



Data Analytics and Artificial Intelligence

Vol: 2(6), 2022

REST Publisher; ISBN: 978-81-948459-4-2 (Online)

Website: <https://restpublisher.com/book-series/daai/>



JBPM in IT Sector for Banking Products

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Abstract: JBPM (Java Business Process Management) is an open-source workflow engine written in Java that can execute business processes written in BPMN 2.0. JBPM is a toolkit for building business applications that manage and automate business processes and decisions. BPM tools make the process easier. Many BPM tools are available on the market to take advantage of business process management such as reduced costs, fewer errors, and faster processing times. Banking is one area where BPM is frequently applied. BPM helps banks automate business processes such as account opening, loan processing, payments, and transactions.

Keywords: JBPM, BPM, Business Process, Process Management, Banking Product.

1. INTRODUCTION

Over the past decade, every digital innovation in the IT BPM world has had an impact on the BFSI industry. This greatly shortened the service time and contributed to the improvement of the service. Deploy robotic process automation to improve claims processing, implement big data and advanced analytics to create risk profiles, gain insights into customer behaviour, and predict fraudulent transactions. This has enabled the industry to simultaneously meet customer expectations and regulatory standards. Market and regulatory demands are constantly changing, so banks need to implement business process management (BPM) that can quickly respond to regulatory changes, process changes, and customer and market needs. This is made possible by an automated banking workflow solution. Increase bank employee productivity and reduce the risk of lost documents and misinformation in banking processes. This improves accuracy and speeds up many processes such as approval workflows and document management. Banking workflow solutions enable banks and financial institutions to streamline their business processes and banking workflows and improve their technology experience. This increases cost and transparency while protecting investments in other systems.

2. OBJECTIVE

Through this paper, we aim to highlight the use of BPM technology in banking sector and how some of the advantages of BPM tools. Further we will see some banking applications which can be easily managed by JBPM.

METHODOLOGY

Through this study and research, we highlight some of the milestones of JBPM. This white paper begins with a general introduction to business process concepts, followed by the latest insights and developments in the field, with a particular focus on the use of process management in banking. Content analysis techniques were implemented to evaluate data obtained from various secondary information sources such as journals, web sources and other scholarly publications. In order to obtain an update on the current state of JBPM in banking sector research, we have used a mix of academic and non-academic literature with the aim of gaining multifaceted perspectives.

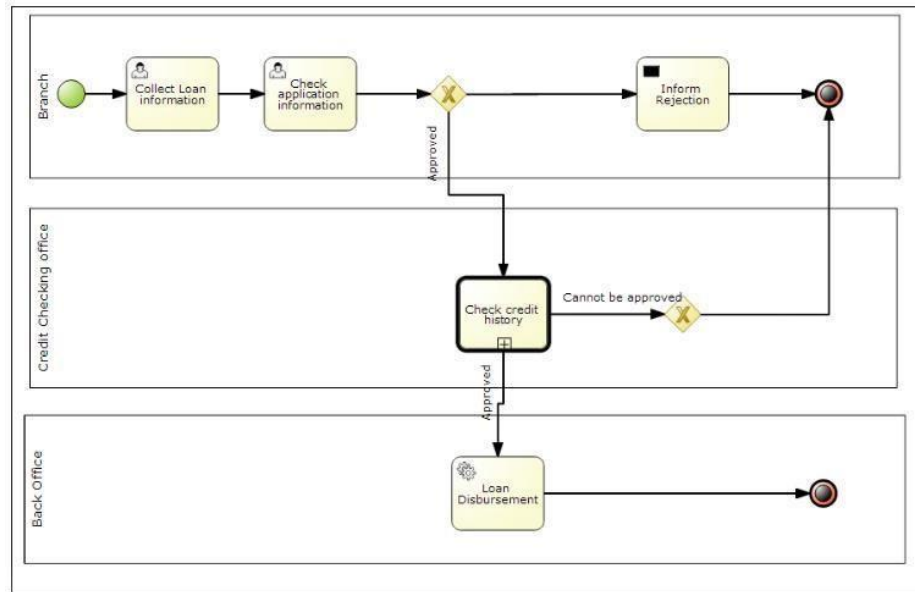
3. OUR BANKING WORKFLOW SOLUTION PROVIDES

Manage banking workflows and automate approvals using standardized processes. A business rules engine and business activity monitoring tools for tasks and SLAs. Similarly, in the age of digital banking, where loan payments are just a click away and customer KYC is just a few clicks away, there is no room for wrong operational decisions. Banks today cannot afford an outdated approach to operational decision making. All static decisions can be modelled in the bank's workflow solution. But complex decisions and business logic require different answers. As decision automation becomes more popular, banks are turning to solutions that can make intelligent decisions accurately and efficiently. In addition to banking workflow solutions that work with BPMN standards, solution providers also offer rule engines based on DMN standards. It integrates and simplifies modelling and implementation to help automate decision-making and enable end-to-end digital processes. Instead of optimizing internal workflows, companies are streamlining and automating decision making. This allows you to focus on customers who expect immediate response in the digital world. Workflow and decision automation can make a difference in your bank.

