Enterprise Low-Code Application Platform: future of software development

A low-code application platform (LCAP) is a software platform that provides development environment to create application software through graphical user interfaces and configuration instead of traditional hand-coded computer programming.

Gartner defines enterprise low-code application platforms (LCAPs) as software platforms for the accelerated development and maintenance of applications, using model-driven development tools, generative AI and prebuilt component catalogues for the entire application's technology stack.

A low-code model enables developers of varied experience levels to create applications using a visual user interface in combination with model driven logic. Such platforms allow developers significant delivery efficiency with increased quality. As such, it takes out the complexity associated with any enterprise scale software development process and brings much needed agility & efficiency. According to many, this technique along with Generative AI assistance and Agents is seemingly the future of Software Development.

Enterprise LCAP features include support for the collaborative development of all application components; runtime environments for high performance, availability and scalability of applications; and application deployment and monitoring with detailed usage insights. Enterprise LCAP platforms feature governance controls and insights, self-service capabilities, APIs for integration with external DevOps tooling, success management with exhaustive technical documentation, training programs and a comprehensive global partner network.

Enterprise LCAPs provide the foundation for developing a wide range of applications and application components with distributed data architectures, including complex multimodal front ends, business workflows, agentic AI and integration capabilities.

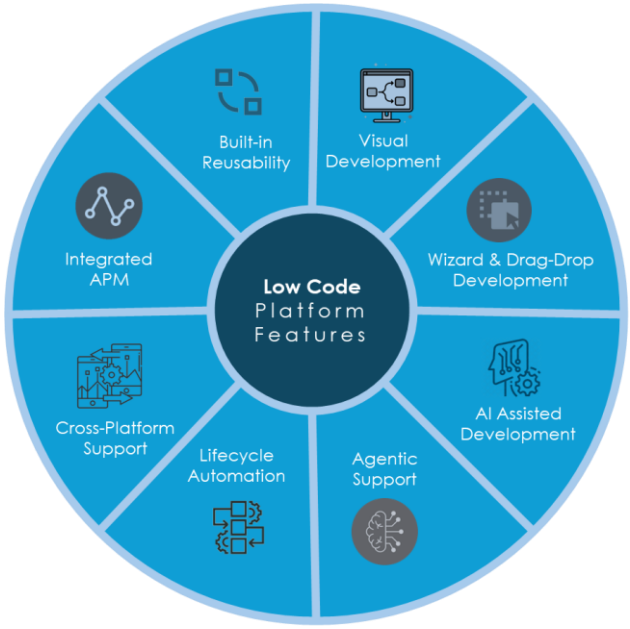

Fig:1 – Features of a Low Code Platform

Market Analysis

The global enterprise low-code platform market was valued at approximately $28 to $35 billion in 2024 and is projected to grow significantly, potentially reaching over $260 to $350 billion by 2032-2035, with a Compound Annual Growth Rate (CAGR) in the range of 27% to 33%.

This growth is driven by the accelerating pace of digital transformation, the need for faster application development, and a desire to bridge IT skill gaps by empowering both professional developers and citizen developers.

