# BUSINESS PROCESS MANAGEMENT IN INSURANCE CASE OF JADRANSKO INSURANCE COMPANY

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#### **Abstract**

Selling insurance products in conditions of today's modern technological solutions is faced with numerous challenges. Business processes in insurance as well as the results of these business processes are the real interface to policyholders. Modeling and analysis of business process in insurance ensure organizations to focus on the customer and increase the efficiency and quality of work. Managing critical business processes in every single organization, likewise in insurance is a key factor for the success. To succeed in today's business environment, insurance companies must possess two important things:

- 1. Business processes that are cost effective and error-free
- 2. Agility to quickly adapt to changes in strategy and business processes

Business processes should be controlled by an automatic system, including their management and control system in real time based on the Balanced Scorecard concept. In this paper we will analyze the model through which it is possible in a relatively short time to ensure business processes mastering. Although the model in this paper is primarily described for insurance companies, it can be applied to other organizations.

## **JEL Classification:** G22

**Keywords:** business process, business process management, business process operationalization, insurance

#### Introduction

#### 1.1. Data sources and collection methods

In this work both primary and secondary data are collected. The secondary data used has been critically evaluated and has been collected from relevant domestic and foreign literature, databases, international and national journals and internet sources. The primary data is collected by semi-structured qualitative interviews with experts in fields of BPM (Business Process management) as well as managers from different organizations and on the basis of own experience of the authors.

#### 1.2. The content and structure of work

This work will initially approach the problem of managing business processes and then through the example of analyzing, modeling and management of business processes in the Jadransko insurance on a concrete example to analyze and comment on the results.

#### 2 Business Process Management

Today's world economy, where large multinational companies spread their markets globally under the influence of modern technology, sharpens competition in very way companies are trying to find ways to increase the efficiency and effectiveness and at the same time cutting costs. Insurance companies also feel a lot of pressure on their business, which is aimed at improving performance, increasing profitability, quality implementation of user requirements and increase return on investment. As a result of these circumstances and requirements of the business process approach imposes itself as an important element in creating market advantages (Zavacki, 2009, p.1.).

#### 2.1. Business Process Definition

We can say that business process is described as a network of activities and buffers through which the flow units have to pass in order to be transformed from input's to outputs (Laguna and Marklund, 2005, p.1). Unique and simple definition of a business process depends on the context of use and in reality does not exist. Harrington (1991), Davenport (1993) and Martin (1993) defines a business process as a sequence of logically related activities and companies resources, with the ultimate aim of which is to achieve customer satisfaction with their products or services of appropriate quality and price, within a reasonable time and the pursuit of added value (Bosilj, Vukšić and Kovačić, 2004, p.9).

Business processes can be viewed as the sum of the activities with the need for one or more types of input variables (input) which achieved a goal that has value to the user (output) (Lončar, 2007th, p.8.).

In its definition of business processes in BPM Schurter assumes that key processes are defined by business attributes, and not by the prevalence of tasks or *steps, routines, activities and rules in the process.* He notes that much of the confusion brought here by the fact that the processes are expressed through work assignments, and such an approach emphasizes the software applications (Schurter, 2005).

Schurter argues that the process is in the service business functions and that it is its primary determinant. As an example he cites the business process execution orders: business purpose of the process in this case is the delivery of a specific product to specific person at a specific time, based on outstanding orders. In this case, it is the definition of a business process in the execution of orders, while a detailed description of the steps necessary in its execution is not his definition, only *folders* of the business process. Schurter further finds that the definition of a business process does not contain a description of the minimum number of steps, actions, rules or ways of working tasks. The definition of a business process according to him lies in the specifics of organizing functions that are performed in the organization. In most cases, business processes exist within a single functional segment of the organization. As with corporate business processes, business processes are not quantifiable criteria, but they are in most cases representing a specific business function that is tightly integrated into the work tasks of the process (Schurter, 2005).

