
INCREASING OPERATIONAL EFFICIENCY THROUGH EFFECTIVE MEASUREMENTS OF OUTSOURCED PERFORMANCES

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Abstract

This study highlights a part of the results of a doctoral research regarding business performance improvement through contract management, conducted by authors in the Research Centre of Business Administration, Bucharest University of Economic Studies, Romania.

Within our core research, we have analyzed the root causes of outsourced contractual dysfunctions and identified that one of the main causes is a high volume of change requests registered during terms execution. Further, we found a correlation between failures in pre-contractual documentation and malfunctioning inter- and intra-organizational processes. Based on those findings, we continued our research - presented in this paper - aiming to find an alternative and more sustainable solution for increasing operational efficiency by monitoring and managing effectively outsourced contracts. To ensure this effectiveness, we propose a combined risk analyzing method which highlights in detail the complete operational risk of each outsourced activity. By this tool, companies are offered the possibility to improve the use and application of Key Performance Indicators and score their contracts on operational performance.

The first part of the paper provides an overview of the existing literature whereas the second part includes research results and solution proposal.

Keywords

Operational Management, Key Performance Indicator, Operational Risk Management, Process Improvement

JEL Classification

B4; D2; F680; L240; L250; M420

Introduction

Globalization is fostering the transfer of business-complementary tasks, services - even key operations to external providers. Companies adopt this strategy in order to remain competitive in dynamic markets, where they register a slower growth on profit due to the rise of the absolute number of competitors (Dobbs and Koller, 2015). The major challenge for expanding companies is the hand-over of risk and responsibility in a reasonable way between the contractual parties (Cooke and Budhwar, 2009). According to a study conducted by Deloitte & Touche LLP in 2016, 48% of outsourcing initiatives fail to deliver as per the set agreement and are terminated before close-out. Companies are struggling for

years with the wrong assignment and management of risk, reason for which some prefer the investment in global collaboration than in outsourcing practices (MacCormack et. al., 2007). Although, global collaboration requests more leadership between companies, while outsourcing relies more closely on negotiation, the operational transparency collaborating companies gain is creating a more secure ground to develop reliable operational processes in an expansive environment. Either way, whether it is simple outsourcing or complex collaborations, companies need to analyze in more detail how each operation that compounds the transferred activity is to be managed up to completion. Therefore, we propose a risk evaluation grid, used by all involved parties, through which all operations are scanned and put together in order to score the transfer. This might be a solution to improve the outcome of outsourcing.

1. Literature review

1.1 Operational Performance

Operational performance is given by the results a company's employees deliver and the outcome of inter-organizational collaborations defined through a variety of commercial agreements. Also, the performance of an enterprise could be positively affected by the goals of sustainability (Schmid, Olaru and Verjel, 2017). The overall outcome is measured against industry standard indicators or internally defined ones with a focus on efficiency, effectiveness and, where applicable, environmental responsibility. Performance indicators are used to measure financial or non-financial performances and are used to be presented within narrative reports in order to deliver a transparent overview on a company's actual status and progress. Its purpose is to help business stakeholders and investors gain a deep understanding of the business development and movement while keeping management accountable for the achieved progress. Measuring performance is a task which implies additional focus from the direct supervisors and in larger organizations, dedicated teams are allocated to define, implement, collect and present the data by use of balanced scorecards. Due to the substantial pressure of reaching business efficiency, organizations start re-designing their business processes and using Key Performance Indicators for a larger scope (Mansar, 2007); instead of measuring past events the focus is now oriented on getting highlighted in real time, future possible deviations from planned target. This way, leading functions can prevent or at least diminish financial, market or quality losses by taking action before the event occurs.

Due to the continuous changing business environment and evolving challenges, business performance cannot only be measured by its compliance to defined budgets and plans, but to their effectiveness in managing their operations and business processes (Cachon and Terwiesch, 2013). It is a switch from an exclusive focus on obtaining to a much larger one, considering also how sustainable the obtained results are. Therefore, cost management, with its narrow view on financial aspects, focused on costs remains an insufficient tool for managers in their attempt to improve operational results. Management became in need of more complex analysis and responses, changing their mindset from cutting costs to reducing waste and continuous improvement. In the past decade, most global acting companies implemented a new discipline, known as Operational Performance Management through which organizations seek to create more value with available resources (Kiyoshi, 1993).

