

Next-Gen ADM Solutions

Low-Code/No-Code Development Platforms

A research report comparing vendor strengths, challenges and competitive differentiators

Customized report courtesy of:



Executive Summary	03	Low-Code/No-Code Development Platforms	11 – 17
Provider Positioning	05	Who Should Read This Section	12
Introduction		Quadrant	13
Definition	08	Definition & Eligibility Criteria	14
Scope of Report	09	Observations	15
Provider Classifications	10	Provider Profile	17
Appendix			
Methodology & Team	19		
Author & Editor Biographies	20		
About Our Company & Research	22		

Report Author: Akhila Harinarayan

Adoption increases for low-code/no-code development platforms and AI across various use cases

About two-thirds of the application development paradigm is expected to be associated with low-code/no-code (LCNC) development platforms. These platforms are not restricted to internal development purposes by enterprise users; service providers also use them for application development within their firms and clients. Professional developers at enterprises and service providers utilize LCNC platforms for application development that may not require efforts to develop applications from scratch. Integrating these platforms for add-on app development services has allowed users to deliver applications at a reduced time to market. The ease of use of these platforms has also allowed an exponential increase of citizen developers with minimal coding knowledge to build apps using simple drag-and-drop techniques. The ease, time

to market and flexibility in integrating the platforms with existing applications has led to the democratization of the application development domain.

Depending upon the complexity, the time taken to develop an application varies. A basic application with limited functionality and straightforward requirements can be developed and deployed within a few hours or minutes. This could include small utility apps or PoC prototypes that can automatically evolve into more sophisticated versions. Some more complex applications involving business process improvements include developing and deploying applications for specific business processes, such as inventory management or order processing, and this may take a few days to a couple of weeks. These applications typically involve moderate complexity and integrations with existing systems. Much more complex applications, such as e-commerce platforms or customer service portals designed to enhance customer journeys, can take several weeks to months for development and deployment. These applications often require complex workflows, integrations with multiple

AI has driven the LCNC adoption, enabling users to utilize prebuilt use cases readily.



systems and user interface customization. The IT teams handle the data integrity and security aspects to ensure the users access the right data set for building these applications. Improving processes and data are interlinked within an organization. Some LCNC platforms allow building apps that drive agility and alignment across the organizations.

AI has primarily driven LCNC platform adoption. AI makes it easier for developers to utilize prebuilt frameworks and code blocks. Some vendors offer easily customizable, prebuilt components, templates and prompts for developing desired applications. ISG sees this trend increasing with vendors developing AI-based platforms, enabling easier application building. Some LCNC testing platforms use AI to build knowledge maps across the IT landscape for multiple use cases, including application management. There is also increased integration with generative AI (especially ChatGPT) to support NLP-driven assisted development across various facets, from planning to code generation to quality assurance. The ease of building applications using AI-based services and platforms has

driven an exponential increase of users developing applications using AI or AI-based ready templates. This trend is expected to grow multifold across multiple use cases.


Data integration has been an important area of concern while developing applications through LCNC platforms. With multiple users in an organization accessing organizational data for building applications, it becomes imperative for firms to have a data management strategy. The LCNC development platforms allow the implementation of these accesses while configuring the development platform for the end user. Typically, the IT team within the enterprise gatekeeps these access controls to data, allowing specific data on which the citizen or professional developer would intend to develop an application. With data being one of the major aspects, the ability to join multiple legacy systems through a virtualized data layer will be crucial in creating the functionality that users need to develop the applications using the platform. LCNC platforms build access controls interwoven with this data fabric to allow data management across the firm with multiple users using the same development platform.

Multiple use cases have emerged over the last year for LCNC development platforms. Developing applications, monitoring and management across various use cases have been most adopted by enterprises and service providers. Process optimization has also undergone LCNC platform adoption, with some apps integrated with the existing automation initiatives to deliver process improvements. Improving customer journeys and building automated reporting tools are other use cases widely adopted for LCNC development platforms. Using AI and analytics to enhance platform adoption is an area that is expanding. With the built-in analytics engine, users can also utilize features such as conversational analytics, automated insights, smart interpretations and predictive analytics that directly feed into improving the use cases across the enterprise.

