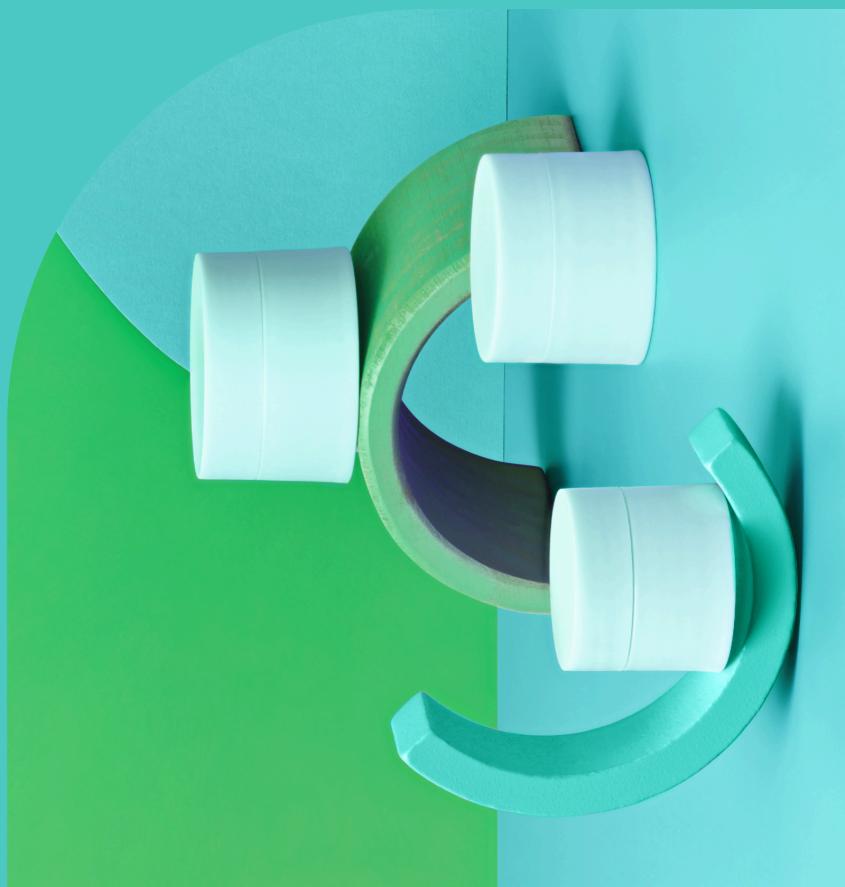




# The 3 Advantages of AI Engineering Ops

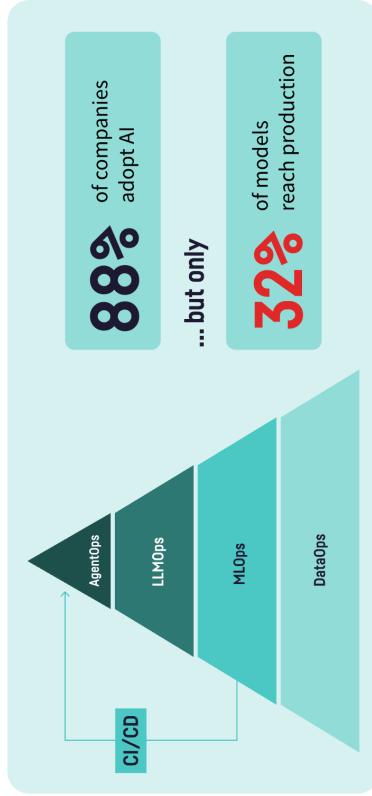
From Experiments to Business Impact



# What Is AI Engineering Operations (Ops)?

Let's be honest about what's happening with AI today. While 88% of companies are diving into AI, only 32% of models ever make it to production.<sup>1</sup> That's already a concerning gap with traditional machine learning (ML). Now add autonomous AI agents into the mix, with their complex operational requirements, and the deployment challenge becomes even steeper.

This comes down to a system problem. Companies lack the robust operational foundation needed to get AI to shift from a good idea to a driver of real impact. Whether you're deploying traditional ML models or autonomous AI agents, you need to maintain them and push more AI applications to deployment without hiccups.