Ventana Research, which is one of the top market research and advisory services company, defines Operational Performance Management as "the practice of understanding, optimizing, and aligning operations-centric business activities and processes to a common set of goals and objectives to reach higher levels of business effectiveness".

Operational Performance Management is a complex approach that incorporates a series of methodologies to ensure value increase and makes use of balanced scorecards, strategy maps, activity-based cost management and risk management (Cokins, 2009).

The Balanced Scorecard is a tool used for strategic planning and management that is used to communicate targeted results, align daily activity with impact on strategy, prioritize projects and/ or services and monitor and measure status of achievement against targeted results. Also, the Balanced Scorecard is one of many management system and managerial tools that could be successfully adapted and used at project, programs and portfolios level (Scheiblich, et al., 2017). To do so, the Balanced Scorecard system has to be a reliable connection between the soft attributes such as: companies’ mission, vision, core values, results and goals and hard attributes: objectives, measures (KPI), targets and initiatives. According to studies published by Gartner Group and Bain & Company, Balanced Scorecards are used by over 50% of businesses from any continent, no matter if they are globally or nationally developed. It is considered fifth in the rank of top ten management tools worldwide and Harvard Business Review defined it as one of the most highly influential business tool developed in the last 75 years.

Strategy map is a one-page graphic representation of how an organization plans to connect its strategic objectives such as financial, customer, processes, learning and development to create added value; therefore, it is a necessary part for the Balanced Scorecard framework (Kaplan and Norton, 2001). The document addresses four different yet interdependent aspects given by the:

1. financial perspective with focus on the long-term shareholder value
2. customer perspective which defines the customer value proposition
3. internal perspective that concentrates on operational processes
4. learning and growth perspective including human, information and organization capital.

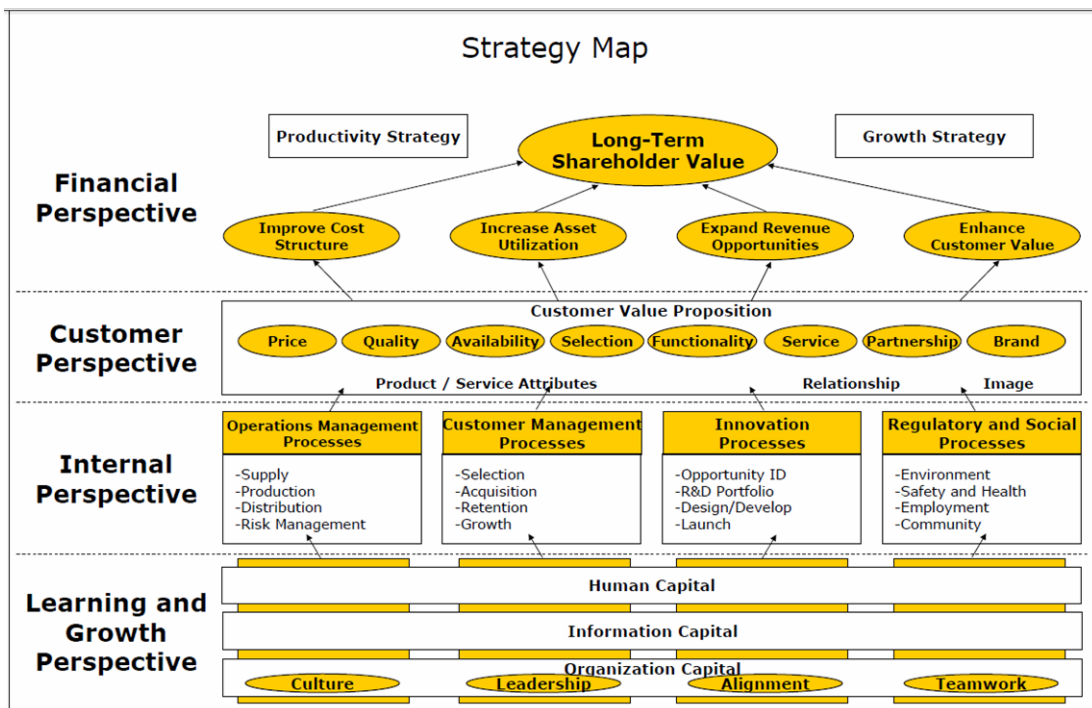


Fig. no. 1 Strategy map

Source: Kaplan, S. R., Norton, D. P. 2001, *The Strategy Focused Organization*, Harvard Business School Press, ISBN 1-57851-250-6