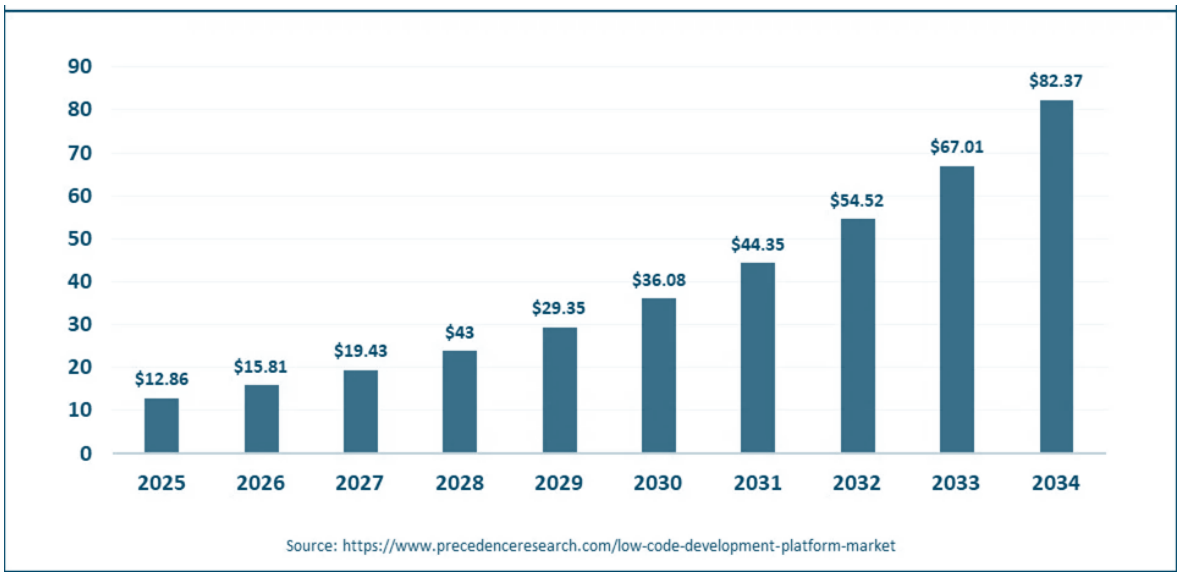

Fig: 2 – Global Low Code Development Platform Market Size

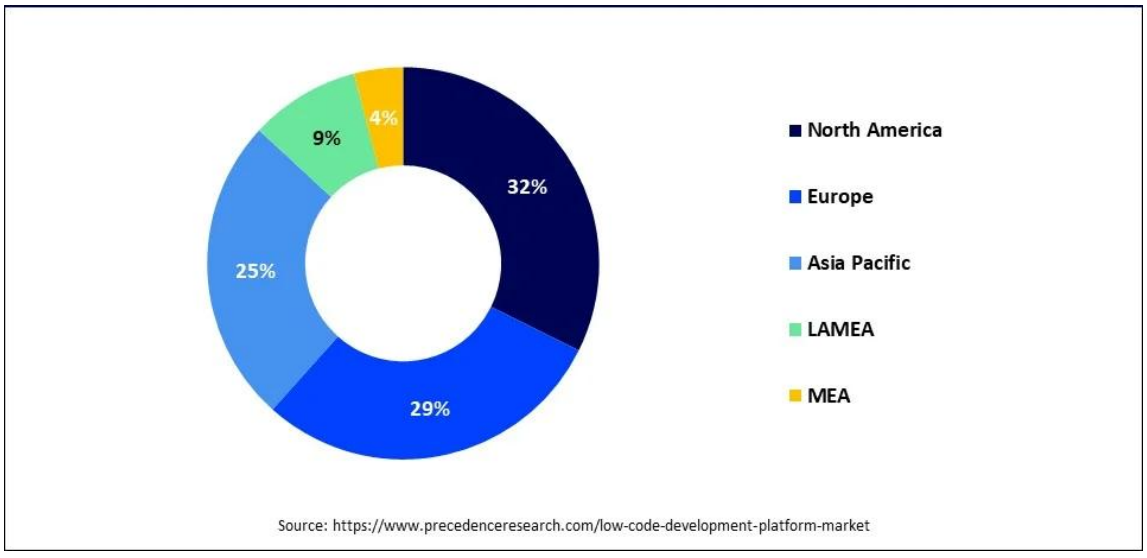

Fig: 3 – Low Code Development Platform Market Share by region

Considering the market adaption many application software vendors and hyperscale players are investing aggressively in this domain. Following are some of the key Low Code development platforms available in the industry.

- Mendix is one of the best low-code platforms on the market, targeted for developing large-scale enterprise-grade applications.
- OutSystems comes with its powerful toolset, AI enhancements and other advanced low-code development utilities.
- Microsoft PowerApps is a rich in features low code development platform, designed primarily for citizen developers.

Hyperscale providers are also coming up with their platforms.

- AWS App Studio is a generative AI–powered service that uses natural language to build business applications, empowering a new set of builders to create applications in minutes.
- GCP AppSheet Automation combines no-code and Google AI to make it easier for anyone, anywhere to automate business processes.
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Fig: 4 – Gartner Magic Quadrant for LCAP 2025

Key concepts related to Low Code Development Platform

A Low-code development platform (LCDP) provides rapid application development and deployment using low-code or no-code techniques such as model-driven application design and development together with integrated deployment of applications. An LCDP typically creates metadata and interprets that metadata at runtime and abstracts the underlying server infrastructure for ease of use.

