

SDLC Optimization with Agentic AI: built-in governance and continuous validation at every stage of software delivery



AI Delivery Operating System – PractIQ on Red Hat OpenShift

Standardize how your organization works with AI across the entire SDLC, address accumulated governance challenges in Agile, and establish a repeatable, scalable Agentic AI model for new projects, existing application development, and legacy system modernization.

PractIQ is an AI Delivery Operating System — an operational platform that standardizes, governs, and automates how IT departments work with AI across the entire software development lifecycle. Running on Red Hat OpenShift, PractIQ delivers a production-ready environment for three scenarios: building new AI-enabled systems from the ground up (Greenfield), reconstructing knowledge of existing applications to prepare them for AI collaboration (Brownfield), and modernizing legacy systems — with governance, repeatability, and scalability built in at every stage.

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Business challenge

IT departments of large enterprise organizations face a concrete challenge: how to implement AI in a systemic way, resolve governance problems that have accumulated over years, and make AI work predictably and repeatably at organizational scale?

The larger the organization, the more clearly two interrelated problems emerge. The first is the absence of governance and standards for the new AI reality — different teams adopt AI independently, workflows are inconsistent, and agentic coding without guardrails introduces chaos rather than predictability. The second is the legacy of two decades of Agile methodologies: hundreds of applications built without coherent technical documentation, architectural knowledge dispersed and uncodified, and accumulating technical debt. Over the years, these systems evolved rapidly — often at the expense of documentation and architectural consistency — creating a significant barrier to modernization and AI integration today.

The paradox is that AI could help address precisely this problem — accelerate modernization, map system dependencies, generate missing documentation. But to do so, it needs exactly what the Agile era discouraged: structured knowledge, consistent architecture, and up-to-date documentation. As Craig Adam put it in *“Agile is Out, Architecture is Back”* (Medium, 2025): *“Agile taught us speed. AI requires architecture.”*

The core problem is not the technology. It is the absence of an operational model for working with AI. Without clear standards, structured knowledge, and an architecture designed to collaborate with agents, AI investments deliver local results — not systemic ones. The consequences are measurable: longer time-to-market despite growing AI investment, inconsistent product quality, higher operating costs, and increasing difficulty demonstrating ROI from AI initiatives at the organizational level.

Solution

PractIQ is an AI Delivery Operating System — an operational platform that standardizes, governs, and automates how IT departments work with AI across the software development lifecycle (SDLC). It addresses three scenarios that large enterprise IT departments face: building new systems with AI from the ground up (Greenfield), reconstructing knowledge of existing applications and preparing them for agent collaboration (Brownfield), and modernizing legacy systems while eliminating vendor lock-in (Modernization).

Unlike point tools that address isolated parts of the process, PractIQ integrates four layers into a single cohesive system. The governance layer defines the standards and rules for working with AI agents. The process layer provides ready-to-use SDLC workflows based on proven industry practices. The agent orchestration layer manages human–AI collaboration within those workflows. The automation layer executes IT practices in a repeatable, measurable way.

PractIQ offers two complementary operating modes. Core delivers ready-to-use, proven IT practices so organizations can start immediately. Forge allows teams to design and automate their own practices tailored to the organization's specific context. Both modes can operate in parallel.

The platform runs natively on Red Hat OpenShift, providing enterprise-grade scalability, security, and production readiness. OpenShift provides the runtime environment for all PractIQ components. This allows organizations to deploy PractIQ in on-premise, hybrid cloud, or multi-cloud environments while maintaining full compliance with corporate security and compliance standards.

Architecture and integration with Red Hat OpenShift

PractIQ is a modular, five-layer system designed to run on the Red Hat OpenShift platform.

The Human-in-the-Loop Layer provides continuous human oversight of AI agent actions. It delivers conversational interfaces and Visual Studio Code integration, enabling engineers to review, accept, modify, or roll back automated actions in supervised mode.

The Knowledge Layer aggregates and organizes the domain and technical knowledge required to execute practices. It holds practice definitions, rules, and knowledge assets that align language model outputs with organizational context and standards.

The Data Context Layer delivers full organizational context to AI agents through integrations with JIRA, Enterprise Architect, Confluence, and Notion. This layer constructs a knowledge graph that enables decisions grounded in the actual state of the project.

