



Modern Management methods based on Process Approach

الأساليب الإدارية المعاصرة المرتكزة على مقارنة السيورة

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Abstract

Keywords

Process Approach enables enterprises to adapt to every change in the business environment, because it makes their activities more effective and more efficient. The purpose of the article is to present the advantages of the adoption of concepts, and management methods based on the process approach as a tool to achieve the objectives of the enterprises and the requirements of customers.

Process Approach;
Total Quality
Management;
Business Process
Reengineering;
Business Process
Improvement;
Business Process
Management.

JEL Classification Codes : M10 ; M19

الكلمات المفتاحية

الملخص

مقاربة السيورة؛ إدارة الجودة
الشاملة؛ إعادة هندسة
سيورة الأعمال؛ تحسين
سيورة الأعمال؛ إدارة
سيورة الأعمال.

تمكن مقاربة السيورة المؤسسات من التكيف مع أي تغيير يطرأ في بيئة الأعمال، بحكم قدرتها على جعل أنشطة المؤسسة أكثر فعالية وكفاءة.
الهدف من المقالة هو إبراز مزايا تبني المفاهيم والأساليب الإدارية المرتكزة على مقارنة السيورة كأداة لتحقيق أهداف المؤسسة ومتطلبات الزبائن.

تصنيف JEL : M10 ؛ M19

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I.INTRODUCTION:

Currently, businesses everywhere are undergoing rapid and significant changes driven by many different factors such as: higher customer expectations, new technologies, increasing marketing dynamics and rapidly growing competition at the international level (Marjanovic, 2000, p.43). No successful enterprise can operate without understanding and dealing with the dynamic environment that surrounds it.

To understand, deal, and survive in such a dynamic environment, an enterprise should adopt a more efficient management approach to adapt quickly to the business environment conditions that can change at any time.

In this context, Process Approach is a good support for enterprises. It is an effective approach to govern, improve and optimize enterprises' operations and processes. It is a powerful way of organizing and managing activities to achieve competitive advantage.

From the foregoing discussion, our research main enquiry is: Process approach contributed to developing a set of concepts and tools, what are the most famous?

Based on the main question of the study, the following sub questions are formulated and presented as follow:

- Is the process approach so important to be adopted?
- What are the main features of the tools and methods based on process approach?

In order to respond to the questions of the present study, researchers refer to the literature related to the research topic.

II. THEORETICAL FRAMEWORK:

1.Understanding the Process Approach:

The actual trend in business management is the transfer from functional to process approach. Process approach is considered as a key tool for improvement of business processes. Implementation of process principles into management brings a lot of changes with positive effects as higher competitiveness, productivity and performance of enterprise (Sujova, et al., 2041, p.672)

A. What is a Process?

Before discussing Process Approach we believe it is important to, first, define the term process. Because the term "Process" is a core concept in Process Approach. A popular definition is:

The Process is a set of logically related discrete elements (tasks, actions, or steps) taken in order to achieve a particular end. (Van Aartsengel & Kurtoglu, 2013, p.152).

The Process is the collection of activities required to produce a product or service. These activities are supported by flows of material, information, and knowledge among the participants in business processes. (Laudon & Laudon, 2014, p.73).

A Process specifies the transformation of inputs to outputs. The transformation can be of many different forms, but a broad classification into four different types is commonly used (Laguna & Marklund, 2019, p.2):

1. **Physical:** for instance, the transformation of raw materials into a finished product;
2. **Locational:** for instance, the transportation service provided by an airline;
3. **Transactional:** for instance, banking and transformation of cash into stocks by a brokerage firm;
4. **Informational:** for instance, the transformation of financial data into information in the form of financial statements.

When the concept "process" is applied to a commercial enterprise, the term "business process" is used (Adesola & Baines, 2005, p.38).

B. Types of Process

Broadly speaking, processes can be organized into three types: (von Rosing, et al., 2014, p.162)

1. **Management processes:** will appear in the accountability view and may be subject to decisions about how activities are designed and implemented. Management processes are engaged in planning, budgeting, control, oversight, and monitoring of main or supporting processes;
2. **Main processes:** are processes within a process that deliver the output;
3. **Supporting processes:** are processes that are necessary to ensure the main process and give everything it needs to meet the purpose for which it was designed, deployed and is operated.