Business is a system of integrated business processes. Understand how to run their business and communicating between employees, partners, customers and suppliers may pose a significant competitive advantage and business.

Bosilj Vukšić, Hernaus and Kovačić (2008, p.19) defines the basic characteristics of business processes as follows:

- Each process has a purpose;
- Each process has an owner;
- Each process has a beginning and end;
- Inputs are entering the process, outputs are exiting process;
- Process is composed of sequential feasible activities;

- Based on the inputs and outputs of the process can be easily determined by the success of the process;
- To survive the process should have known internal and external suppliers and customers;
- Process improvement is inevitable.

#### 2.2. Business Process Classification

Depending on the context in which the business process is mentioned there are several classification processes. Each company represents a special case and must be viewed through the interconnection of business processes and their respective dimensions. All organizations have a full range of common and similar processes, as well as business dimensions, no matter how much it is special or think they are special:

- Division by the organizational structure;
- Division at intervals;
- Breakdown by territory;
- Breakdown by category of products and services;
- Division by the suppliers and customers.

According to the field of action process within the organization, they are divided into three different types (Laguna and Marklund, 2005, p.3):

- Individual processes are performed by individuals;
- Vertical (function) processes that are part of the functional units or departments of the organization;
- Horizontal processes that go through several functional units.

We can also distinguish three logical components of a business process (Ould, 2005, p.145):

- management information process,
- operating process,
- Process management.

The control information process implies that a part of the overall management information system is related to a specific business process. Operating process creates man, and consists of people, equipment, organization, policies and procedures,

all of which is aimed at ensuring the effective operation of the organization. The control process also creates man, and consists of people, authority, organization, policies and procedures with the aim of planning and control activities taking place within the organization. Motor for focusing the attention on business processes can be, regarded as M.E. Porter, who presented the concept of the company, as a value chain (Bosilj Vukšić, Hernaus and Kovačić, 2008, p.30). Value chain comprises multiple business processes, development of new products and ordering to sales and customer support after the completion of the sale.

Infrastructure

Human Resource Management

Technology Management

Product Related

Primary Activities

Infrastructure

Human Resource Management

Product Related

Market Related

Primary Activities

Figure 1 The division of business process activities

Source: M.E. Porter 1985, pp. 11-15

According to Porter, the value chain consists of primary and secondary (support) activities (Figure 1). All secondary activities must be included in the unique value chain. Unlike the primary, secondary activity does not have direct value for the company, but are necessary for its operation (Palačić, 2009, p.7). The process is part of the value chain, and depending on the complexity can be divided into smaller parts, i.e. sub-processes. For example: the purchase of shares, on ordering, negotiating, contracting, receiving, warehousing, payment, etc. The activity is the smallest part of the process that makes sense to model and display the diagram. Activity may appear relatively complex task that work for a particular project is not necessary to examine in more detail, but the simplest operation that cannot be further broken down and called the step (Bosilj Vukšić, Kovačić, 2004, p.9).

#### 2.3. The concept of Business Process Management (BPM)

Business around the world is under enormous pressure of high competition and the business environment that is rapidly changing and increasingly demanding customers. There are three trends that contribute to this pressure, and these are:

- Globalization,
- Technological, legislative and regulatory changes,
- More and more agile and flexible organization.

All these pressures have created an interest in analyzing how business can become more flexible and effective. Each organization is defined with a lot of business processes that describe the way in which the organization conducts its business. Some processes are key to an organization's operations and make its comparative advantage. Some are not so critical, but are still essential for its functioning. Business processes are, in essence, the nervous system of each company (Khan, 2003, p.15) and it is therefore important to manage them. Business Process Management (BPM) combines a managerial approach with appropriate technology in order to improve the performance of companies. BPM is a systematic approach to improving operations based on design, measurement, analysis, improvement and management processes. BPM is based on a business approach to change management for improving business processes with the ultimate goal of achieving business goals, while changes include the entire life cycle of the process: from defining and modeling to implementation, analysis and optimization of the process (Figure 2).

