TECHNOVERT

The evolution of **Low code AI & ML** for accelerated delivery

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Executive summary

Organizations utilize low code development platforms (LCDP) to make business operations more efficient. Using low code AI & ML, automation technology enables users to design and deploy applications faster and at lower costs. Organizations can thus develop automated workflows that makes their employees' work better and get more productive. Accelerated app development, reduced legacy system related risks, improved time-to-value and increased productivity are among the advantages of low code AI & ML integration.

In today's age, business process agility is the end goal of organizations looking to transform their systems and infrastructure. With increased focus on deploying modern applications, many are taking advantage of low code platforms for accelerated delivery. However, implementing digital initiatives come with certain challenges to design, build and manage new apps, systems, processes, and integrations effectively. This paper examines key issues faced by organizations looking to build modern apps, and how agile low code development has become a saving grace to expert coders and citizen developers alike. The paper focuses primarily on how low code AI & ML is bringing new frontiers to industries through modernization.

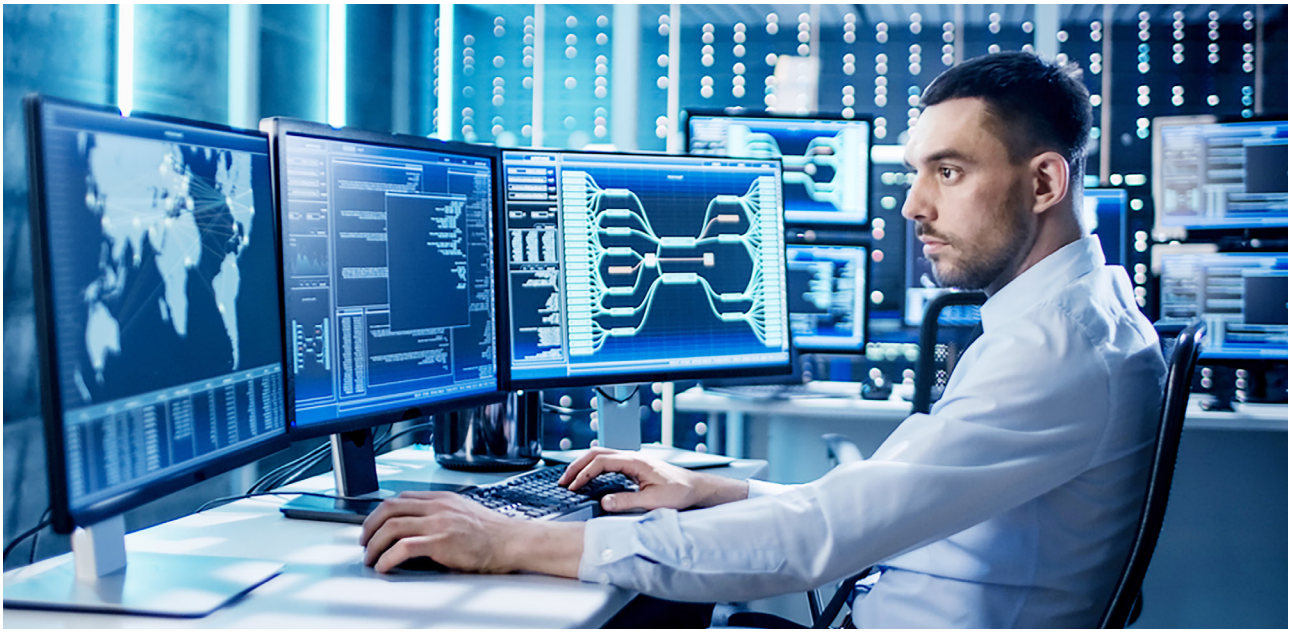
Evolution of the software industry with data science

Low code/no code development is responsible for accelerating the pace of innovation and the reducing overheads for organizations and individuals looking to release a new digital solution or reengineer existing system architecture.

Software development has changed significantly in the last decade, in 3 major ways –

1. **Embedded:** Software makes overall changes to an IT infrastructure by reinventing traditional industries like financial services using advanced ML integration for analytics. Successful businesses like Peloton, Tesla, Amazon and Salesforce are examples of how intuitive AI & ML integration is at the core of business software that influences customer experiences.
2. **Velocity:** At incredible speed, software capabilities are constantly being introduced, refined, and recalibrated to accelerate innovation unlike ever before. Instead of waiting for months or years to release a new version of your business app, you can drop a full-fledged product or new features to the market in just days using agile development methods.
3. **Cost:** Costs surrounding software development have reduced significantly, as the availability more software developer support in the market shrunk marginal costs of code rapidly. Supported by cloud innovation, new software can be deployed in minutes from any corner of the globe.