Following are the key features of such platform –

- Visual Modelling
- Declarative Tools
- Instant mobility
- Security and Scalability

Typical benefits that such a platform brings may be classified as follows –

- Improved Agility for software delivery
- Decreased Cost of implementation
- Higher Productivity
- Greater Software Quality
- Effective Risk Management
- Better Governance

Various types of low code and no code platforms exists. Based on its implementation and intended usage they can be classified as follows –

No-code development platform (NCDPs) allows programmers and non-programmers to create application software through graphical user interfaces and configuration instead of traditional computer programming. No-code development platforms are closely related to low-code development platforms as both are designed to expedite the application development process.

No-code platforms are designed entirely with the citizen developer in mind to develop new applications that serve the business, usually for internal use. These platforms are usually simpler to use than a low-code platform.

Niche Low Code platforms are designed to satisfy a strict business need, such as business process management (BPM) of typical common workflows, case management and such key CRM features. In such cases low code is a feature, of an existing solution or product. All advanced BPM platforms (such as Pega) provide such features.

Bi-modal Low Code platforms are focused almost exclusively on the front-end, to add new functionality on top of existing systems rather than modernizing the core. This is ideal for quick UI centric development including development of Mobile Applications etc.

While bi-modal IT tools may satisfy short-term innovation goals, as the organization grows and needs change and scale, these solutions fall short in keeping up with the enterprise's growing digital delivery requirements.

Enterprise low-code application platforms have no limitations. They make it simple to deploy enterprise-class applications and systems and integrate them with cloud services. It's possible to build operational systems for departments, core digital systems, or digital experiences that serve millions of users.

Enterprise low-code also delivers high performance, scalability, high availability, disaster recovery, security, and much more.

Considering the existing market leading offerings in this area, it is apparent that Niche and Bi-modal low code platforms are more widely available and adopted in the market. Low code platforms which are focused for enterprise scale back-end development is not adequate. Such platform supporting recent industry trends like Microservices is even more rare.

Another interesting observation is – most of these commercially available platforms are closed in nature. Code generated within this platform are maintained and deployed within those system boundaries, typically on a cloud instance. Generated codes commonly cannot be extracted out of the platform. This makes it more difficult to adopt for the wider business usage.

Key Trends & Drivers

Generative AI Integration: AI-powered features in platforms enable natural language-based app creation and automation.

AI-Enabled Low-Code Solutions: Platforms are incorporating AI toolkits to simplify analytics, enhance UX, and reduce dependency on skilled developers.

Cloud Deployment Demand: Organizations prefer cloud-based platforms for real-time access, lower infrastructure costs, and improved scalability.

Mobile & Web-Based Accessibility: The growing need for cross-platform, internet-accessible applications drives demand for low-code app creation.

Our Approach towards Low Code Development

NuboNS has broadly adapted the concepts of Enterprise Low code platform and extended that further to make it compatible for Microservice based Cloud Native implementation with integrated CI/CD pipeline allowing developers to extend the generated code further to address any specific business requirement and deployment scenarios.

This platform in an ideal situation should run on top of Nubo Native Platform to takeout inherent complexities from a typical microservice based cloud native implementation. NNP Enterprise low-code development platform (PROGRAMADO) is a platform that provides end to end solution for rapid development of enterprise scale, cloud native applications utilizing Microservice Architecture. This platform provides intuitive user interfaces to generate various solution frameworks and use cases with game changing delivery velocity.

It also integrates generated solution components with the underlying NNP DevSecOps toolchain and provides seamless deployment options into the underlying Kubernetes environment.

This platform embraces a configurable template-based structure for code generation which makes it adaptable into any kind of complex development ecosystem. Frameworks generated by this platform can be easily extended to accommodate additional business logic through its defined extension points.