Design

Modeling

Business
Process
Management
Life Cycle

Execution

Monitoring

Figure 2 Life cycle management of business processes

Source: Lončar, 2007, p.14

The first step in managing business processes is to design or to define business processes. The owners of the business process at this stage have the most important

role because they have business requirements and available resources (Lončar, 2007, p.14). The next stage of the business process is modeling and it involves collecting sufficient detail in order to understand how the process works and then formalize the flow of business processes using business process flow diagram. Business process within the company then implements and executes the monitoring and monitored Key Performance Indicators (KPI) companies. The collected data are analyzed to identify unexpected behavior, non-optimized flows and bottlenecks, and on the basis that optimizes process. With BPM companies can be achieved:

- Higher quality;
- Time reducing;
- Cutting costs;
- Improvement;
- Business risk reducing.

Today, the BPM concept is an integral part of any organization that wants to become and remain competitive.

## 2.4. The concept, development and the importance of process orientation

During the eighties the management prevailed functional i.e. vertical perspective that emphasized strict managerial control. Strong functional structure has led to the creation of isolated departments so called silos operations of the company. Business and operating results are tracked individually, at the departmental level, and this has led to inefficient operations (Lončar, 2007, p.11). In the early nineties the attention of the academic community and the business world began to attract the concept of business process and orientation to business processes.

Table 1 Difference between traditional and process oriented enterprise

Feature	Traditional enterprises	Process-oriented company
<b>Business view</b>	Business Function	Business process
Organizational Unit	Section	Process teams
Work tasks, jobs	Narrowly defined	Flexible and our comprehensive nor
Focus staff	The supervisor protected, managers	Customers
The fee is based on	Implementation activities	Achievements
The role of leadership	Supervision	Mentoring
The key to a person	Director of (the business functions)	The owner of the business process
<b>Business Culture</b>	The supervisor up area, conflicts	Participation, cooperation

Source: Bosilj Vukšić, V., Hernaus, T., Kovačič, A. (2008.), pp. 53.-55.

Table 1 shows the differences in characteristics between traditional and process oriented enterprises. Because of the business functions orientation, traditional enterprise does not have a clearly defined image of the entire process. It is poorly focused on the customers and there are unnecessary bottlenecks and barriers. Communication and rivalry among organizational units were poor and there are conflicts between different departments.

The original theorists of process philosophy were W.E. Deming, M.E. Porter, T.H. Davenport, M. Hammer, J. Champy, R. Coombs and R.Hull (Bosilj Vukšić, Hernaus and Kovačić, 2008, p.22). According to the process, i.e. horizontal view business processes constitute the core of the functioning of a particular organization because the organization is primarily made up of the process, not the product or service (Bosilj Vukšić et al., 2006, p.7.).

In a process oriented companies focus on process provides a better focus on the customer, determining the limits of the process, and customer and supplier processes is achieved by better communication, specifying the owner of the processes that are responsible for the process of avoiding the traditional fragmentation of responsibility.

## 3. BPM in the Jadransko insurance company

As explained in the previous chapters, BPM is a business initiative, using software tools introduces order in respect of due process procedures and allows the reporting of company's business processes in real time. Concise explanation can be further described with insurance companies requirement to rapid change adaptation.

Underwriting software, beyond which typically are large investments because it is often based on its own development team, in most cases does not cover all aspects of the process. The daily operations of insurance companies, with automated activities, which are often accompanied by good software solutions, perform many of the activities that are dependent on the human factor. In order to achieve full transparency of the performed work and to have constant access to critical data about the business, it is necessary to measure the effectiveness of all activities, regardless of their human or automated nature. In mastering the business processes it is necessary to define the steps that follow one after the other in order to subsequently make appropriate business decisions. Two steps to the beginning of the process followed by the:

- 1) Documenting Business Processes,
- 2) Operationalization of Business Processes.