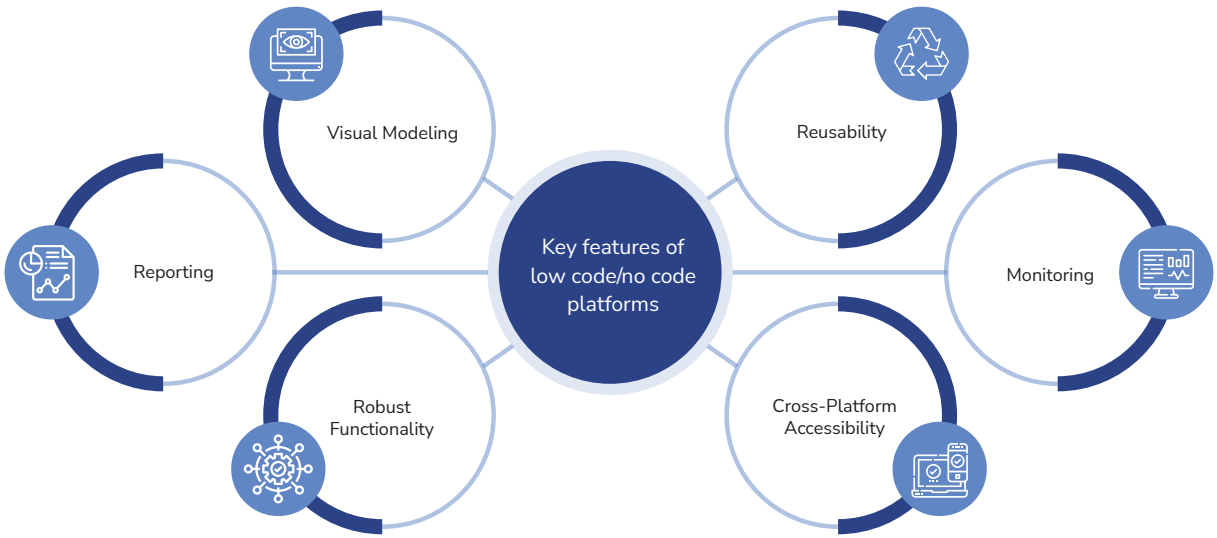
> "Low code application platforms (LCAP) are anticipated to be the largest component of low code technology through 2022, with a hike by 30% from 2020 to reach $5.8 billion in 2021."
>
> **- Gartner forecast**



Mission critical challenges tackled by low code AI

Advanced feature rich applications often rely on AI & ML integration. Using low code platforms, developers can easily benefit from pre-built code and simple interfaces to integrate the latest AI & ML algorithms. The robust development environment being minimal, or no code helps organizations build complex apps faster and in a simpler way. Especially for historical data analysis and predictive AI at the core, applications need to be fine tuned with clean code algorithms and user-friendly controls. Additionally, the increased access to functional data opens new doors in the field of low code app development with enhanced ways of processing and applying data for evolution.

Key features of low code/no code platforms



Low code AI & ML offers immense flexibility and ease, with access to a vast library of resources requiring zero or minimal coding experience to develop highly functional apps. In fact, most low code/no code platforms like Outsystems, Servicenow and Appian rely on simple app builders for even the most complex product development use cases.

By cutting down on costs and development time-to-value, companies adopt low code app development to address an array of challenges, like:

1. Changing business requirements

The rapid scaling up of enterprise IT requires a consolidated approach to design and deploy apps and processes faster. Low code is a viable solution to catch up with rising business demands in line with digital adoption.

2. Lack of specialist skills

As various enterprise functions require diverse set of tools to carry out effective work, low code agile development maximizes the utility of non-technical human resources with a comprehensive platform to develop business-critical applications.

3. Support for existing applications

Profitable continuity being dependent on transforming legacy processes requires supportive technologies to improve existing systems. Low code is widely used to build supporting frameworks for existing applications, thereby reducing the costs incurred during transformation.

4. Legacy integration

The top priority for digital business agility is to replace or integrate legacy systems with newer technologies that streamline various functions. In this case, low code platforms offer resources that create a smarter shift or complementary workflow for legacy integration.