With flexible infrastructure and ease of deploying the platforms, there is an evolution in IT models within organizations to democratize software adoption and development at scale. Many organizations are testing central IT functions with federated local champions to support the changes reflected in the industry.

Enterprises are increasingly adopting the LCNC approach to rapidly deploy services themselves or through their partners, enabling services to their clientele.




 Provider Positioning

Page 1 of 3

	Low-Code/No-Code Development Platforms
Airtable	Leader
Appian	Leader
AuraQuantic	Market Challenger
Betty Blocks	Product Challenger
BizHub	Contender
Caspio	Contender
Claris	Contender
GeneXus (Globant)	Rising Star ★
Kintone	Product Challenger
Kissflow	Rising Star ★



 Provider Positioning

	Low-Code/No-Code Development Platforms
Mendix	Leader
Microsoft	Leader
Nintex	Contender
Oracle	Market Challenger
OutSystems	Leader
Pega	Leader
Quixy	Contender
Salesforce	Leader
SAP	Market Challenger
ServiceNow	Leader





**Low-Code/No-Code
Development Platforms**

Simplicité	Contender
UiPath	Leader
Wavemaker	Product Challenger
Zoho	Leader



Next-Gen ADM Solutions 2023

focuses on **low-code/no-code application development** for citizen or professional developers.

Simplified Illustration; Source: ISG 2023

Low-Code/No-Code Development Platforms

Definition

Over the years, there have been many advancements in application development, from building basic services for enterprises to delivering applications using digital technologies. Optimizing processes and costs has been a constant focus for enterprises and have been embedded in building and delivering applications. However, in the past three to five years, the focus has shifted toward low-code and no-code development platforms, helping users to configure the applications required for specific business needs. These platforms are built to be user-friendly, enabling even a user without a software development background to configure and develop applications. They also allow drag-and-drop configuration requiring minimal to zero coding expertise. As a result, over the last two to three years, the user base and adoption of these platforms have increased multifold. In this study, ISG assesses the platform vendors in the application

development segment that provide low-code/no-code capabilities to make the independent development of applications simpler for clients with minimal interference from developers. The two primary benefits of these platforms are business agility and implementation simplicity. The secondary benefits are the innate ability to work with legacy IT infrastructure and decreased development, testing and maintenance costs. ISG assesses the vendors across multiple industries and functional areas, such as process engineering, business intelligence, product development, research and development. The increase in low-code/no-code platform adoption indicates the changing nature of application development approaches. It reflects the emphasis on reducing the time professional or citizen developers require to optimize operations at lower costs.



Scope of the Report

This ISG Provider Lens™ quadrant report covers the following one quadrant for solutions: Low-Code/No-Code Development Platforms.

This ISG Provider Lens™ study offers IT decision-makers:

- Transparency on the strengths and weaknesses of relevant providers/software vendors
- A differentiated positioning of providers by segments (quadrants)
- Focus on the regional market

Our study serves as the basis for important decision-making by covering providers' positioning, key relationships and go-to-market considerations. ISG advisors and enterprise clients also use information from these reports to evaluate their existing vendor relationships and potential engagements.

Provider Classifications

The provider position reflects the suitability of IT providers for a defined market segment (quadrant). Without further additions, the position always applies to all company sizes classes and industries. In case the IT service requirements from enterprise customers differ and the spectrum of IT providers operating in the local market is sufficiently wide, a further differentiation of the IT providers by performance is made according to the target group for products and services. In doing so, ISG either considers the industry requirements or the number of employees, as well as the corporate structures of customers and positions IT providers according to their focus area. As a result, ISG differentiates them, if necessary, into two client target groups that are defined as follows:

- **Midmarket:** Companies with 100 to 4,999 employees or revenues between \$20 million and \$999 million with central headquarters in the respective country, usually privately owned.