Today, documenting business processes is typically performed using tools for Business Process Analysis (BPA) and then operationalized through systems for Business Process Management Suites (BPMS). The description of these steps on a concrete example, will give some practical tips and recommendations for the implementation and optimization of processes in an insurance company, as well as the benefits to society resulting from the automation of business processes, i.e. their economic benefit.

According to leading business analysts researches (Gartner, McKinsey), business processes are at the very top tier of business priorities since 2005. It is expected that this will be a market with high growth in the next five years. The question that is certainly troubling decision makers is why go into business process automation precisely in moments of crisis, and not wait for a better time?

In order to obtain an answer to this question it is necessary to analyze the business environment. The consequences of the analysis of the business environment are reflected in the cessation of growth, or reduce the number of employees. Furthermore, the volume of business has increased due to the impact of the crisis on clients in the form of pressure on the technical departments due to the cancellation of insurance, increasing the number of attempts at fraud claims, increasing the amount of unpaid premiums, etc.

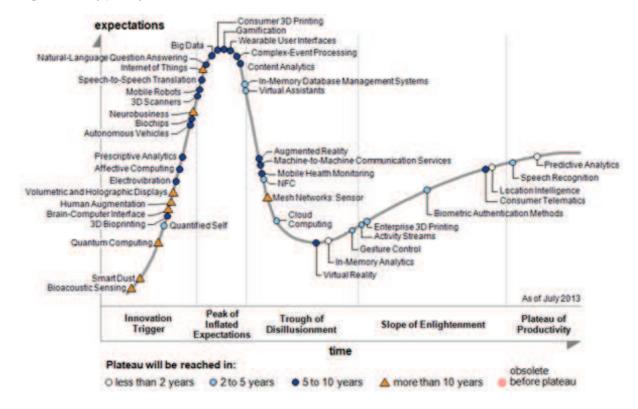


Figure 3 Hype Cycle for BPM, 2011.

Source: Gartner 2013.

#### 3.1. The efficiency of the business in insurance company

In such a framework, in order to manage the new situation accompanied by reduced capacity, the insurance companies have only one way out, which is to increase the efficiency of the performance of business processes.

Insurance companies are continually faced with the pressure to improve performance, increasing profitability, providing superior customer service, and return value to shareholders. In the last few years in managing business processes winning combination proved to be the one that helps insurers to achieve these business objectives and create competitive advantage.

The insurance industry is inherently paper-driven process by which the insurer agrees to provide the contractor with a particular service, one day in the future. For the conclusion of the contract, it is necessary to interpret information from different sources as well as reaching certain conclusions. From the foregoing, it is evident that the insurance companies are process-oriented companies, and that in any case would benefit from the implementation of business process management.

## 3.2. Operationalization of the business process

Despite the obvious benefits of documenting business processes, only the operationalization of the business process allows full statement affirmation: *Introducing the BPM system, directors are provided with a tool for easy management of the company.*Why is this so? Just documenting business processes does not mean that the company has implemented a business process management.

The following problems still have a strong influence on the activity of the company: operational processes are not performed as described, operational processes are inconsistent, there are some jobs that are duplicated and not standardized, performed mainly *by hand*, with numerous paper documents, etc. Modern business organization is composed of human and computer (automated) activities. Within the process these activities are usually intertwined. The aim of the operationalization of the business process is to create a system that can measure the performance of the process and its actors (primarily those human).

In order to achieve this, based on a documented process of describing the stages of the business process, graphics interface are made for human users (simple forms, forms that are used to display and enter basic data required to perform certain activities within the process) and integration among different computer systems.