5. Staff shortages

Less workforce specialized in app development, calls for increased technology awareness among existing employees. Low code AI & ML helps automate key operations, requiring minimal human intervention. LCDP allows anybody with basic computer knowledge to develop apps, while being sensitive to the learning path of inexperienced citizen developers.

6. Management commitment

Lack of awareness among management teams about the latest digital tools, results in less commitment to, and delay in transformation initiatives. To avoid unnecessary costs and delays, low code AI & ML streamlines the development process and gathers quicker results for digital products, by creating awareness of a new gen solutioning.

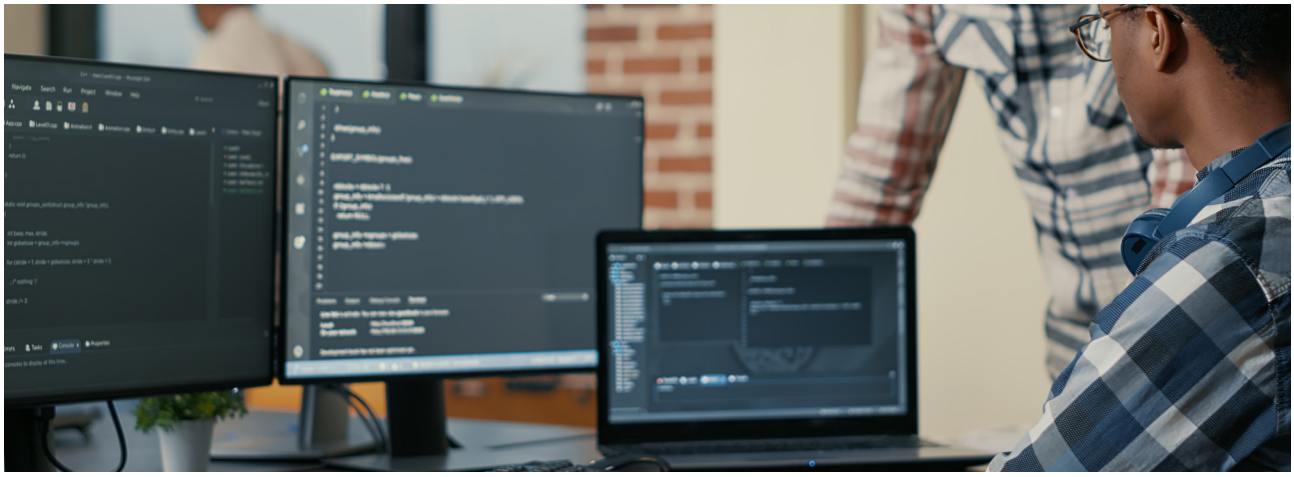
7. Inefficient processes

Outdated systems and inefficient processes require a complete makeover, in which case low code AI & ML presents an affordable, quick, and scalable solution to improve process efficiency and workflow.

8. Migrating to other platforms

In many cases, a lot of data and digital assets are lost or made redundant while porting to other platforms. That's where low code apps can be developed and deployed to ensure effortless, continuous, and secure methods of migration or porting to other platforms.

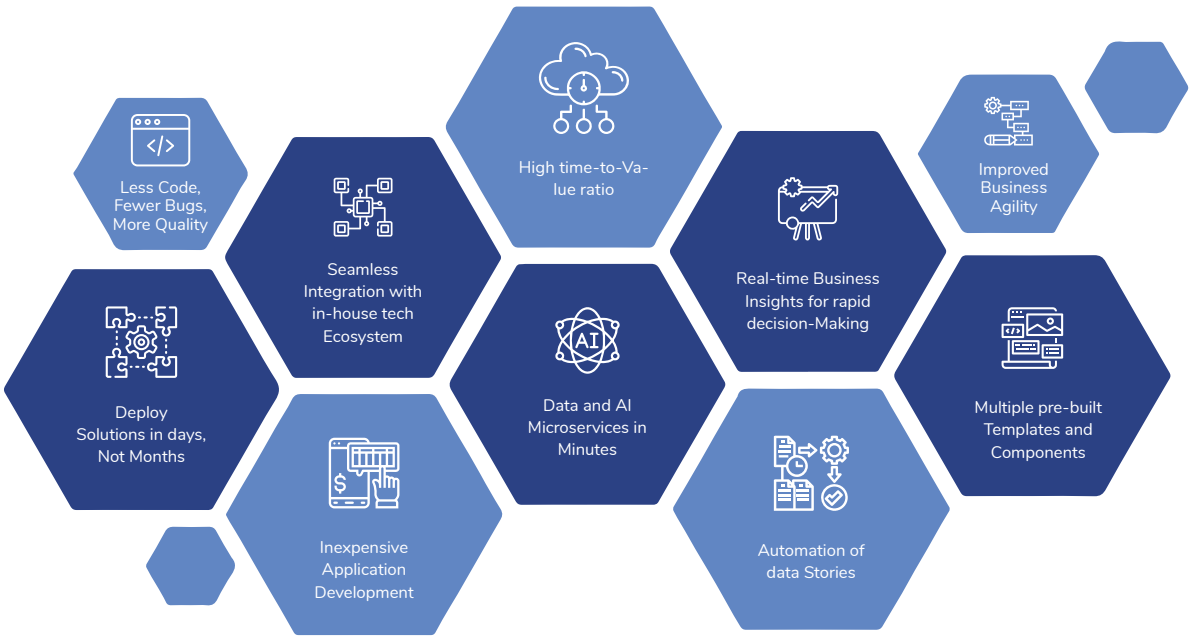
What is agile low code development?