The companies doing this have built a solid operational foundation:

- **DataOps:** Ensuring your data flows are reliable and compliant
- **MLOps:** Monitoring and managing your ML model lifecycles
- **LLMops:** Managing and governing your generative AI with confidence
- **AgentOps:** Deploying autonomous AI agents safely at scale
- **CI/CD:** Automating continuous integration and continuous deployment

Like how DevOps transformed how teams push software to production, unified AI Engineering Ops break through the bottlenecks currently holding your teams back. It allows for structured, faster, and more reliable pathways from innovation to implementation.

<sup>1</sup> Machine Learning Deployments Suffer High Failure Rates. <https://digitalco.com/article/machine-learning-deployments-suffer-high-failure-rates/>

## Consequences of Neglecting Your AI Engineering Ops Strategy



**Revenue Opportunities Lost**



**Investments Without Returns**



**Critical Business Failures**



**Silent Performance Erosion**

# What Happens Without an Ops Plan?

When AI initiatives lack detailed operations, the consequences can hit both your bottom line and competitive position:

- **Value Delayed Is Value Denied:** Without proper MLOps or LLMOps, teams can move 40% slower in their model lifecycle, delaying their progress from model training to deployment.<sup>2</sup>
- **Investment Without Return:** Seventy percent to 85% of organizations' AI investments fail to meet ROI targets<sup>3</sup>—not because the ideas weren't sound, but because of roadblocks like lack of AI Engineering Ops, poor data governance, or inadequate infrastructure.

2 Forrester: The Total Economic Impact™ of Dataiku. <https://pages.dataiku.com/forrester-tei>

3 Between 70-85% of GenAI Projects Fail to Meet ROI. <https://www.nttdata.com/global/en/insights/focus/2024/between-70-85p-of-genai-deployment-efforts-are-failing>



- **Business-Critical Failures:** A few years ago, a global real estate marketplace giant lost over \$300+ million due to inadequate model monitoring and governance.<sup>4</sup> Every organization can face similar consequences without proper guardrails and adequate oversight.
- **Invisible Performance Erosion:** Deployed models are likely losing 40% of their accuracy within a year<sup>5</sup> — silently degrading until they quietly damage your business outcomes.

The risks of inadequate AI Engineering Ops are real. Most organizations already have AI ops strategies in place. But many don't realize their current approach is ineffective until they face the consequences. They're missing the systematic operational foundation that separates leaders from laggards. Let's explore the three advantages of proper AI Engineering Ops and how they create robust, reliable AI deployments and applications.

---

<sup>4</sup> The \$500mm+ Debacle at Zillow Offers – What Went Wrong with the AI Models? <https://insidebigdata.com/2021/12/13/the-500mm-debacle-at-zillow-offers-what-went-wrong-with-the-ai-models/>

<sup>5</sup> Data Drift: What It Is, Why It Matters, and How to Tackle It. <https://www.dasca.org/world-of-data-science/article/data-drift-what-it-is-why-it-matters-and-how-to-tackle-it>





## 1. End-to-End Visibility

Most companies split their AI work across many different systems. Each team uses its own tools: Data teams use one platform, ML engineers use another system, and GenAI specialists have their own separate workspaces. Business teams only see the final results. They can't see how these results were arrived at or how reliable they might be.

This split approach creates dangerous gaps in oversight. Consider these facts: Only 25% of even top companies have full monitoring with instant alerts.<sup>6</sup> Quality checks exist in separate places: Data quality in one system, model performance in another, and LLM accuracy somewhere else. When something goes wrong, teams might spend weeks trying to find where the problem started. You can't improve what you can't properly see.