- **Large Accounts:** Multinational companies with more than 5,000 employees or revenue above \$1 billion, with activities worldwide and globally distributed decision-making structures.

The ISG Provider Lens™ quadrants are created using an evaluation matrix containing four segments (Leader, Product Challenger, Market Challenger and Contender), and the providers are positioned accordingly. Each ISG Provider Lens™ quadrant may include service providers that ISG believes have strong potential to move into the Leader quadrant. This type of provider can be classified as a Rising Star.

- **Number of providers in each quadrant:** ISG rates and positions the most relevant providers according to the scope of the report for each quadrant and limits the maximum of providers per quadrant to 25 (exceptions are possible).





Provider Classifications: Quadrant Key

Product Challengers offer a product and service portfolio that reflect excellent service and technology stacks. These providers and vendors deliver an unmatched broad and deep range of capabilities. They show evidence of investing to enhance their market presence and competitive strengths.

Contenders offer services and products meeting the evaluation criteria that qualifies them to be included in the IPL quadrant. These promising service providers or vendors show evidence of rapidly investing in products/ services and a follow sensible market approach with a goal of becoming a Product or Market Challenger within 12 to 18 months.

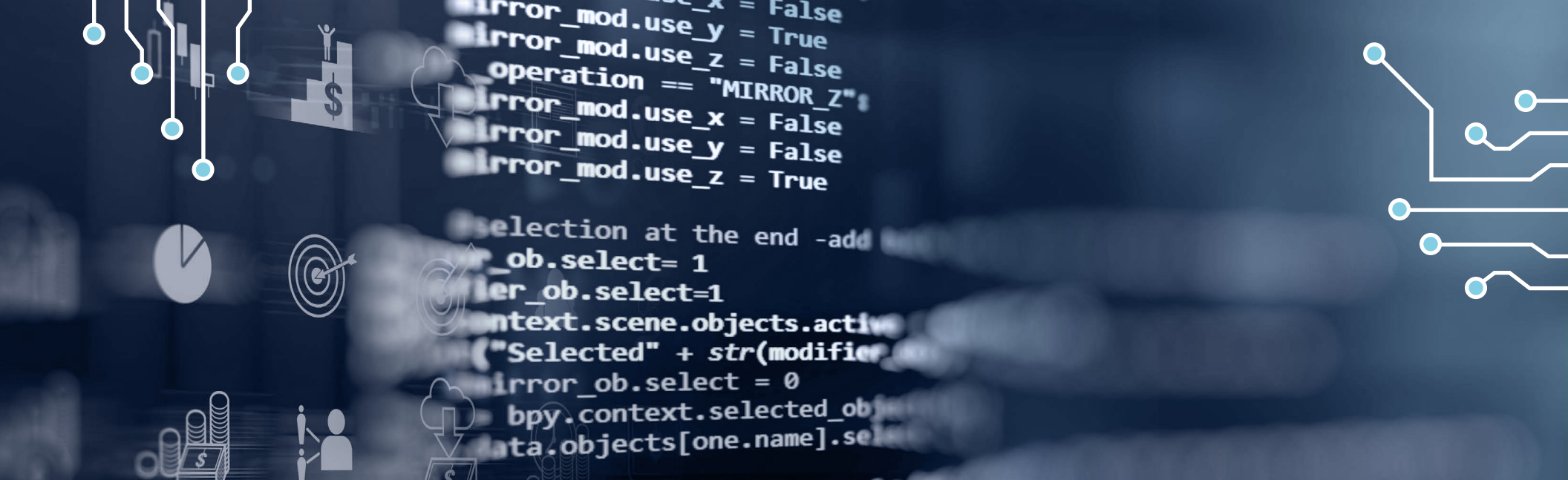
Leaders have a comprehensive product and service offering, a strong market presence and established competitive position. The product portfolios and competitive strategies of Leaders are strongly positioned to win business in the markets covered by the study. The Leaders also represent innovative strength and competitive stability.

