Low-code as a strategic tool for enterprise applications

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Table of **Contents**

Low-code as a strategic tool for enterprise applications

Enterprises are looking at new ways to augment innovation and digital transformation. A low-code platform is a strategic tool in the IT tool chest that allows enterprises to innovate faster and efficiently. Low-code provides speed for the business developer and allows professional developers to build with scale. Enterprises can use low-code to create reusable components that can be repurposed to provide contextual, customizable, and configurable experiences to customers. Enterprise developers can leverage modern technology, support microservices, adopt containerization, take care of deployment and up-gradation with minimum effort, and build cloud-native applications with minimum downtime. Low-code platforms are developer-centric and empower the developer to shape ideas into working solutions without the hassles of setup and deployment.
The features that support low-code as a strategic tool for enterprises are:

Speed for the business developer and **scale** for the professional developer
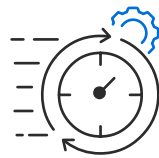
Hyper accelerates **developer velocity**

Supports **modern enterprise services**
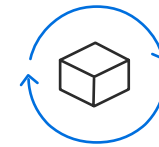
Supports **enterprise readiness and continuous delivery**

Composable applications with plug-and-play of reusable components

By 2024:

65% of application development for enterprises will be with LCAP

40% of LCAP customers will be non-IT enterprises

75% of large enterprises will be using at least four low-code development tools
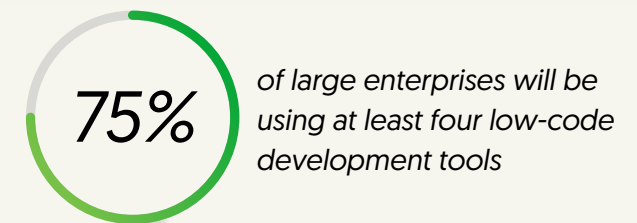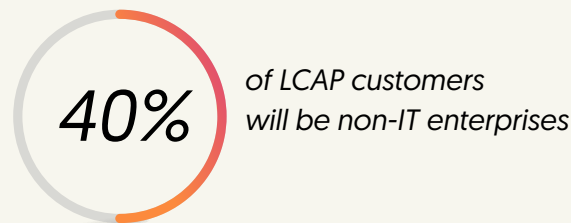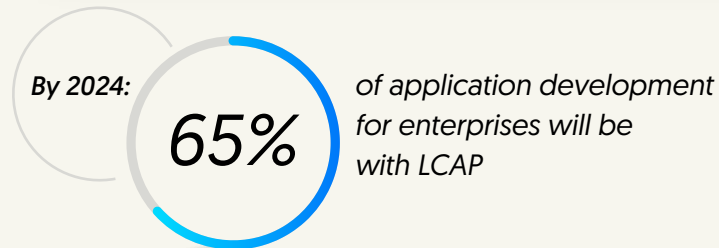
Gartner Report

Speed for the business developer and **scale** for the professional developer

WYSIWYG

Business developers can easily drag and drop widgets and components to the application canvas and create applications in a matter of weeks.

AUTO-GENERATION OF APIs

Auto-generated APIs help business developers leverage the benefit of data and 3rd party integrations with ease.

QUICK PROTOTYPING

Low-code allows business users to ideate faster, test their POC's and innovate quicker.

A good low-code platform enables a citizen developer with minimal programming skills to build a fully functional end-to-end application in a matter of weeks as opposed to months or years.

CODE EXTENSIBILITY

An extensibility-first low-code platform allows professional developers to scale better across layers. Code extensibility in the UI, integration, and backend layer allows professional developers to create custom endpoints, customize the code, and even enables custom infrastructure.

DEPLOYMENT

Low-code platforms that have containerized application delivery can ensure faster deployment, streamline operations and increase scalability. Low-code platforms that use the Docker containerization model provide a resource-optimized environment that ensures deployment to cloud providers.

ARCHITECTURE

Low-code platforms that support microservices-based architecture tackle scalability issues effectively. Well-defined REST APIs that decouple the front-end and the backend layers allow applications to scale.

The same platform enables a professional developer to scale the application to meet enterprise needs.

Enable extreme developer velocity

A conducive environment for rapid development includes removing friction points and increasing flexibility for the development team which is called 'Developer Velocity'.

