Automating Item Activation Process to Overcome Challenges for Error-Free Inventory Operations

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ABSTRACT

This article highlights the need for the successful implementation of a custom engine within Oracle Governance, Risk, and Compliance (GRC) Preventive Controls Governor (PCG) to address challenges encountered during the item activation process in Inventory. The existing manual processes exhibited a high error incident rate, leading to various issues in Bill of Materials (BOM), Costing, and Financial Accounting due to incorrect inventory item attributes.

A comprehensive approach was implemented to address these issues. The processes were streamlined and optimized by leveraging controllership principles and implementing multilevel workflow-based approvals. Additionally, user-friendly webpages were developed using the Oracle Application Framework (OAF) to enhance the overall user experience.

The implementation of the custom engine within Oracle GRC PCG proved to be a transformative game-changer. It enabled effective control and governance over the item activation process, ensuring data accuracy and integrity. Remarkably, the error incident rate was reduced to zero, resulting in significant improvements in productivity and operational efficiency.

This article delves into the strategies employed, the achievements realized, and the profound impact on productivity, highlighting the successful integration of Oracle GRC PCG in optimizing critical business processes.

Keywords: Inventory Automation, Item Activation, ERP, Enterprise Resource Planning, GRC, Governance, Risk, and Compliance, PCG, Preventive Controls Governor

1. INTRODUCTION:

STREAMLINING INVENTORY OPERATIONS WITH ORACLE GRC AUTOMATION

Accurate attribute management during the item activation process in Inventory is crucial to avoid downstream issues in Bill of Materials (BOM), Costing, and Financial Accounting. However, a persistent high error incident rate posed a significant challenge, leading to multiple problems associated with incorrect attributes.

The objective was to automate the item activation process to improve controllership, optimize the operations workflow, and boost productivity. This article outlines the steps taken and the outcomes achieved through a comprehensive approach.

A custom engine was developed within Oracle Governance, Risk and Control (GRC) Preventive Controls Governor (PCG), leveraging Form, Flow, and Audit rules. Multilevel workflow-based approvals were implemented to ensure effective control and governance. Additionally, user-friendly webpages were created using the Oracle Application Framework (OAF), enhancing the overall user experience.

This automated solution proved a game-changer, significantly reducing the error incident rate and associated problems. The streamlined processes and enhanced controllership resulted in improved inventory accuracy, operational efficiency, and cost savings while also ensuring better compliance with regulatory requirements.

The primary purpose of this work was to address the significant challenges faced during the item activation process in Inventory. Specifically, the high error incident rate led to various issues in Bill of Materials (BOM), Costing, and Financial Accounting due to incorrect item attributes.

By automating and streamlining the item activation process, the objectives were to:

Enhance Controllership: Implement robust controls and governance mechanisms to ensure accurate attribute management and data integrity.

Increase Productivity: Optimize the workflow and eliminate manual processes, improving operational efficiency and reducing the time and effort required for item activation.

Mitigate Errors: Minimize errors and associated problems caused by incorrect item attributes, which can have far-reaching consequences across various business functions.

Improve Compliance: Strengthen adherence to regulatory requirements and industry best practices by implementing standardized and auditable processes.

Enable Data Visibility: Provide real-time reporting and visibility into the item activation process, enabling better decision-making and proactive issue resolution.

By leveraging Oracle Governance, Risk and Compliance (GRC) Preventive Controls Governor (PCG), along with the development of custom engines, workflow-based approvals, and user-friendly interfaces, this work aimed to deliver a comprehensive solution that addresses the challenges faced and optimizes the item activation process for improved efficiency, accuracy, and overall business performance.

2. METHODOLOGY:

AUTOMATING ITEM ACTIVATION WITH ORACLE GRC PCG AND OAF

The methodology employed in this work involves three key algorithms focus on automating and streamlining various aspects of the item activation process in Oracle E-Business Suite Inventory using the Preventive Controls Governor (PCG) and Oracle Application Framework (OAF).

