



University of Navarra

A NEW WAY TO DEFINE OPERATIONS IN
THE HOTEL INDUSTRY

Beatriz Muñoz-Seca*
Josep Riverola*
Linda Sprague**

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* Professors of Operations Management and Technology, IESE

** FDSI, FIOM Professor at Cranfield University

Research Division
IESE
University of Navarra
Av. Pearson, 21
08034 Barcelona - Spain

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1. Introduction

In this paper we propose a framework for the analysis of Operations in the Hospitality industry, and more specifically in the Hotel sector. The arguments it contains are based on the literature, but they are also backed by the experience of the authors, who have visited more than 300 hotels in all parts of the world. They are also based on the evidence provided by an ACE research project, which has provided an opportunity to analyze databases, and on interviews with some 30-40 hotels in Bulgaria.

Visiting a place satisfactorily is a multidimensional experience. A large number of dimensions contribute to the full package. This paper presents the notion of a tourist (or traveller) as a “displaced individual”, a person who has been taken out of his/her normal operating environment and transported to a somewhat different operating environment. The operating environment is understood as a number of concurrent processes that provide the services needed for the satisfaction of the individual. We argue that whenever a person is displaced to a new environment, certain processes become unavailable to him/her, and in order to achieve satisfaction he/she needs to reconnect to them in the new environment. *We argue, then, that a hotel is simply his/her entry point into the new environment*, and the possibility of achieving a swift and satisfactory reconnection depends on the performance of the hotel and the «local environment» it provides.

Keeping in mind this differentiating aspect, in this paper we present a conceptual framework for analyzing hotel operations. First, we analyze a number of issues concerning the hotel sector that will help us to consider the relevant elements of an operations system. We then proceed to define the components of the operational structure and their values. Finally, we briefly introduce the diagnostic tool we have developed and describe how its implementation was perceived by 16 hotels in Bulgaria.

2. Relevant properties of services

To start with, we would like to remind the reader of some of the key properties of services [4,8], which we present in contraposition to the more familiar case of firms that sell goods. Although there are no enterprises that provide only goods, and indeed one could argue that to a certain extent all enterprises are service enterprises, since they all supply a package of impressions to the customer, there are nevertheless certain properties of service operations that are particularly important:

- The customer interacts very closely with the production process. In the case of industrial goods, the customer hardly ever gets a direct perception of the way the production process works; he/she just sees the results. Therefore, details that may be completely irrelevant in industrial processes (a high degree of cleanliness, for instance) may be crucial for the service customer. The so-called moment of truth [1] applies here.
- Quality is difficult to objectify; any measure of quality is subjective. Service goods normally lack a definite physical quality. This does not allow the use of objectifying procedures such as measuring, weighing, appraising, etc. In addition, many services are ephemeral; they last a short time and are difficult or impossible to reproduce. Thus, it is impossible to carry out any kind of laboratory or repetitive testing. This makes it overwhelmingly difficult to define standards or objective quality tests [9].
- Defects are critical and difficult to make good. Experience shows that a poor quality service erodes the customer's confidence in the provider of the service and may break the link between customer and provider. This we shall analyze in greater detail below.
- Operations are customer-initiated. Ultimately, the service provider has to be prepared at all times. Often, any prediction of customer arrivals can only be probabilistic, and so there is no room to relax the standards of process quality that the customer requires.

We shall understand these characteristics better if we look at the process of purchasing a service, in particular a hotel service.

3. Purchasing under uncertainty

Purchasing is a decision to exchange a good (normally money) that the customer has in hand for a package of impressions [8] (or experiences). Obviously, the package is purchased (or at least a purchase commitment is made) before full enjoyment of the object of the purchase is obtained. Therefore, buying is based on a prior evaluation of subsequent satisfaction [2]. Often, the customer is not even aware of the full spectrum of impressions that he will get from the purchasing act.

Think of buying a vacation on a Caribbean island. Will the weather be good? This is an important but uncertain factor. And more important still, you may not know that the last leg of the trip will be made in a local plane, whose state of conservation leaves much to be desired. However, even if you do not know exactly what you are purchasing, you are willing

to run the risk of purchasing it because some dimension of the perception you expect to receive carries a priori a very considerable weight [2]. This expectation ties in with all the ideas of customer expectations vs. reality that are so well documented in the literature on services [1,2,4,9].

Because of this motivating dimension, the decision to go ahead is based on the information available to the decision maker at the time of the purchase, and also on the a priori subjective assignment of probabilities to the «success» of the experience. This assignment is almost never explicit but takes the form of «trust».

Summarizing, to answer the question: How do you know whether what you are buying is worth the money? You have to rely on an a priori evaluation, since you lack the perceptual memory. The sources of evaluation you can use include:

- Brand trust. The confidence you have in a given brand, e.g. the tour operator.
- Dealer trust. The confidence you have in a dealer of the services, e.g. the travel agent.
- Third party trust. E.g., a friend tells you about a nice hotel.
- Objective tests. Very difficult in services.
- Past experience in repeat buying. Difficult in services.

The effect of a bad experience on the overall perception of the service can thus be framed in the context of an a priori evaluation of perceptions. The consumption of a service is a random experiment, with a predicted distribution of outcomes and an actual distribution of outcomes. In principle, information could be gathered by testing, i.e. repeating the experiment to learn more about the actual distribution of outcomes. But unlike in the normal testing of industrial products, here we have a kind of testing where the tester is involved in the results of the test. To put it another way, the observed has an influence on the observer. If the result of a test is negative, the observer draws a negative conclusion and revises his beliefs, raising his expectation of receiving a bad sensation. It is a kind of test that we could call *consumptive*: a test with utility for the experimenter, one in which experimenter and experiment are no longer independent. Also, if the test result is negative, the experimenter may stop the sampling immediately.