Developer velocity encompasses both the speed and the depth at which talent can be harnessed. In other words, maximum utilization of talent. McKinsey & Company developed a metric called the Developer Velocity Index[DVI] of an enterprise which suggested higher the DVI, the greater the impact on business performance.

A well-designed low-code platform with the right features augments developer velocity and in turn propels enterprise velocity.

> "
> Enterprises with powerful tools are **65%** more innovative and have **47%** higher developer satisfaction than those with lower DVI
> "

Enterprise Velocity

- Quick Prototype Validation
- Reusable Project Artifacts
- Accelerate Build-Test-Deliver
- Easy Customization
- Effortless Onboarding

Developer Velocity

- Built-in UI widgets and templates
- 1-click multi-cloud hybrid deployment
- In-built security automation
- Declarative configuration-driven development
- Collaborative development
- API-end point auto-generation

Building blocks of modern enterprise application development

Low-code encompasses the right building blocks for modern enterprises to develop modern applications. The platform should be able to leverage existing assets and provide standard enterprise services to create enterprise-grade applications that are both mobile as well as web-friendly.

YOUR ASSETS

- Database
- Business Logic
- End-Point
- Legacy Data
- 3-rd Party Integration

ENTERPRISE SERVICES

- Event-driven Systems
- Identity Access Management Services
- Artifact Repository **Maven**
- CI/CD Release
  - VCS | Git
- Federated Data Sources
- Configuration Repositories

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- Visual Drag-and-Drop Workbench
- Collaborative Development
- 100% REAL Code Customization
- API Integration-Generation Hub
- PWA enabled mobile experiences
- Multi-cloud 1-Click App Deployment

ENTERPRISE APPLICATIONS

- Mobile Applications
- Responsive Web Applications
- Composable Experiences (Micro Apps)
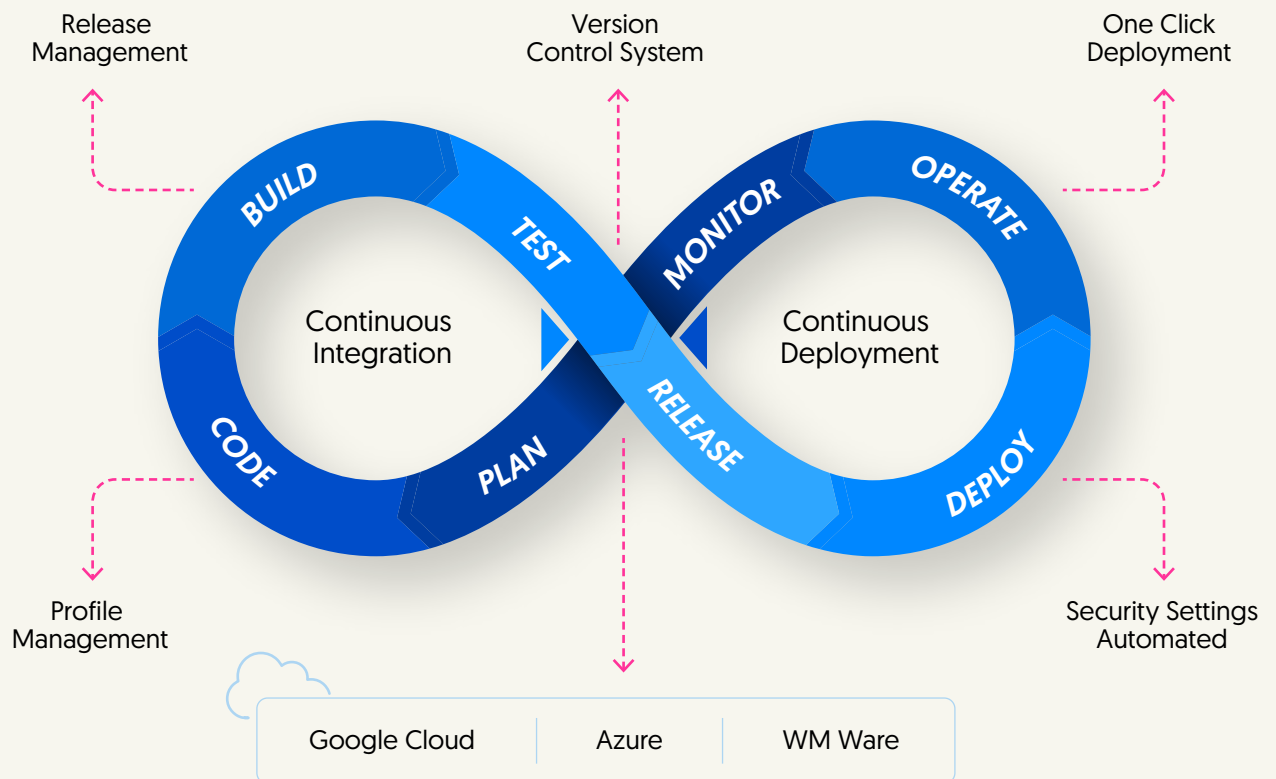- Embeddable Applications