Market Challengers have a strong presence in the market and offer a significant edge over other vendors and providers based on competitive strength. Often, Market Challengers are the established and well-known vendors in the regions or vertical markets covered in the study.

★ **Rising Stars** have promising portfolios or the market experience to become a Leader, including the required roadmap and adequate focus on key market trends and customer requirements. Rising Stars also have excellent management and understanding of the local market in the studied region. These vendors and service providers give evidence of significant progress toward their goals in the last 12 months. ISG expects Rising Stars to reach the Leader quadrant within the next 12 to 24 months if they continue their delivery of above-average market impact and strength of innovation.

Not in means the service provider or vendor was not included in this quadrant. Among the possible reasons for this designation: ISG could not obtain enough information to position the company; the company does not provide the relevant service or solution as defined for each quadrant of a study; or the company did not meet the eligibility criteria for the study quadrant. Omission from the quadrant does not imply that the service provider or vendor does not offer or plan to offer this service or solution.





Low-Code/No-Code Development Platforms

Low-Code/No-Code Development Platforms

Who Should Read This Section

This report is relevant to enterprises across industries for evaluating vendors offering low-code/no-code (LC/NC) platforms and how they address the key challenges faced by enterprise clients today.

Enterprises are increasingly adopting low-code/no-code platforms due to several compelling reasons. These platforms empower organizations to accelerate application development and deployment processes by enabling users with varying technical backgrounds, including citizen developers, to create applications without extensive coding knowledge. This democratization of app development fosters greater agility, as business users can directly contribute to solutions tailored to their needs. This approach also reduces the reliance on specialized IT teams, expediting the development cycle.

Furthermore, low-code/no-code platforms address the challenge of technical debt and silos, allowing seamless integration of various enterprise applications. The prebuilt components, templates and prompts available in these platforms simplify development

tasks, saving time and effort. Enterprises also benefit from cost savings, as low-code/no-code platforms often have lower total ownership cost than traditional development methods. The ease of integration, reusable building blocks and visual development environment contribute to increased productivity and quicker time-to-market.

Adopting low-code/no-code platforms aligns with enterprise goals of streamlining processes, enhancing collaboration between IT and business teams, reducing development costs and accelerating innovation to meet the demands of the rapidly evolving digital landscape.



IT leaders should read this report to assess LC/NC vendors' strengths and weaknesses, and learn about how integrating LC/NC capabilities into existing IT infrastructure can enhance competitiveness.



Line-of-business and industry leaders should read this report to understand LC/NC vendor positions and how LC/NC can aid in reducing silos and enhancing visibility, automation and business value.