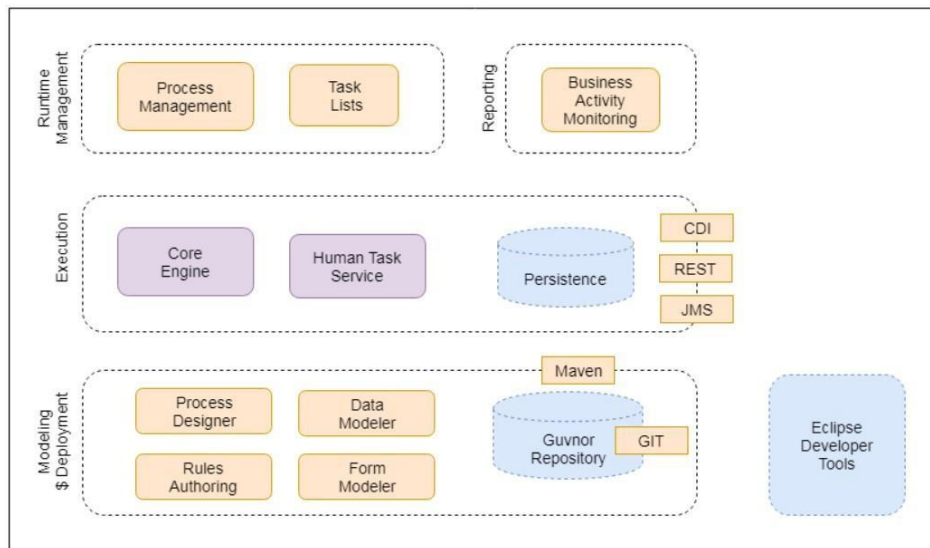
1. **Increase Efficiency and Productivity** – Implementing a banking workflow solution reduces manual processes and transforms the workplace into a streamlined, digital and process-efficient system. Managers can now see more loan applications and complex scenarios than before.
2. **Better Risk Management** – Implementing rule-based decision automation solutions ensures operations adhere to policy and reduces fraud. Insights from data help develop better risk and credit policies to mitigate losses.
3. **Paperless Environment** - Paper consumption is reduced when all fields of an electronic application are recorded and completed. The banking workflow solution's integration capabilities also help integrate with a variety of other IT applications for intelligent automation. Helps banks automate
4. document processing, verification and validation, compliance checks and consolidation.
5. **Customer Satisfaction** – Who doesn't like things to go fast? Automated solutions optimize the verification process, ensuring fast decisions and a smile on the customer's part. Automation also eliminates human error, which helps reduce losses and create suspicion.
6. **Analytics and Fraud Detection** – A data-driven engine collects better and more accurate data. This aids data analysis to prevent fraud in real time. It also helps with other activities such as campaign management, store scorecards, etc.
7. **Better decision-making** – pre-defined rules and algorithms ensure transparency, fairness and better responsiveness to local customer contact conditions.

Is your banking workflow solution compatible with your current IT landscape?

Many banks have homegrown applications as well as legacy applications that are still running and maintained. They provide core banking solutions or help with manual entry of customer data. When choosing his OEM for solutions, he must consider current IT applications for seamless integration and smooth workflow. Business processes allow you to use flowcharts to model your business goals and describe the steps that need to be taken to achieve those goals and sequences. This greatly improves the visibility and agility of business logic and provides a high-level, domain-specific representation that is easier for business users to understand and monitor. The core of JBPM is a light-weight, extensible A workflow engine written in pure Java to execute business processes using the latest BPMN 2.0 specification. It can be embedded in your application, used as a service, and run in any Java environment. JBPM supports adaptive and dynamic processes that require flexibility to model complex realworld situations that cannot be easily described by rigid processes. Give control back to the end user by allowing them to control which parts of the process to run, dynamically deviate from the process, etc. JBPM is more than just a decoupled process engine either. Complex business logic can be modelled as a combination of business processes and business rules and complex event handling. You can combine JBPM with Drools projects to support an integration environment that integrates these paradigms, allowing you to model your business logic as a combination of processes, rules, and events. Below figure show the basic design of loan application system.



4. JBPM COMPONENTS



This figure gives an overview of the different components of the JBPM Project:

Core Engine: The Core Engine is the heart of your project, allowing you to execute your business processes in a flexible way. A lightweight workflow engine written in Java that executes business processes.

Human Task Service: The Human Task Service is an important part of BPM. Provides a human task lifecycle when a business process requires the execution of tasks that involve human actor interactions.

Persistence: This is runtime persistence that maintains the state of all process instances and logs all audit information that occurs during process execution.

EST/JMS: It connects our application with the core engine through Java API and also connects remotely through a REST and JMS API.

Process Designer: Enables business users to design and simulate business processes in a web-based environment. It provides a graphical editor for viewing and editing business processes with drag-and-drop options. It also supports process simulation.

Data Modeler: Enables non-technical users to view, edit, and create data models used in business processes. The Data Modeler tool provides both logical and physical data models without the need for explicit coding.

Form Modeler: Allows you to create, generate and edit forms related to business processes or while performing tasks. This modelling tool helps you create forms without any coding knowledge or knowledge of template markup. Provides a WYSIWYG environment for modelling forms for non-technical users.

Rule Authoring: You can specify different types of business rules to combine business processes. These business rules are decision tables, guided rules, etc.

5. GUVNOR REPOSITORIES

All types of assets used in business processes are stored and managed in Guvnor repositories.

Process Management: processes can be managed from a web-based management console. It includes features such as managing process instances. H. Start processes, stop processes, check running instances, manage and run human task lists, and generate reports.

Eclipse Developer Tools: A set of plugins for the Eclipse IDE that allows you to integrate your business processes into your development environment. It helps you create business processes with drag-and-drop options, test and debug processes, and more.

6. CONCLUSION

Main purpose of JBPM is to manage all the requirements of business flow and management information. It is an open source, flexible, easily to use and understand that covers business process management, workflow. JBPM includes Workflow Engine and Graphic Designer based on Eclipse platform or any workbench. JBPM has been widely used in various industries and units that require process management such as banking, finance, medical care, government and universities.

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