

# The Use of Business Process Management in Hotel Direct Sales Improvement

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**Abstract** – This article deals with Business Process Modelling and Reengineering use in the hospitality industry, focusing on the improvement of direct telephone sales by application of the CRM system. After modelling the current state of the selected process using ARIS methodology, the same process was remodelled for the application of the CRM system. This application shortened the whole process (mainly the number of activities needed to prosecute) and allowed the front-office employee to be more clients oriented. The automation of labour-intensive processes can reduce the number of human-caused errors and improve the convertibility and reservation request and their overall value.

**Keywords** – BPM in hospitality, business process reengineering, hotel direct sales, process modelling.

## 1. Introduction

Graphical representation of business activities is the key approach to understand the complexity of organizations and interactions of its parts, which can be vital for stakeholders to understand the subject of discussion properly. [1]

Currently, the Business Process Management (BPM) is being used to provide these stakeholders with verifies methodology, tools and software for

process modelling, simulation and optimization for improvement of the business efficiency [2].

Created models represent the reality and deliver the abstracted view on the organization.

The key focus is on business processes, while several authors point out the need for proper representation of BPM activities to stakeholders. [3]

According to Weske [4], business processes can be perceived as a set of coordinated activities with predefined input creating the output within an organizational and technical environment. To understand the complexity of business processes properly following elements are being included: IT applications and infrastructure, technical equipment, people (internal and external) and their organization (commonly described from an organizational structure point of view and activities, roles, point of view), documents and documented knowledge, risks, inputs and outputs and other business-oriented elements. [5]

Some authors like Doebeli et al. [6] are providing a more comprehensive view on the business processes while describing them as a set of coordinated and organized activities prosecuted by employees to achieve predefined goals and partial objectives.

BPM is supporting these predefined goals in three major areas. Process description with a clear focus on the partial elements of created models [7], process model analysis implementing qualitative and quantitative approaches [8] and process simulation which can be beneficial for managers to improve their decision-making and the overall quality and decisions made [9].

To model and graphically describe the business processes, several tools and methods can be used. One of them is Business Process Management Notation (BPMN) which represents a widely used approach for building comprehensive and understandable process models. [10].

The main aim of this article is the examination of the possible use of BPM and business process redesign in the hospitality industry and evaluation of its possible impact on the organization providing

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services with intensive and very dynamic human-to-human interactions.

For this purpose, the process of direct selling through the telephone is used as there is identified lack of technology use. The process without the use of CRM (Customer Relationship Management) is presented using ARIS modelling methodology as well the redesigned version of this process after CRM implementation.

## 2. Literature Review

The application of BPM is widely described mainly in the industries with a high level of possible standardization. For example in transportation, industrial companies, education and manufacturing. The limited number of studies and application within the service industry can be found.

Within the work of Krstic, Kahrovic & Stanisic [11] the proposal of a hospitality industry focused framework for BPM use is presented. The authors showcase the different levels of process modelling (core processes, supporting process and managing processes) and present the case study of the selected process. The presented approach is lately adopted by other authors [12], [13].

The study of Chalupa & Petricek [13] is focusing on the process modelling, including the optimization proposal based on the measured processing times for check-in of a hotel client. The proposal is based on the application of ID card reader connection to hotel PMS (Property Management System) which cannot only decrease processing times but as well improve the position of client-oriented sub-processes and cross-selling.

Process redesign (re-engineering) presented in the previous study was as well used to increase the efficiency of hotel operations. [14] During the re-engineering procedure, core (client focused) processes were identified and evaluated to improve the service quality and customer orientation. Thanks to re-engineering, the hotel manager was able to measure the performance based on the customer-oriented criteria and improve overall customer satisfaction. [15]

Similarly to Chalupa & Petricek [13], Ozdemir, Colak & Shmilli [20] and Beldona, Beck & Ou [21] are proposing the use of modern technologies for improvement of hotel operations. Ozdemir, Colak & Shmilli [20] focused on the visualization and modelling of front-office processes of pre-arrival, check-in, during-stay and check-out. Based on the results of this study, hoteliers should implement modern technologies and comprehensive description of process models using various elements and documents to decrease the time needed to operate the computer or PMS and increase the time spent with a client. Another output is closely connected to the use of PMS systems, in which the connectivity with

other systems and technical equipment has to be secured as well as the training of operating staff.

