

# TITLE: BLOCKCHAIN-POWERED INTELLIGENT CLAIMS MANAGEMENT SYSTEM



## Problem Analysis:

The healthcare revenue cycle management (RCM) domain faces critical challenges such as:

1. **High Denial Rates:** Claims often get denied due to incomplete documentation, coding errors, or non-compliance with payer policies.
2. **Inefficiencies in Workflow:** Manual processes and redundant approvals lead to delays, while lack of real-time tracking creates communication gaps.
3. **Limited Data Integration:** Current systems fail to utilize external data (e.g., demographic or socioeconomic factors) to analyze denial trends.
4. **Scalability Issues:** Existing systems struggle to adapt to regulatory changes and evolving industry needs.

# PROPOSED SOLUTION:

## Step-by-Step Plan

### 1. **AI-Powered Denial Prediction:**

- Use machine learning models to predict denial likelihood based on blockchain-stored historical data.
- Highlight errors (e.g., coding issues, missing documents) and suggest fixes before submission.

### 2. **Smart Contract Automation:**

- Pre-validate claims with smart contracts, automating checks for compliance, completeness, and eligibility.

### 3. **Data Integration:**

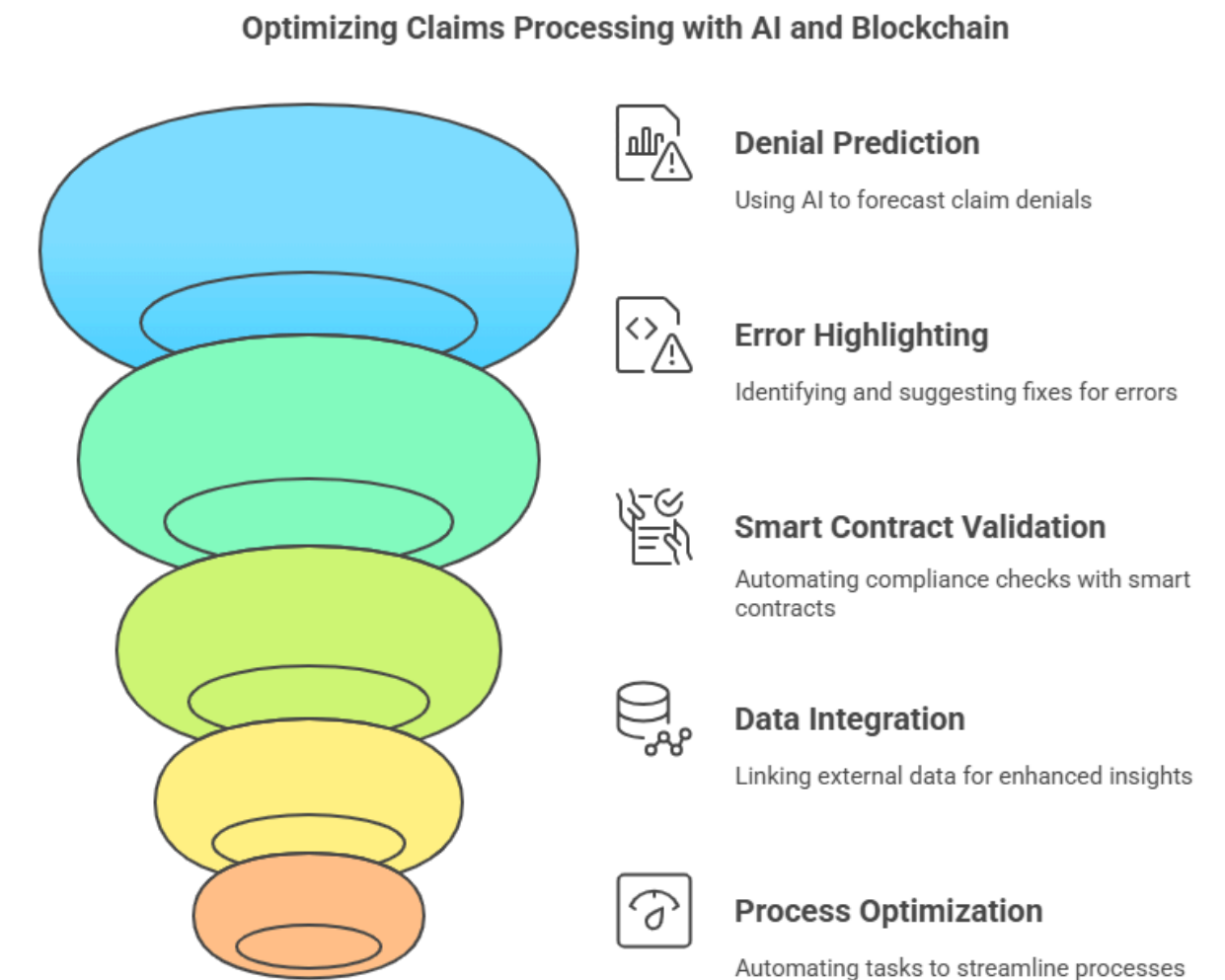
- Securely link external data sources (demographics, socioeconomic factors) to blockchain for better insights.
- Enable personalized decision-making by identifying denial trends across regions and payers.