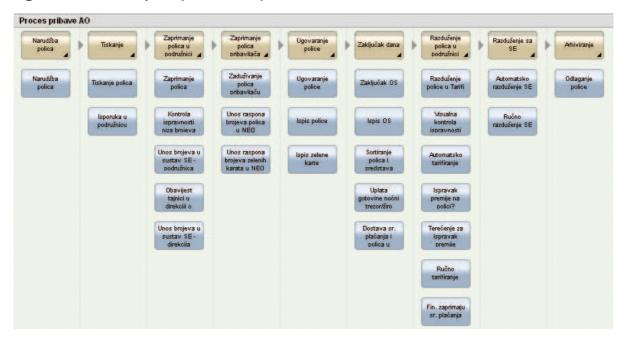
The performance of each activity system are carefully recorded and based on data collected allows different types of process analysis behavior. All of the above methodology in the management of business processes is called the operationalization of the business process. Depending on the role played by the user in an insurance company, there are three ways in which user sees the business process:

- Operating (ordinary) user
- Process analyst or process owner
- Administration and Management

## 4. Analysis of the business acquisition process in the Jadransko insurance company

#### 4.1. Initial recording business acquisition process

**Figure 4** Discovery Map workshops held after 03.11.2010.



Source: Internal Jadransko insurance company data

With the onset of the global financial crisis and the recession that followed thereafter, in the Jadransko Insurance appeared a necessity for more efficient management of business processes. As the first and one of the most important business processes, the process of obtaining car insurance policy represented the initial process wanted to be completely mastered and it was decided that this should be the first business process on which to apply the previously mentioned process documentation and business process operationalization.

After initial talks and workshops, the first snapshot of the business processes of car insurance policy acquisition was made, in the way the same process was seen by managers and managing directors. Figure 4 shows the Discovery Map after initial snapshot.

#### 4.2. Results after two weeks of commenting on 16.11.2010

After the workshop 03.11.2010 Jadransko insurance employees were allowed to comment on the process described. For the purpose of commenting, IBM Blueworks tool is used (at that time was called Blueprint) in which in a very simple and intuitive way it is possible to enter employees comments, comments from power users, etc. During this period Jadransko insurance employees entered 158 changes and comments to the Blueworks tool. User activity statistics (changes, comments, answers, etc.) can be seen on the graphs shown below.

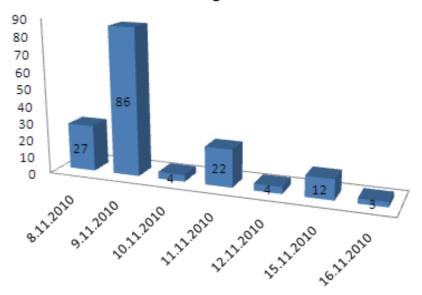


Figure 5 Statistics of Blueworks tools usage

Source: Internal Jadransko insurance company data

The diagram shows that the activity about describing the process was highest in the first days of the project. Statistical interest related to describing the process after 16.11.2010 is lower. Despite the explosion of the activity number and detailing the process map, there were almost no comments from the Jadransko to any treatment and a new description of the process.

## 4.2. The final version of the process - 05.12.2010 (Discovery Map)

Results of conversation with the proposed experts for specific activities and analysis of entered comments made detailed image of a business process which is in the final version of the paper at the highest level seen in the fact that the process dia-

gram 03.11.2010 had 29 activities, and the final of 05.12.2010 had 94 (!) activities in the primary process and the four sub-processes with their respective activities.

**Figure 6** Final version of the process (Discovery Map)



Source: Internal Jadransko insurance company data

#### 4.3. The final version of the process - 05.12.2010 (Process Map)

In order to analyze the flow of activities in the process, Process Map was made, which was associated with the activities associated received conditional branching. Such an image of the process described by recent instances of the process was used to identify problematic situations in borderline cases that are subsequently processed.