Agile development is a method of enhancing developer productivity by adopting efficient platforms and techniques for app development, like the adoption of low code/no code solutions. Agile development aims to maximize the benefits of digital transformation by involving the wider organization and its business functions. Fundamentally, by saving time in development and empowering less experienced developers with the flexibility and ease of low code development platforms, businesses become more agile.

Low code solutions provide an agile environment for organizations to create new apps that improve work processes, quicker and easier than ever before.

10 reasons why enterprises need low code platform



Citizen development to drive growth

By leveraging the latest digital technologies, organizations can align existing systems and working practices to the modern requirements of highly scalable IT. Time consuming and complex work is simplified and automated using low code AI & ML, empowering the workforce with intuitive tools for digital acceleration. Since apps play a key role in digital transformation, agile development helps reverse the complexities of modernization for enterprise initiatives. Digital technologies are applied and exploited through applications. Thus, the highly competitive standards of digital transformation are continually evolving with newer technologies being introduced by various business entities.

Using low code AI & ML, extracting business intelligence and data analytics is far more simplified. Agile development paired with AI & ML adoption brings a fresh perspective for citizen development.

Citizen development is a dynamic and business-centric method of software creation that takes advantage of knowledge workers, who otherwise have no formal coding experience.

Citizen development is a business process that empowers non-IT-trained employees to try their hand at software development, leveraging low code/no code (LCNC) platforms to build apps. This type of software development, despite the lack of formal experience in coding, enables employees to become citizen developers – cutting costs and making good time in development for the organization. development, leveraging low code/no code (LCNC) platforms to build business apps. This type of software development, despite the lack of formal experience in coding, enables employees to become citizen developers – cutting costs and making good time in development for the organization.

The rise of low code for accelerated delivery

The essence of low code AI & ML is to create a new class of software 'assemblers,' rather than the traditional developers. A citizen developer essentially creates new software and enterprise capabilities with minimum or zero technical coding experience, thereby speeding up enterprise transformation.

So why is the prominence of low code AI & ML integration a huge win for enterprise IT? It has to do with abstraction, which means that the movement of low-level code at any stage can be utilized, assembled, and implemented without having to work on the code from scratch. Such abstraction and availability of resources makes AI & ML integration as easy as building with LEGO blocks. This discovers new opportunities for growth and introduces new capabilities for sustainable digital transformation.

Some relatable use cases of low code AI & ML integration are when,

- A user, not software developer, creates new screens with custom fields without writing code on Salesforce that improves lead qualification.
- A customer service manager adds a new priority of service tickets classified as "critical" without having to write a single line of code.
- HR professionals create new apps for employee onboarding with automated notifications and alerts without writing code.
- Marketers create links within existing databases tagged as "follow up" to create a new segment of customers to nurture with products, messages, and services.

The use cases for AI & ML integration are infinite, depending on the enterprise needs and the architectural layout

Low code tech for AI & ML integration

The important trend that low code brings to enterprise IT is the massive contribution to product development and inhouse innovation capacities of organizations. The low code/no code era creates a new paradigm for data science principles to become more prevalent in enterprise infrastructures.

Integral to a consolidated cloud computing and big data environment is the availability of low code “assembler” platforms to speed up product development and deployment.