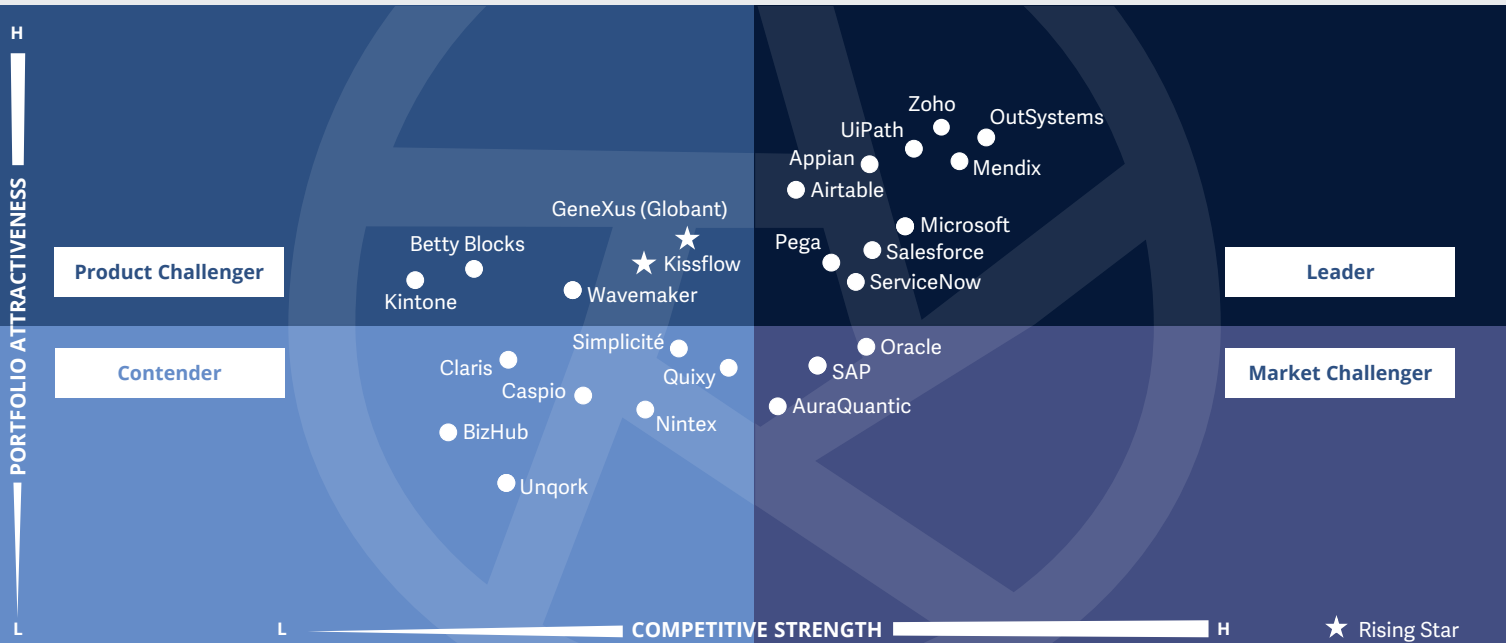


Business process leaders and mid-level managers should read this report to understand the LC/NC benefits, including how it reduces dependence on IT.



**Next-Gen ADM Solutions
Low-Code/No-Code Development Platforms**

Global 2023



The Low-Code/No-Code Development Platforms quadrant assesses global software vendors across the industry that **offer application development platforms with drag-and-drop functionalities** in the interfaces to build functional modules.

Akhila Harinarayan



Low-Code/No-Code Development Platforms

Definition

The Low-Code/No-Code Development Platforms quadrant assesses global software vendors across the industry. These vendors offer application development platforms that use interfaces with drag-and-drop functionalities to build functional modules and work as full-fledged applications, providing benefits and tangible business impact for the users.

Low-code vendors offer development platforms that require considerably less coding than full-stack development. Professional developers are the primary targets, with the underlying proposition of faster application development, deployment and provisioning. The low-code platform vendors also offer guidance and training for professional developers to provision, develop and deploy full-stack or small-scale applications and manage the application services.

No-code vendors offer development platforms that configure applications based on business logic and prebuilt drag-and-drop options. Citizen developers are the primary targets.

The underlying proposition is simplicity of use and the innate ability to provision applications without coding knowledge. Some vendors offer a complete solution suite that includes both low-code and no-code offerings.

Vendors offer platforms that support on-premises or cloud-based applications, including using visual models to determine application and process logic. The availability of an app store with widgets, templates, plug-ins and APIs provides the flexibility to add new functionalities to the existing application. Vendors are assessed on the support provided for the application delivery lifecycle, including built-in testing and auto-scaling capabilities to support business growth.

