

TCS MasterCraft™



Leverage generative AI-powered
automation to modernize
applications using
TCS MasterCraft™



Amidst rapidly growing global business requirements and end-user demand for the latest technologies such as cloud, mobile, social media integration, and analytics, enterprises still using legacy systems face multiple challenges to meet market demands. To modernize their legacy systems, enterprises look for a solution to aid them in 1). Automated and seamless transformation 2). Move towards the latest technologies (modernization) 3). Digitization and web enablement, and 4). Information and data standardization.

TCS MasterCraft™ for modernization is a cognitive code analysis product that helps in planning, strategizing, and executing the modernization of applications. This solution aids in extracting the business rules/requirements from the application and translating them to formal language, enabling the modernization of legacy applications to newer technologies.

Overview

The successful application modernization journey begins with a proper plan and perfect execution of the strategies to overcome various risks. The multiple factors influencing the need for modernizing legacy applications include

- Improving business agility
- Interacting with applications built on newer technologies
- Reducing complexity
- Reducing cost of running an application

TCS MasterCraft™ enables the complete process of application modernization. TCS MasterCraft™ for modernization facilitates the users in understanding existing applications, helps in migrating to different/latest technology, and offers valuable insights. Our solution analyzes the existing application cognitively and builds the complete knowledge repository. This knowledge repository holds valuable information such as entry points for the application, transactional flows from each entry point, dependency chart, impact reports, etc. Using all this information, the users are enabled to extract the business rules from the application and present those rules in a user-readable format, which is used as inputs for application modernization.

Key features

Significant features are as under:

- Leverage the decision engine, powered by gen-AI, to analyze the code and provide 360-degree insights to determine the modernization roadmap and approaches
- Translate the cryptic denominations in the code to standardized domain terms by neural network model and break down the programs logically in an optimized size consumable by large language models (LLMs)
- Automatically pull application knowledge from the source code to document the functional and technical specifications, extract business rules, and create code summary for each program block using the knowledge engine
- Generate code from the business summary created automatically using the Codegen AI agent. Create and execute the test cases with automation using the TestGen AI agent
- Build, package, and deploy the applications from the generated components to desired target environments

Benefits

The major benefits of TCS MasterCraft™ are:

- **3X faster:** Modernizations enabled with AI Agents deliver 3 times faster than the traditional approaches
- **Mature, risk-mitigated approach:** Intelligent automation, backed by contextual knowledge and extensive experience to ensure risk, cost and quality optimization
- **Cost-effective solution:** Generated code is compliant to all coding/security standards and maintained as logical models for future modifications.
- **Technology agnostic LLM approach:** Transformation solutions can be plugged with all popular open-source/commercial models of LLM in the future.
- **No vendor lock-in:** Code generated from our product provides flexibility to maintain the complete project outside the product

TCS advantages

Partner with TCS to leverage the following key differentiators:

- **A robust network:** TCS provides a wide range of integrated modules, spanning global cloud leaders such as Amazon, to offer enhanced flexibility for migration.
- **TCS experience:** TCS embodies decades of experience in successful and mature Application Modernization methodology.
- **TCS' best practices** and methodologies packaged and deployed for various global customers enabling them to modernize applications with reduced business risk.
- **R&D credentials:** TCS enables access to its Innovation labs, which have years of dedicated experience in application maintenance, upgradation and consolidation scenarios.

Awards and accolades



To know more

Visit the TCS MasterCraft™ page on www.tcs.com

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About Tata Consultancy Services Ltd (TCS)

Tata Consultancy Services is an IT services, consulting and business solutions organization that has been partnering with many of the world's largest businesses in their transformation journeys for over 56 years. Its consulting-led, cognitive powered, portfolio of business, technology and engineering services and solutions is delivered through its unique Location Independent Agile™ delivery model, recognized as a benchmark of excellence in software development.

A part of the Tata group, India's largest multinational business group, TCS has over 601,000 of the world's best-trained consultants in 55 countries. The company generated consolidated revenues of US \$29 billion in the fiscal year ended March 31, 2024, and is listed on the BSE and the NSE in India. TCS' proactive stance on climate change and award-winning work with communities across the world have earned it a place in leading sustainability indices such as the MSCI Global Sustainability Index and the FTSE4Good Emerging Index.

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