Some popular technologies driving low code AI & ML integration are:

AWS SageMaker: A cloud machine-learning platform, launched in November 2017, SageMaker enables developers to create, train, and deploy machine-learning (ML) models in the cloud. SageMaker also enables developers to deploy ML models on embedded systems and edge-devices easily.

Azure ML Studio: The drag-and-drop workflow capability in Azure Machine Learning studio simplifies and accelerates the process of building, testing, and deploying machine learning models for data science teams, from beginners to professionals.

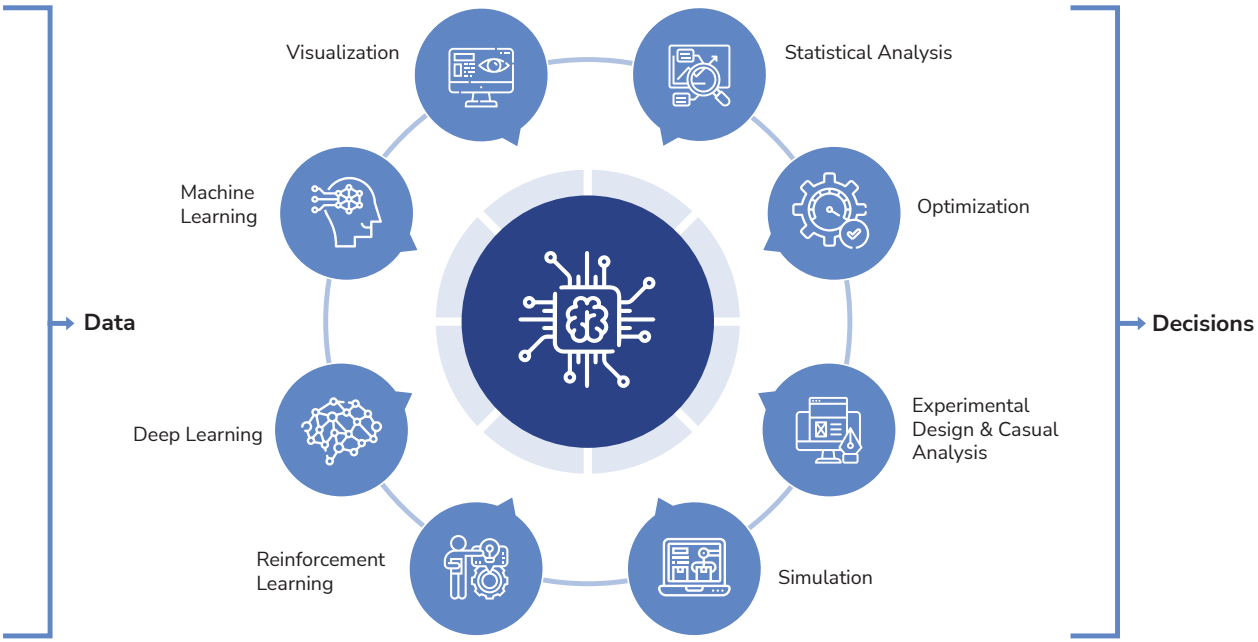
H2O.ai: An open-source big data analysis tool that provides an analytical interface for cloud computing, providing users with statistical tools that were previously only available to large organizations with more resources.

Exploiting growth opportunities with low code development

As is the case, data drives modern organizations with crucial insights and valuable intelligence. Refining the properties of system architecture with the latest advancements in data science introduces a new wave of transformation, leading to widespread AI & ML adoption to achieve desired outcomes.

Let's take the case of a clean energy initiative, typically with multiple investors, numerous sources of data and various stakeholders to consider. In the event of finding new investors, the process should track every financial record, outflow, and inflow of capital to produce result-driven strategies the beneficiary can use. The software should also be able to dedicate financial records to cost-analyzing the project requirements based on resource availability and other factors like debt, equity, and corporate action.

