AIA Assessment Report

# Project Information

Project: SmartCredit AI Risk Assessment System

Date: September 11, 2025

Impact Level: Level I

Score: 24/224 points

# Executive Summary

This system presents relatively low algorithmic impact risks due to its AI/ML-powered, financial decision-making, automated processing, personal data usage capabilities. Standard operational procedures with basic monitoring and documentation are sufficient. The assessment indicates Level I classification under Canada's Algorithmic Impact Assessment framework.

# Key Findings

* System uses AI/ML algorithms requiring interpretability considerations
* System processes personal information requiring privacy safeguards
* Automated decision-making requires human oversight mechanisms
* Financial decisions have significant economic impact on individuals
* Specific compliance planning requirements identified
* Critical information gaps require stakeholder input

# Recommendations

* 📋 MODERATE RISK: Implement standard oversight procedures
* Plan for basic bias detection and monitoring systems
* Expect quarterly reviews and documentation requirements
* 💰 Financial systems: Plan for enhanced audit trails and appeals processes
* Implement standard monitoring and documentation procedures
* Establish clear decision-making audit trails
* Plan regular system performance reviews

# Project Description

The Royal Bank of Canada is developing an AI-powered credit risk assessment system called "SmartCredit" to automate and enhance loan approval decisions for personal loans, mortgages, and small business credit applications. The system will be deployed across all Canadian branches and online platforms, processing approximately 50,000 applications monthly.  
  
Technical Architecture: The system uses a hybrid machine learning approach combining gradient boosting algorithms (XGBoost) with deep neural networks. It analyzes over 200 data points including credit bureau reports, banking transaction history, employment records, social media activity indicators, and alternative data sources like utility payment patterns. The model incorporates natural language processing to evaluate loan application essays and employment verification documents.  
  
Data Sources:  
\* Equifax and TransUnion credit reports  
\* 24 months of customer banking transaction data   
\* Employment verification through third-party services  
\* Property assessment data from municipal databases  
\* Open banking data from other financial institutions (with consent)  
\* Publicly available social media profile information  
  
Decision Scope: The AI system will automatically approve loans up to $75,000 for personal loans and $500,000 for mortgages when confidence scores exceed 85%. Applications with scores between 60-85% are flagged for human review, while scores below 60% result in automatic denial with explanation. The system affects approximately 2.5 million Canadians annually who apply for credit products.  
  
Stakeholder Impact: Primary stakeholders include loan applicants, bank staff, regulatory bodies (OSFI, FCAC), and secondary impacts on families, small businesses, and housing markets. The system particularly affects newcomers to Canada, young adults establishing credit, and small business owners seeking growth capital.  
  
Current Implementation Stage: The project is in the design phase, with model development 60% complete. Initial backtesting shows 12% improvement in default prediction accuracy compared to existing manual processes, but reveals potential disparate impact on Indigenous communities and recent immigrants. The bank plans deployment in Q2 2025 following regulatory approval.  
  
Risk Considerations: Key concerns include algorithmic bias, data privacy compliance, model interpretability for regulatory scrutiny, operational resilience, and reputational risk from automated denials. The system requires integration with existing core banking infrastructure and must comply with PIPEDA, OSFI guidelines, and emerging AI governance frameworks.

# Disclaimer

⚠️ Early Indicator - Not Official Assessment. Based on functional characteristics only. Final assessment requires complete stakeholder input.