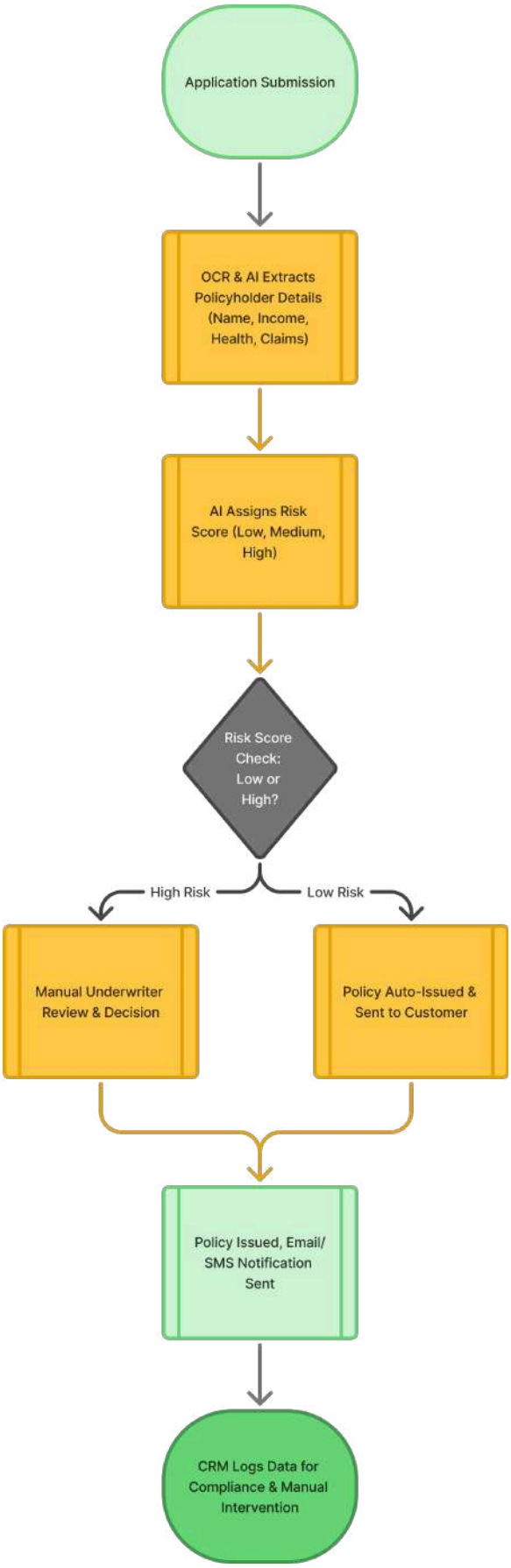
techwrx

Underwriting Automation


Application Submission
OCR & AI Extracts Policyholder Details (Name, Income, Health, Claims)
AI Assigns Risk Score (Low, Medium, High)
Risk Score Check: Low or High?
High Risk
Low Risk
Manual Underwriter Review & Decision
Policy Auto-Issued & Sent to Customer
Policy Issued, Email/ SMS Notification Sent
CRM Logs Data for Compliance & Manual Intervention

Objective: Automate key aspects of the insurance underwriting process using RPA within a CRM (HubSpot/Salesforce) to enhance efficiency and reduce manual effort.

Tool Used: UiPath (with OCR, AI-Based Fraud Detection, CRM Integration, and Automated Workflows).

System: HubSpot or Salesforce CRM.

Outcome: Policies are underwritten with a blend of automation and human review within the CRM, ensuring seamless data flow, improved risk analysis, and faster processing times.

Step 1: Digital Application Intake In CRM

We'll automate policy application submission within HubSpot/Salesforce.

1. Open UiPath Studio → Create a new Process.
2. Integrate UiPath with HubSpot/Salesforce API.
3. Set up automation rules in the CRM to capture applications from web forms, emails, or chatbots.
4. Use the "Save Attachments" activity to store supporting documents inside the CRM.
5. Test by submitting a sample application and verifying data capture in the CRM.

Step 2: Extract Applicant Data (OCR & AI Processing)

Now, we'll extract and verify applicant details from submitted documents.

1. Use "Load Taxonomy" to define extracted fields:
   - Personal Details (Name, DOB, Address, Contact Info)
   - Policy Type
   - Coverage Requested
   - Financial Details (Income, Assets, Credit Score, Claim History)
2. Use "Digitize Document" to process application forms.
3. Validate extracted data using "Present Validation Station"
4. Automatically update extracted details into CRM fields.

Test by extracting data from sample applications and verifying CRM accuracy.

Step 3: AI-Assisted Risk Assessment & Categorization

Now, we will support underwriters in risk assessment and policy categorization with AI assistance.

1. AI models analyze financial and health risks, providing risk scores rather than making final decisions.
2. Use an If Condition to determine underwriting workflows:
   - If low risk → Move to automated pre-approval.
   - . If moderate/high risk → Flag for manual underwriting review.
3. Integrate data sources (credit reports, medical records, previous claims) to enhance risk assessment.
4. Apply Natural Language Processing (NLP) to classify policies.
5. Update risk score and policy classification within the CRM dashboard.

Test by running different applicant profiles through the system.

Step 4: Human-Assisted Decision Making In CRM

Now, we determine underwriting decisions with AI support and human oversight.

1. Configure CRM business rules to assist underwriters by analyzing:
   - Policy eligibility criteria
   - Credit risk scores
   - Health reports
   - Claim history
2. If a policy meets auto-approval criteria for low-risk applicants, trigger policy issuance workflow.
3. If a policy is flagged as high-risk, route it to an underwriter for manual review.
4. Update underwriting status in the CRM system.
5. Ensure compliance with insurance regulations requiring human oversight for complex cases.

Test with different application scenarios to validate automation logic.

Step 5: Policy Issuance & Customer Notification

Once approved, policies are issued, and customers are notified automatically.

1. Integrate CRM with a document generation tool (e.g., DocuSign) for policy issuance.
2. Set up automated email and SMS workflows for policy approval notifications.
3. Log policy details in the CRM, ensuring full history is stored.

Test by issuing a policy and verifying notifications and document generation.

Step 6: Deployment, Compliance & Monitoring

Once tested, deploy the bot and set up monitoring inside HubSpot/Salesforce.

1. Use UiPath Orchestrator for scheduling and tracking.
2. Enable logging for flagged high-risk cases inside the CRM dashboard.
3. Notify underwriters via automated tasks for manual intervention when needed.
4. Ensure compliance checks are in place to meet regulatory requirements.

Final test: Run automation on real applications and verify CRM entries.

Final Check

- Applications submitted via multiple channels (email, web, chatbot) are captured in CRM
- Data extracted & verified using OCR and AI
- AI models assist in risk assessment but do not replace human underwriters
- Policies categorized and underwritten using a blend of automation and manual review
- Policy documents generated and issued through automated workflows
- Customers notified of underwriting decisions via automated CRM notifications
- Automated monitoring and compliance checks in place inside CRM

Next Steps

Considerations for further optimizations:

- AI-driven predictive analysis for underwriting trends.
- Expanding automation to include multi-system integrations (medical databases, financial checks, etc.).
- Advanced exception handling for missing or conflicting data.
- Compliance tracking for regulatory reporting and audit readiness.