**AI operations today require more than discrete practices.**

**Chiranjiv Roy,**  
Global Head of Data Sciences &  
Applied AI at C5i.ai



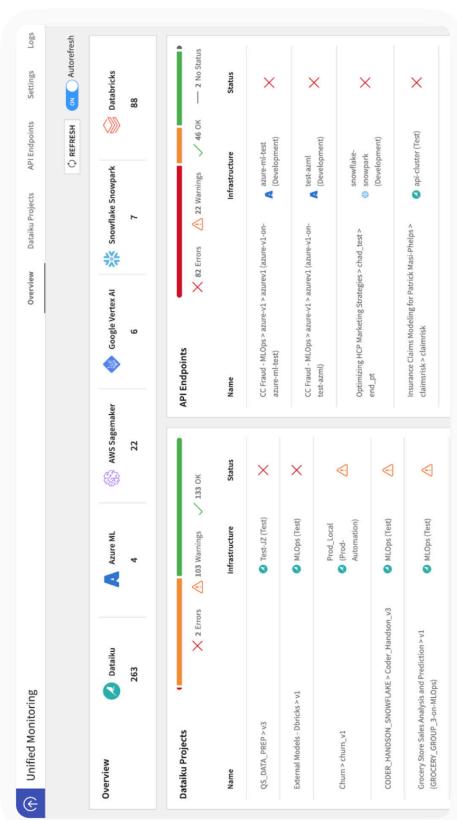
Dataiku, The Universal AI Platform™, fixes these problems by bringing all parts of your AI work together in one place: DataOps, MLOps, LLMOps, and AgentOps. This single system has shared metrics and gives everyone visibility. When everything connects, teams can quickly identify and resolve issues through clear, traceable tracking across systems.

<sup>6</sup> McKinsey. (2023). State of AI 2023. <https://www.mckinsey.com/capabilities/quantumblack/our-insights/the-state-of-ai-in-2023-generative-ais-breakout-year>



## SEE EVERYTHING, SOLVE ANYTHING

Seeing all your AI performance in one place changes everything. Teams make faster, better choices because they share a single source of truth rather than debating which quality status is most important. This complete view helps you spot how one part of your AI chain affects others, like how data quality at the start shapes model output at the end.



## Dataiku brings all these pieces together:

**Unified Monitoring:** Allows ML engineers and IT to track deployment health, drift detection, and quality metrics from a single dashboard, giving everyone the same view of truth.

**Model Evaluation Store:** Data scientists can keep an eye on their models over time, with consistent metrics that track performance drift, data drift, and prediction drift, so they catch issues before they hurt their business.

**LLMops Tools:** AI engineers can set rules for GenAI with standardized evaluation metrics, prompt validations, and compliance policies that keep these tools both strong and safe.

**End-to-End Data Quality:** Analysts and data engineers can build quality checks and see lineage tracking into data flows, so problems are found early instead of months down the road.

**Agent Trace Observability:** AI teams can trace every agent decision with complete visibility into prompts, tool calls, and reasoning paths, so they can quickly debug unexpected behavior instead of spending weeks guessing what went wrong.

This complete visibility not only improves ops but naturally leads to better governance, which is the next advantage of AI Engineering Ops.

**Western Digital**  
Through Dataiku's comprehensive operational visibility and monitoring capabilities, Western Digital successfully maintained over 80% accuracy in production for their email analysis system, ensuring consistent performance at enterprise scale.

## The 5 Biggest AI Adoption Challenges

Source: IBM Institute for Business Value



## 2. Built-In Compliance

Good operations bring good compliance. They go hand in hand. IT teams typically have ownership of technology governance, and they want to deliver business value through AI. But they've become the bottleneck instead of the hero. In many organizations, IT has been seen as the gatekeeper that slows down AI deployment — not by choice, but by necessity. They must ensure security, compliance, and stability while business teams push for faster results.

The technical challenges are significant. Forty-five percent of organizations struggle to adopt AI because of data accuracy, bias, or privacy concerns. IT must create custom deployment pipelines, manage infrastructure, handle version control, and monitor performance, often using disconnected tools not designed for AI workloads. Meanwhile, business stakeholders grow frustrated waiting months for their models to reach production.

Thankfully, a natural advantage of proper AI Engineering Ops is built-in security and structured approval processes. Now, your IT team becomes the hero of your AI journey instead of the bottleneck.



## TRANSFORM IT FROM BLOCKERS TO VALUE ACCELERATORS

Dataiku transforms IT teams from gatekeepers to value drivers. Because the deployment happens in the same platform as the building, model deployment is now simple, fast, and secure:

- **Deploy to Existing Infrastructure:** No need to build new production systems. Dataiku sends models directly to your pre-existing platforms like Azure ML, Databricks, Vertex AI, and AWS SageMaker. This means IT can leverage what they already have while maintaining control.
- **Fix Issues Where They Start:** When problems arise, they can be caught in the Dataiku Deployer and quickly fixed in the same place where models are built. This cuts troubleshooting time dramatically and lets IT solve issues faster.



Enable quick approval and robust oversight through Dataiku Govern.





