

# BMS: Improving TMF Efficiency and Quality with Automation

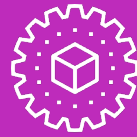
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# Human and Digital Workers Maximize Quality and Efficiency



**Use both to create  
a competitive  
differential in trial  
operations**



**Digital workers  
automate high-  
volume, manual  
tasks**



**Humans perform  
decisions,  
approvals, and  
intelligent tasks**

# BMS's Automation Journey

# BMS TMF Overview

~ 90 staff

Decentralized accountability model with robust central support

~ 800

Total BMS-sponsored, active trials in Veeva Vault eTMF

~ 35%

Outsourced with multiple operating models

Automation is necessary to support high trial volume and drive efficiencies

# Challenges Addressed with RPA Bots

## Challenge

## Automation Solution

Documents maintained in other repositories



Bot moves and classifies documents without system integration

Time- and resource-intensive, repetitive activities lead to disengagement



Bot reduces time to upload, apply metadata, and classify appropriately

Document quality



Bot inspects for ALCOA and issues QIs on the most prevalent classifications

Data discrepancies



Bot reconciles information between documents and CTMS data

**Automation frees resources from low-value activities to reallocate to high-value**

# Leveraging Bots to Automate High-Volume Manual Tasks



Upload from external systems



Classify documents



Review document quality

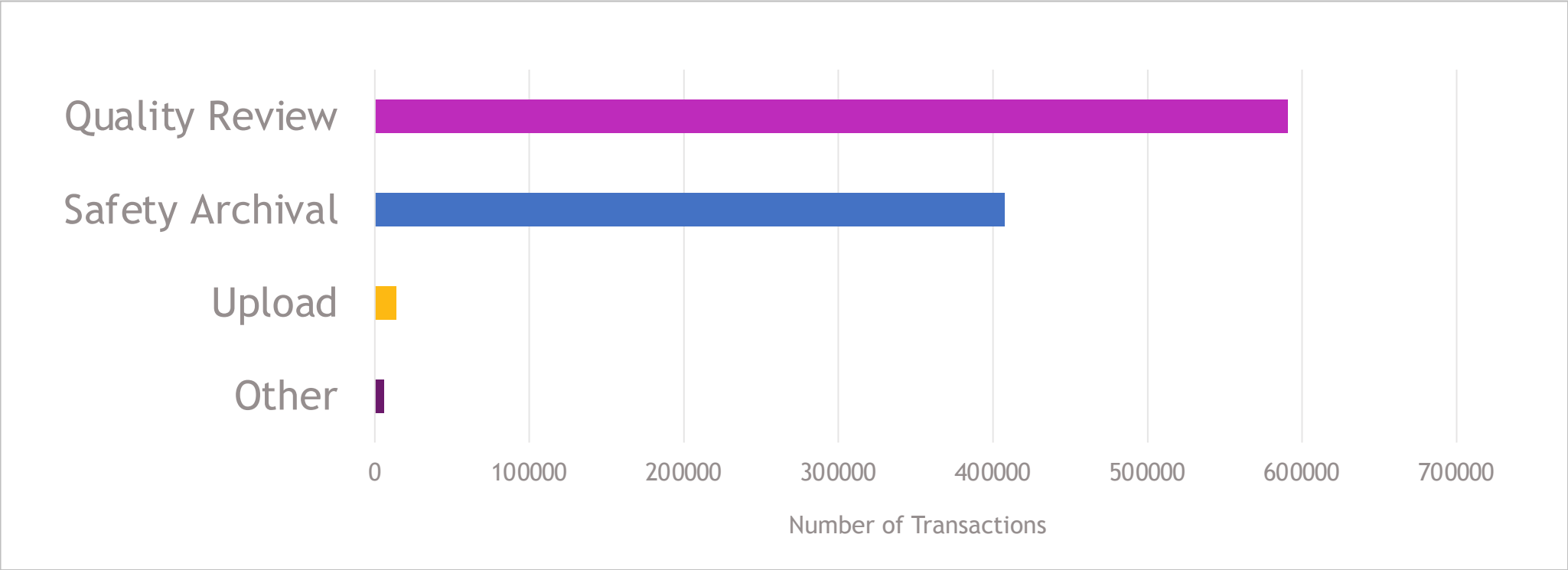


Reconcile information



Broadcast messages to IRB/IEC

# Quality Review is the most impactful automation



**Quality review is the largest proportion as a high-transaction, high-value activity**

# Results of Automation Over Four Years

**10+  
Bots**

**1,000,000  
transactions**

**200,000  
hours saved**



# Automation Example 1: Quality Review Bot

## Quality Review Bot Overview



**Purpose:** Check document quality and metadata



**Value:** Streamline quality review



**Next:** Increase classifications and maintain quality



### Lessons Learned

- Use structured documents
- Drive alignment between the bot and eTMF teams
- Consider how to account for template changes

# Automation Example 2: Veeva TMF Bot

## Auto-Classification Bot Overview



**Purpose:** Populate type, subtype, and classification



**Value:** Reduce errors and surface potential issues



**Results:** 96% accuracy rate year to date



### Lessons Learned

- Develop quick reference cards and host TMF clinics
- Examine ways to increase uptake

# 3 Lessons for Your Automation Journey

# How to Prioritize Your Company's First Bot

## 1 Identify potential bot's value add:

- Time savings
- Cost savings
- FTEs realigned
- Effect on priority trials

## 2 Identify the downstream impacts

- Process gaps addressed
- Key stakeholders and users affected
- Volume of work

## 3 Ensure alignment with quality and validation SOPs

# 1. Determine WHAT To Automate

## Criteria to Automate



Most prevalent document types



Highest FTE effort






Highest ROI



### Question to answer:

Are you fixing a specific task (RPA) versus orchestrating an end-to-end solution (BPM tool)?

## 2. ITERATE To Increase Uptake and Accuracy

Common Challenges		Solutions
Low utilization/uptake		Focus on communication and training
Bot stopped working		Invest to re-design
Variable accuracy		Standardize document format

## 3. Maintain OVERSIGHT and Control

1

Review metrics  
monthly/quarterly

2

Provide summary  
outputs to the  
business team

3

Identify the bot's  
“manager” to  
onboard/offboard

# What's Next at BMS



# Planned Process Improvements To Drive More Value



**Scope:** Increase scope of existing bots

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**Business Priorities:** Automating TMF periodic review and EDL management

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**Offboarding:** Stop/decommission some bots