The orientation on the seamless customer experience can be visible as well in the work of several other authors [16] and [17]. The main driver for the improvement of quest experience is in the transformation of the organization from strictly organizational (the activities are directly linked to responsible employees on predefined workplaces with not room substitutability) to process lead.

Akin Aksu [18] is proposing the use of modern technologies to drive process management and process re-engineering, reflecting the specifics of Total Quality Management. As mentioned in a previous study [18], process management plays a crucial role in service quality management [19] and human resources management,

Several studies used business processes modelling for simulation purposes in hotel and restaurant operations and revenue management. Han, Lustigova & Chalupa [22] are focusing on the simulation of resort gastronomy stand operations with a primary focus on the work environment redesign to assure higher customer satisfaction and revenue maximization through queue reduction and distribution. Poulouva et al. [23] recently developed the hotel process simulator, which can be used as an analytical tool for hoteliers as well as the training and supporting educational tool at hospitality-focused universities. The standalone simulator is mainly focused on revenue management and profitability optimization. The same approach and focus are presented by the author of HotelSimu – hotel simulation game. [24]

Based on the output of presented studies, there are leading research flows in business process management and simulation in the hospitality industry. One of them is focusing on the maximization of business profitability through provided services and customer orientation with process re-engineering, and the second one is using models and simulations to improve the position of revenue management. This study is focused on the firstly mentioned process re-engineering.

## 3. Methodology

This study is using the combination of methodologies presented in previous studies. To understand the selected processes and their notation properly, ARIS methodology was used [13].

The ARIS methodology is not focusing only on the business processes but as well on the business environment. The whole process of business modelling starts with the meta-model describing different points of view on the organization. The organization structure is defined (several roles are creating not only the workplaces but as well the owners of processes and the roles – workplace while

the owner of the process is the responsibility holder pro process execution) as well as processes, technical equipment model, IT infrastructure model and the model of documents and documented knowledge. For the comprehensive overview of the business, several other models can be added (model of risks, a model of goals including measurable KPIs and input and output model).

The framework created by Krstic, Kahrovic & Stanistic [11] is used to create comprehensive overviews of hotel processes on three basic layers.

- **Core Processes** (the processes focused on the value delivery to hotel client – provision of accommodation and restaurant services).
- **Support Processes** (the processes excluding interaction with hotel clients but affecting their overall satisfaction – housekeeping, the food and beverages production)
- **Control Processes** (the processes connected to the organization of hotel supporting strategy setting, control and evaluation of hotel activates – quality control processes, risk management).

Within these processes, several models and diagrams can be created. The highest level of abstraction (excluding the division on Core, Control and Support processes) is represented by Process Groups (for example “Providing Accommodation Services”). These groups are analytically described in Value Added Chain diagrams that represent the major processes within the process groups (Reservation Creation, Check-in, and Check-out).

These sub-processes analytically described on the different levels: the Function Added Diagram (FAD) and Event-driven Process Chain (EPC) model. Figure 1 describes the structure of models based on their granularity.

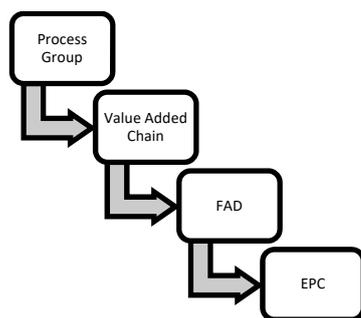


Figure 1. Structure of process models

FAD diagram is used to connect identified sub-processes with other models from the business overview. The inputs and outputs are identified as well as the key IT technologies, process owner and internal and external process users. Within this model, key documents and documented knowledge can be presented. To create a comprehensive overview of the sub-process, KPIs, and goals should

be displayed while taking into account the significant risks.

On the level of EPC diagram, the events and activities are defined. The final level of granularity is based on the assumption that the creation of the model should represent the business realistically, but should not describe the activities that are not improving the value delivered to the process users.

#### 4. Results

Following previously mentioned ARIS methodology, the whole structure of processes was created. Figure 2 describes the detailed EPC diagram of the process of Reservation creation through telephone. This EPC described the current state of art and it consists of several steps that should be improved.

