Introduction To BPM

Defining organizations as the "team cooperation of a group of people to achieve a certain goal", processes can be defined as the method of achieving those goals. Regarding the importance of processes and the wide range of possible processes to achieve a certain goal, they need to be defined, explained, controlled and managed. However on the other hand, today business environments are facing fast changes, thus the proper methods of achieving goals are constantly changing as well.

Considering all the above factors, constant supervision, design, change and improvement of processes based on the organization strategy seems vital.
EPC solution includes comprehensive infrastructure to identify, analyze, design, execute, monitor, integrate and control the human-based processes and system-based processes in an organization.

These solutions provide the organization with maximum productivity and efficiency by modeling, automation, management and improvement of business process as well as integrating to other active applications in the organization.

In addition to process automation, EPC has focused on the following areas:

**Offering Facilities Related To Electronic Services**
Considering these facilities, you can easily automate the services that are offered to customers, clients, citizens and etc. out of your organization. These facilities lead to integration of processes with organizational portal.

**Integration with Current Application**
Integration of processes with the current information systems omits scattered information islands in the organization.

**Controlling and Monitoring Processes**
Implementing EPC provides the opportunity to increase visibility, supervise and control the processes, activities and procedures of the organization automatically.
Tools — Process Design and Deployment Tools

- Process Designer
- Process Engine
- Designing and managing forms
- Rule Engine
- Entity Designer
- BPM APP Transfer
- Management of the analytical data of the process
- Events Management
Process Designer

Organizational processes can be defined by process designers and then they can be performed via process engine. This system supports various types of processes:

- Human based processes
- System based processes
- Combined (human-system) processes

There are specific standards to design various processes so that a human based process or a system based process can be designed in the shortest time. Some of the features of the process designer can be listed as followed:

- Designing process **graphically**
- Validating the value of process during the designing phase
- The possibility to import the process diagrams from other process designers (based on BPMN standard)
- The possibility to define complicated cases in processes like:
  - Conditional Sentence
  - Defining complex processes
  - Defining parallel procedures
Process Engine

The processes which have been designed by process design tools (Process designer) are published in the process implementation engine, from that point, the processes are implemented based on specific procedures.

Some of the features of this engine can be listed as followed:

- Supporting process improvement continuously through various ways:

  **Versioning On Processes**
  In this mode each version of the processes can go through their specific procedures.

  **The Possibility to Change Process Instances while they are being Implemented**
  This feature gives you the chance to change processes variously while they are being implemented.

  **The possibility to supervise and control processes while they are being implemented**
Designing and Managing Forms

This tool provides you with the ability to design forms in the shortest possible way. The following can be named among various features of this tool:

- The possibility to define web-based forms without writing codes
- Providing a WYSIWYG interface
- The possibility to preview while designing
- The possibility of using pre-defined themes
- Having access to various controls during designing forms
- Required field validation and range field validation
- Being supported by Ajax technology automatically

In addition to the current features of producing forms quickly, there has been a series of other components in the form designer that allows the user to design complicated forms like:

- Verifying the authenticity of the input information based on rules
- Using a business vocabulary syntax in the forms
- Using rule designing tool in the form of scripts
- Defining forms independently from the process
- Use special forms created by the programmer
- Define complex forms
- Define access level for various components (or controls) of a form
- Define the behavior of a form for each phase of the process
- Define Master detail forms
Organizational rules are constantly changing. These rules are generally indicated in forms of routines, regulations, etc. managing and adjusting organizational processes with these changing rules is a major problem in managing the organization activities and that's why rule engine tool is one of the most important components of Business process management systems.

By using this engine, organizational rules are completely separable from processes. Therefore by simply changing a rule, you can guarantee that the rule is observed all through various business processes and procedures that are influenced by the mentioned rule.

In this system, you can assign the change of a rule to all processes or to some processes that have specific versions. Applying this method, you can distinguish process rules that have different versions. There are 2 types of rule design tools in EPC.

Some features of the rule engine tools in this system can be listed as followed:

- Showing rule errors while designing
- The possibility to call the rules via:
  - Processes
  - Forms
  - Events
- The possibility to change rules at real time
Management of the Analytical Data of the Process

One of the objectives of implementing processes with BPMS tools is to improve the processes continuously. Process improvement requires various tools. Saving, management and monitoring the analytical data of the process are some of the most important of these tools. EPC is capable of keeping and processing the data followed are some of the examples:

- The time to respond to each task
- The predicted amount of time for each task
- The effective predicted time for each task
- The effective time of performing each task
- The cost of waiting time of each task in the EPC workflow work list
- The cost of effective work done on each task
BPM APP Transfer

This module provides the possibility to transfer the generated processes from design environment to execute environment. In some cases, the specific processes have changed in the design environment, the changes will be automatically applied in the destination (performance environment). In other words, the processes will be updated in destination.

