ACTICO Platform 9
Digital Decisioning. Powered by AI

At a glance

HIGHLIGHTS

→ Graphical decision and rule authoring

→ Combination of rules-driven and AI-powered decisions

→ Collaborative, enterprise-grade decision management

→ High-performance, explainable decision automation

BENEFITS

→ Unified platform without the need for additional tools

→ Business-IT alignment for maximum agility

→ Seamless integration into existing infrastructures

actico
Smarter Decisions

PRODUCT OVERVIEW

ACTICO Platform is a flexible and scalable software for digitalizing and automating high-volume, operational business decisions. It helps organizations capture decision-making logic, train and operationalize machine learning models, and apply automatic decision making to any application scenario.
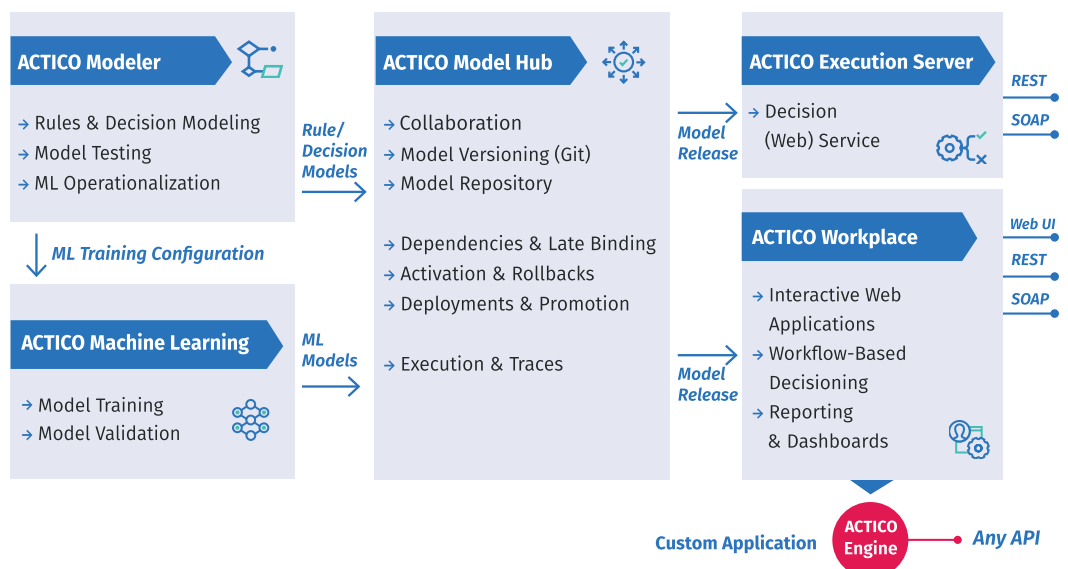
ARCHITECTURE

ACTICO Platform consists of seamlessly-aligned components that support business domain experts, data scientists and IT professionals throughout the entire digital decisioning life cycle.

Business domain experts use **ACTICO Modeler** to author decision models graphically and test them for quality assurance. Data scientists use **ACTICO Machine Learning** to train and validate ML models.

ACTICO Model Hub is the central management component where everything comes together: The repository stores all models with their versions, provides comprehensive governance features and enterprise-grade deployment options. **ACTICO Model Hub** is the collaborative platform that enables both business and IT users alike to jointly and securely work with models and bring new releases to production systems.

ACTICO Execution Server and **ACTICO Engine** are the decision engines that process all models. They meet highest performance needs and are built for seamless integration in all kinds of application scenarios. Decisions can be consumed as a service or directly embedded into Java applications.

The **ACTICO Workplace** framework allows organizations to create flexible, workflow-based business applications that involve end users into the decision-making process.

ACTICO Modeler		ACTICO Model Hub		ACTICO Execution Server	
→ Rules & Decision Modeling	*Rule/ Decision Models*	→ Collaboration	*Model Release*	→ Decision (Web) Service	REST SOAP
→ Model Testing		→ Model Versioning (Git)			
→ ML Operationalization		→ Model Repository			
↓ *ML Training Configuration*		→ Dependencies & Late Binding		**ACTICO Workplace**	Web UI
		→ Activation & Rollbacks		→ Interactive Web Applications	REST
ACTICO Machine Learning	*ML Models*	→ Deployments & Promotion	*Model Release*	→ Workflow-Based Decisioning	SOAP
→ Model Training		→ Execution & Traces		→ Reporting & Dashboards	
→ Model Validation					

Custom Application ⎯ **ACTICO Engine** ⎯ *Any API*

COMPONENTS & FEATURES

ACTICO Modeler

The graphical, low-code authoring environment allows domain experts to externalize their knowledge into transparent rules and decision models.

- → Graphical modeling of business rules, decision tables and flows, also DMN decision models
- → Integration of ML model predictions into business rules
- → Quality assurance via built-in test editor, execution and debugging
- → Comprehensive model navigation, validation and refactoring
- → Graphical compare & merge of model changes
- → Data modeling, also import from XML Schema or JavaBeans
- → Extensibility with custom functions, services and actions
- → Versioning, modularization and reuse of rules and ML models

ACTICO Machine Learning

The machine learning component enables data scientists to train and operationalize explainable machine learning models.

- → Training of machine learning models using any kind of AI algorithm
- → Scalable in-memory architecture for model training
- → Rule-based or Apache Spark-based feature engineering
- → Automated, scheduled model retraining for continuous optimization
- → Model performance metrics, leaderboards and model selection
- → Explainability of ML models and predictions
- → Supports H2O, Apache Spark and H2O Sparkling Water

ACTICO Model Hub

The central model repository stores all models with their versions. It provides state-of-the-art, secure deployment options and compliance features.