Enterprise readiness and continuous delivery

Enterprises cater to a range of applications from internal processes to customer-facing and partner-related applications. New applications are constantly being built and older ones, modernized. These applications typically have varied needs of business logic, integration, security, and performance considerations.
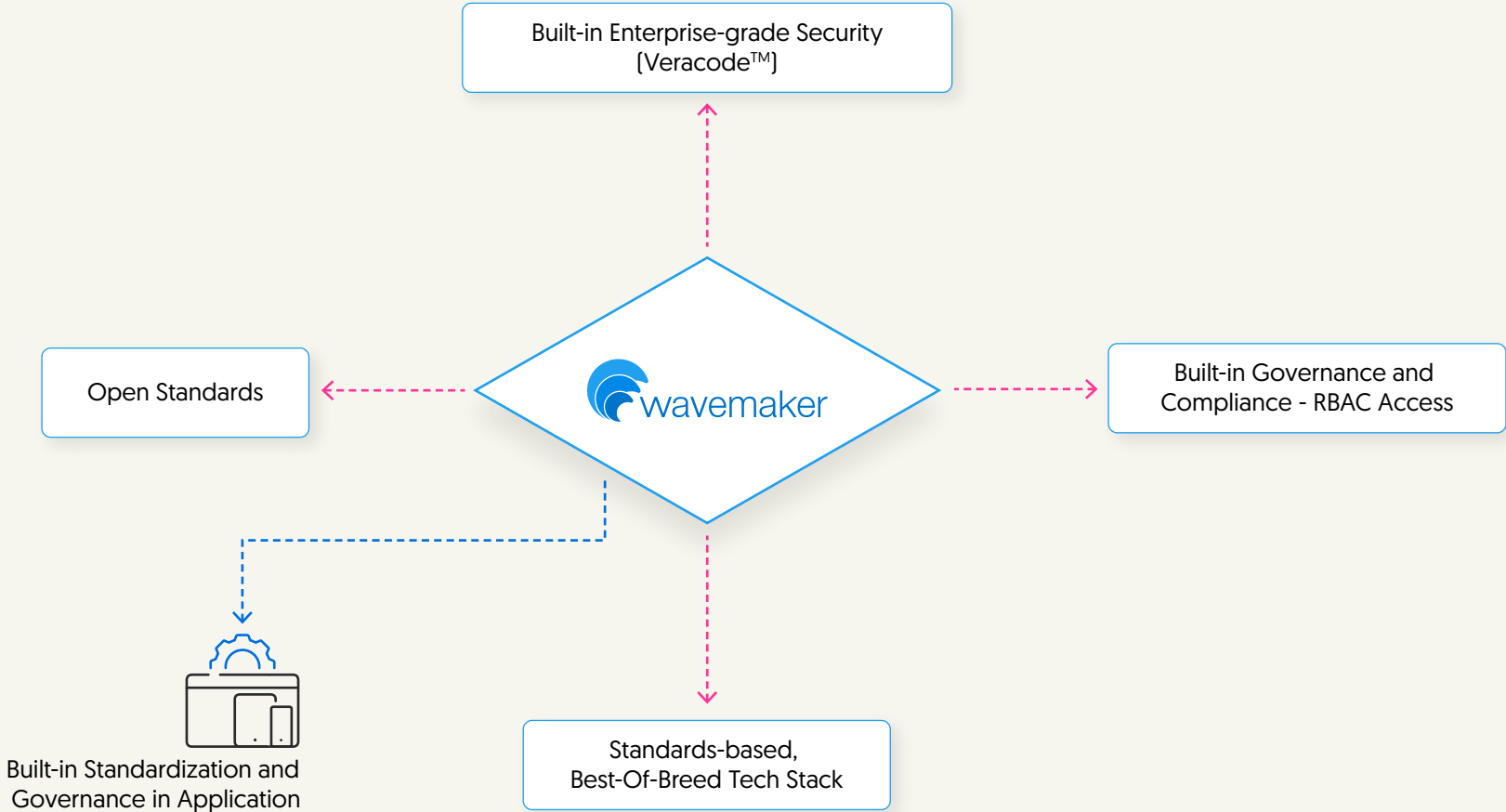
A strategic low-code platform should fit a wide range of applications and use cases and is well suited for wider adoption within the enterprise. Also, the ability to easily integrate with the choice of source control systems, identity management systems, CI/CD mechanisms, artifact repositories, container orchestration, and deployment platforms makes it easier to have a continuous delivery mechanism.