A slightly different approach to these three types is: (Krichmer, 2017, p.7)

1. **Operational processes:** their focus is on the execution of the operational tasks of a company;
2. **Management processes:** which ensure the appropriate performance of the operational processes;
3. **Governance processes:** to ensure compliance with overall rules and guidelines.

C. What is a Process Approach?

The process approach involves the systematic definition and management of processes, and their interactions, to achieve the intended results in accordance with the quality policy and strategic direction of the enterprise (ISO 9001:2015, p.7).

The process approach is a management strategy, which incorporates the plan-do-check-act cycle and risk-based thinking. It means that processes are managed and controlled. It also means that we do not only understand what the core processes are, but we also consider how they fit together. (Abu AlRub & Shibhab, 2020, p.15).

D. Process Approach benefits

With the introduction of the process approach to management, the enterprise has the following capabilities: (Ainel Nurlankyzy, 2019, p.167)

- The process approach allows to optimize the control system, make it transparent for management and able to respond flexibly to changes in the environment;
- The process approach allows to obtain and use a system of indicators and criteria for assessing the effectiveness of management at all stages of the production and management chain;
- The process approach provides confidence among the co-founders of the enterprise that the existing management system is aimed at continuous improvement of efficiency and maximum consideration of the interests of stakeholders;
- Process management ensures the implementation of the process approach in the enterprise in accordance with the requirements of ISO 9000:2000 and obtaining the appropriate certificate;
- The process approach and quality management system guarantee a certain order and responsibility for the development, coordination, approval and maintenance of documentation;

The basis of the process approach to management is fact-based decision-making. The presence of an information system in the organization allows owners of processes to obtain objective information for management in the event that it is built within a single system of management of the enterprise based on the process approach.

E. Implementing the process approach

According ISO 9000, the following implementation methodology can be applied to any type of process. The step sequence is only one method and is not intended to be prescriptive. Some steps may be carried out simultaneously: (ISO 9000: 2008, pp.8-12)

1. Identification of the processes of the enterprise:

1. **Define the purpose of the enterprise:** The enterprise should identify its customers and other interested parties as well as their requirements, needs and expectations, to define the enterprises intended outputs;
2. **Define the policies and objectives of the enterprise:** Based on the analyses of the requirements, needs and expectations, establish the enterprises policies and objectives;
3. **Determine the processes in the enterprise:** Determine all the processes needed to produce the intended ;outputs;
4. **Determine the sequence of the processes:** Determine how the processes flow in sequence and interaction;
5. **Define process ownership:** Assign responsibility and authority for each process;
6. **Define process documentation:** Determine those processes that are to be documented and how they are to be documented.

2. Planning the process:

1. **Define the activities within the process:** Determine the activities needed to achieve the intended outputs of the process;
2. **Define the monitoring and measurement requirements:** Determine where and how monitoring and measuring should be applied. This should be both for control and improvement of the processes and the intended process outputs;
3. **Define the resources needed:** Determine the resources needed for the effective operation of each process;
4. **Verify the process against its planned objectives:** Confirm that the characteristics of the processes are consistent with the purpose of the enterprise.

3. Implementation and measurement of the process: Implement the processes and their activities as planned. The enterprise may develop a project for implementation that includes, but is not limited to Communication, Awareness, Training, Change management, Management involvement, Applicable review activities. Apply the controls, and perform the monitoring and measurements as planned.

4. Analysis of the process: Analyse and evaluate process information obtained from monitoring and measuring data, in order to quantify process performance. Where appropriate, use statistical methods. Compare the results of process performance information with the defined requirements of the process, to confirm process effectiveness and efficiency and to identify any need for corrective action.

5. Corrective action and improvement of the process: Whenever corrective actions are needed, the method for implementing them should be defined. This should include the identification and elimination of the root causes of the problems (e.g. errors, defects, lack of adequate process controls). The effectiveness of the actions taken should be reviewed. Implement the corrective actions and verify their effectiveness according to plan

2. Management methods based on the Process Approach

Process approach is the basis of several popular management methods that use the process approach as the main approach to improve performance. Such as

A. Total Quality Management (TQM)

The process approach constitutes an important part of any quality management strategy. A primordial goal of any enterprise is to develop and implement strategies that enhance the ability to consistently deliver a quality product or service. As such, a process approach where all resources and tasks are identified, analysed and allocated to each step of the production process will more effectively deliver the desired results (<https://www.isotracker.com/>).

- What is Total Quality Management?