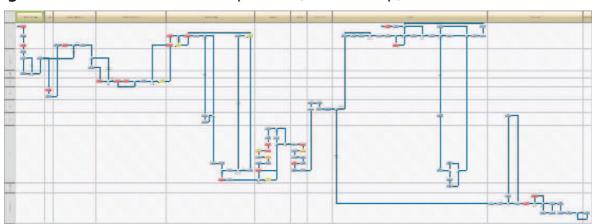


Figure 7 The final version of the process (Process Map)

Source: Internal Jadransko insurance company data

Figure 7 is illustrative. This process was the subject of an initial separation Car Insurance acquiring process under appropriate business decisions.

#### 4.4. The distribution process

During the process analysis, it was concluded that it is not a single process, but rather that certain elements of the process are shared with other types of insurance. The first example of such a case is the separation *Printed materials orders* from the process of Car insurance acquiring, because it is about specific activities, some of which have no direct connection with arranging insurance (e.g. advertising folder). Review of initial separation process of Car insurance acquiring in more specific process vividly shown in the lower diagram.

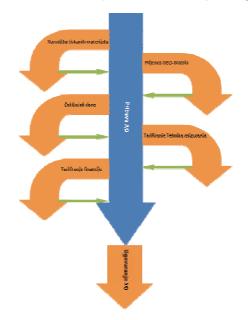


Figure 8 Diagram of the distribution process of acquiring Car Insurance

Source: Internal Jadransko insurance company data

With this stratification process, the process of contracting auto insurance has become its lower part while further achieve the possibility of re-use process, the more common type of insurance in several places in the company's business processes [e.g. Property insurance]. Description of the process

Following the distribution of these processes, in Blueworks tool was opened a new project called *Car-insurance - current process*. Within it are all the processes outlined in this document, which came as a result of the analysis.

Ugovaranje police AO Prijenos NEO -Stroga Tarifiranje -Izdavanje Zaključak dana Tarifiranje Evidencija MATRIX financijsko računa Prijenos NEO-Tarifiranje -Stroga Unos police Zaključak dana Tarifiranje računa za Evidencija MATRIX računovodstvo @ravne osobe Unos načina plaćanja Zaprimanje sredstava plaćanja Provjera u MATRIX-u Provjera drugih osiguranja radi Provjera HUO preko interneta Unos police drugog prodajnog Ispis police Ispis zelene karte Pribavljanje potpisa osiguranika Krivi unos sredstva plaćanja Ispravak sredstva

Figure 9 The process of Car Insurance acquiring

Source: Internal Jadransko insurance company data

plaćanja

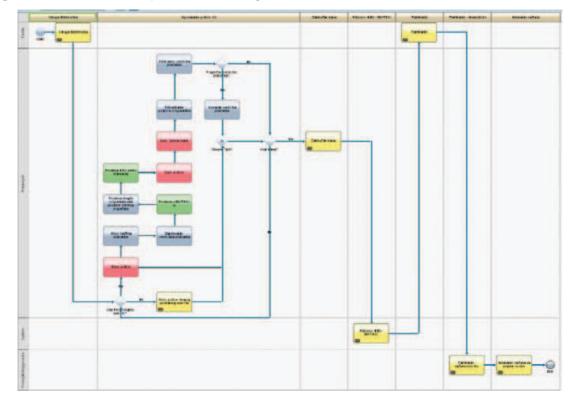


Figure 10 Process map underwriting of Car Insurance

Source: Internal Jadransko insurance company data

## 4.5. Recommendations after analyzing the business process

Following the analysis of business processes, detailed recommendations are made for each process and for each sub-process. The document listed only some recommendations in order to be able to gain an insight into the work, and to demonstrate the systematic approach to solving every single problem.

These recommendations were needed to be discussed by several people who work in the described activities, in order the solution is based on their feedback and optimal found for all employees and subsidiaries of the company.

Recommendation 1 - Distribution of the description of the process for review to all branch offices

In order to standardize and unified the process in each of the subsidiary companies, it is recommended that the results of the process are distributed to all branches. For customers in the branches, the quickest way to achieve this would be to open accounts in Blueworks tool [www.blueworkslive.com].