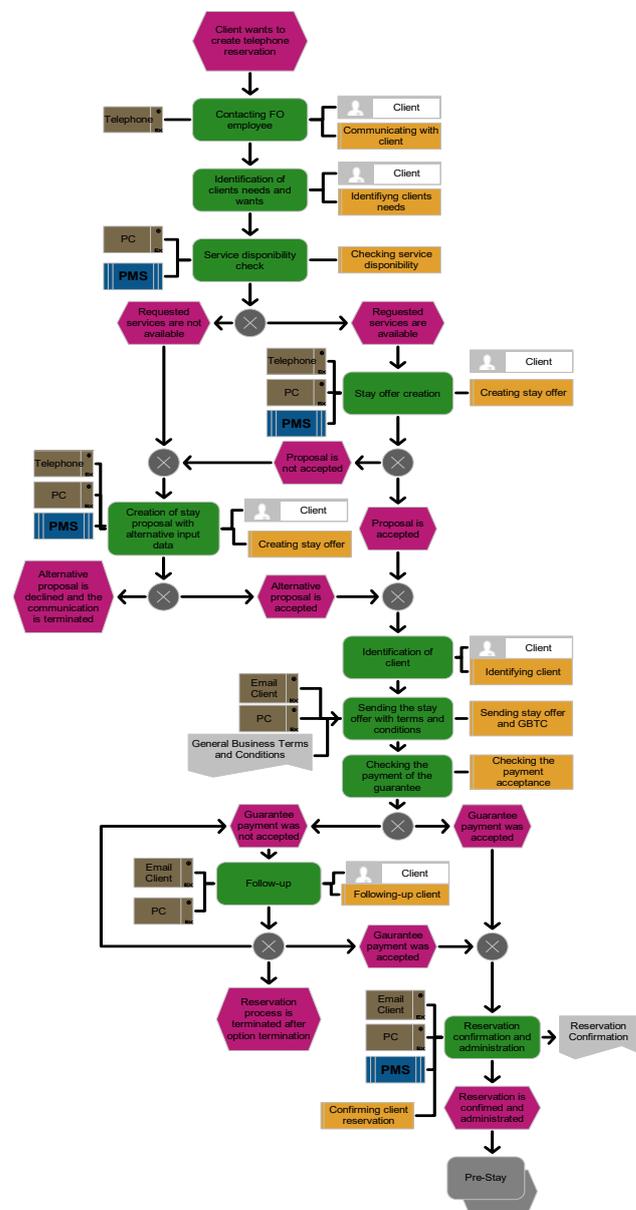


Figure 2. EPC model of reservation creation process through telephone

The whole process is called out by the client who wants to create the reservation. After contacting the front-office employee, the needs and wants are identified, and service disponibility is checked in the Property Management System. If the service is not available, the Front Office employee has to propose alternative rooms, dates or even product structure not to lose the direct contact with a client, while in the situation of product availability; the employee can easily create the offer based on the data within the system.

When the proposal is accepted, the Front-Office (FO) employee has to identify the client by receiving the name and e-mail address. Lately, the offer is created in the preferred office tool and saved in pdf format, General Business Terms and Conditions are attached as well as the information about the reservation guarantee payment. After sending the client these document, optional reservation is created in the PMS system and paid guarantees are checked regularly. If the payment is not processed, the FO employees have to follow-up client until the option date when the reservation is cancelled or confirmed, which is based on the payment status.

After the reservation is confirmed, the FO employee changes the status within PMS and can use (after receiving approval from the client) the e-mail address for pre-arrival communication. The whole process is terminated by the interface (Pre-Stay) which connects the process of reservation creation with upcoming activities before arrival in Pre-Stay phase.

The presented second part of the process is labour intensive and requires much responsibility from FO employee.

Figure 3 describes the same process after the CRM tool application. The selected CRM system is directly connected to Web Booking Engine and implicitly to PMS. The functionality of sales-oriented CRM helps employees with the automation of labour-intensive activities. The first part of the EPC diagram (until Stay offer creation) is corresponding to the current process notation in Figure 2; only the PMS system is being replaced by CRM. During the offer creation, employees can quickly and dynamically see the available room types, rooms and special offer and they can up-sell or cross-sell other services. Within this point, the FO employee can focus on the increase in reservation value. Several possibilities can be presented to the client at one time without a need for the repetitive search. If all the offers are declined, FO employee can terminate the communication with the client.