4. Purchasing tourism services

In tourism, purchasing the whole package of impressions has a great number of components and a great number of independent dimensions. It is important to distinguish between dimensions and components. The components are all the variables that measure the impressions. But not all of them are independent. Therefore, one has to speak of the dimensions of the experiment, meaning the number of independent components.

When there is a physical good at the center of the consumption experiment, many of the components are correlated, usually around certain measurable properties of the object. The fact that there is a central object may be the reason for the high correlation we find in such cases. If, for instance, we consider the purchase of a car, even if we can enumerate a large number of components of the experiment –comfort, safety, acceleration, noise, status, etc.– many of these components are related to the physical properties of the car –size, finish, engine horsepower, etc. In turn, a small number of (composite) dimensions of the object describe to a high degree the results of the consumption experiment.

Things are much less clear in the case of services, especially of complicated services such as tourism. Tourism involves experiences whose results affect almost all areas of human behavior, from the purely sensorial to the affective and intellectual. Tourists often get very complicated packages of sensations that are difficult to describe in a few dimensions, because normally they are much less correlated. Therefore, we can say that consumption experiences with goods are *focused experiments*, whereas the same experience in tourism is a *diffuse experiment*. Focused experiments, therefore, are those that can be described by a small number of dimensions. Diffuse experiments, in contrast, are described by a large number of dimensions.

This is one of the reasons why it is so difficult to make an a priori evaluation of consumption experiences. It is necessary to consider the full spectrum of dimensions to accurately assess the quality of the experience. A (big) failure in one of the dimensions can produce a negative result in the whole, but as we have said, the customer is normally only capable of concentrating on a few a priori dimensions, which we shall call the *motivating dimensions*. We define these dimensions as the customer's desires or expectations when he/she buys the hotel offer.

If the evaluation of the uncertain purchasing decision is good enough in terms of the motivating dimensions, then the decision is made. But the result will depend on all the dimensions. For instance, one of the typical dimensions is esthetic or cultural. We want to see Rome, perhaps visit the Roman remains, for historic, cultural or purely esthetic reasons, which are the motivating dimensions. Even if we have gathered information, we may decide to trust somebody who recommends a "nice hotel". But the hotel may be located in a very noisy street, and we may get a first floor room. This dimension is hardly ever considered a priori, and yet it can spoil an otherwise pleasurable experience and create a perception of a poor quality hotel. We shall assess this with our diagnostic tool.

5. The process dimensions of tourism

It is important to remember that, as we said before, traveling is displacing somebody to a new environment. We shall attach a more precise meaning to this in the following sections. However, the first implication is that all the body and mind support functions have to be kept going in the new place. Life has to go on: not just life, but life as we know it. Therefore, all of the hierarchy of human needs is represented in the result of the consumption experience. We hypothesize, with Mill and Morrison [6], that the dimensions of the touristic package are the full set of criteria in the Maslow [5] hierarchy (1). We have reworded and adapted them in the following list. This list will provide us with the main frame of the hotel

(1) Other approaches are possible. The allocentric versus psychocentric typology of people can be exploited to list travel motivations, and has been analyzed by [7] Psychocentric people are centered in themselves, concerned about the small problems of one's life. Allocentric people is one whose interest pattern are focused on varied activities. Allocentric motivations are for example Educational motives, Genealogy, Search for exotic, Sense of power and freedom, Gambling, friendship, sharpening perspectives, Political motives, Vacation on second homes. Near Allocentric motivations are religious pilgrimages, sports events, travel as challenge, Business travel, Theater tours, new life styles. Midcentric motivations are Relaxation and pleasure, contacts with friends and relatives, Health, need for a change, escaping one's problems, glamour of destination, beauty appreciation, sensual indulgence, shopping, joys of transportation, pleasure pre and post trip and family motives. Psychocentric motivations are ego enhancement and status, travel for acceptance in society, travel as cultural norm, visiting places seen in the news, visit to amusement parks. This classification is rather poor for the purposes of this paper.

operations. We postulate that the touristic experience *results in values for all the following criteria becoming processes to make the experience satisfactory.*

- *Food.* Whether for survival or for pleasure, a constant stream of it should be assured at the budgeted cost.
- *Money.* Keeping expenditures within desired limits.
- *Room.* Quality of the accommodation, meaning sleeping and resting quarters and all the facilities related to personal hygiene and so on.
- *Travel.* Transportation to places.
- *Communication.* Keeping in touch with the desired information channels, which for many people are the information channels they use in their usual place of residence.
- *Survival and safety.* Related to non-existence of unwanted hazardous situations, threats to personal safety and belongings, crime, etc.
- *Predictability and risk.* Capability of not getting unwanted and surprising results.
- *Human relationships.* Contact with other people.
- *Wellbeing and health.* Everything to do with medical care, comfort, temperature, etc.
- *Leisure and entertainment.* Capability of using spare time in the desired way.
- *Shopping and collecting.* Access to local goods for economical, souvenir or other reasons.
- *Esthetic.* Capability of enjoying desired sensorial inputs: sights, sounds, smells, etc.
- *Culture.* Capability of experiencing different approaches to living.
- *Learning.* Adding knowledge to the existing store.

The above criteria together determine the quality of the experiment of buying the full package of impressions offered by a hotel. However, as always, the above results are not obtained spontaneously. Many, if not all of them have to be «manufactured» or «produced» by Operations Systems.

6. The many operations systems

An Operations System is characterized by the goods or services that it produces. Every operations system uses a series of operations arranged in sequence to transform a set of inputs into the required outputs to be delivered to the customer. Each operation is performed in a way

that depends on the level of knowledge available, or on the technology used. We have described the properties of operations systems elsewhere [8], but we would like to point out here that one of their properties is breadth, i.e. the range of products or services that they deliver.