If this is not possible due to the limited number of licenses that are available to the Company, the distribution can also be done by sending the documents in

electronic format: Word or PDF (Word is the preferred format because of the possibility to track changes). Distribute copies of the paper is not recommended.

Recommendation 2 - Unification of internal documents

During the analysis there are encountered significant deviations in the appearance of the documents used to support some parts of the process in the branches and the head office and among the branches. It is necessary to unify the look of all the forms and documents at the level of company in order to facilitate users to work with documents and consequently avoid mistakes.

Recommendation 3 - Customize the output specifications to user needs

Necessary data on discharge of the day and specifications associated with the discharge of the day are different from user to user: sales, rentals and accounting. Accordingly it is recommended to print tailored to the needs of individual users to accelerate the control and conclude the day.

Recommendation 4 - Automatic tariff

Install the *automatic tariff*. For a growing number of Car Insurance policy (over 60%) it is possible to determine the parameters of control in a way that there is no further need for physical policies control. In this case person who is tariffing would only need to confirm that the policies are physically arrived in the office. The company has already raised almost all the necessary parameters for this automated approach.

The parameters which must be comparable to the previous and new policies, to make sure that the correct policy is going in the Insurance Bureau, or that tariffing person does not have to check the attachments with the policy are:

- The contractor (per PIN or VAT-in)
- License plate
  - The correct jump premium grade and the same level of premium if the policy has a 50% bonus
  - Premium group
  - Claim check
  - Chassis number check
  - Discount or allowance

For final confirmation it is recommended to use Web services HUO [Hrvatska Udruga Osiguravatelja] control premium grade because it contains a sufficient set of data that can unambiguously confirmed the correctness of the data on the policy.

## Recommendation 5 - Improvement of IT

There is a common example of unintended replacement forms when printing on printers or mixing strict records documents between different for producers. To avoid this it is possible, instead of just printing the check numbers, for the strict records documents to print a bar code, and using a reader always unambiguously determine which strict records document are in order. This would almost completely avoid the need for subsequent adjustments to the system.

## Recommendation 7 - Operationalization process

Document with which the process of obtaining Car insurance policy is analyzed, as well as the pertinent process, is fundamental document for the movement in the operationalization of the business processes analysis, which is the ultimate goal of any BPM project.

The recommendation in this direction has been made in order to make the process of operationalization of priority identified in this document and the leaderships of the Company receive the mandate and resources (financial, human and time) to automate every process.

Another recommendation is to automate the process one by one, maximum atomized (as smaller projects with a limited scope, which include specific activities that can be carried out separately and used within multiple processes).

This approach avoids the principle of *the Big Bang* where the full range of processes implemented at the same time, which ultimately increases the duration of the project and the necessary resources without achieving quick results. Before the operationalization of any process, the recommendation is to communicate clearly the objectives of the project under the top management of the Jadransko Insurance and maximum transparency to systematize key performance indicators by which to monitor the activities of employees in the process.

When selecting priorities for automation of the first implementations choose *Quick Win* processes that will bring quick results and effective management to justify the investment in business process management.

#### 5. Conclusion

For success in today's competitive market managers necessarily requires the introduction of changes. However, before that, it is necessary to detect and analyze problems or trends to help them at all and could react and introduce some changes.

For example, the analysis of Car Insurance Acquiring business processes in the Jadransko Insurance evident necessity for ongoing management of business processes in order to achieve better efficiency and effectiveness as well as business decisions.

Automation of business processes using modern BPM tools is therefore an essential tool in today's competition. Business processes are constantly changing so they should continually monitor and react to any changes or anomalies that occur due to various circumstances.

If the company goes into the process automation of business processes, that must be carried out systematically, organized and very carefully because the automation itself entails reducing the need for human resources which can lead to large-scale resistance to the implementation. In this process, all employees must find their place and well-being, and only that will lead company to success in BPM project operationalization.

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