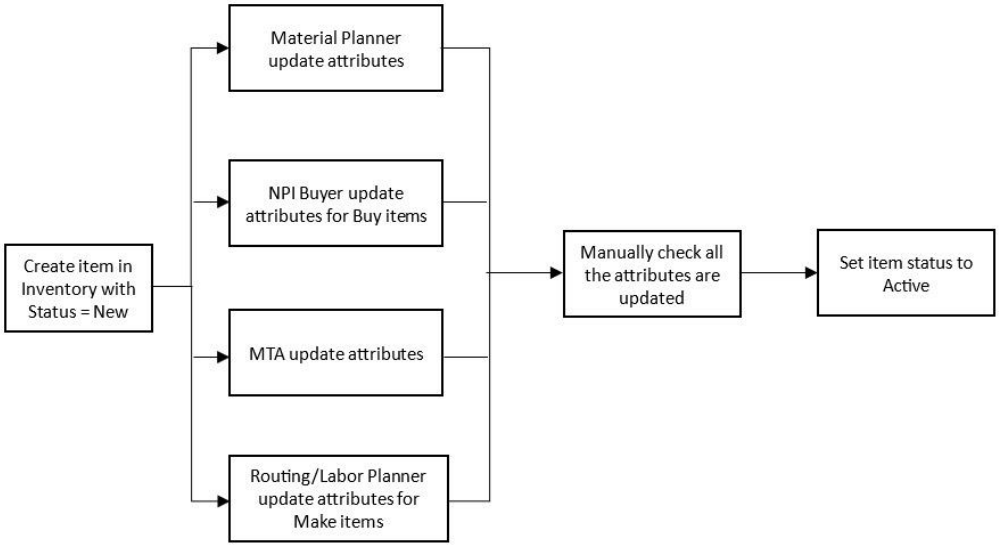

Figure 1: Manual Item Activation Process Flow

Figure 1 illustrates the existing process flow for activating an item in inventory. The process starts with creating an item with “New” status and then material planner updating the item attributes. Next, the NPI buyer updates the attributes for the buy items. Then, the MTA updates the attributes. After this, the routing/labor planner updates the attributes for the make items. Finally, the system checks that all the attributes are updated and sets the item status to “Active”.

Algorithm 1: Custom Engine Development in Oracle GRC PCG

This algorithm outlines the steps for developing a custom engine within Oracle GRC PCG to address the challenges faced during the item activation process. It involves initializing the PCG platform, defining requirements, developing the engine using Form, Flow, and Audit rules, thorough testing, and fine-tuning to achieve the desired results.

1. Initialize the Oracle GRC PCG platform and set up the necessary configurations.

2. Define the custom engine requirements based on the specific needs of the item activation process.

3. Develop the engine using Oracle GRC PCG Form, Flow, and Audit rules, ensuring adherence to best practices and compliance standards.

4. Test the custom engine thoroughly to validate its functionality and effectiveness in addressing the identified challenges.