How AI & ML facilitates data-driven decision making



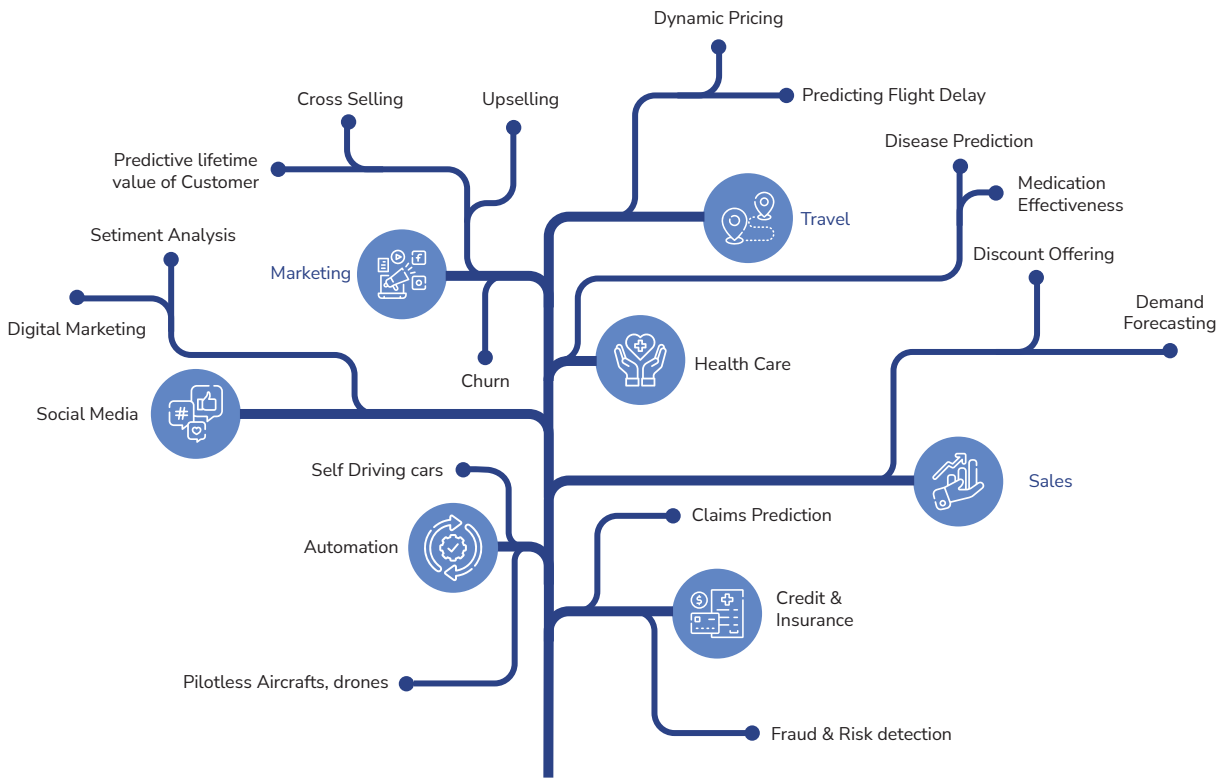
Using AI & ML integration, the overall process can be supported with applications that constantly analyze large sums of data from multiple sources to identify opportunities for funding and project management. The complexities of the various historical data regarding investors can be simplified using automated commands that create a feedback mechanism to collect, analyze

and execute data-driven outcomes depending on real-time data from multiple sources and recorded investment activities. Selectively analyzing the data helps an organization collectively target high quality acquisitions in critical situations. Thus, clean energy companies can identify higher possibilities for closure before approaching or inviting investors to an event. The same example applies to identifying a new product for an insurance conglomerate or studying user behavior on an eCommerce platform.

In the example of a clean energy company, if the beneficiary wants to identify “banks” looking to invest in clean energy, the historical data collected over the previous funding rounds and historical transactions can identify the ideal banks to notify, or approach. This one way that AI & ML can improve processes and simplify complex situations for organizations to make better decisions. Using low code AI, developers can fabricate an array of AI & ML driven processes using minimal resources.

The use of low code platforms to deliver cutting-edge solutions are a more holistic approach to development that saves time and energy in building suitable applications. As the low code technology advances, more refined and exploitable chances of implementing digital initiatives emerge.

Uses of AI & ML integration for process efficiency



Abstraction has extended its use cases to a plethora of new and existing tools, as well as platforms. Citizen development helps organizations employ existing resources to provide business-critical solutions cost-effectively and quickly. Today, implementing creative solutions using software has become much easier, opening doors to a new age of accessibility and innovation. The fundamental notion of low code AI & ML is to aid in the evolution of software development by making technical resources readily avialable as interactive and intuitive interfaces.

As more organizations are looking to strategize their digital transformation journey with low code solutions, there is an urgency to rapidly claim their stake through innovative measures. End-to-end low code solutions and citizen development initiatives for accelerated delivery are winning over industries with efficient and cost-effective results as we enter 2022.

Are you positioned to capitalize on digital acceleration with low code AI? If so, we can strategize and implement end-to-end support for all your digital initiatives.