AI Impact in User Experience

Transforming CAPA

From static forms to intelligent, predictive systems that anticipate needs and streamline workflows.

From Static to Predictive Interfaces

Traditional CAPA tools wait for manual input. AI-first systems predict patterns, impact, and next actions based on historical data.

Pattern Recognition

AI identifies similarities across 23+ previous CAPAs and predicts likely root causes like equipment calibration drift.

Action Prediction

System prepares workflows automatically, predicting supplier audits and resource needs before managers request them.

CAPA: Predictive Intelligence in Action

Traditional Approach

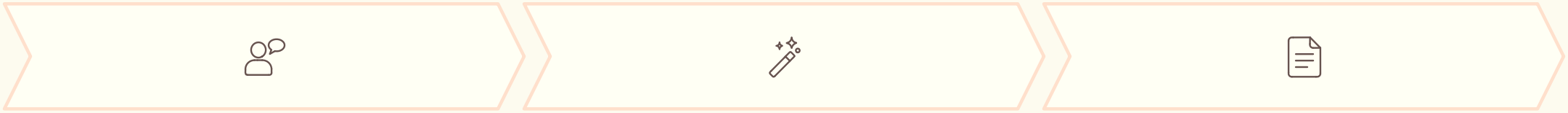
- Manual problem statement entry
- User determines root cause
- Manual severity assessment
- Workflow steps defined by user
- Guesswork on due dates

AI-Powered System

- Instant pattern matching
- Predicted root cause with confidence score
- Automated severity classification
- Pre-generated workflow recommendations
- Data-driven resource allocation

Intent-Driven Design

Users express intent naturally instead of navigating complex forms. AI generates complete workflows automatically.



User Intent

"Create CAPA for packaging defect in Line 3"

AI Processing

Analyzes context, batch data, shift info

Auto-Generation

Creates record, fills fields, suggests root cause

Result: Hundreds of clicks eliminated. Human error reduced. Time savings of 60-80% per CAPA creation.

Product Hold: Intelligent Automation

01

Intent Recognition

User: "Hold all batches from temperature spike last night"