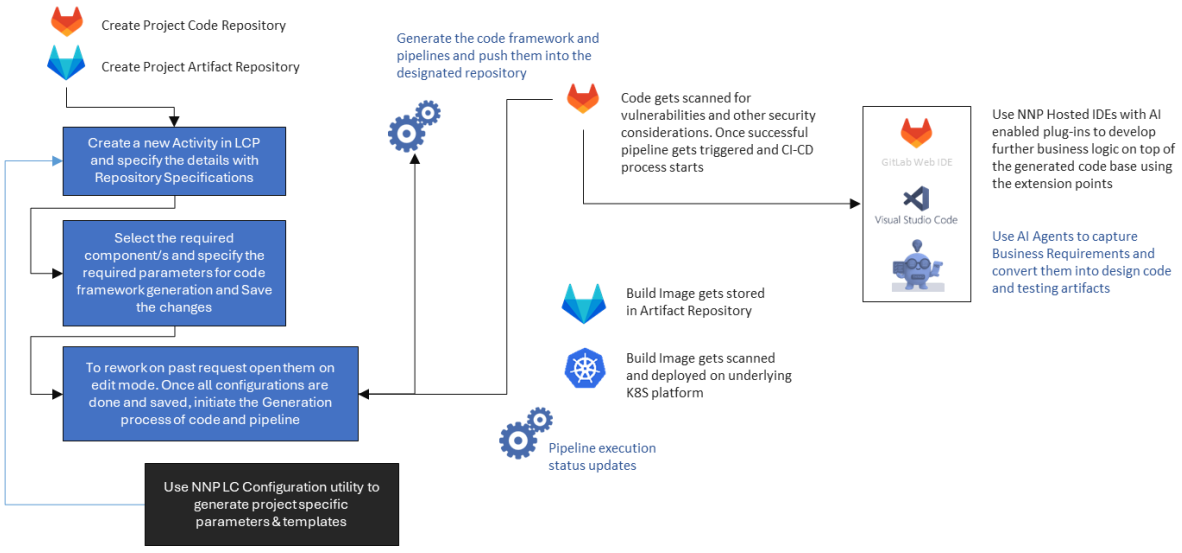

Fig: 5 – NNP Low Code Development process flow

All generated codebases are checked in the repository for further enhancement and business requirement implementations through well-defined extension points.

A template-based approach has been adopted for code generation to make the platform flexible to adapt to any engagement specific business requirement.

Concepts of IDE plugin for smart code completion has been followed to further support developers realizing specific business requirements. Usage of other specific low code utility may also be considered based on specific need and applicability.

A comprehensive configuration utility has been provided for this platform to support additional and specific code generation templates and additional parameters that needs to be considered while generating the code framework.

Following are the key features of this platform –

- Underlying Repository and DevSecOps Pipeline
- Responsive User Interface generation supporting common java-script frameworks (Angular, React, React-Native)
- Microservice Framework Generation with common programming languages (java, python, node, Golang, rust)
- Integrated Microservice Assembly generation
- Service Orchestration and message flow generation for enterprise and IoT edge solutions
- Data Management and AI Application generation
- AI Agents to automate the SDLC process and AI enabled hosted IDE for AI assisted development
- Comprehensive CI/CD/CT pipeline with integrated 5 step security scan and Test Automation

Conclusion

The global enterprise low-code platform market was valued at approximately $28 to $35 billion in 2024 and is projected to grow significantly, potentially reaching over $260 to $350 billion by 2032-2035, with a Compound Annual Growth Rate (CAGR) in the range of 27% to 33%.

The increasing need of digitalization and maturity of agile DevOps practices are expected to enhance the use of low-code development platform market across the globe. Organizations are adopting this new approach for verity of new development needs including complex application modernization initiatives.

NNP PROGRAMADO, NuboNS's Low Code Development Platform provides mechanism for rapid development utilizing AI capabilities and Microservice based Cloud Native Architecture principles. It covers every possible aspect of an enterprise low code platform, ideal for any cloud optimized development. It brings in path breaking delivery efficiency with enhanced code quality and security.

About Nubo Native Solution

Nubo Native Solution is working on a mission to democratize cloud by providing a sovereign, adaptable and comprehensive Cloud Platform referred as Nubo Native Platform (NNP) for state-of-the-art Cloud Native Development and Hosting.

Nubo Native Solution with its path-breaking Cloud Platform and associated Consulting and Professional Services enables large-scale Cloud Repatriation, complex Application Modernization, API Lifecycle Management, AI Enablement, Edge Computing and accelerated Software Development ensuring lower TCO and improved TTM, for the Enterprises worldwide.

Compiled by Nubo Native Platform team

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