### 3. Scalable Efficiency & Speed-to-Value

AI projects often hit a wall between building and using. Data teams get stuck with tasks that have nothing to do with making better models. They spend most of their days fixing configs, writing documentation, and waiting for approvals instead of solving real problems.

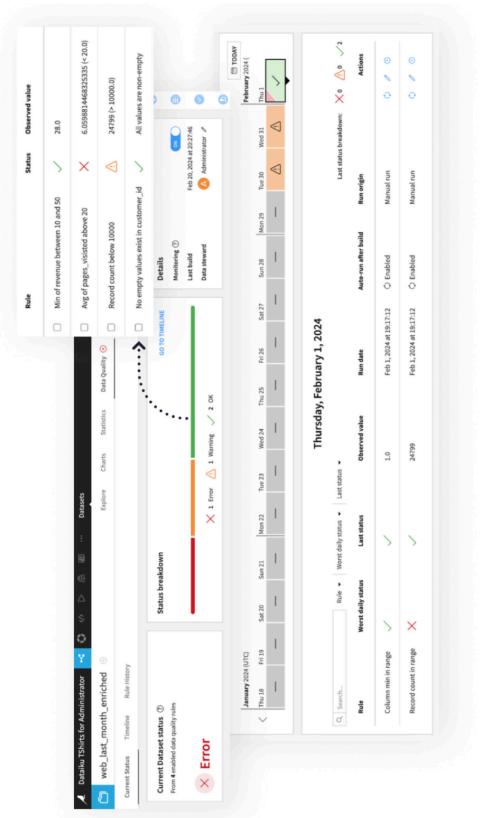
This waste hurts everyone. The best AI sits on a shelf for months while the business keeps making choices without it. By the time it goes live, a new problem has already popped up, and there won't be a solution for another couple of months because of slowdowns.

The companies that win with AI have solved this core problem. With automation and consistent standards, their teams can push ten models to production in the time others push just one, all without cutting corners on quality. This is the true mark of AI maturity — not just how good your models are, but how quickly they start creating value.



## FROM EFFICIENCY TO MEASURABLE ROI

AI teams need tools that can actually make them efficient. Instead of forcing your process to fit a tool, a tool needs to fit how you work so you can go faster. Dataiku tackles the slowdowns of deployment head-on with tools built for real AI teams.



## With Dataiku, data teams transform productivity and deliver business value faster:

**Auto-Documentation:** Cut documentation time from hours to minutes with templates that match company standards, helping teams meet compliance requirements without last-minute scrambles.

**Checks and Alerts:** Free ML engineers for higher-value work by automating system monitoring, model retraining schedules, and pre-production tests.

**Custom Metrics:** Track real-world performance across data pipelines, ML models, and LLMs for clear visibility into AI investments and strategic improvements.

**Customize Deployment to Your Likin:** Eliminate approval bottlenecks with automatic routing while IT maintains proper governance over endpoints and resources.



MandM's small data science team uses Dataiku's integrated MLOps capabilities to achieve 10x faster model operations than fragmented approaches. They now manage hundreds of models in production through unified deployment and monitoring workflows.

Maintain compliance quality at all times with automation, documentation, and alerts.