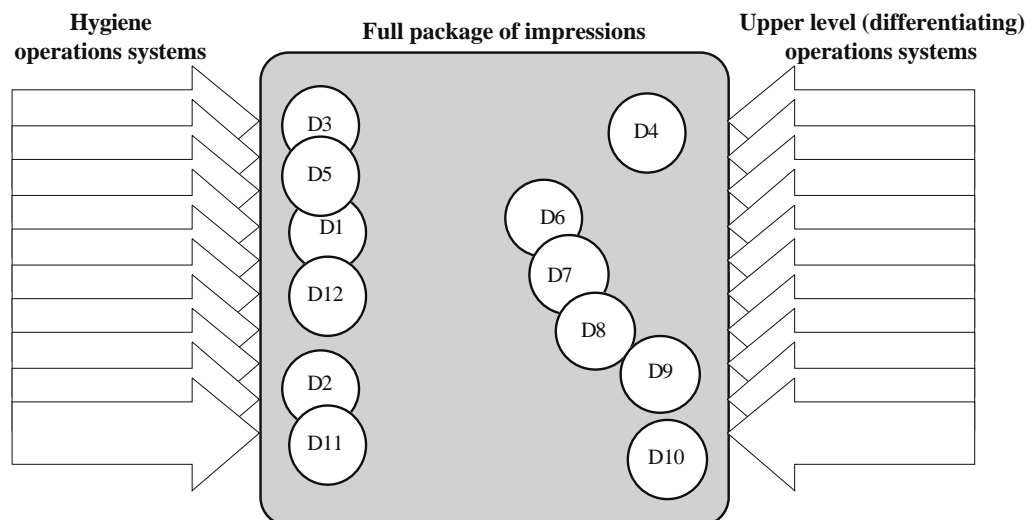
At a given stage of technological development it may be uneconomical, unfeasible or plain crazy to use the same operating system to deliver all different types of service. For example, in manufacturing industry some components are bought –rather than made in-house– and integrated into the final product. Purchasing these components allows another operations system to create the goods that are incorporated into the final product as black boxes. Thus, supplier operations processes never interact with the final customers.

In touristic operations this is not the case. Since there are so many independent dimensions, it is very rare for a single operations system to be capable of producing the full spectrum of sensations. Normally, the technology available fosters the existence of a large number of operations systems, specialized in different functions. In the tourist industry we have the Travel System, which is further specialized according to means of travel (airlines, railways, ships, buses, etc.), the Reception System (the system that picks visitors up at the endpoint of the main mode of travel and delivers them to their final destination), the Accommodation System, etc. In tourist services, because of the low correlation, we have a large number of interacting independent operations systems.

Suppliers do not integrate, and operations systems usually belong to providers of specialized services. In addition, all the operations systems come into contact with the customer. Therefore, managing the global experience may mean managing several operations systems and their interaction with the customer. Some of the systems may be very difficult to control, in terms of the quality of service provided to the customer. However all of them contribute to the overall experience.

Figure 1 aims to represent this situation. The figure makes a very preliminary distinction between Hygiene Operating Systems and Upper Level (Differentiating) Operations Systems, following the terminology proposed by Maslow [5]. We shall have to enumerate and describe in detail all the relevant systems, distinguishing between hygiene levels and upper or differentiating levels.

Figure 1



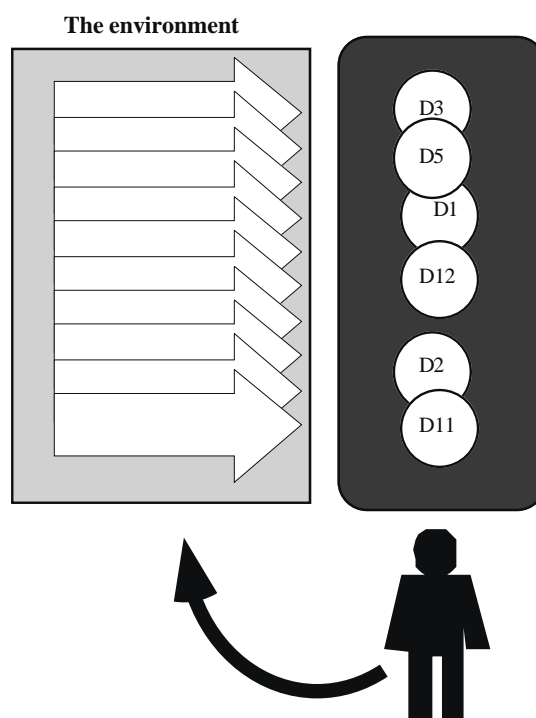
Operations systems can be used to obtain the desired results if you control –i.e. if you have sufficient knowledge about– their *entry points* (their physical location, access codes, etc.) and their *operating rules*. Let us consider the communications system as an example. Imagine that you want to use Compuserve from Ecuador. There is no phone number in Ecuador that gives direct access to Compuserve. You have to call abroad. No entry points in Ecuador for this system. Now you need to know the procedures for handling the Ecuadorian phone system. The easiest one is how to dial abroad. The reader may have a hard time trying to find out if he/she is not staying at a hotel. Four years ago, calling Europe from China was not easy or obvious at all. Of course, you could do it, but only if you knew the magic words that opened the system for you.

7. The hotel as the entry point to the environment

Since we have asserted that a tourist is inserted into a «foreign» environment, we need to characterize the environment after and before the touristic experiment. We define an environment as a number of existing operating systems that can be assessed and used by the environment inhabitants to get specific services. This is sometimes called the service sector of the economy, but we lay specific emphasis on the existence of the operations systems, rather than the services themselves. Operations systems are the relevant populators, not services. Services may be available in an environment, but you may be unable to access them owing to lack of information or knowledge. This is the typical situation whenever the insertion is sudden and brief, as it typically is in tourism.