As enterprises mature, several additional needs arise such as scanning for vulnerabilities, code analysis, updating configurations, and adapting to infrastructure-based configuration changes. Low-code platforms that can automate these processes are aligned towards best practices for application development.

Release Management

Version Control System

One Click Deployment

BUILD

TEST

MONITOR

OPERATE

Continuous Integration

Continuous Deployment

CODE

PLAN

RELEASE

DEPLOY

Profile Management

Security Settings Automated

Google Cloud | Azure | WM Ware

Standardization and governance
with low-code development

An excellent low-code platform will have built-in standardization and governance rules like the use of open standards, Veracode™-like certification, use of open source technologies, and adherence to regulations. Applications that are crafted on WaveMaker have inbuilt governance and standardization.

Built-in Enterprise-grade Security (Veracode™)

Open Standards

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Built-in Governance and Compliance - RBAC Access

Built-in Standardization and Governance in Application

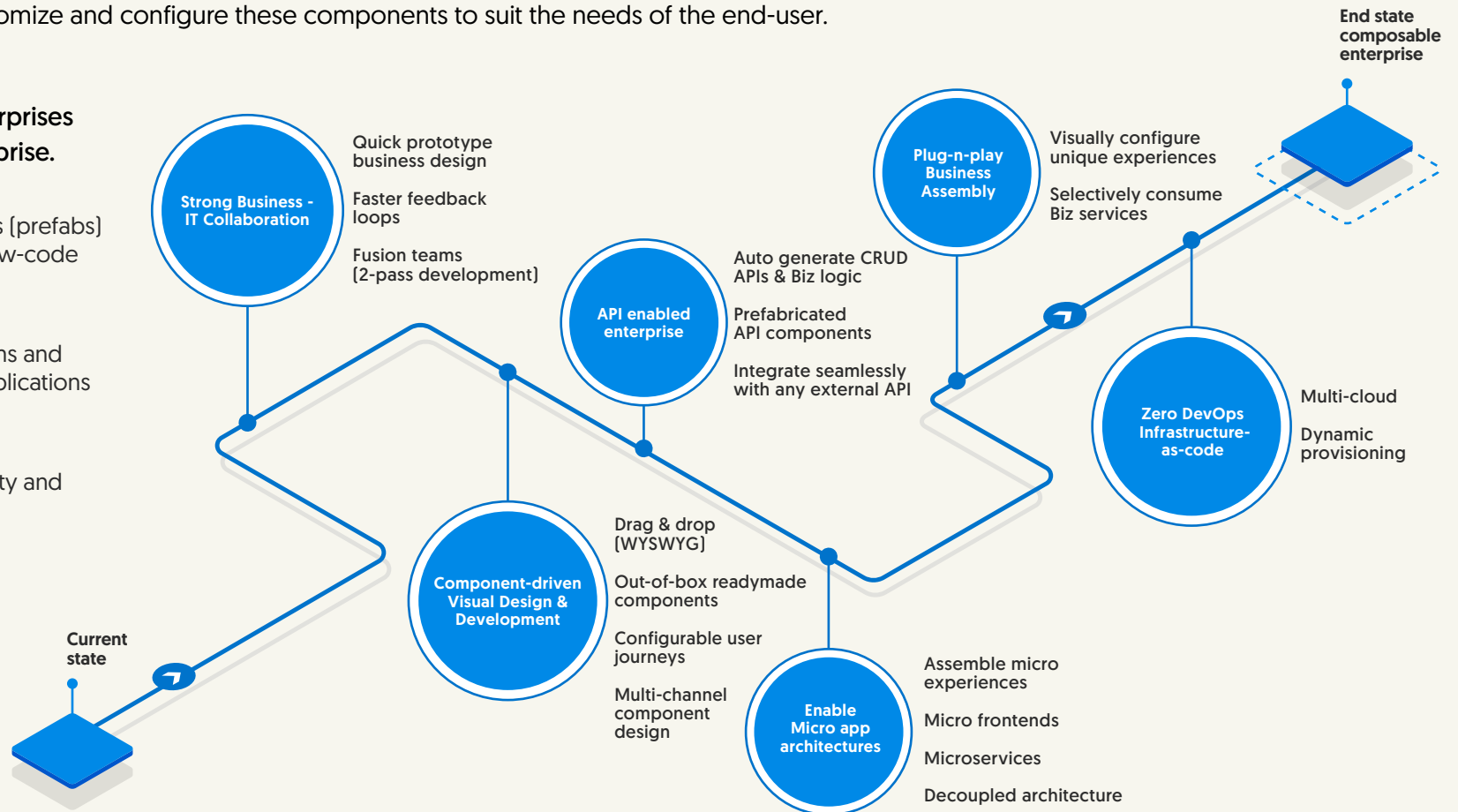Standards-based, Best-Of-Breed Tech Stack