02

Automatic Identification

AI identifies affected lots and initiates hold status

03

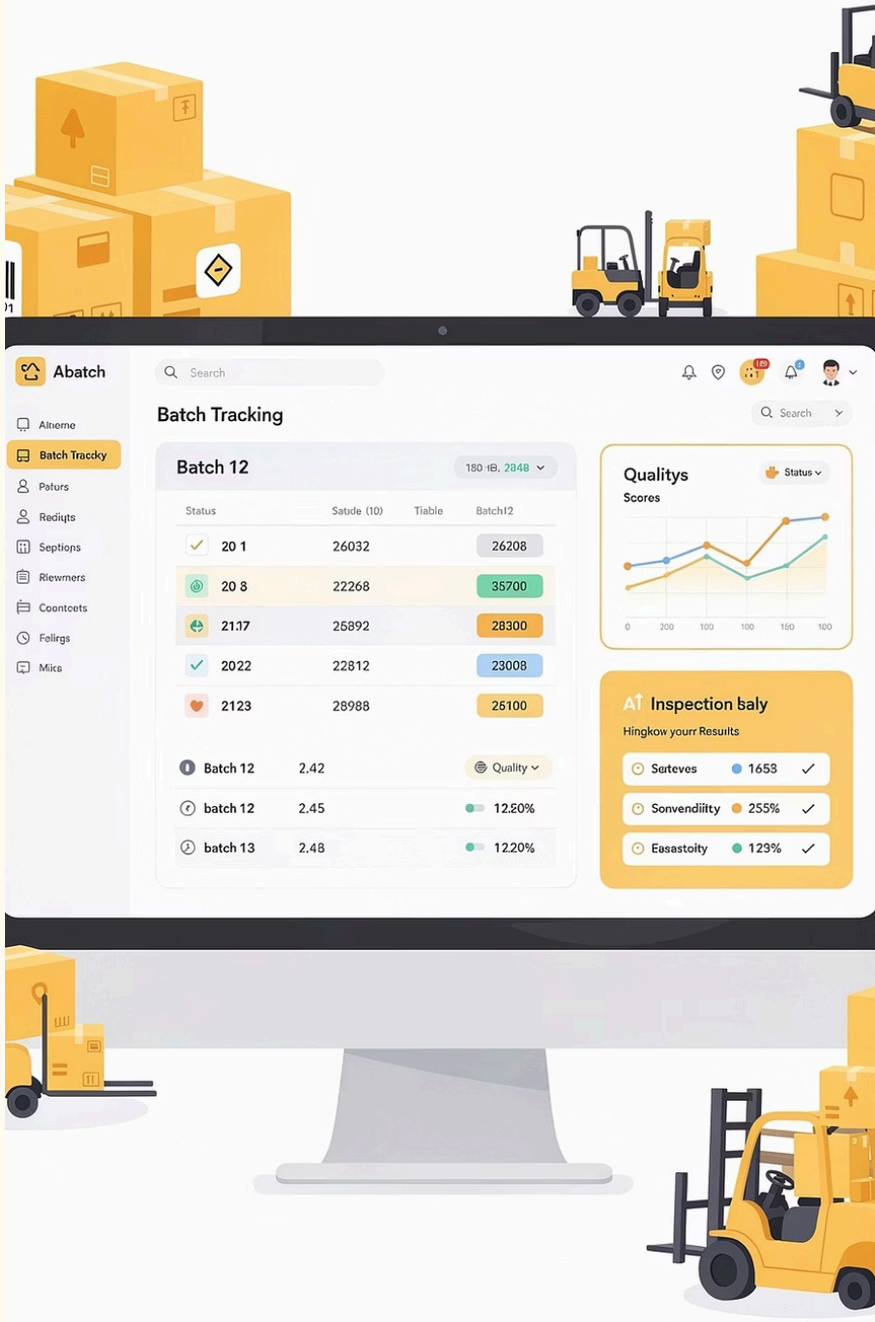
Stakeholder Notification

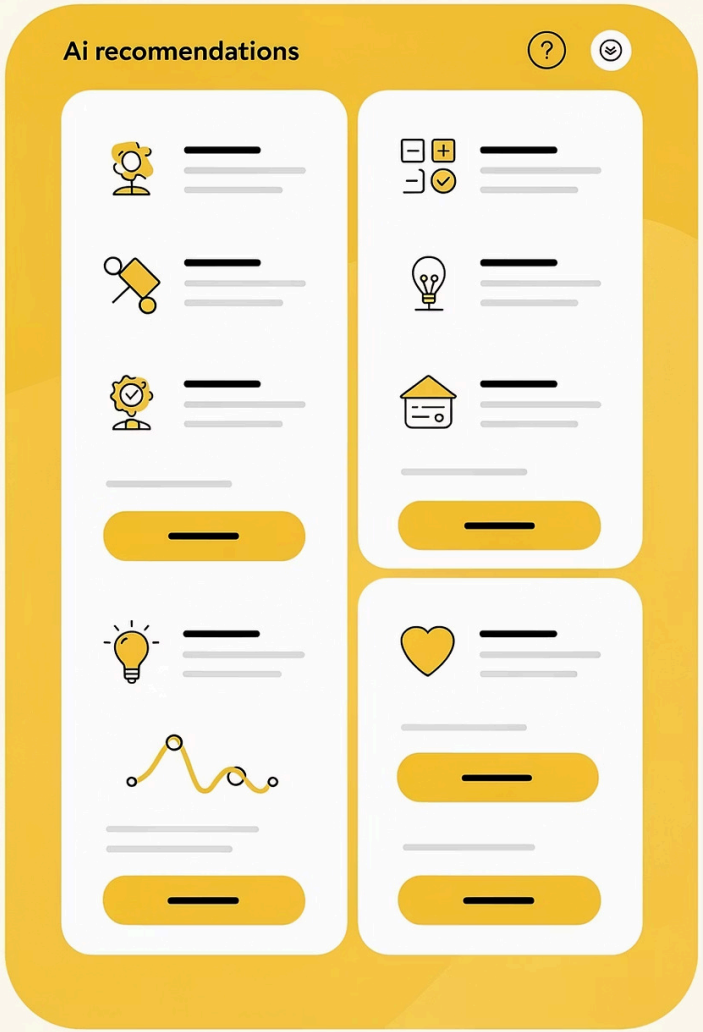
Alerts QA, Production, and Warehouse teams instantly

04

Risk Assessment

Generates risk score and testing plan recommendations





Proactive Curation

AI shows only the 3-5 most relevant actions instead of overwhelming users with options.

CAPA Curation

When opening a CAPA, AI highlights:

1. 3 most likely root causes based on patterns
2. Recommended corrective actions
3. Best matching historical CAPA solution

Contextual Adaptation

The interface dynamically changes based on role, time, device, location, and urgency.

Quality Manager (8 AM)

Dashboard shows 3 CAPAs at risk of overdue today with priority alerts.

Operator (Mobile)

Simplified view: Create issue, upload evidence, assign station only.

Priority Mode Activation

High-Risk Detection

When batch risk exceeds threshold, UI automatically switches to Priority Mode.

Critical Information Display

Shows critical deviations, evidence checklist, and time-to-expiry countdown prominently.

Audit Season Adaptation

During audits, system highlights CAPAs linked to prior audit findings automatically.