As an aside, the structure of an environment in terms of Maslow's hierarchy is strongly related to its degree of social development. Socially developed countries are characterized by the existence of «built-in» operating systems that supply all types of services, especially higher up the Maslow hierarchy.

Figure 2



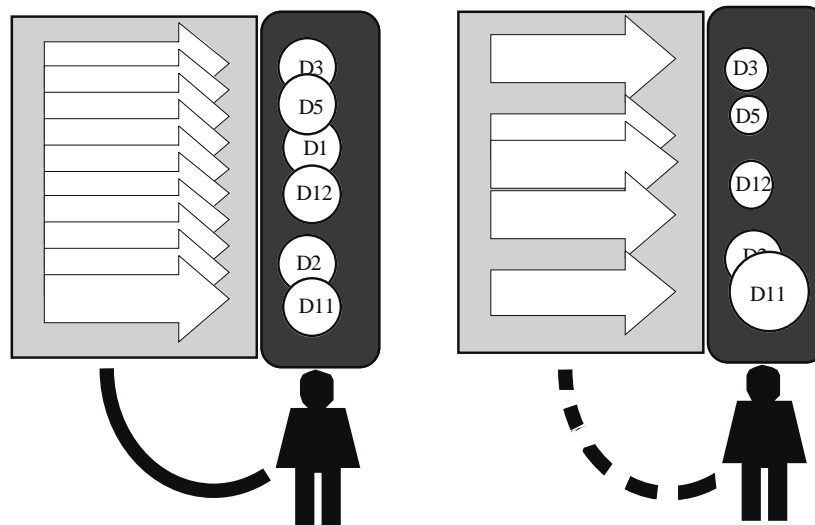
The above diagram depicts this situation. An individual who knows how to control the environment can obtain the services that deliver a given package of impressions. In general, an individual inhabiting a stable environment is capable of handling operations systems to obtain services from various types of service provider:

- *Self-supplied services.* Services provided by the individual him/herself. Shaving or combing one's hair, for instance.
- *Family unit supplied services.* Services that can be provided economically for a small number of closely related people, as in a family. Cooking food and making beds are cases in point, even if some of them are further specialized in the family unit, cooking being done by the housewife, for instance.
- *Firm supplied services.* Services provided on a commercial basis, being developed for profit and supplied through market mechanisms. Theater, movies, etc. are examples of this type of mechanism, a very large category indeed.
- *Public service.* Large scale services, provided by the public administrations. Safety systems, public transportation, etc. are examples of this type.
- *Societal services.* Services provided by the structure of the society itself. The web of ties that links individuals in a society provides high-level services, such as affection, friendship, recognition, etc. You might say that the provider is society itself, its «lore» or culture.

Now it is easy to understand the fundamental problem of the touristic experience. In moving to a new environment one suddenly has to deal with a new set of operations processes. If the cultural differences between the initial and the final position are slight, the set of processes, or rather their entry points and operating rules, will be very similar and the individual may carry on receiving the same kind of services as before.

However, this is not usually the case. The tourist wants –and seeks out– different experiences from those available in his/her normal environment. But remember that this is normally true for the motivating dimensions, not for the other dimensions. Many tourists want «new experiences», but superimposed on an environment as close as possible to the familiar one. You may want to go to China to see the wonders of Beijing, but then you want an environment that feeds you hamburgers and not Chinese food eaten with chopsticks

Figure 3. After the displacement of the individual the set of processes changes and so does their control



Thus, to provide a satisfactory touristic experience you need to make sure that the tourist can obtain the services he/she desires, and that he/she can use the processes that work differently in the new environment. You can characterize the type and degree of variation in the environment and its effect on the individual by using two simple ideas.

- *Degree of change*: Defined as the number of operating systems that have to be restored –in the sense of supplying information about their entry points– to make the experience satisfactory. This is how hotels typically cater for their guests: if you want a map of the place, you ask at reception and they give you one.
- *Degree of displacement*. Defined as the number of operating systems that have to be restored in order to make the experience satisfactory –in the sense of instructing the tourist about their rules of operation, or of providing an interface that adapts the command structure familiar to the tourist (that of their customary processes) to the new environment. This is what a guide does.

According to our research and experience, the old-fashioned conception of a hotel was as a resting place, a room for the night. In contrast, the modern view of a hotel stresses other points that lead us to our fundamental hypothesis:

A hotel is essentially an entry point to a new environment. Therefore, every hotel has to select the type of connections that it wants to provide, and how to interface them with their prospective customers. In so doing every hotel selects a mix of operating systems to implement, and of links to create to existing operating systems.