The LLM Execution Layer is responsible for executing generative AI tasks. It supports multiple language models—OpenAI GPT, Anthropic Claude, Meta LLaMA, and local models—and dynamically selects the appropriate model for each task.

The Orchestration Layer is the central integration component. It manages MCP Server configuration, orchestrates data flow between layers, maintains agent conversation memory, and provides monitoring and logging for all activities.

All components are containerized and deployed on Red Hat OpenShift, which provides orchestration, autoscaling, and built-in enterprise-grade security mechanisms. The integration encompasses: **Red Hat OpenShift AI** (running and managing language models within the cluster, including fine-tuning of local models), **Red Hat OpenShift Dev Spaces** (browser-accessible developer environment), **Red Hat Developer Hub** (central portal for accessing PractIQ practices and tools), and **Red Hat Developer Hub Workflow** (flexible scaling of practice orchestration components).

Key capabilities

PractIQ delivers five ready-to-use IT practices that automate critical areas of engineering team workflows.

AI Analysis — AI-assisted analysis of business and technical requirements. Ensures completeness, consistency, and full traceability of requirements from the outset, eliminating ambiguities and contradictions before they propagate downstream.

AI Component Design — Automated creation and validation of technical and functional documentation for individual applications. Transforms documentation from a one-off task into a repeatable, structured practice. The resulting application design model is ready for direct consumption by AI agents.

AI Architecture — Standardized architecture design with AI agent support. Automatically generates documentation to C4 Model standards, reducing documentation time by over 90%. Also enables automated reconstruction of existing system architectures directly from source code — building an AI-ready knowledge base for Brownfield and Modernization scenarios.

AI Development — A standardized, governed agentic coding process. Defines agent roles, operating rules, and collaboration workflows for engineers — eliminating unpredictability and ensuring consistent code quality across projects and teams.

AI Quality Assurance — Continuous quality assurance embedded throughout the SDLC. Automates the creation and execution of end-to-end acceptance tests with full traceability to requirements. Supports Playwright, Gherkin, WireMock, and Jest.

Business benefits

Deploying PractIQ on Red Hat OpenShift delivers measurable business value across four dimensions.

Operational results in the Greenfield scenario: engineering effort to deliver features reduced by up to 80%, analysis and architecture phase shortened by over 50%, team productivity up 50%, test coverage reaching 90% without additional effort, time-to-market improved by 40%, and 95% of code produced by AI agents under engineer supervision.

Value from Brownfield and Modernization scenarios: reduced operational risk from systems no one fully understands; shorter onboarding time for new engineers; elimination of vendor lock-in and recovery of control over licensing and maintenance costs. According to Gartner's research, technology debt consumes an average of 30-40% of the IT budget in large organizations — PractIQ provides a systemic solution to reduce it.

Financial benefits across all scenarios: elimination of redundant rework costs, reduction of defect correction costs, and optimization of LLM token expenditure through dynamic model selection and fine-tuning with LoRA.

Strategic value: all three scenarios operate on a single, integrated platform — knowledge built in the Brownfield scenario feeds directly into Greenfield and Modernization workflows. Governance and compliance are embedded in every workflow. Full independence from AI model vendors. A natural extension of your organization's existing platform strategy based on Red Hat OpenShift.

About the partners

Inteca is an a Wrocław-based IT company founded in 2011, with a team of over 50 engineers and consultants. The company specializes in the design, implementation, and operation of enterprise-grade IT platforms for organizations in the financial, banking, insurance, industrial, and energy sectors. Inteca's clients include Santander, BNP Paribas, Crédit Agricole, Allianz, Generali, Orlen, and Tauron.

Inteca is a Red Hat Advanced Business Partner with extensive experience in consulting, implementation, and managed services for Red Hat OpenShift and Kubernetes. PractIQ is a natural extension of this specialization — an AI governance and SDLC automation platform that complements and enhances the Red Hat ecosystem.

For more information: inteca.com | practiq.tech

Red Hat is a global leader in enterprise open source solutions. Red Hat OpenShift is the industry's leading enterprise Kubernetes platform, providing organizations with a secure, scalable environment to run containerized applications across on-premises, hybrid cloud, and multi-cloud deployments.

More information: redhat.com