

ENERGY · WIND

Finding every suspect blade: failure containment for a wind-turbine OEM

When a blade defect appears in the field, the manufacturer must decide which blades to inspect. Inspecting everything from a plant is slow and costly; inspecting too few leaves defects in service. Wexa linked manufacturing, field service and customer contracts in one graph and let an agent find the exact cohort.

6 vs 24

inspections needed (graph cohort vs PLM-only)

100%

recall: no defective blade left in service

~\$20M

less inspection cost at an assumed \$1.1M per blade

16 / 21

node and relationship types across 3 systems

CLIENT

Global wind-turbine manufacturer

REGION

Global

WHEN

2026

ENGAGEMENT

Solution build

WEXA COMPONENTS

Wexa · custom ontology · context graph · cohort agent

The challenge

- Defects travel through adhesive lots, plant transfers and people, not just through one plant
- PLM, field-service and CRM data live in separate systems
- Customer contracts carry tight serial-defect notice periods (as short as **48 hours**)

What Wexa built

- ✓ Ontology spanning PLM (blades, adhesive lots, plants), field service (inspections, inspectors) and CRM (customers, contracts, notice terms)
- ✓ Cohort agent that walks provenance only and never reads the defect label
- ✓ Comparison against PLM-only and plant-sweep containment strategies
- ✓ Customer-notice view ranking affected contracts by notice deadline

How it runs on Wexa

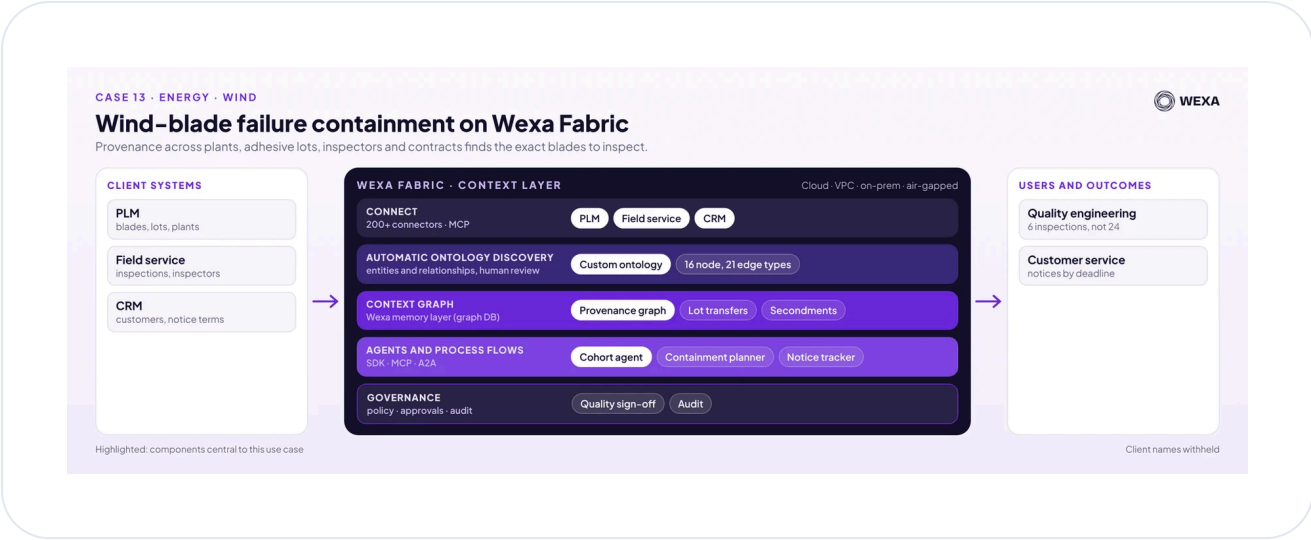


FIGURE How this use case runs on Wexa: client systems connected, ontology discovered, context graph in the Wexa memory layer, agents and process flows, and governance. Highlighted components are central to this use case.

Results

MEASURE	BEFORE / WITHOUT WEXA	WITH WEXA
Blades inspected per containment event	24 blades	6 blades
Annual cost of the process	\$26.4M	\$6.6M
Time to implement the AI solution	6 months	4 weeks
AI build cost (one-time)	\$480K	\$30K
AI operating cost per year (models, infrastructure, upkeep, platform)	\$312K	\$166K

MEASURE	BEFORE / WITHOUT WEXA	WITH WEXA
Total AI cost in year 1	\$792K	\$195K

WITH WEXA

\$19.6M

net annual value to the client after Wexa's
own operating cost

6x

faster to implement

47%

lower AI operating cost

\$597K

less AI spend in year 1

- ✓ Validation test: the graph cohort needed 6 inspections and found every defective blade; PLM-only needed 24; a plant sweep needed 18 and missed 2
- ✓ The missed blades were reached only through an inter-plant adhesive-lot transfer and an inspector on secondment, relationships that exist only in the graph