Entity Designer

Entities that are related to processes are designed with this tool. On these mentioned entities, related databases are created automatically and the introduced information structure (Tables, fields) is introduced in the EPC generator report tool.
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Integration with organization portal

Often some of the stakeholders of many processes are people who are out of the organization. These stakeholders include customers, citizens, clients, partner companies. Normally the organizations communicate with the clients outside the organization, through the portal. That’s why EPC integrates the processes and organization portal so that people external of the organization can be connected to the internal activities of the organization. In the other words the clients can perform the following activities through the organization portal:

- Starting the process by filling out the EPC form in the portal
- Having access to the related reports in the portal
- Performing the assigned tasks in the portal
- Tracking the registered requests in the portal
Generating Tracking Code

Lots of processes start from outside the organization. For instance, when a customer files a request on the portal by filling out a form, Enterprise process center allocates a unique tracking code to that request and provides the person with the opportunity to track in different ways (such as SMS, email, IVR,...)

A tracking code can be generated in two methods:

A. Generating automatic tracking code
   In this mode the system generates a tracking code for the process automatically and displays it for the end user.

B. Generating tracking code based on a specific formula
   In several cases, it's necessary to generate tracking codes based on specific formula or rule. Having the mentioned possibility you can specify the required formula to calculate the tracking code.
Tracking via SMS, Email, IVR

After receiving the tracking code, the client can follow the process through SMS and IVR. The process engine sends text messages based on the condition and state of the process (using SMS or emails) and voice messages (using Interactive Voice Response) to the person.

Electronic Payment Service

One of the important needs in electronic services is providing the chance to make electronic payments. Having the module for electronic payments, EPC, provides this possibility at any state of the process with the lowest cost. The possibility to pay electronically through internet bank information transfer network gives us the opportunity to make payments without needing to write any codes.
Sending Alerts

Sending alerts at specific phases of a process is a feature of EPC. In other words the process designer can easily pinpoint the following:

- A state in the process where alerts should be sent
- The method of alerting
- The receiver of the alert
- Type of alert

Therefore the client can follow his request and not necessarily follow it via phone or searching for his request externally. The alerts can be sent through the following methods:

- Email
- SMS
- Messenger
Events Management

In this system, events are of high importance. It's the events that lead the process forward. In Enterprise process center, events are of various natures:

- Human based events
- System based events
Allocating system external resources to Processes

User Management

Users’ EPC Work List
Allocating System External Resources to Processes

Almost in all organizations, there are various applications. Most often these applications use various technological infrastructures. Integrating these applications has always been important and a costly job because unlike fragmented systems, organizational tasks are not independent information islands.

Business processes often interact with users, applications, back-end resources, and resources inside and outsides the organization.

BPM systems have to be able to communicate with system resources as well as user, because there aren’t many processes that can work independently without communicating with these resources.

Processes are connected with other information systems in 2 general formats:

- The connection of process with current applications.
- The connection of current application with the process that includes:
  A. The possibility to start a new process from the application
  B. The possibility to proceed the present state of the process
User Management

This tool provides you with the opportunity to define users, roles, positions, groups, and also the ability to manage them. After defining the above items in this part you can also define access level for various parts of the system such as form management, task management...

This tool has various features among which the following can be listed:

- The possibility to define organization chart
- The possibility to define natural person and legal person
- The possibility to define the access of each person
- The possibility to define roles, groups, positions...
Users’ EPC Workflow Work List

All the end users can interact in this environment according to their access level. People can communicate with applications developed by EPC through forms, work list, reports and etc.

- The possibility to see the tasks done
- The possibility to see the unfinished tasks
- The possibility to see the assigned tasks
- The possibility to search the tasks
- The possibility to create folders and assign custom rules to them
- The possibility to access the tasks based on task type
- The possibility to have access to dashboards
- Access to forms
- The possibility to start processes
The possibility to track processes

Getting reports from process information

Decision support module
The possibility to track processes

Every user can track his processes through the desktop module. Tracking can be done in 2 ways:

- **Tracking the current works**
  In this part you can see what has been done so far to lead a work into the dashboard of a person.

- **Tracking the work done**
  By tracking the work done, you can view what sorts of activities are caused by the certain task in the organization.
Decision support module

Making a proper decision requires access to convenient, precise and correct information at the right time. This module aims at supporting the decisions made in the organization. There are some features in this system to provide task participant(s) with decision support reports at any state of the process.

Generally these reports include:

- A list of information on the current situation
- Reports on comparing the data at various periods of time
- Predicting data for future periods of time (based on previous data analysis)
Getting reports from process information

Process information is two types:

A. Control reports from performing the processes
B. Reports that are related to the entities and forms of a process

The process designer expert can produce any types of reports from process table after creating the entities related to the process.
Questions?

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