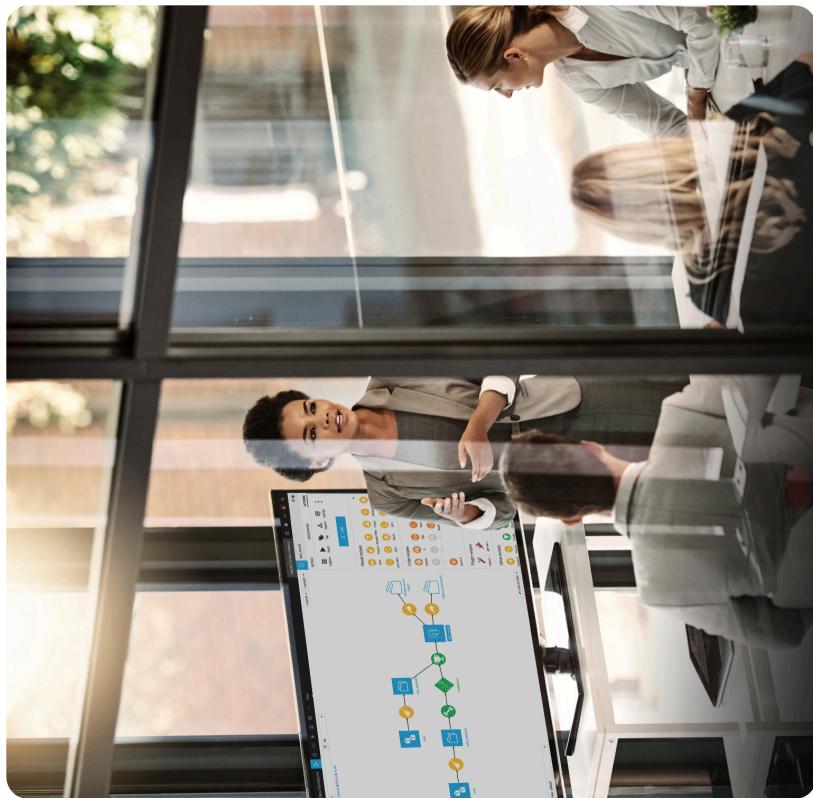
## AI ENGINEERING OPS EXCELLENCE WITH DATAIKU



AI Engineering Ops isn't just theory — it delivers real business results. John Lewis Partnership (JLP) proves this perfectly. Despite having 20 talented data scientists, their AI models sat unused in experimental phases for months, blocking any real ROI.

By implementing proper AI Engineering Ops through Dataiku, JLP transformed its deployment pipeline. Models now reach production in five weeks instead of months, and iteration cycles dropped from 10-12 weeks to just one to two weeks.

The efficiency gains unlocked tens of millions in financial benefits across checkout optimization, forecasting, and scheduling. Most importantly, standardized processes and governance let JLP's team build and maintain models themselves — exactly the kind of roadblock elimination that marks mature AI operations.

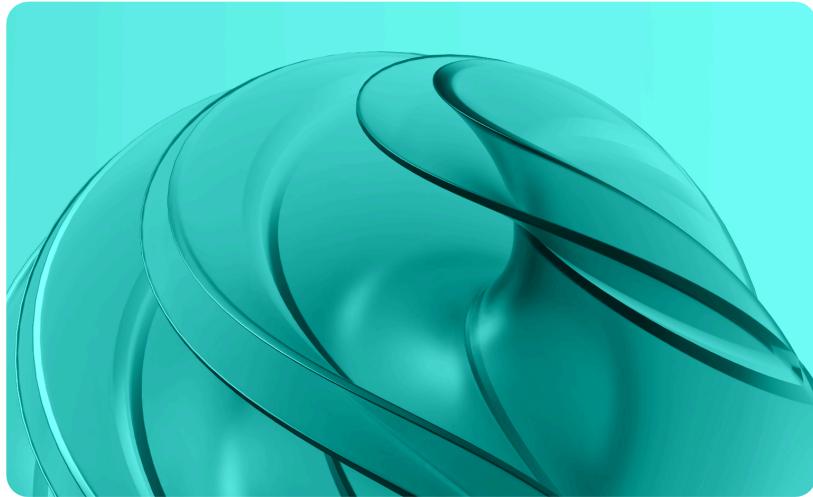


# Final Thoughts

AI Engineering Ops transforms how organizations deliver on AI's promise. By unifying visibility, embedding compliance, and accelerating deployment, companies move from experimental projects to business-changing solutions.

The next frontier is AgentOps. As autonomous AI agents take on more complex business tasks, they bring entirely new operational challenges. Agent observability requires deeper insights into multi-step decision-making processes, while agent quality assurance demands automated testing and validation to prevent costly failures. These aren't just nice-to-haves. They're essential capabilities for any organization serious about scaling AI agents safely.

The companies building robust AgentOps capabilities today will dominate tomorrow's AI-driven landscape. The difference between AI leaders and laggards isn't having better algorithms, it's having better operations. When data scientists spend less time on deployment hurdles and more time on innovation, when IT becomes an enabler rather than a bottleneck, and when models and agents reach production in weeks instead of months, the entire organization wins.





# Accelerate AI Value Creation With Dataiku

Transform your AI Engineering Ops from experimental projects to business impact with the universal AI platform that brings together visibility, compliance, and speed-to-value. Start deploying ten models in the time it takes others to deploy just one.

LET'S GO