### 4. **Process Optimization:**

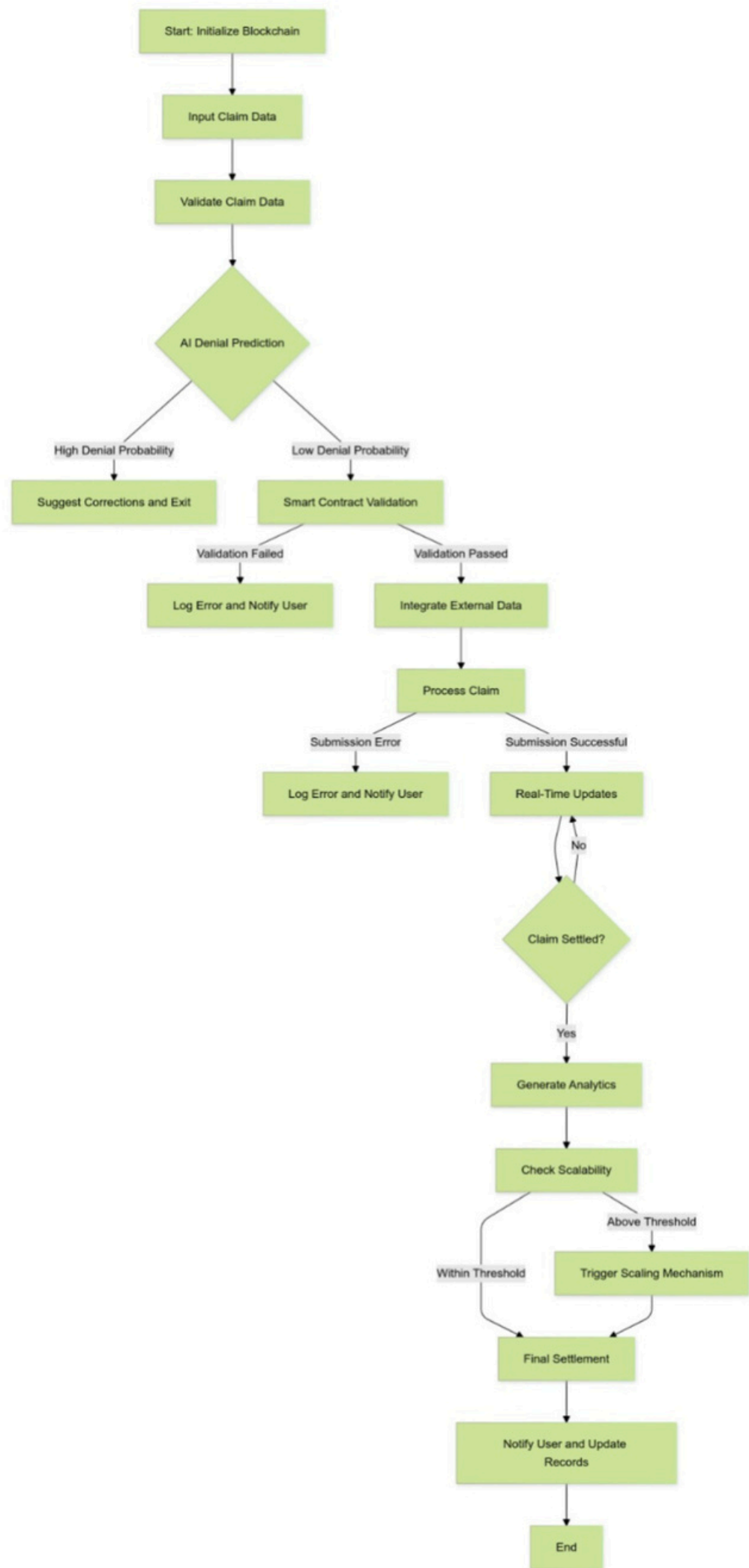
- Automate repetitive tasks (e.g., data entry, claim tracking) with RPA.
- Provide real-time claim status updates to reduce administrative burden.