1.2 Operational Risk Management and Measurement

Operational Risk Management aims to foresee any business risk and prepare adequate solution of prevention and impact minimization by using tools, methods and procedures. However, to accomplish this, risk has to be measured. Generally, operational risk can be first classified by measuring frequency of happenings and the severity of the impact to organization. Further, three methods can be used to gather more detailed data: the loss distribution approach, scenario analyses and balanced scorecards (Kenett and Raanan, 2011).

Any operation has value-added and non-value-added activities. Some of them do have a direct influence on the planned result, while others can be considered as “preparation and maintenance” of the main activities. We do classify them for simplifying the mapping process. Once those are clear, we can identify the risk each of the activities can produce. Based on this data, the activities can be scored aiming to highlight operational pitfalls, offering management the opportunity to focus on foreknown critical scenarios and their solutions.

Within the research paper entitled “Manage Collaborative Partnerships Through Effective Project Management in the Oil and Gas Industry” presented at the SGEM Conference in Vienna 2017, based on the study of over 800 contracts, it was shown that the main cause of contract failure was change management and the high request of changes are non-aligned inter- and intra-organizational processes (Gavril et. al., 2017).

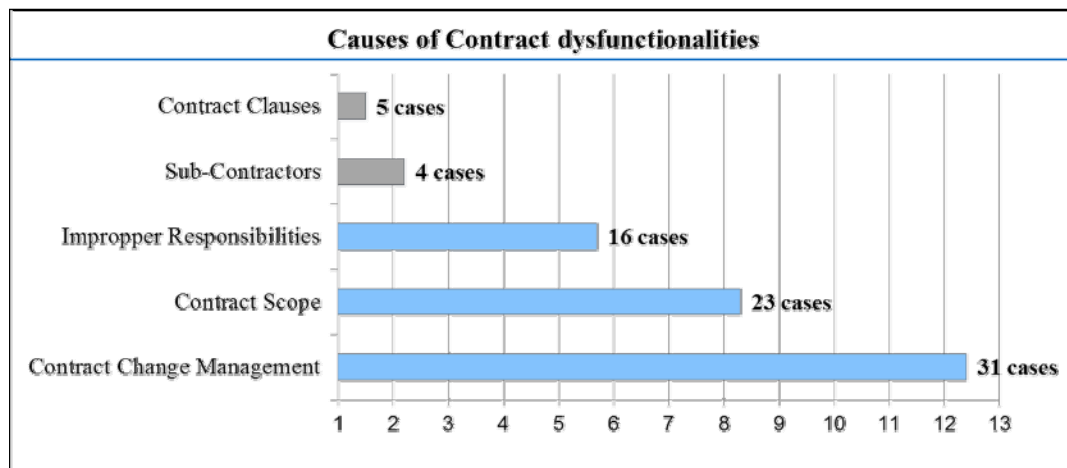


Fig. no. 2. Causes of contractual dysfunctionalities

Source: Gavril, et. al., 2017 – Manage collaborative partnerships through effective project management in the Oil and Gas industry, Science and Technologies in Geology, Exploration and Mining, ISBN 978-619-7408-26-3, DOI: 10.5593/sgem2017H/15.

1.3 Process improvement

Process improvement is a never-ending task (Liker, 2004) and has to be everyone’s duty and shall not be limited to one departments’ responsibility.

