## Introduction

Here we’ll summarize all the must have & nice to have features we need from a BPM solution, to consider it as an alternative to Bonita for our Order Management solution.

The later idea is to build an Excel file with it and have a checklist for candidates. Even we could use a point system to decide.

## Must have

**Modules offered**

* User interface
* Process modeling
* Engine process workflow

1. **User interface**

* Portal User interface:
  + Security mechanisms that allow access to the application.
  + End users can consult their to-do tray, manage their processes, task tracking ...
  + Users Administrators: task priority tracking, searches by user or process, view and manage all installed processes, versions and active instances of all installed processes.
  + Users administrators: Allow creation, modification and deletion of the roles associated with the execution of the tasks of the processes.
  + Allow escalation of activities. In the case of need, either due to the absence of the person assigned the task or some inconvenience during the execution.
* User Interface workflow
  + View open cases and consult their associated information: executed tasks, context data ...
  + Allow users to see the progress of the process and the paths the process has taken graphically.
  + View record activities and actions executed in the process (person, action, time)
  + Change user interfaces quickly and intuitively.
  + Allow the end user, through an administrative tool, to change variables and / or specific process data at runtime, with prior authorization.
* User interface interactive reports
  + Creation of interactive reports, with filter and search options.
  + Allow use of predefined reports and their monitoring (KPIS)
  + Generate reports and graphics of the simulation.
  + Ability to export reports and graphs to office tool formats.

1. **Process modeling**

* BPMN 2.0 modeling tools
  + Complete BPMN cycle: online modeling, simulation, implementation, execution, monitoring and optimization of the implemented processes.
  + Subprocess modeling.
  + Allow teamwork in process design, modeling and construction from a single centralized tool.
* support version control
  + Allow the versioning of processes centrally and under a process governance.
* User interface designer
  + Must have a UI designer that allows to design attractive forms to be used in manual process tasks
* Must be possible to setup KPIs on processes.
  + Allow to include in the design time controls in the execution of the activities in order to stagger and notify if necessary.
* Allow reuse
  + of components, scripts, connectors in the design of processes.
  + of roles, users, business rules, forms screens.
* Validate diagrams

1. **Engine**

* Process (workflow) engine
* Integration capabilities to connect applications with third party services (bidirectional)
  + Integration with SOA services
  + Integration with REST services
* It must be managed by web interfaces (Api rest, SOAP) and offer to be extended with management api to extend / integrate it with external applications.
* Authentication and authorization mechanisms
* Must be integrable with either LDAP or Active Directory, Single sign on
  + Allow authorization specific to task, process, thread level
  + Allow according to the roles assigned to people the assignment of tasks.
  + Allow the assignment of tasks based on business rules that evaluate the process information and assign the task to the corresponding user or group of users.
* Record activities and actions executed in the process (person, action, time)
* Start processes manually or automatically.
* Support exception handling and error recovery.
* Compatible with standard market databases.
  + Oracle

1. **Deployments**

* Must be easily deployable on Kubernetes
* Must work in high availability
* Allow instances of the same process with different versions to run so that tasks in an old version process can continue to run until they are completed or migrated to the new version.
* Allow process deployment automation
* Update or migrate versions of running deployed processes
  + It allows the migration of running processes to a new version, in order to use those changes immediately.
  + Allow to make adjustments or modifications in the deployed processes. Create, modify or eliminate tasks in the flow diagrams of the processes already developed to start them again.

## Nice to have

**Modules offered**

* Have a large community of consultation and use of open source.

1. **User interface**

* Portal User interface:
  + Easily enable both User Interface Localization (i10n) and User Interface Internationalization (i18n)
  + Oriented to the UX user experience with the mobile or tablet and with the native functions of these: (Bluetooth, camera, gps)
* User Interface workflow
  + Simulate workflow costs and workloads
* User interface interactive reports
  + Creation of graphs and reports on information obtained in real time from the processes.
* Electronic signature usage capabilities

1. **Process modeling**

* Facilitate the development of processes to a service orchestration approach: workers, JMS queues.
* Existing solutions to integrate with JMS or ESB to manage messages and requests even if the system is down or busy.
* Provide documentation of processes, scripts so that they are exportable to office automation tool formats.
  + Tasks can be documented at design time
  + Design with different levels of abstraction
* Reports of interdependencies between processes, impacts of changes in subprocesses.
* Allow simulation of processes:
  + For their optimization and calculation of parameters.
  + Simulate workflow costs and workloads
  + Detect and visualize possible cases of bottlenecks.
* Web user interfaces designer with rich capabilities.
  + Allow definition of components supported in electronic forms, such as dropdowns, text areas, etc.
  + Allow connecting forms with data extracted from bbdd
  + Allow data validation of forms.
* Allow import / export of process design from one design tool to a different one.
* Business rules engine.
  + Can use business rules direct process logic.
  + Allow setting process rules through a business rules engine independent of the process engine
* Allows the execution of unit test on processes
* Allows CI/CD
* Allows the use of Git as version control for process designs and related source code

1. **Engine**

* Business rules engine. Can use business rules direct process logic.
* Allow sending emails and event notifications in the execution of the tasks of the processes.
* Management of the documents that are generated, recorded during the execution of the process.
  + Allow storing, retrieving and referencing documents against a document management tool (for example alfresco) to integrate them into the process flows.
  + Electronic signature usage capabilities

1. **Deployments**

* Must be scalable. Multiple active instances can be deployed on demand