### 5. **Scalable Design:**

- Build a modular, cloud-based system to handle future industry changes and larger data volumes.



# Flowchart:



# EXPECTED OUTCOMES:

## 1. Operational Efficiency:

- **40% reduction** in claim processing time by automating workflows and improving tracking.

## 2. Reduced Denial Rates:

- **20-30% fewer denials** due to AI-powered prediction and smart contract validations.

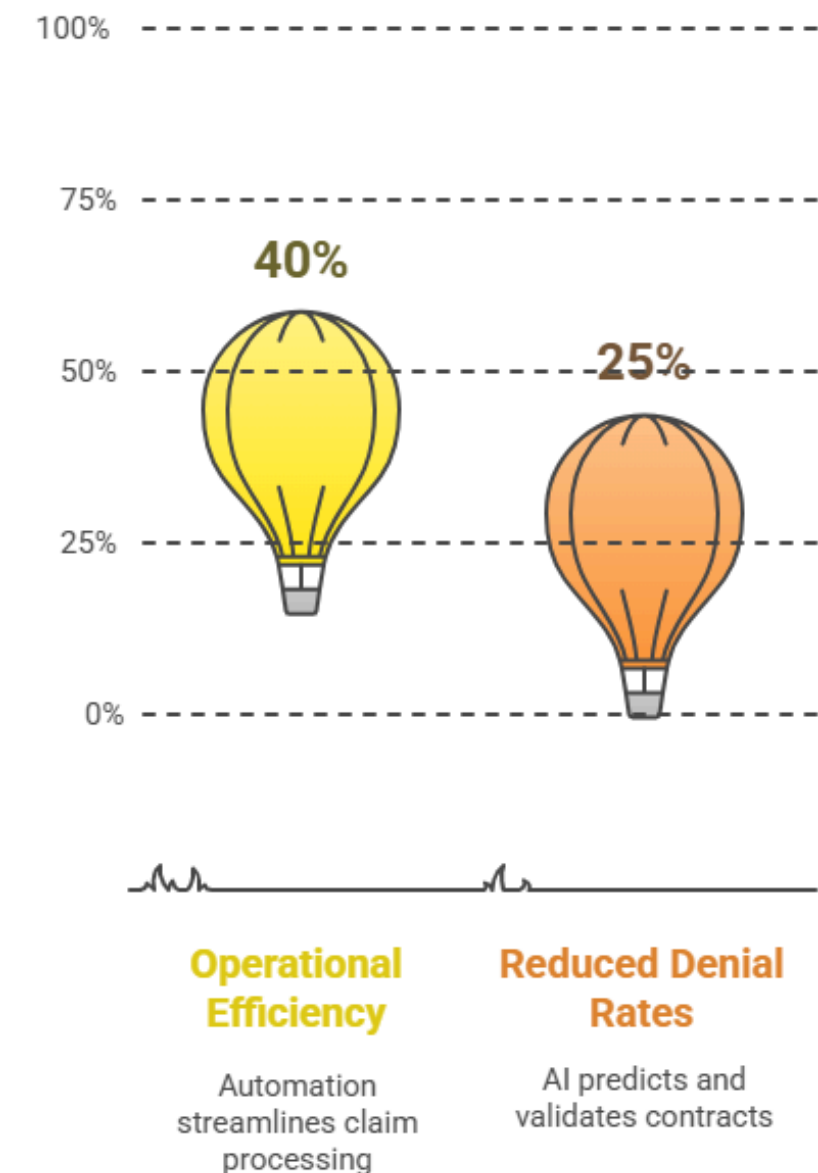
## 3. Improved Stakeholder Satisfaction:

- Transparent blockchain records reduce disputes.
- Real-time updates improve provider-insurer communication.

## 4. Enhanced Decision-Making:

- Data integration enables insights into denial trends, improving accuracy and adaptability.

Impact of Technological Improvements on Insurance Operations



# CHALLENGES AND MITIGATION:

## 1. Resistance to Adopting Blockchain:

- **Mitigation:** Conduct training sessions and implement small-scale pilots to showcase ROI.

## 2. Poor Quality of Historical Claims Data:

- **Mitigation:** Use data-cleaning algorithms and encourage better data input practices.

## 3. Scalability for Small Providers:

- **Mitigation:** Modular, cost-effective subscription models to ensure accessibility.

## 4. Regulatory Changes:

- **Mitigation:** Use dynamically updated smart contracts to ensure compliance.

How to address challenges in blockchain adoption?

### Resistance to Adoption

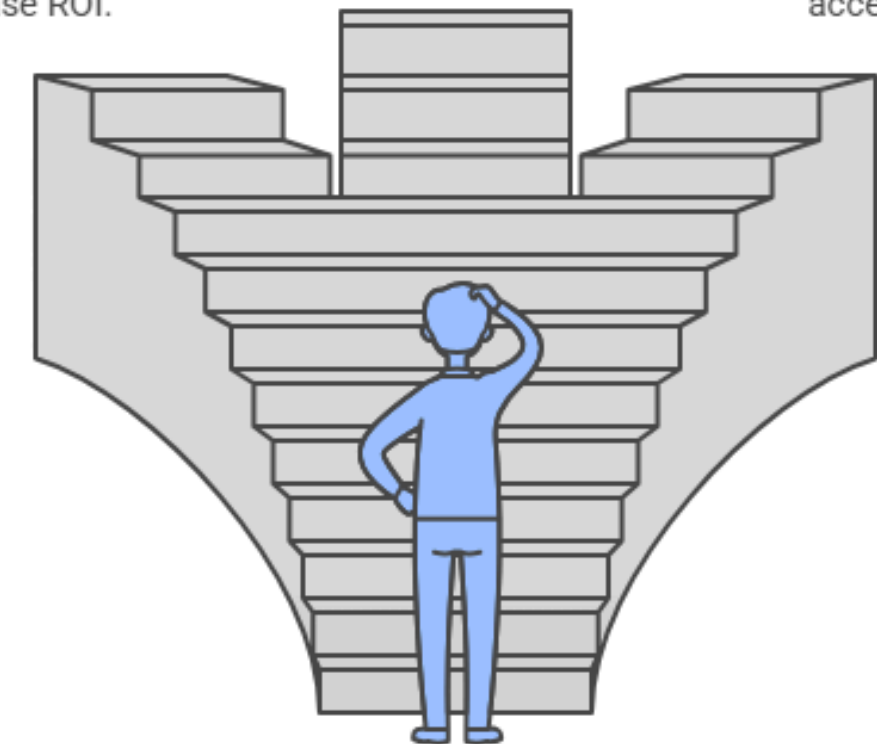
Conduct training sessions and implement small-scale pilots to showcase ROI.

### Poor Data Quality

Use data-cleaning algorithms and encourage better data input practices.

### Scalability Issues

Offer modular, cost-effective subscription models to ensure accessibility.





# APPENDIX:

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- **Our Team Members** for their hard work, dedication, and collaboration in making this project a reality.

We are truly inspired by the opportunity to innovate and contribute toward solving real-world problems.

Thank you!

# THANK YOU