- → Git-based collaboration platform for multiple modelers
- → Repository for reuse of models and extension libraries
- → Unified model repository for rules and machine learning models
- → Deployment API for model activation and rollback at runtime
- → Security, access control and audit log
- → Promotion of models between stages e.g. DEV, TEST, PROD
- → Late binding (dynamic dependency resolution) for localized model changes
- → User management via OAuth2 (OpenID Connect) or ActiveDirectory

ACTICO Execution Server & Engine

The highly scalable decision engine offers seamless integration into all kinds of infrastructures and meets highest performance needs.

- → High-performance execution engine for decision, rules & machine learning models
- → Java API for direct integration into applications and processes
- → REST/SOAP API for providing centralized decision services
- → Simultaneous hosting of multiple model versions
- → Model deployments and roll-backs at runtime without downtime
- → Execution of H2O or Python ML models
- → Fully auditable with execution traces and visualization in Modeler

ACTICO Workplace

ACTICO Workplace allows the implementation of flexible, workflow-based business applications for decisions that require human interaction.

- → Model-driven web application development
- → Human workflows for case-by-case decisioning scenarios
- → Context-sensitive forms, dynamic user interfaces
- → Combination of automated decisions with human decisions
- → Versioned models for rules, workflows, data & UIs
- → Database for all decision workflows, states, data and attachments
- → Full-text search, worklists, reporting and dashboards
- → User management via ActiveDirectory or SAML

DEPLOYMENT OPTIONS

ACTICO Platform is designed to support all kinds of deployments. While ACTICO Modeler is a desktop application available for Microsoft Windows, Mac and Linux, the server components (ACTICO Model Hub, ACTICO Machine Learning, ACTICO Execution Server and ACTICO Workplace) are available on-premise, for customer cloud infrastructures (private, public, hybrid) or as managed services in the ACTICO Cloud.

INTEGRATION OPTIONS

ACTICO Platform meets the stringent requirements of central decision architectures where decisions must be consistent across all processes, applications and channels. Therefore, it offers various integration options. ACTICO Execution Server provides decisions as REST/SOAP web services ("decision services") that can be consumed by any application via SOAP or REST API. The ACTICO Engine can be integrated directly into Java applications. ACTICO Platform comes with a code generator enabling deployments as e.g. AWS Lambda or Azure functions, or into embedded systems / microcontrollers.

GOVERNANCE & SECURITY

ACTICO Platform provides comprehensive governance and security features for each step within the digital decisioning lifecycle. ACTICO Model Hub allows the definition of fine-grained access rights (groups, roles, permissions) for working with models and repositories as well as for releases and deployments. design-time auditability, every change of a model is documented in a detailed audit log. For runtime auditability, ACTICO Platform provides revision-safe execution environments that record each decision made in a traceable way.

PERFORMANCE & SCALABILITY

ACTICO Platform features full horizontal and vertical scalability and high availability. For service-based scenarios, ACTICO Execution Server includes a low-latency web stack and has proven to process more than 12.000 REST calls/sec. The stateless and elastic nature of ACTICO Execution Server allows scaling across multiple machines with elastic load balancing. For direct integration scenarios, ACTICO Platform provides a code generator that creates thread-safe Java code directly from rules and (H2O) machine learning models. This allows the scaling and parallelization of decision requests and ensures native JVM speed and low-latency processing.

SYSTEM REQUIREMENTS

ACTICO Modeler
Operating Systems
Microsoft Windows (64 Bit)
Java
Java 11 (64 Bit), included
in Installer
Java SE 8 (Oracle VM, 64 Bit)
Database Connectivity
Any JDBC 2.x compliant database
Memory
4 GB
Harddisk Space
500 MB

ACTICO Machine Learning
Operating Systems
Microsoft Windows (64 Bit)
Linux (64 Bit)
Java VMs
Java SE 8 (Oracle VM, 64 Bit)
Memory
16 GB / 4 CPUs minimum
Harddisk Space
200 GB

ACTICO Model Hub
Operating Systems
Microsoft Windows (64 Bit)
Linux (64 Bit)
Java VMs
Java 11 (64 Bit)
Java SE 8 (Oracle VM, 64 Bit)
Web Browsers:
Google Chrome
Microsoft Edge
Mozilla Firefox
Databases
Oracle 12c, 18c, 19c
Microsoft SQL Server 2016, 2017
MySQL 5.7 (incl. Amazon Aurora)
Authentication:
Microsoft ActiveDirectory / LDAP
OpenID Connect (OAuth2/OIDC)
Memory
4 GB / 2 CPUs minimum
Harddisk Space
2 GB minimum

ACTICO Workplace
Operating Systems
Microsoft Windows (64 Bit)
Linux (64 Bit)
Java VMs
Java 11 (64 Bit)
Java SE 8 (Oracle VM, 64 Bit)
Web Browsers:
Google Chrome
Microsoft Edge
Mozilla Firefox
Databases
Oracle 11 R2, 12c, 18c, 19c
Microsoft SQL Server
2014, 2016, 2017
MySQL 5.7
(incl. Amazon Aurora)
Authentication
Microsoft
ActiveDirectory / LDAP
SAML 2.0

ACTICO Execution Server
Operating Systems
Microsoft Windows (64 Bit)
Linux (64 Bit)
Java
Java 11 (64 Bit)
Java SE 8 (Oracle VM, 64 Bit)

EUROPE
ACTICO GmbH
Germany

AMERICA
ACTICO Corp.
Chicago, USA

ASIA & PACIFIC
ACTICO Pte. Ltd.
Singapore

info@actico.com
www.actico.com