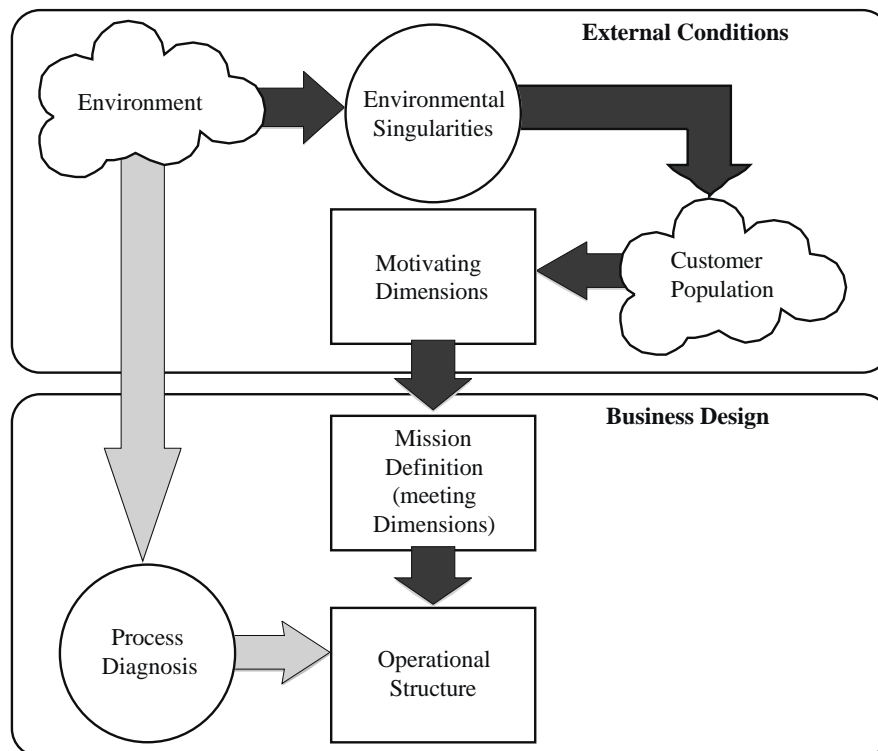
The less developed the place, the fewer existing operations systems there will be and the more such systems the hotel will need to provide. Links are mainly in terms of entry points and rules of operation.

With this main idea in mind, we are now in a position to start defining a new concept of hotel diagnosis. We shall analyze the components and agents in the hotel structure, and then provide the elements that can help us analyze the competitive position of the hotel.

8. The hotel's mission and its operational structure

In previous research it has been asserted that a hotel's mission, and therefore its way of competing, of being best, are very closely related to its location [3]. We argue that the hotel's mission is in fact related to its environment, a wider concept that includes all the processes going on in the neighborhood of the hotel. In fact, we propose the following scheme:

Figure 4



We can see that we have two differentiated elements. First, the external conditions, defined by the environment and the environmental singularities. Second, the business design, defined by the operational structure of the hotel and the links the operational structure provides with the environment.

The conceptual approach here is similar to the conceptual framework developed in a previous research paper [8]. In that paper we linked a company's operational structure to the way the company differentiates itself. We defined a number of different operational structures for different ways of competing. In other words, we developed an approach that classifies the operations of firms by profiles. These profiles have to match a differentiated way of competing.

The main difference in our hotel approach is that for us the operational structure consists of the processes the hotel itself provides and *the links the hotel provides with the processes of the environment*. Thus, the operational structure of a hotel is a combination of the profile of its own processes and the profile of the processes of the environment. Let us analyze step by step this new vision of a hotel's operational structure.

First, we have the motivating dimensions that explain why the customer has come to a specific hotel. Every hotel has a differentiated way of competing. This can be defined in terms of the location of the hotel (conveniently located close to your business meetings and thus providing easy access to your appointments), personalized service (The Ritz Carlton, with its information system to ensure differentiated care for each customer's needs), or reliability (as in the Hiltons, where everything is always similar, no matter what part of the world you are in). Thus, the customer has definite motivations for selecting a hotel. The way each hotel defines its mission is different, depending on the hotel's structure or individuality. Chain hotels have their mission defined by the corporate structure. Independent hotels can be linked to one another while maintaining their separate identity. In support of the above we can cite some of the internationally adopted classifications of hotels. For instance, City Hotels, Beach Hotels, Ski Hotels, Spa Hotels and Roadside Hotels are all categories that have the environmental approach outlined above.

In order to assess the customer's motivation we need to classify the customer's desires. The customer only knows about the environment, or operations, that he/she has interacted with. A process that he/she has not experienced does not exist for him/her. In more or less the same way, the manager can only guess at the customer's motivations and the complete structure of the environment. The following table summarizes the situation.

| | Customer | Manager |
|-------------------------|--|---|
| Motivation | Knows his/her own motivations | Guesses at the customer motivations, based on statistical evidence. |
| Environment Ops. | Experiences the effect of part of the environment operations | Partially knows the structure of the environment |
| Hotel Ops. | Experiences the effect of part of the hotel operations | Can diagnose the structure of its own operations |

The table below shows ways to gain information, but note that the customer may lack the motivation to do so if the first interaction is unsatisfactory.

| | Customer | Manager |
|-------------------------|---------------------------------------|-----------------------|
| Motivation | | – Ask the customer |
| Environment Ops. | – Only based on the «stay» experiment | – Collect information |
| Hotel Ops. | – Only based on the «stay» experiment | – Self-diagnosis |

The question now is how to define the motivating dimensions for choosing a particular hotel. We need a structure that can compare why the customer has chosen us with what we are providing, both our internal processes and the environmental processes. The purpose of this comparison is to find profiles that could help us assess customers' met and

unmet needs. Thus, we need to define a process structure and some variables that could help us measure customer satisfaction/dissatisfaction. By studying the literature, paying special attention to the Mariott analysis published in the *Cornell Quarterly* [3], and using the Mill and Robison [6] list mentioned earlier, as well as the adapted Maslow list, we have systematized a list of processes that need to be present in any hotel structure. They are:

| | |
|---------------------------|---------------------------------|
| Food | Scenery and sightseeing |
| Telephones, data networks | Business and work |
| Socializing | Mobility |
| Shopping & collecting | Police and security |
| Universities, courses | Special target group facilities |
| Room | Museums, festivals, exhibitions |
| Health & comfort | Entertainment |
| Recreational facilities | |

Processes or services for diagnosing the customer's evaluation of operations

These processes need to be analyzed according to the following three components:

- the Motivation of the customer
- the Structure of the environment
- the Structure of the hotel's own processes.