Plug-and-play reusable composable
experiences for modern digital channels

Low-code platforms that allow developers to create functional software components enable a composable architecture. Components can range from simple UI widgets to fully functional API-integrated widgets that cover basic functionality. A low-code platform allows developers to build abstractions over internal as well as external APIs and allow users to just plug and play an entire micro app into a web or mobile app with ease. This kind of feature allows a model where professional developers can create a library or repository of core components that can be resued by implementation teams. Implementation teams can consist of business users and IT professionals who can customize and configure these components to suit the needs of the end-user.

Using low-code propels enterprises towards a composable enterprise.

- ☑ Build reusable components (prefabs) and app slices with your low-code platform
- ☑ Allow implementation teams and customers to compose applications using prefabs
- ☑ Enable hyper-customizability and hyper-configuration
- ☑ Create standard themes and templates

End state composable enterprise

Strong Business - IT Collaboration
- Quick prototype business design
- Faster feedback loops
- Fusion teams (2-pass development)

Plug-n-play Business Assembly
- Visually configure unique experiences
- Selectively consume Biz services

API enabled enterprise
- Auto generate CRUD APIs & Biz logic
- Prefabricated API components
- Integrate seamlessly with any external API

Zero DevOps Infrastructure-as-code
- Multi-cloud
- Dynamic provisioning

Current state

Component-driven Visual Design & Development
- Drag & drop (WYSWYG)
- Out-of-box readymade components
- Configurable user journeys
- Multi-channel component design

Enable Micro app architectures
- Assemble micro experiences
- Micro frontends
- Microservices
- Decoupled architecture

Summary

Adoption of low-code as a development platform of choice for enterprises is a strategy that is not just limited to speed. Low-code consolidates the collaboration between business and IT. With quick prototyping, businesses can feel the market pulse and innovate faster. 2-pass development (fusion teams) consisting of core development teams and implementation teams allow the creation of a marketplace of components that can be customized and configured per client. Component-driven development is fueled by out-of-the-box readymade components which help in creating configurable user journeys that are device and channel-agnostic. A decoupled microservices-based architecture allows for scalability while prefabricated API components help in providing an abstraction layer over integrable services. With one-click deployment to a cloud of your choice and literally zero DevOps, low-code provides the ability to provision infrastructure in the form of code. A winning strategy in choosing the right low-code platform for enterprises consists of checks as to whether the above features are in place. An innovative enterprise will make the smart choice of choosing a low-code platform that caters to all these and more.

To know more about our solutions for enterprises visit us at:
https://www.wavemaker.com/enterprise/

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