While there is no generally accepted definition of TQM, several notable authors have attempted to define it, among them:

TQM is an approach to improving the competitiveness, effectiveness and flexibility of a whole enterprise. It is essentially a way of planning, organizing and understanding each activity, and depends on each individual at each level. For an enterprise to be truly effective, each part of it must work properly together towards the same goals, recognizing that each person and each activity affects and in turn is affected by others (Oakland, 2014, p.32).

TQM is defined as both a philosophy and a set of guiding principles that represent the foundation of a continuously improving enterprise. It is the application of quantitative methods and human resources to improve all the processes within an enterprise and exceed customer needs now and in the future. TQM integrates fundamental management techniques, existing improvement efforts, and technical tools under a disciplined approach (Besterfield, et al., 2012, p.1).

- The Principles of TQM

The quality management principles which form the basis for setting a policy regarding quality are (ISO ,2015, p.p.1-14) :

1. **Customer focus:** The primary focus of quality management is to meet customer requirements and to strive to exceed customer expectations;
2. **Leadership:** Leaders at all levels establish unity of purpose and direction and create conditions in which people are engaged in achieving the enterprises quality objectives.
3. **Engagement of people:** Competent, empowered and engaged people at all levels throughout the enterprise are essential to enhance its capability to create and deliver value;
4. **Process approach:** Consistent and predictable results are achieved more effectively and efficiently when activities are understood and managed as interrelated processes that function as a coherent system;
5. **Improvement:** Successful enterprises have an ongoing focus on improvement;
6. **Evidence-based decision making:** Decisions based on the analysis and evaluation of data and information are more likely to produce desired results;
7. **Relationship management:** For sustained success, an enterprise manages its relationships with interested parties, such as suppliers.

- TQM Techniques, tools and systems

There is a wide range of quality management tools, techniques, and systems, the most commonly found in Quality Management Literature are: (Psychogios & Vasilios Priporas, 2007, p.p.43-44)

- **Statistical Process Control (SPC):** SPC is one of the most well-known management methods. It is a statistical method through which managers can control the production or the service delivery process, in order to make shifts attempting to improve it;
- **ISO 9000 series:** is perhaps the most popular quality improvement system. This set of standards ensures that a enterprise has a specific quality improvement policy, which makes it more competitive in the market;
- **Pareto Analysis:** It is a tool through which the management team can eliminate problems that occur in the operation processes;
- **Matrix Diagram:** This is a tool that allows managers to identify, analyse, and rate the relationship between two or more variables, and in this way to encourage them to think in terms of relationships, their strengths, and any patterns;
- **Histograms:** are also useful TQM tools. Histograms graphically demonstrate the relative number of occurrences of a wide range of events;
- **Tree Decision Diagram:** is a tool through which someone can arrange targets, problems, or customer's needs in a specific order;
- **Critical Path Analysis (CPA):** This tool is associated with managing projects. CPA seeks to establish, through the use of a network of arrows or nodes, a logical order of activities in terms of time and importance for the completion of a project;
- **Fishbone or Ishakawa Diagram:** The fishbone diagram is used to identify causes of a problem without using statistical methods.

B. Business Process Reengineering (BPR)

BPR has become a widely used approach to the management of change since the early 1990s, yielding potential benefits such as increasing productivity through reduced process time and cost, improved quality, and greater customer satisfaction (Cao, et al., 2001, p.332).

- What is Business Process Reengineering?

The pioneers of Business Process Reengineering define BPR as:

BPR is the fundamental rethinking and radical redesign of business processes to achieve dramatic improvements in critical, contemporary measures of performance, such as cost, quality, and service and speed (Hammer & Champy, 1993, p.35).

BPR encompasses the envisioning of new work strategies, the actual process design activity, and the implementation of the change in all its complex technological, human, and organizational dimensions (Davenport, 1993, p.2).

- How Business Process Reengineering works?

BPR is a step towards a dramatic change that contains the major components summarized as follows: (Srinivasan, 2011, p.15-16)