Each individual process will be valued according to two variables. One is the importance or maturity of the process, the other the value provided by the process. Thus, the motivation profile will be determined by two variables: «importance of the service» and «importance of price». Each variable will have three possible values: Not important, Important and Very important (for services), and Not willing to pay, Indifferent and Willing to pay (for price). The environment and the operations will be assessed in terms of «development» and «value». Each of these variables will also have three possible values: Undeveloped, Developed and Very well developed (for development), and Bad, Fair and Good (for value). The following tables summarize the values of the dimensions.

| Motivation | Importance of service | Importance of price |
|-------------------|------------------------------|----------------------------|
| | Not important | Not willing to pay |
| | Important | Indifferent |
| | Very Important | Willing to pay |

| Environment and Operations | Level of Development | Value |
|-----------------------------------|-----------------------------|--------------|
| | Undeveloped | Bad |
| | Developed | Fair |
| | Very well developed | Good |

The 15 processes, each with 2 levels, provide a conceptual framework for diagnosing the operational structure of hotels.

9. HODIT: a diagnostic tool

This conceptual framework has been translated into a software application called HODIT (Hotel Operations Diagnostic Interactive Tool). HODIT helps the hotel manager assess:

- The expected structure of the hotel, as defined by customers' motivations.
- The hotel operations and their congruence with customers' motivations. A new feature of our approach is the linking of the hotel operations with the processes provided by the environment.
- Recommendations on how to adapt operations to customers' expectations. In these recommendations we apply the concept of Competitive Margin (1) as a measure of the leeway in terms of competitive advantage that the hotel has, in order to fulfill the expectations of future customers.

HODIT runs in a PC environment using Windows and has been written in C++. We estimate that the time required to use the tool is 20 minutes. Both the framework and the tool have been tested on 16 hotels in the Bulgarian Black Sea resort of Varna. This has been accomplished with the help of research grant 94-172-R provided by the European Commission as part of its ACE program.

Let us consider the example of a real hotel in the Varna resort area to further understand the tool.

First step: customer motivation

The 15 processes are assigned a ranking by the decision maker. He must consider each of the services that could lead the customer to choose the hotel, and the price/value the customer associates with each process. In assessing value, the customer may feel that the price of the hotel is a fair compensation for the services received as a result of these processes, and that he/she is not willing to pay any extra money for them. Alternatively, he/she may feel that a particular process provides extra value, and may even be willing to pay a surcharge to enjoy it as it is.

The three levels are:

Rank the services as

Not Important
Important
Very important

Give your view of the importance of price

1. Not willing to pay
2. Indifferent
3. Willing to pay

(1) Competitive margin is a concept developed by one of the authors. It defines the cushion that a firm has, to be able to react to the client needs. The firm can provide more "service" to the client that he/she expects, and has the necessary margin to react promptly to a client's more incisive demands. For instance, the processes could be organized so that the firm can be faster in reaction time than currently necessary. This provides a competitive cushion to reach long term competitive advantage.

(2) He/she.

Let us consider the example of the Bulgarian hotel. In Table 1 below we see the manager's evaluation of customer motivation in each process.

Table 1. Values of motivation

| <i>1</i> | <i>2</i> | <i>3</i> | <i>4</i> | <i>5</i> | <i>6</i> | <i>7</i> | <i>8</i> | <i>9</i> | <i>10</i> | <i>11</i> | <i>12</i> | <i>13</i> | <i>14</i> | <i>15</i> |
|----------------------------------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Motivation | | | | | | | | | | | | | | |
| 3 | 3 | 2 | 3 | 2 | 3 | 2 | 2 | 1 | 2 | 2 | 2 | 2 | 1 | 3 |
| Motivation – Importance of Price | | | | | | | | | | | | | | |
| 3 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 1 | 1 | 2 | 2 | 2 | 3 | 3 |

- | | | |
|-----------------------------|------------------------------------|-------------------------------------|
| 1. Food | 6. Police & security | 11. Shopping, collecting |
| 2. Room | 7. Socialising | 12. Scenery, sightseeing |
| 3. Mobility | 8. Recreational facilities | 13. Museums, festivals, exhibitions |
| 4. Telephone, data networks | 9. Special target group facilities | 14. Universities, courses |
| 5. Health & comfort | 10. Entertainment | 15. Business & work |

We can interpret this assessment of customers' perceptions of importance and associated value as follows:

- *Very important:* Food (willing to pay), Room (willing to pay), Telephone & data networks (willing to pay), Police & security (indifferent), Business & work (willing to pay).
- *Important:* Mobility (willing to pay), Health & comfort (indifferent), Socializing (willing to pay), Recreational facilities (willing to pay), Entertainment (not willing to pay), Shopping & collecting (indifferent), Scenery & sightseeing (indifferent), Museums, festivals & exhibitions (indifferent).
- *Not important:* Special target group facilities (not willing to pay), Universities & courses (not willing to pay).

This diagnosis gives us a profile of customer expectations. Now, HODIT goes on to evaluate the processes provided by the environment and their accessibility.

Second step: environmental processes

As a second step, HODIT evaluates the processes provided by the environment and their accessibility. Accessibility is a crucial element in diagnosing the environment. For instance, we might have an airport close by, but the road may be in very bad condition, so we have to use a riverboat to get there. This is not an easily accessible process. The hotel has to evaluate its environment accessibility in order to evaluate the environment what offers to its customers.