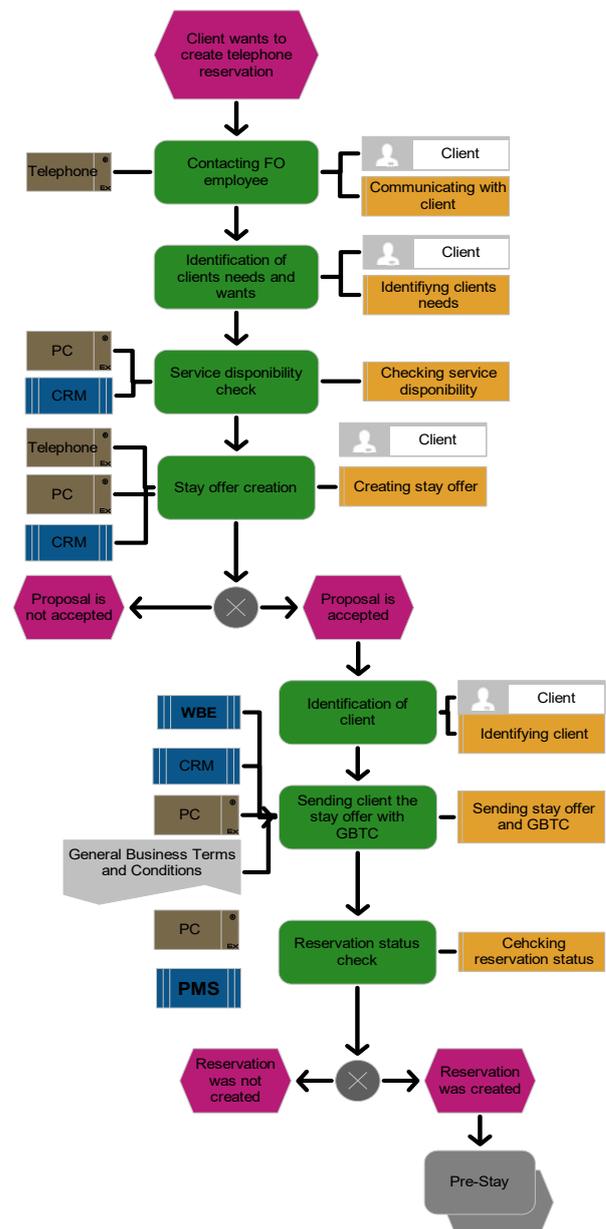


Figure 3. EPC model of reservation creation process through the telephone with the use of CRM

In the next step, FO employee needs to get the e-mail address and client name, which is added to the e-mailing template of stay offer in CRM. After these details are filled in, the automatically created stay offer can be sent to the client. Created offer is directly linked to WBE (Web Booking Engine) where the client can see the exclusive offer, as well as other services and can proceed to reservation creation and guarantee payment. All these activities are done within the customer-friendly environment of WBE without the need of FO employee support. When the guarantee is being paid, the reservation is directly transferred to the PMS system. The whole process is connected to automatized pre-arrival communication where the client can automatically receive important information of offer for online check-in, which can lately save valuable time during the arrival.

## 5. Conclusion

The visualization of processes connected to client value delivery is crucial not only in manufacturing or other highly standardized industries. This paper dealt with process management in the hospitality industry, focusing on the increase of efficiency of hotel processes based on modern technology implementation. The re-engineered process presented in Figure 3 shows a possible reduction of activities and human-computer interactions. Other benefits connected to the implementation of CRM system into direct sales are within the reduction of human errors (automized e-mailing, notifications and pre-arrival communication), faster information exchange and reduction of processing times in connected processes like check-in.

Another conclusion is connected to education [25] and human resources management [26]. The implementation of research outputs into education can be beneficial not only for students but as well for the whole industry. Understanding business processes and their optimization and simulation can support decision making and a comprehensive understanding of business operations. For human resources managers, the business process management could help with onboarding training by visually describing the activities connected to the workplace as well the connection to other workplaces and entities within the system. Simulation can be later used for improving the quality of decision making on the managerial level.

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