- **Strategic/Business Planning:** Strategic planning refers to a set of business goals and requirements expressed in terms of customer needs within the context of a mission, vision, values and beliefs;
- **Activity Modelling:** is a technique that assists in understanding how the business planning works. requires that a business process be decomposed in a step-by-step manner into activities that make up the processes;
- **Data modelling:** is a technique that describes exactly what information is needed by an enterprise to perform the activities that make up the business processes;
- **Activity-Based Costing (ABC):** The ABC takes into account all these aspects. It has the potential to go beyond the distribution and absorption of non-volume related fixed overheads;.
- **Economic Analysis:** Economic analysis enables an enterprise to determine costs and benefits associated with alternative investment opportunities taking into account the life cycle characteristics of investments;
- **Best Business Practices:** A manager has to answer two questions about his areas of responsibilities: Is this the best way to do it? How do I compare with others who have the same responsibilities? The first question is answered by using the techniques of „best practices“ and the second question by the techniques of „bench marking“. These essentials have been derived from total quality management (TQM) movement;
- **Functional Economic Analysis (FEA):** It provides a methodology for analysing and evaluating management practices and alternative process improvement and investments. It gives a framework for exploring alternative opportunities for improving business processes using sound business case practices.

- The Three BPR implementation approaches

There are three approaches to BPR implementation: (Huq & Martin, 2006, p.576)

- **The first approach:** radical top-down BPR, is a strategic process change initiative sponsored by top management. This approach has the most negative impact on employees“ levels of comfort, confidence, competence, and control, especially if top management has not supported it with adequate retraining;
- **The second approach:** participative BPR involves almost everyone in the enterprise. Here to, the previously-mentioned employees 4C“s may be disrupted because of consensus decision making;
- **The third approach:** ERP-driven BPR requires that the existing processes be aligned with the software, a systematic implementation plan through cross-functional coordination, and addressing issues relating to employee training and culture.

Enterprises use BPR to (Mohapatra, 2013, p.26-27)

- Empower employees;

- Eliminate waste, unnecessary management overhead, and obsolete or inefficient processes;
- Produce often significant reductions in cost and cycle times;
- Enable revolutionary improvements in many business processes as measured by quality and customer service;
- Help top enterprises stay on top and low achievers to become effective competitors.

C. Business Process Improvement (BPI)

The concept of BPI was first named so by James Harrington (1991), which he described as a systematic methodology developed to help an enterprise make significant advances in the way its business processes operate (Harrington, 1991, p.20).

- What is Business Process Improvement?

Several notable authors have attempted to define BPI. We state:

BPI is a methodology that is designed to bring about step-function improvements in administrative and support processes using approaches such as process benchmarking, process redesign and process re-engineering (Harrington et al., 1997, p.5).

BPI is achieved by examining and understanding the why, what, and how of the process and demystifying the interactions between the people, process, and technology. During the project, people are empowered, activities are simplified, and the use of technology as an enabler of accurate, complex actions is promoted. At the end of the project, each team member will have a similar understanding of the process and its expected results (Attong & Metz, 2012, p.5859).

- The need for Continuous Improvement

In a relatively short time span dramatic changes have occurred. These changes applied to the products or services offered in the marketplace, the technologies used, the way activities are organized, and so on; have made Continuous Improvements a necessity in today's marketplace (Bjorn, 2007, p.1). Continuous improvement: a term derived from the total quality movement, means monitoring a business process and making adjustments to it so that it continually improves over time. Developing a continuous improvement mindset ensures that the process continues to deliver the gains achieved. This means continually measuring the business process, regularly reevaluating client/customer needs and expectations, engaging the process workers on a regular basis, and not allowing the documentation to sit on the shelf (Page, 2010, p.228). It is where all members of the enterprise work together on an ongoing basis improving processes and reducing errors to improve overall performance for the customer (Fryer, et al., 2007, p.498).

- Business Process Improvement Methodologies

Many BPI methodologies which have been proposed for business process improvement differed in their effectiveness. The situation is difficult because business processes are different in different

enterprises, and methodologies should be designed based on processes need of each industry (Rachid & Ahmad, p.45). The widely used methodologies are : (<https://mosimtec.com/>)

- **Model-Based Integrated Process Improvement Methodology (MIPI):** MIPI describes “what to do and how to make it happen”, especially when it comes to improving efficiencies;
- **Super Methodology:** designed to improve overall productivity, suitable for the improvement efforts of a small to medium-sized enterprise;
- **Benchmarking Methodology:** in this method, the aim is to adapt ideas and strategies, products or services, and processes from successful enterprises. Improvements could be in the manufacturing process, updating legacy technology, or even enterprise direction;
- **PDCA (Plan-Do-Check-Act) Methodology:** PDCA methodology involves continuous improvement PDCA cycles to improve productivity. The stages of the PDCA cycle encourage accurate planning and measuring effective methods through feedback;
- **Six-Sigma Methodology:** Six-Sigma involves detecting and removing errors and defects from your business processes by concentrating on outputs that directly affect customer satisfaction;
- **Lean Thinking:** lean thinking is a business improvement methodology that aims to reduce waste from processes;
- **Kaizen Methodology:** Kaizen is a Japanese term meaning continuous improvement, which explains its basis of gradual, continuous and incremental improvement. It focuses on making small continuous improvements in order for them to have a large scale impact;
- **Total Quality Management (TQM):** This is a business improvement methodology that is best for an environment that’s constantly changing. TQM is a system of practices, training techniques and tools that keep adapting to customer demands.