Accessibility is defined by 3 values: 0, 0.5 and 1 (bad accessibility, fair accessibility, good accessibility). To define the overall profile of the environment, the evaluation of accessibility needs to be combined with an evaluation of the environment processes. We do this by combining the environment profile with the accessibility values. HODIT does this by simply multiplying the two values.

| LEVEL | VALUE | Accessibility |
|-----------------------|---------|---------------|
| – Undeveloped | 1. Bad | 0 Bad |
| – Developed | 2. Fair | 0.5 Fair |
| – Very well developed | 3. Good | 1 Good |

Table 2. Environment and accessibility profile

| <i>1</i> | <i>2</i> | <i>3</i> | <i>4</i> | <i>5</i> | <i>6</i> | <i>7</i> | <i>8</i> | <i>9</i> | <i>10</i> | <i>11</i> | <i>12</i> | <i>13</i> | <i>14</i> | <i>15</i> |
|-----------------------------|----------|----------|----------|----------|----------|----------|----------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| Motivation – Level | | | | | | | | | | | | | | |
| 2 | 2 | 1 | 2 | 1 | 1 | 1 | 1 | 1 | 2 | 3 | 1 | 3 | 1 | 2 |
| Environment – Value | | | | | | | | | | | | | | |
| .5 | .5 | .5 | .5 | .5 | .5 | .5 | .5 | .5 | .5 | .5 | .5 | .5 | .5 | .5 |
| Environment – Accessibility | | | | | | | | | | | | | | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |

- | | | |
|-----------------------------|------------------------------------|-------------------------------------|
| 1. Food | 6. Police & security | 11. Shopping, collecting |
| 2. Room | 7. Socialising | 12. Scenery, sightseeing |
| 3. Mobility | 8. Recreational facilities | 13. Museums, festivals, exhibitions |
| 4. Telephone, data networks | 9. Special target group facilities | 14. Universities, courses |
| 5. Health & comfort | 10. Entertainment | 15. Business & work |

Let us take an example of the profile provided in Table 2. The «Food» process is «developed» (level 2) in the environment, has a «fair» value (level 2) and «fair» accessibility (0.5). In contrast, the «recreational facilities» process is «undeveloped», with only «fair» value and «fair» accessibility.

Once the environment profile has been determined, HODIT moves on to the next step, which is an evaluation of the internal processes of the hotel operations.

Third step: hotel operations

For the operations in the hotel we use the same three levels as before, plus the value perceived by the customer as a result of his/her interaction with each process. The customer «experiences» the processes and should be able to assign them a value.

| LEVEL | VALUE |
|-----------------------|---------|
| – Undeveloped | 1. Bad |
| – Developed | 2. Fair |
| – Very well developed | 3. Good |

Table 3. The values of the operations profile

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 |
|--------------------|---|---|---|---|---|---|---|---|----|----|----|----|----|----|
| Operations – Level | | | | | | | | | | | | | | |
| 3 | 3 | 2 | 3 | 2 | 2 | 2 | 2 | 1 | 2 | 3 | 1 | 2 | 1 | 2 |
| Operations – Value | | | | | | | | | | | | | | |
| 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 | 2 |

- | | | |
|-----------------------------|------------------------------------|-------------------------------------|
| 1. Food | 6. Police & security | 11. Shopping, collecting |
| 2. Room | 7. Socialising | 12. Scenery, sightseeing |
| 3. Mobility | 8. Recreational facilities | 13. Museums, festivals, exhibitions |
| 4. Telephone, data networks | 9. Special target group facilities | 14. Universities, courses |
| 5. Health & comfort | 10. Entertainment | 15. Business & work |

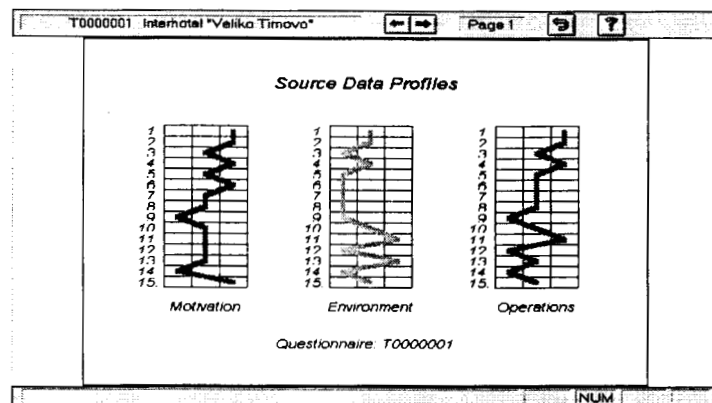
For instance, the «Food» process is «very well developed», but its value is merely «fair». In contrast, the «Special group facilities» process is «undeveloped» and is valued as «fair».

This step concludes HODIT's data-gathering. Now, the hotel manager can move on to the diagnosis stage, which is also represented by a set of profiles.

The Profiles

HODIT transforms the data and provides evaluation information.

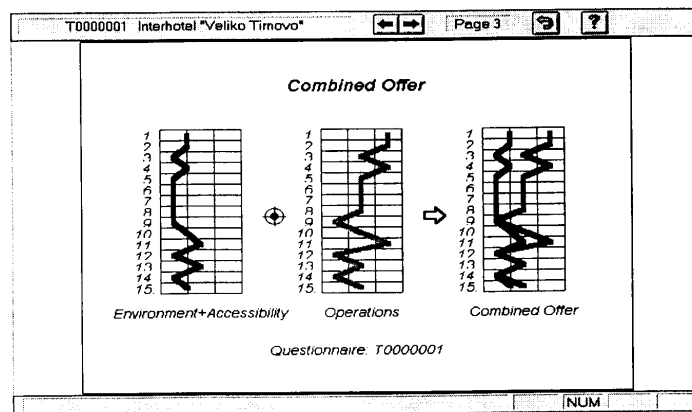
Figure 5. Initial Profiles



All the data collected in the three previous steps are organized in profiles. Figure 5 shows the 3 profiles for the example. This helps the manager gain a quick overview of the situation of the hotel operations.