5. Fine-tune and optimize the engine as required to achieve the desired results.

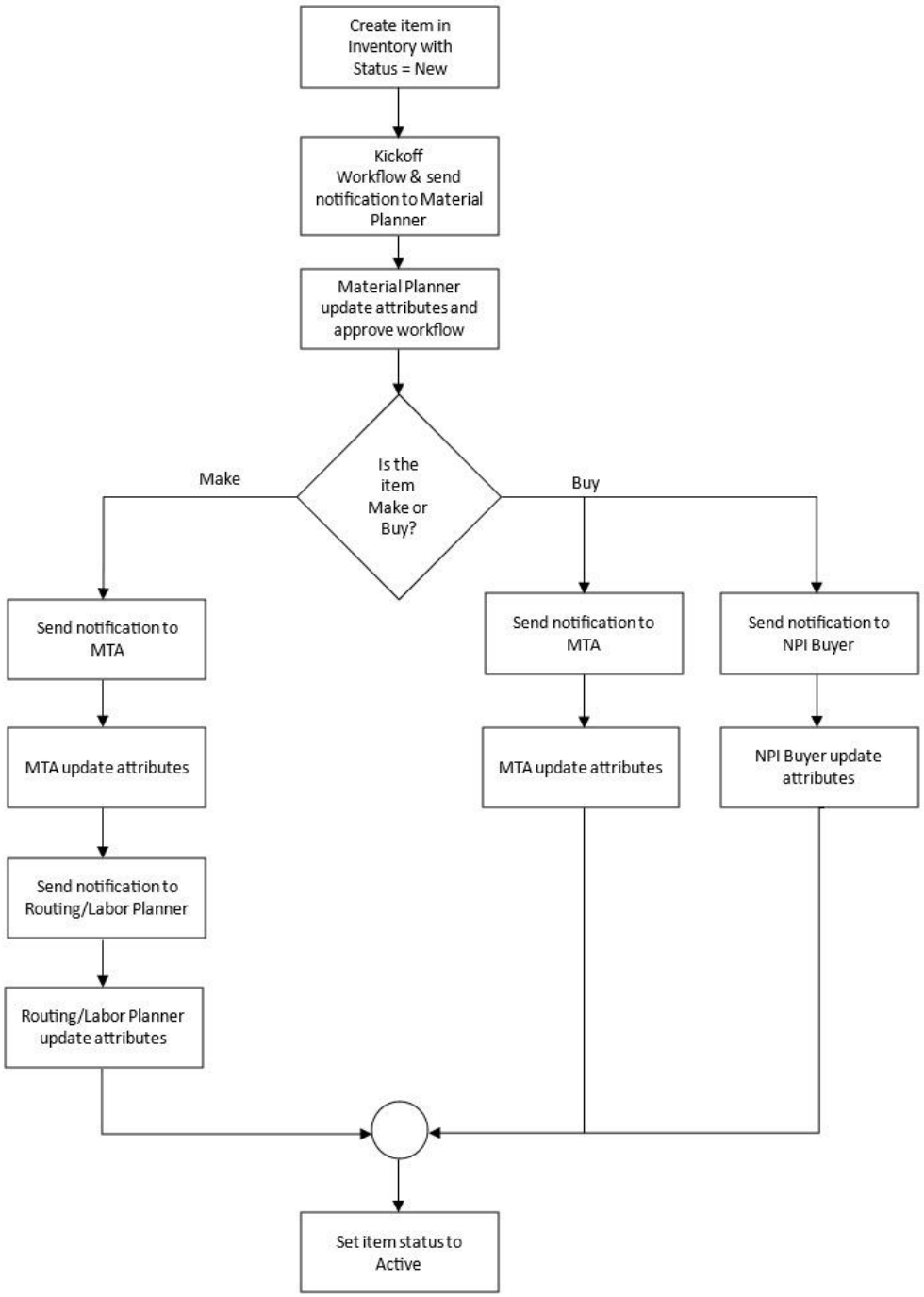

Figure 2: Automated Item Activation Process Flow

Figure 2 illustrates the automated item activation process flow. The process starts with creating an item in the inventory with the status "New". Then, a workflow is kicked off, and a notification is sent to the Material Planner. The Material Planner updates the item attributes and approves the workflow.

Next, the system checks whether the item is Make or Buy. If the item is Make, a notification is sent to the Material Technical Advisor (MTA). Once the MTA updates the attributes, a notification is sent to the Routing/Labor Planner to update them. Once the Routing/Labor Planner updates the attributes, the item status is set to "Active" and available for use.

If the item is Buy, a notification is sent to the Material Technical Advisor (MTA) and New Product Introduction (NPI) Buyer. Once the MTA and NPI Buyer update their relevant attributes, the custom engine checks all the item attributes are updated in the inventory. Finally, the item status is set to "Active" and available for use.

Algorithm 2: Implementation of Multilevel Workflow-Based Approvals

This algorithm focuses on implementing multilevel workflow-based approvals to enhance controllership and governance over the item activation process. It includes analyzing the existing approval process, designing, and configuring the workflow with multiple stages, integrating it into the item activation process, monitoring progress, and continuously evaluating the effectiveness of the approvals.

1. Analyze the existing approval process and identify the appropriate levels of approval required for efficient controllership.

2. Design and configure the workflow with multiple approval stages, ensuring proper segregation of duties and accountability.

3. Integrate the workflow into the item activation process, enabling automated routing and notifications to relevant approvers at each stage.

4. Monitor and track the approval progress using appropriate reporting and tracking mechanisms.

5. Continuously evaluate the effectiveness of the workflow-based approvals and adjust as needed.

Algorithm 3: Creation of UX Webpages in Oracle Application Framework (OAF)

This algorithm describes creating user-friendly webpages using Oracle Application Framework (OAF) to improve the user experience and efficiency of the automated item activation process. It involves understanding user requirements, designing intuitive webpages, developing forms with data validation and error handling, and conducting thorough testing and usability evaluations.

