functional organization, consisting of director of marketing and business managers, and various marketing and sales focus with marketing personnel, who create marketing team.

Strategic marketing planning, marketing and trade division includes the process of collecting marketing information, processing and analysis. It is a difficult and necessary process for setting the focus of the division in the future, to ensure the success of the airport company in the market.

Director of marketing and trade prepares a marketing plan, which is used to manage and coordinate the marketing efforts of the company.

Marketing planning, marketing and trade division is involved in the feedback mechanism to inform about the facts in an implementation process, if there are discrepancies in the positive or negative direction from expected assumptions. The flow of information is the opposite and helps marketing and sales division to correct mistakes of the previous process.

Airport company seeks to achieve its success, the chosen system of marketing elements to operate as a whole. Combining these elements creates a **marketing mix**. Through the marketing elements of the airport company aims on the one hand to satisfy their customers (passengers) and on the other hand, ensure its profitability. Marketing mix is an important sales tool and contains so. 4P - Product, Price, Promotion and Place.

Division of marketing and trade performs a **marketing control** is the responsibility of the director of marketing and trade cooperation with all the manager of marketing and trade. Marketing control provides feedback for further planning and implementation, including monitoring

operational performance, identifying causes of serious weaknesses and decisions on corrective measures to eliminate these gaps.

Primary responsibility for managing and implementing **marketing research** in marketing and sales division manager bears the marketing research. Marketing research is part of the marketing management of the airport. The solutions of the steps involved in research and marketing research professionals, who transmitted the information manager, in collaboration with other division managers, marketing and trade take appropriate marketing decisions.

The processes of marketing research include:

- defining the problem,
- research plan,
- collection of information,
- analysis of data.

4.2 Analysis of behaviour

Identifying the role of

The primary responsibility of management problems lays director of marketing and trade. Division deals with the problematic situation resulting from the bottom up, because many times subordinate employees are able to identify problems earlier and more specific than managers who do not see deep divisions marketing activities.

Epistemological the role of

Division of marketing and trade deals with learning about new trends in problem recognition properties. This uses a

consulting and training firm, which works intensively.

Diagnostic the role of

Director of marketing and trade, in collaboration with marketing and division managers regularly review the proper functioning of the division, which reflects the experience and knowledge of division employees. Therefore, director division at regular intervals, subject to checking on their employees, organizing training for them and with managers evaluates their performance and work.

Optimization the role of

If you want marketing and sales division to finalize the optimum criterion must know the real state of the resource. The main criterion of optimality for the airport and the division of profit is a long-term stability of the system. Airport company seeks to ensure optimal conditions for passengers, which will attract and increase the number of passengers and increase the profits of the airport.

Role of the variants

Selection of dealing with problem situations in marketing and sales division is the responsibilities of the director of marketing and trade. An table, which are arranged variants can solve the problem if each variant is an overview of positive and negative consequences of the alternatives.

Prognostic (predictive) the role of

Airport company has several strengths on which to plan for the future, which may contribute to the positive future

development. It has a strong market for scheduled air transport and the increasing interest in holiday travellers for departures scheduled flights. In the future, with proper marketing strategy can obtain a share of passengers from Vienna Airport and cover network connections to hubs - Prague, Munich, Frankfurt and so on.

5 THE PROPOSAL FOR IMPROVING THE OPERATION OF DIVISION OF MARKETNG AND

Current status of Bratislava Airport is reflects the status of civil aviation in the Slovak Republic, economic realities, possibilities and capabilities of people to travel, but also due to many other factors that were signed on the fact that Bratislava Airport is the only airport among EU capitals, whose performance are almost entirely dependent on foreign airlines. Bratislava Airport, within its capabilities finances itself all commercial activities, especially marketing and support programs for airlines to ensure the expansion of lines run from the airport.

Improving the internal organization of marketing and trade division should consist of knowledge and experience of qualified personnel division, who should exercise team work and thus easier to come to the realization of marketing and business goals and directly respond to the needs of passengers. Interaction is important for all managers and employees of the division and their mutual respect. Each manager must know his role, it must be understood and needs to know the

objectives and expected performance of their team and know how their personal success depends on other employees.

Implementation of the **marketing audit** is a comprehensive, systematic and periodic review of the environment, goals, strategies and activities of the company to identify problems and opportunities and to prepare actions to improve performance marketing company. Its task is to uncover problem areas early and improve the overall marketing of the company. Careful analysis of data and information received from employees and people outside the company to evaluate the most important factors that affect performance and marketing effectiveness. Marketing audit shows that the chosen path was the most profitable and efficient as possible, not whether the objectives achieved. It is strategic market behaviour to control the whole society.

Appropriate way and attempt to attract the interest of the Slovak passengers use air travel could be **viral marketing**. It is a marketing communication technique, where the further spread of the marketing message using the message recipients themselves. Source message (airport company) sends a message to the group of potential travellers, and those it according to his will and interest process. Airport company to release the message loses control over the development and dissemination of the message.

E-mail marketing can make the airport a meaningful communication strategy, in which passengers will receive an email message to his request and desire. Just e-mail marketing is one of the best tools that will enable the airport company simply to maintain contact with

passengers who show interest in its products.

6 CONCLUSION

System analysis and synthesis methodology is the examination of complex objects, such as the airport company - Airport M. R. Stefanik and troubleshooting to ensure high quality of its activities. Proper implementation of marketing and sales activities helps prevent many problems relating to the airport and their products to market entry activities and assisting the successful operation of air transport market.

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