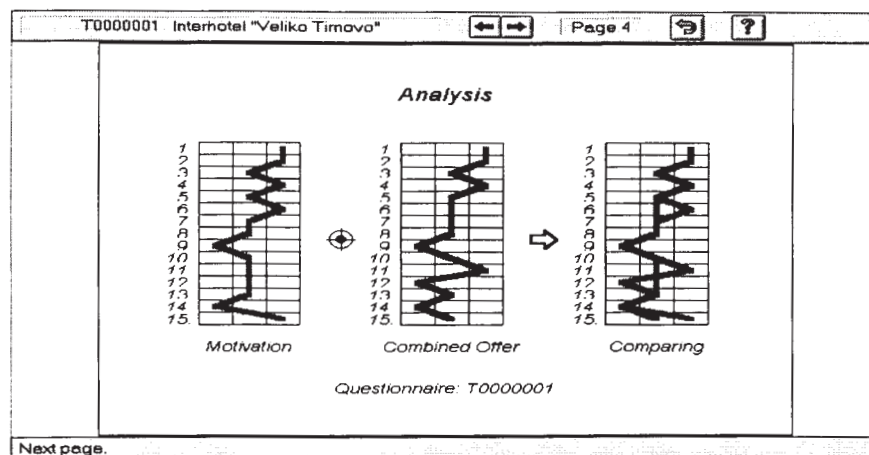
To do so, the environment profile is combined with the accessibility profile to give an evaluation of the external offer. Then, the external offer is combined with the hotel's own operations profile (the higher of the two values is taken as the combined profile). The net result is the global operations profile that the hotel offers to the customer. Figure 6 shows the final profile that combines the hotel processes with the environment processes.

Figure 6. Combined Offer Profile



The final step is to compare the customer motivation with reality as measured by the above combined profile. Figure 7 shows the comparison. Customer motivation is shown in red and the operations profile in blue. There are clearly some discrepancies. In some processes the hotel offers more than its customers expect, which gives the hotel an added advantage, which we call its «competitive margin». In others, it fails to meet customers' initial motivations (expectations).

Figure 7. Customer motivation and the combined offer (operations and environment profiles combined)



HODIT provides a list of the processes that meet customers' expectations, those that exceed them, and those that do not reach the required level.

Competitiveness of the hotel processes

Subsequently, HODIT provides a competitive position matrix of the hotel processes. This matrix is defined by two variables:

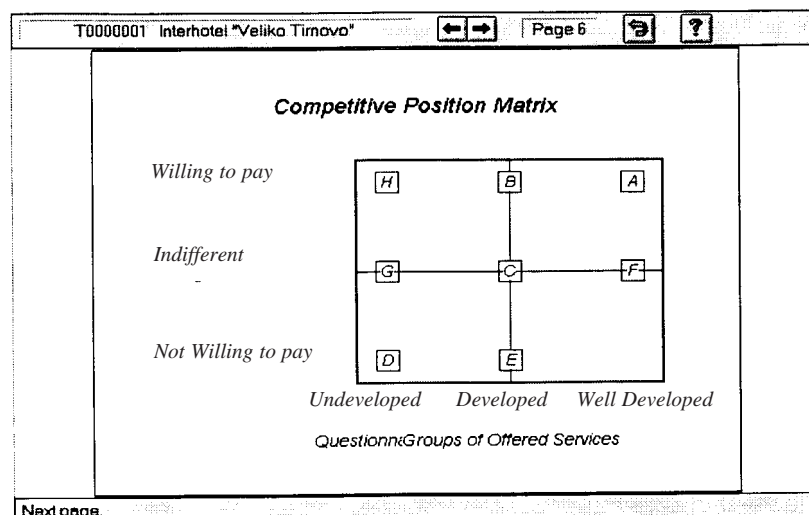
- Customers' willingness to pay for each process.
- Customers' ranking for each process.

In Figure 8 we can see an example for the Bulgarian hotel. Being color coded, we can immediately identify the processes that customers consider very important but are not willing to pay extra for.

On the other hand, there are processes that the hotel does not provide but that the customer values and is willing to pay for. HODIT takes a visual approach. For instance, if we click on one of the rectangles, the software provides information about the process. This helps the hotel manager to rapidly detect the value of each process.

If customers are not willing to pay extra for the process, it should be included in the total cost of the hotel stay, and thus we can clearly define it as a «hygiene process». If customers are willing to pay extra, it is because they regard it as a differentiating asset of the hotel, and therefore we can classify it as a «differentiating process». Note that this can vary tremendously, depending on the environment. A customer might find hygiene in eating a beef hamburger in the US, and competitive advantage in doing so in India. Again, the environment and the cultural differences play a crucial role in customer perceptions of a hotel's differentiating position. It is well known that US citizens traveling in foreign countries tend to go to US chains because they know they will find their usual pattern of living. Europeans also know this and, when in doubt, may choose the American way of life.

Figure 8. The competitive position matrix of the Bulgarian hotel



Action plan

The final window that HODIT shows gives the hotel manager three recommendations:

- The processes that need to be developed
- The processes that need to be maintained
- The processes that provide a competitive cushion.

A short-range action plan should concentrate on acting upon each process that needs to be modified.

10. Conclusions

This paper has presented a conceptual framework for analyzing the operations system of a hotel. This framework has been applied in several hotels in Bulgaria and has been translated into a software tool. It received a very positive response in the pilot testing. Its main value was the simplicity of the conceptual framework behind it. The hoteliers found it user-friendly and capable of providing immediate feedback. One of the most relevant issues discussed in the Black Sea workshop was the competitive cushion (margin) that each hotel had and how this could provide added advantage in the privatization process. The hygiene elements were also discussed in depth. The new motivation profile of the hotels' customers was one of the main relevant factors: the hotels had come into contact with European tour operators and the hygiene conditions required by their new customers were somewhat different from those required by their previous customers. The importance of the competitive cushion was greatly discussed, as some hotels had been able to react promptly to new customer demands thanks to the existence of this cushion.

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