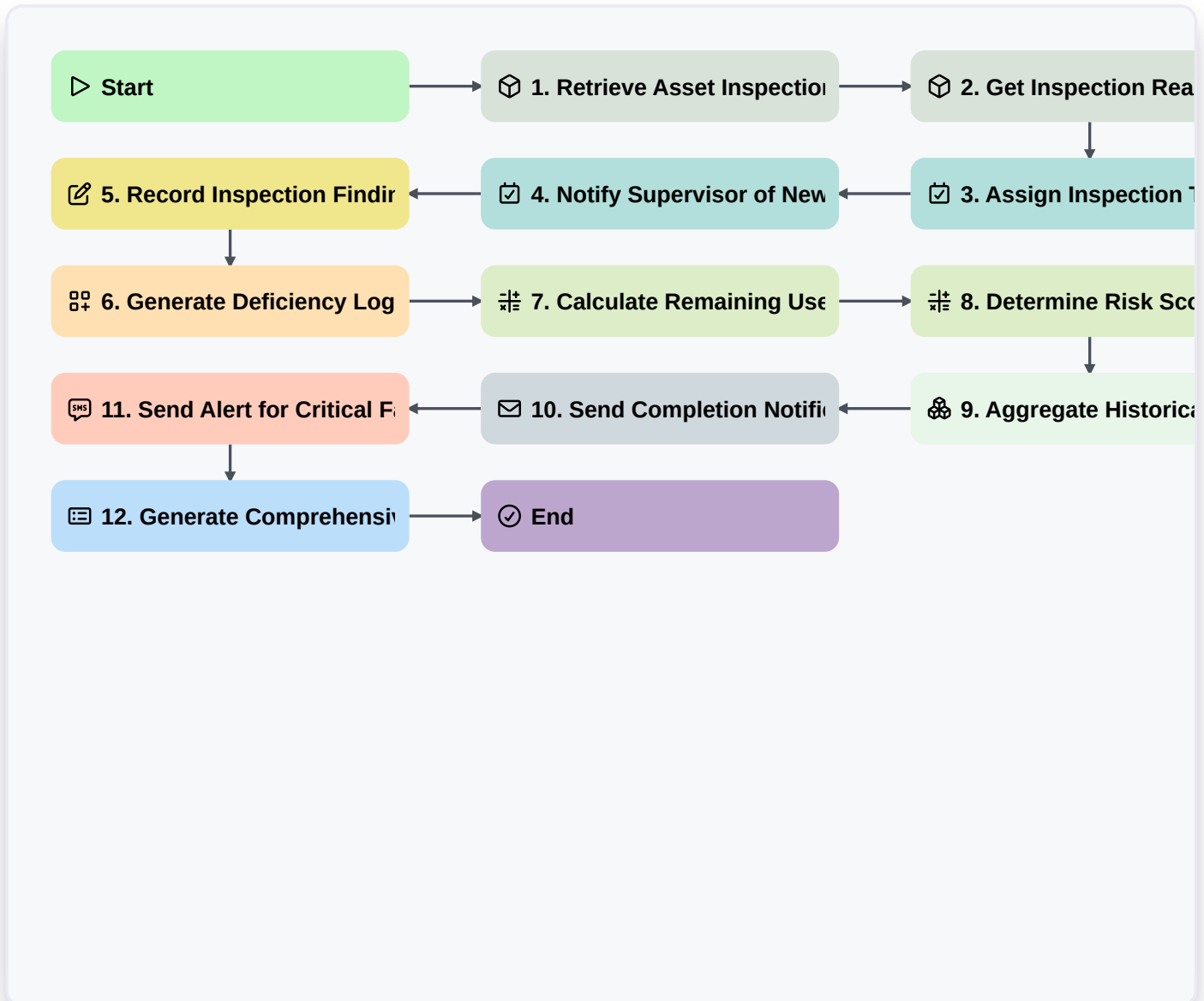


# Predictive Inspection Workflow: Optimizing Asset Health Monitoring



## ▶ Start

Start of the Workflow/Process.

## 📦 1. Retrieve Asset Inspection Data

Retrieve existing asset records and associated inspection history from the Asset Data Model.

## 📦 2. Get Inspection Readings

Fetch latest sensor readings or manual inspection data for the specific asset being inspected.

## ✅ 3. Assign Inspection Task to Technician

Automatically create and assign a new inspection task to the assigned field technician based on asset location/due date.

## ✅ 4. Notify Supervisor of New Inspection

Create a follow-up task for the supervisor to review the completed inspection data within 24 hours.

## 📝 5. Record Inspection Findings

Update the asset record with the technician's findings, including pass/fail status and captured data.

## 6. Generate Deficiency Log Entry

Create a new, dedicated log entry in the 'Deficiencies' data model if inspection parameters are not met.

## 7. Calculate Remaining Useful Life (RUL)

Execute a formula (e.g., (Current Readings - Baseline) / Degradation Rate) to estimate asset lifespan remaining.

## 8. Determine Risk Score

Calculate an overall asset risk score based on the aggregation of multiple data points (e.g., vibration, temperature, age).

## 9. Aggregate Historical Performance Data

Calculate metrics (average, max variance) from the last N inspection entries for trend analysis.

## 10. Send Completion Notification

Email the Asset Owner and Maintenance Manager upon successful completion and data submission.

## 11. Send Alert for Critical Failure

Send an immediate SMS alert to emergency contacts if a critical failure threshold is detected during the inspection.

## 12. Generate Comprehensive Inspection Report

Automatically compile all gathered data, deficiency logs, and calculated metrics into a final, auditable PDF report.

## End

Start of the Workflow/Process.