The system adapts to situations instead of forcing users to adapt to the system.

Explainability & Trust

AI-driven decisions must be transparent, especially in regulated environments. Every recommendation includes reasoning.

Root Cause Transparency

"Detected recurring pattern in similar CAPAs from Jan-Aug. Operator training issues contributed 68% of similar deviations."

Confidence: 82%

Testing Priority Logic

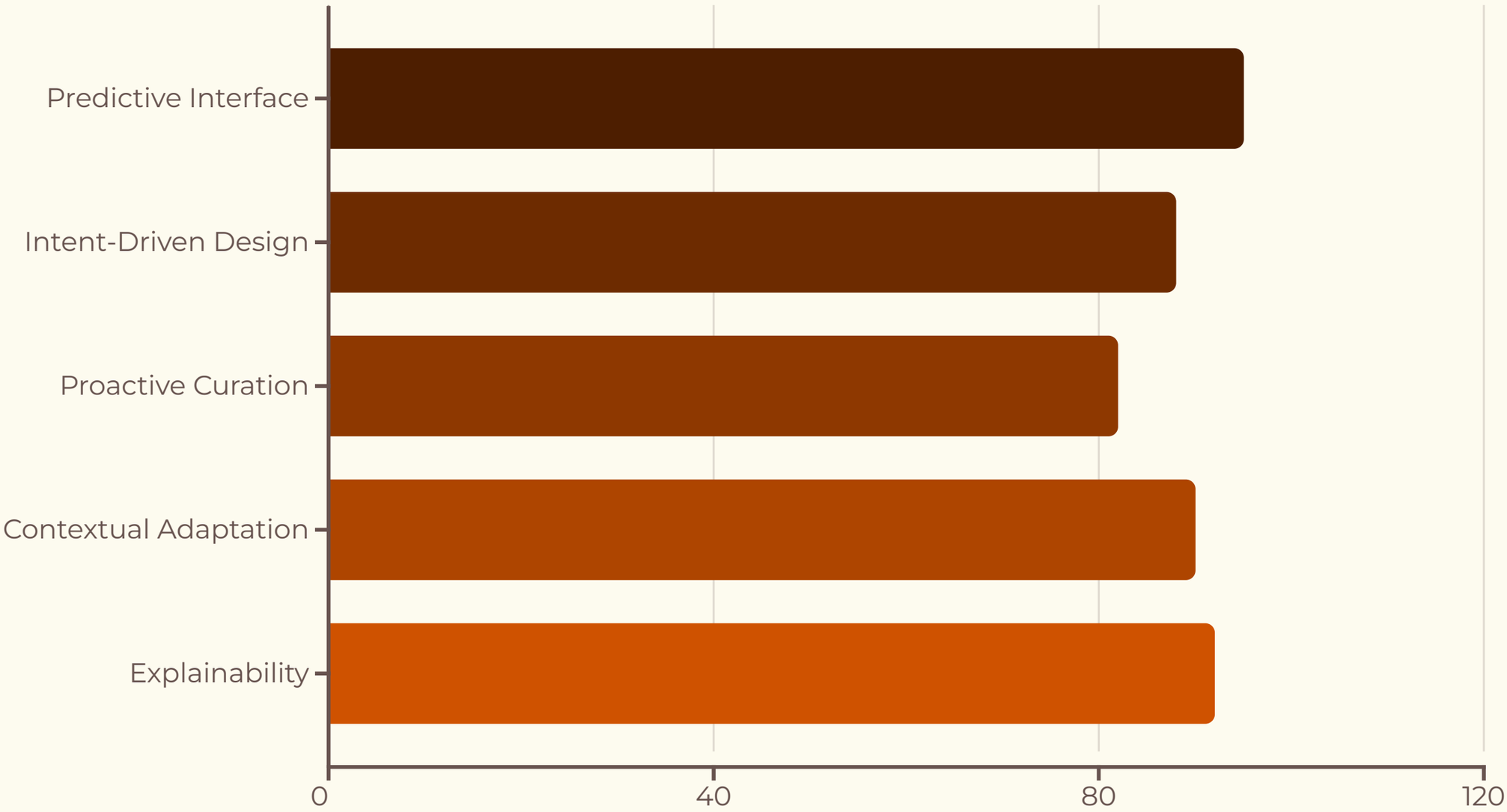
"Based on batch temperature deviation of 2.3°C, probability of microbial growth is 63%."

Release Reasoning

"All test results passed. No similar deviations recorded. Zero customer complaints for this SKU in last 6 months."

Ensures compliance, audit traceability, and user trust through complete transparency.

AI Impact Summary



AI transforms CAPA

from reactive tools into intelligent partners that predict, adapt, and explain—reducing errors, saving time, and building trust.