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Harvest planning and yield prediction

This workflow automatically analyzes crop data from multiple sources to predict harvest timing and yields, then generates optimized harvest schedules and resource allocation plans for maximum efficiency and profitability.

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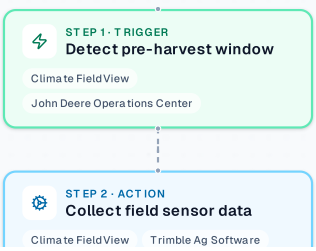
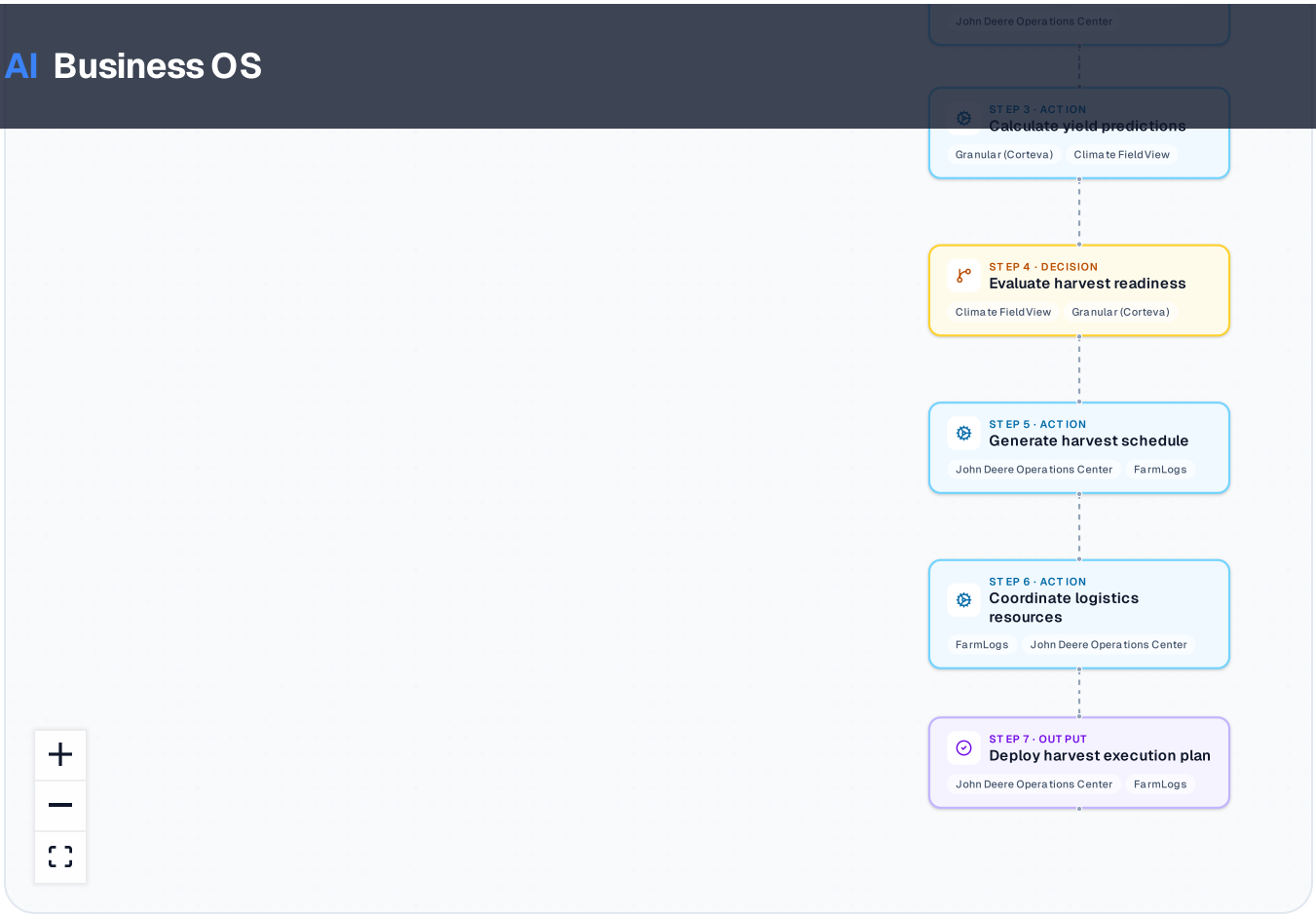
WORKFLOW TRIGGER
Crops reach 30 days before expected harvest maturity date

Visual Flow

Each node represents an automated step. Connections show how data and decisions move through the workflow.





Step-by-Step Breakdown

Detailed explanation of each automated stage in the workflow.

1

Detect pre-harvest window

The workflow triggers when crop growth models indicate fields are entering the 30-day pre-harvest monitoring period. This initiates comprehensive yield prediction analysis.

Climate FieldView | John Deere Operations Center

2

ACTION

Collect field sensor data

Gather real-time data from soil moisture sensors, weather stations, satellite imagery, and field scouts. This data provides current crop health and growth stage information.

Climate FieldView | Trimble Ag Software | John Deere Operations Center

3

ACTION

Calculate yield predictions

Process historical yield data, current season growing conditions, and crop monitoring data through AI models. Generate field-specific yield estimates with confidence intervals.

Granular (Corteva) | Climate FieldView

4

DECISION

Evaluate harvest readiness

Compare predicted yields against target thresholds and assess weather forecast risks. Determine if harvest should proceed on schedule, be accelerated, or delayed.

5

ACTION

Generate harvest schedule

Create optimized harvest timeline considering equipment availability, labor capacity, storage facilities, and market pricing. Prioritize fields by yield potential and timing constraints.

John Deere Operations Center FarmLogs

6

ACTION

Coordinate logistics resources

Schedule harvesting equipment, trucking capacity, and storage allocation based on predicted volumes and timing. Send automated notifications to contractors and handlers.

FarmLogs John Deere Operations Center

7

OUTPUT

Deploy harvest execution plan

Distribute finalized harvest schedules to field crews, equipment operators, and logistics coordinators. Activate real-time tracking and monitoring systems.

John Deere Operations Center FarmLogs

Outputs

- Field-specific yield predictions with accuracy ratings
- Optimized harvest schedule with equipment assignments
- Logistics coordination plan with contractor notifications

Key Metrics

- Yield prediction accuracy percentage
- Harvest schedule adherence rate
- Equipment utilization efficiency

Tools & Integrations

- Climate FieldView
- John Deere Operations Center
- Trimble Ag Software
- Granular (Corteva)
- FarmLogs

AI Business OS

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