A good tool to start a deep-dive audit into the operational processes and their mistakes in delivering profitable results is the claim management process which has the capability to highlight root causes of failure in delivering expected results. Based on a study made by Gavril, et al. (2017) on over 1000 contracts and their failures, the claim process “secures diagnosing and recognition of critical situations rather than treating deal-braking events [...] and reveals the performance leakages of a company, pointing out weak decision makers.” Starting from the proved process disruptions, companies may choose to apply the Kaizen philosophy tools and techniques (Sharp and McDermott, 2009). According to Imai, (1989;

2012) Kaizen is an “umbrella concept” for a mixed of complex business methodologies compound to support improvement. One approach of business process management is to focus on how the actual way of executing tasks can be improved and targets a standardized quality of deliverables (Dumas et al., 1998). Process efficiency is calculated based on the formula:

$$PE = \frac{\sum PTs (VA)}{\text{Total LT}} \quad \begin{array}{l} PE = \text{Process Efficiency} \\ PT = \text{Process Time} \\ VA = \text{Value Added} \\ LT = \text{Lead Time} \end{array} \quad (1)$$

2. Research methodology

Based on our previous findings, we deepened our research aiming to support the improvement of operational efficiency. To accomplish this objective, we studied relevant literature from trustful publishers and world-wide recognized professionals and associations related to operational management, performance indicators and efficient management systems. We focused our empirical research, we compared the 4 most used management systems by global acting companies and identified their common numerator in the attempt of finding adaptable solutions for better monitoring outsourced performances.

Our empirical research was focused on analyzing the KPIs used to monitor over 2000 contracts from the Oil and Gas and Construction industry signed between 2010-2018, define the most frequent used and their possible impact on operational performance.

Aiming to find adaptable solutions to improve operational performance through effective monitoring of outsourced performances, we have first identified which are the more complete or punctual methodological solutions that support organizational approaches both, in terms of processes and management of human dynamics available to companies; the most frequently used are: Lean (Shook, 2010), Six Sigma (Arthur, 2011; Keller, 2011), Business Processes Engineering, The 4 Disciplines of Execution (McChesney, 2016). Further, we compared them, willing to identify their common denominator and structural benefits:

- performance tracking is transparent and permanently accessible to processes runners;
- use of visual management tools, team designed scoreboards and specific information dashboards available on the workplace;
- process improvement circles where the job methods are developed by the entire team with involvement of all members and approval of management.
- good metrics developed starting with the client’s priorities in mind, which facilitates a more relevant set of KPI (voice of client – VoC; critical to quality– CtQ; value stream mapping)

One important step for quality improvement is to identify a right set of measurements. Those measurements should be a mixture of early and subsequent indicators and a combination of qualitative and quantitative KPI’s (Marquardt, Olaru and Ceausu, 2017). Also, KPIs are the important part and bases of Balanced Scorecards. They can provide information regarding internal operational performance, namely the efficiency of processes and employees as well as the performance of outsourced services. Monitoring external competence and business outcome is considered more complicated than those from a company’s internal set-up. Services are usually outsourced following a decision to improve quality and reduce costs, based on thorough analyses of professional providers. This means that the technical know-how of how quality is best delivered remains with the supplier while the Beneficiary can only define result-oriented KPIs. In the Construction and Oil and Gas industries where we had access to analyze over 2000 contracts signed between 2010 and 2018, the following seven Indicators have the highest applicability frequency:

- Schedule Performance Index: difference between earned and planned value

- Impact on Schedule: deviations of scheduled timeline caused by approved changes
- Cost Performance Index: ratio between earned value and paid cost
- Impact on Cost: difference between actual cost without losses versus budgeted cost
- Number of “Key Documents” approved: ratio between approved and reviewed documents
- Design Values versus tested Factory Acceptance Test: engineering versus design parameters
- Design Values versus tested Site Acceptance Test: tender value vs. value measured on site

It is noticeable that all of them are not measuring future activities on which Beneficiary or Supplier can positively influence the outcome. They are measuring technical indicators, deadlines, document deliverables and final results. Following, when the KPI indicates a low performance, the chain of consequences already developed multiple rings. Depending on the complexity of the project, those consequences can be traced in a variety of adjacent activities operated by different companies.

3. Results and discussion

To prevent or minimize the appearance of unforeseen risks, we recommend at first to use an overlapping of two methodologies:

1. Job Brake Down from Training Within Industry and
2. Evaluation Phase from Value Analyses.

Both methodologies were developed during the WWII in the United States of America aiming to solve the most difficult operational challenges:

- to reduce time to competence for very complex tasks involved in the production of sophisticated military equipment (Diesel Submarines);
- to be able to meet the operational requirements by working with unqualified personnel;
- to ensure necessary materials and equipment by substitution of those missing in production.

