

INDUSTRY REPORT · AI IN ENGINEERING

AI Adoption in Industrial Engineering: 2026 Benchmark Report

2026-02-26

29 pages

ORGS WITH ACTIVE AI PILOTS

68%

A benchmark survey of AI and machine learning adoption across predictive maintenance, digital twins, and process optimization in industrial and energy engineering organizations.

Adoption Maturity Varies Widely by Use Case

Predictive maintenance remains the most mature AI use case across the organizations surveyed for this report, reflecting its comparatively well-defined problem structure and the accumulated years of condition monitoring data many organizations already had in place before formal AI initiatives began.

Process optimization and generative design use cases show meaningfully lower adoption maturity, with most surveyed organizations still in pilot or early scale-up phases rather than full production deployment, reflecting both greater modeling complexity and, in several cases, cultural resistance to AI-recommended process changes without a human engineer's sign-off step retained in the workflow.

Data Quality Remains the Leading Barrier to Scale

Consistent with prior years, data quality and accessibility, not model sophistication or talent availability, remains the most frequently cited barrier to scaling AI initiatives beyond initial pilots among surveyed engineering organizations, reinforcing that data infrastructure investment often needs to precede rather than follow AI initiative launch to reach production scale successfully.

