Exploitative and Explorative Business Process Improvements

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1. What is a business process?

A business process is a sequence of activities for the fulfillment of an operational task. From one or more inputs (input), a customer-beneficial output (result) is generated, i.e. products are created or services rendered through information and material transformation. Figure 1 shows a simple illustration. [1]

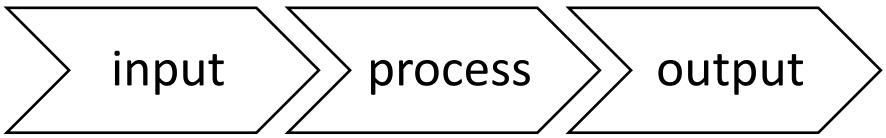

Figure 1: Simple illustration of business process

The biggest benefits of the business-process oriented concept are:

- Standardization
- Transparency of every procedure
- More efficient planning
- Efficient control of every procedure

This yields in a group of business processes, which helps organizations bring together all sort of objects, including people, documents, information sources, organizational structures and applications. The Management of all these business processes is called Business Process Management BPM. [2]

2. Business Process Improvement

Business Process Improvement represents the identifying, analyzing, improving, and then reviewing existing business processes. This is accomplished by mapping out business processes, identifying any inefficiencies and redesigning the process.

Figure 2 shows a general approach to do a business process improvement.

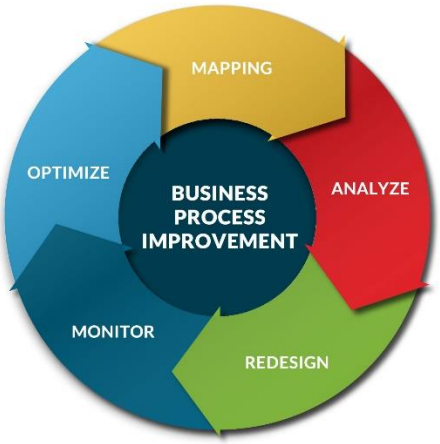

Figure 2: Lifecycle Business Process Improvement [3]

Due to very different applications in research or companies, there exists many methodologies or patterns with slightly different focus, which will be presented in the further sections.

2.1 PDCA (Plan-Do-Check-Act)

This pattern was developed at Western Electric by Walter Shewhart and is divided into four main parts:

1. **PLAN**
   This part consists of answering questions like what amount of resources are needed, which resources are available and what is the best solution to fix the problem in regard of the resources.
2. **DO**
   Everything which got considered in the previous stage got applied
3. **CHECK**
   Verifying all the goals from the planning phase. If something went wrong, this mistake has to be eliminated.
4. **ACT**
   The final phase is to act completely apply the initial plan.

This approach is for continuous improvement and can be repeated many times. [4]

2.2 Six Sigma

Six Sigma gives the possibility to measure inconsistencies or defects in a process to deliver better products and services. A special feature of this approach is the division in two sub-methodologies, one for creating new processes (DMADV) and the other for improving existing processes (DMAIC). [5]

Step	Instruction
(D)efine	Defining process goal in respect of company's overall strategy and customer's needs
(M)easure	Measuring which factors are critical to the quality of the product or service
(A)nalyze	Different options need to be analyzed regarding design and development
(D)esign	Actual designing of the process
(V)erify	Verification if all needs are met

Table 1: DMADV

Step	Instruction
(D)efine	Identifying possible improvement
(M)easure	Measuring the current performance of the existing process
(A)nalyze	Analyzing the process with highlighting any defects and identifying their root causes
(I)mprove	Eliminate the defects and improve the process
(C)ontrol	Controlling the improved process if any new defects appear

Table 2: DMAIC

2.2 Lean Manufacturing and Lean Thinking

This approach sets the goal to reduce waste from every business process and can be divided in following main goals:

- Mend imbalanced production quantities
- Avoid inventory errors
- Fix product defects
- Reduce wastage

All in all, it seeks to get rid of every step in one business process which are not actually needed. [6]

Literaturverzeichnis

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