The Job Brake Down is an efficient tool to split an activity into the smallest possible actions and forming the reverse engineering scene (Dooley, 1940; 1945).

In addition to it, comes the Evaluation process from Value Analyses, in order help analyze and score the risk on each activity of the operation. The Value Analyses Job Plan was mainly developed by Lary Miles and published as a procurement operational guide for non-technical professionals (Miles, 1961).

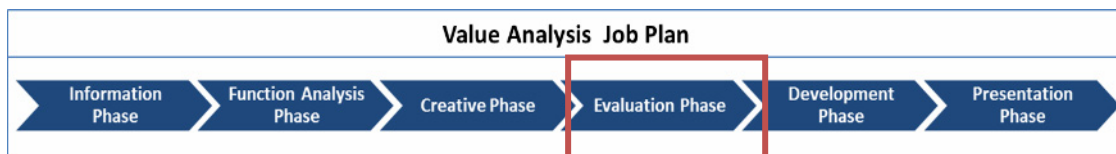


Fig. no. 3. Value Analysis Job Plan

Source: authors own contribution based on the information collected from www.Save-International.org

The resultant actions of Job Brake Down enter the risk evaluation phase where each are quoted with a score between 1 and 5 where 1 is low and 5 is high. All processed data are centralized within an Operational Risk Evaluation Report. Further, this report is overlapped with the one made by the other contractual parties in order to obtain a complete Operational Risk Evaluation Report on the outsourced project.

Once this report is worked out in detail on the basis of rigorous analyzes, it is possible to highlight the risk areas of the outsourced project and assign appropriate KPIs for early

warning of foreseeable deviations. A general overview of how contracts can be scored following the operational risk evaluation process is represented by Fig. 4 from below.

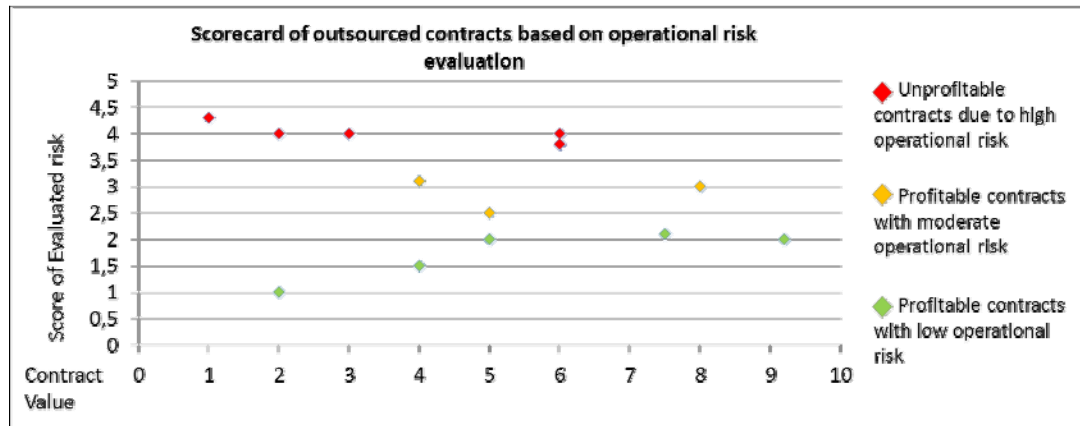


Fig. no. 4. Proposed Scorecard of outsourced contracts based on operational risk evaluation

Source: authors own contribution based on research

Conclusion

By use of such a precise tool, as the above proposed Operational Risk Evaluation Report, companies may benefit of:

- a reduced unforeseeable risk and apply appropriate Performance Indicators and Key Performance Indicators to effectively measure outsourced performances;
- a well predefined solution plan for high risk evaluated activities/operations which in case of the unwanted event occur, saves precious time in finding and agreeing on suitable solutions;
- valid, standardized data collected on the basis of thorough analysis of transversal teams, based on which companies may score their outsourced contracts and identify further business inefficiencies given by unprofitable projects. This valuable information offers the framework from which management decisions and actions can be taken to increase operational efficiency;
- high level of knowledge transfer and collaboration among contractual parties.

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