1. Understand the user requirements and gather feedback to determine the key functionalities and features needed for efficient item activation.

2. Design intuitive and user-friendly webpages using Oracle Application Framework (OAF), ensuring seamless integration with the existing system.

3. Develop the webpages, incorporating relevant forms, data validation mechanisms, and error handling capabilities.

4. Conduct thorough testing and usability evaluations to ensure optimal performance and user satisfaction.

5. Deploy the UX webpages, provide necessary user training and support, and gather feedback for continuous improvement.

By combining these algorithms and leveraging the capabilities of Oracle GRC PCG and OAF, the methodology aims to deliver a comprehensive solution that streamlines the item activation process, enhances controllership, and improves overall productivity while ensuring data accuracy and user satisfaction.

3. RESULTS AND DISCUSSION

Implementing the custom engine in Oracle GRC Preventive Controls Governor (PCG) Form, Flow, and Audit rules, along with adopting multilevel workflow-based approvals and UX webpages in Oracle Application Framework (OAF), yielded significant results. The following outcomes were achieved:

Productivity Boost: The number of items activated per week increased from 100 to 275, resulting in a remarkable 175% boost in productivity. The streamlined operations workflow and automation of the item activation process played a pivotal role in achieving this notable improvement.

Error Incident Rate Reduction: By attaining complete controllership during the item activation process in Inventory, the error incident rate was successfully reduced to zero. This accomplishment profoundly impacted resolving multiple issues in BOM, Costing, and Financial Accounting, which were primarily caused by incorrect attributes.

Streamlined Operations Workflow: The synthesis of cross-platform functionalities and the implementation of efficient controls and approvals through the multilevel workflow-based system contributed to the streamlining of the operations workflow. The entire item activation process became more efficient, transparent, and accountable, improving overall productivity.

4. CONCLUSION:

ACHIEVING OPERATIONAL EXCELLENCE THROUGH ORACLE GRC PCG AND OAF INTEGRATION

In conclusion, the challenges encountered during the item activation process in Inventory were effectively addressed through a comprehensive set of actions. The development of a custom engine in Oracle GRC PCG, the utilization of multilevel workflow-based approvals, and the creation of user-friendly UX webpages in OAF successfully resolved the issues associated with high error incident rates and incorrect attributes. The notable achievements include a

175% productivity boost, a reduction of the error incident rate to zero, and the streamlining of operations workflow through the synthesis of cross-platform functionalities.

The successful implementation of these strategies not only improved the item activation process but also had a positive impact on BOM, Costing, and Financial Accounting accuracy. The achievement of complete controllership during item activation ensured the maintenance of accurate attribute management, leading to enhanced data integrity and operational efficiency.

The lessons learned from this project highlight the importance of leveraging technology, automation, and controls to optimize processes and achieve higher productivity levels. The integration of GRC rules, workflow-based approvals, and user-centric UX webpages proved to be instrumental in overcoming the challenges faced during item activation. The client can now benefit from an improved and error-free item activation process, enabling smoother operations and increased productivity.

FUTURE WORKS:

MEASURING SUCCESS AND CONTINUOUS IMPROVEMENT

Implementing an automated item activation process is a significant undertaking, and it is crucial to measure its success and continuously improve upon it. Establish key performance indicators (KPIs) to track the effectiveness of the automated process, including error rates, productivity gains, and cost reductions over time. Regular monitoring and analysis of these KPIs will provide valuable insights into the system's performance and highlight areas for further optimization.

Soliciting feedback from users and stakeholders is also essential, as it can uncover potential pain points or opportunities for refinement that may take time to be apparent. Ensuring the long-term sustainability and relevance of the automated system by conducting regular audits and updates will help identify any emerging issues or changes in business requirements that may necessitate adjustments to the system's functionality or processes. Embracing a culture of continuous improvement is paramount in this endeavor. By fostering an environment that encourages innovation and adaptation, the organization can stay ahead of evolving market trends and customer demands, ensuring that the automated item activation process remains efficient, effective, and aligned with the company's strategic objectives.

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ABBREVIATIONS

ERP: Enterprise Resource Planning
GRC: Governance, Risk, and Compliance
PCG: Preventive Controls Governor
BOM: Bill of Materials
UX: User Experience
OAF: Oracle Applications Framework
MTA: Material Technical Advisor
NPI: New Production Introduction