D. Business Process Management (BPM)

Business Process Management, broadly speaking, is part of a several decade-long tradition that aims at improving the way business people think about and manage their businesses (Harmon, 2010, p37) BPM has its roots in the process orientation trend of the 1990s, where a new way of organizing enterprises on the basis of business processes was proposed (Weske.2007, p.4).

- What is Business Process Management?

While there is no generally accepted definition of BPM, several notable organizations have attempted to define it. These include:

BPM Institute defined BPM as the definition, improvement, and management of a firm's end-toned enterprise business processes in order to achieve three outcomes crucial to a performance-based, customer-driven firm:

1. clarity on strategic direction,

2. alignment of the firm's resources,
3. Increased discipline in daily operations. (www.bpminstitute.org)

According to the **ABPMP International's** Business process management (BPM): is a disciplined approach to identify, design, execute, document, measure, monitor, and control both automated and non-automated business processes to achieve consistent, targeted results aligned with an enterprise strategic goals (www.abpmp.org).

- Business Process Management Life Cycle

The BPM lifecycle describes the phases in managing business processes and illustrates how BPM initiative can be organized to arrive at an improved process by means of six major steps: (Dumas et al., 2018, p.p.22-24)

1. **Process identification:** In this phase, a business problem is posed. Processes relevant to the problem being addressed are identified, delimited, and interrelated;
2. **Process discovery:** (also called as-is process modelling). Here, the current state of each of the relevant processes is documented, typically in the form of one or several as-is process models;
3. **Process analysis:** In this phase, issues associated with the as-is process are identified, documented, and whenever possible quantified using performance measures. The output of this phase is a structured collection of issues;
4. **Process redesign:** (also called process improvement). The goal of this phase is to identify changes to the process that would help to address the issues identified in the previous phase and allow the enterprise to meet its performance objectives;
5. **Process implementation:** In this phase, the changes required to move from the as-is process to the to-be process are prepared and performed. Process implementation covers two aspects: organizational change management and automation;
6. **Process monitoring:** Once the redesigned process is running, relevant data are collected and analyzed to determine how well the process is performing with respect to its performance measures and performance objectives.

- Business Process Management Capabilities

BPM provides enterprises with the most comprehensive ability to document, assess, and improve the enterprise through:(Panagacos, 2012, p.11)

- **Function analysis:** is used to assess the functions performed by an enterprise at the macro level. This identifies growth opportunities and provides guidance for strategic planning;
- **Service analysis:** is used to identify manual processes for automation and helps prepare them for integration with IT platforms;
- **Process analysis:** is an assessment of end-to-end processes that aids process analysts to identify process improvements and optimize business performance;

- **Information analysis:** is used to define and assess the flow of information between various stakeholders, identify any gaps, and optimize those channels;
- **Workflow analysis:** is used to define and assess data workflow between applications, networks, and systems.

- The Benefits of Business Process Management

There are many benefits to implementaion BPM, the major benefits are: (Menken & Blokdijk, 2009, p.201-202)

- **Efficiency:** Through:
 1. Eliminate Manual Data Entry;
 2. Reduce Process Cycle Time;
 3. Reduce Manual Analysis/Routing.
- **Effectiveness:** Through:
 1. Handle Exceptions Faster and Better;
 2. Make Better Decisions;
 3. Consistent Execution.
- **Agility:** Through:
 1. Faster Regulatory Compliance;
 2. Support New Business Models.

III.CONCLUSION:

It has been clearly presented that processes represent a core part of every enterprise, and managing these processes is considered to be among the top priorities for many enterprises. It is necessary to find an approach to improve processes in order to increase effectiveness, efficiency, and adaptability.

There is no standard list of business processes, each enterprise must independently or with the help of experts develop their own business process, depending on the analysis of the environment that surrounds it, and then decide on the business process approach that should be applied, in order to keep up with the dynamic business environment.

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