Eligibility Criteria

1. **Number, usability and customization** of drag-and-drop options
2. **Ease of use** of interface and integrated development environment
3. **Integration** with third-party applications
4. Hosting options, **architecture, app security** and scalability
5. **Price options** (enterprise, business, individual and others), ROI calculation support, low exit cost and price competitiveness
6. Training modules and overall quality of the **training program**
7. Market presence in terms of the number of **live users and client implementations**, partnerships, brand awareness, geographic reach and financial growth
8. The versatility of the platform to cater to business users that strive for **no-code, logic-based applications** and to coders that aim to develop complex applications by writing a short piece of code



Low-Code/No-Code Development Platforms

Observations

With many enterprises setting up global delivery centers, the amount of users using low-code/no-code development platforms is increasing tremendously. Professional and citizen developers across the globe within enterprises are exploring, experimenting and implementing the applications they develop for their business units or the broader enterprise. The increase in LCNC development platform adoption in this segment has also driven the innovation and addition of new features by the LCNC vendors. Most vendors are focusing on using AI and generative AI to enable them to provide additional features in the platform that will help users to go to market in less time and realize benefits quickly. Some platforms, such as Airtable, consolidate and connect with core systems of record and SaaS tools and enable connected apps to be built on top of shared data, all on a single platform. The LCNC platform vendors are facilitating these kinds of integrated application building.

Financial services, business services and manufacturing are the top three industries where the LCNC development platform adoption is gaining traction. Certain niche vendors, such as Quixy, focus on the public sector and have gained clients over the last two years. This segment is an interesting space to watch out for the next two to three years, with enterprises and service providers showing similar interest in LCNC platforms to enable them to save time and go to market faster, thereby delivering tangible benefits to their customers and clients.

From the 85 companies assessed for this study, 27 qualified for this quadrant, with 10 being Leaders and two Rising Stars.



Airtable's low-code operations toolkit and interface designers configure applications through drag-and-drop elements using the Airtable Connected Apps Platform™. A pool of 1,000 professionals in the U.S. supports most Airtable customers.

appian

Appian's full-stack low-code platform provides multiple visual models to determine the application and process logic, a web-based integrated development environment (IDE) enabling developers to work in a standard IDE.

Mendix

Mendix has a strong partner network that includes consulting, system integration, cloud and academic partners. Mendix's cloud partners include AWS, SAP, Google Cloud and Azure.

Microsoft

Microsoft announced its next-generation AI Copilot in Microsoft Power Apps to help transform building applications. Large language models can facilitate easy application building by describing what is needed through multiple conversation steps.

OutSystems

OutSystems continuously introduces new features and capabilities to extend its leadership in the market. Some updates include new security and maintainability code patterns in AI Mentor Studio, Azure OpenAI Connector and IT User Authentication for AI Mentor Studio.

Pega

Pega offers automated governance, business and IT collaboration with its low-code platform, supported by its toolkit, including Agile Studio, App Studio, Dev Studio, App Factory and Prediction Studio.

Salesforce

Salesforce offers a low-code DevOps Center service on its infrastructure, providing developers with a platform for building custom applications. The Salesforce DevOps Center service is based on the same object model that Salesforce uses to construct its applications.



Low-Code/No-Code Development Platforms

servicenow

ServiceNow platform offers capabilities to build digital workflow apps using App Engine, including service management, enterprise integration and data tracking. ServiceNow's platform is known for handling asset management data effectively.



UiPath has a profound set of native AI capabilities, including next-best-action recommendations using ML for developers when creating automation, intelligent document processing, AI Computer Vision, NLP or Communications Mining and AI Center for bringing custom ML models.



Zoho Marketplace boasts more than 90 vertical and horizontal-centric applications for popular use cases, 750 prebuilt connectors for third-party integrations and a catalog of over 300 templates serving different form factors like web, mobile and tablet.

GeneXus

GeneXus (Rising Star) has a flexible approach to internal or external data and API integration, supporting major providers in the market. The GeneXus Database Reverse Engineering Tool enables an inverse engineering process of an existing database.



Kissflow (Rising Star) has readily built templates for procurement, finance, HR, admin and operations. The platform also offers workflows that users can select based on their low-code/no-code platform development requirements.





“Zoho has a solid reputation in the low-code/no-code development platform domain and has constantly focused on improving the platform as required by market trends.”

Akhila Harinarayan

Zoho

Overview

Zoho Creator is Zoho’s unified low-code development platform with a visual builder, app store, application development lifecycle management and one-click deployment across the web and mobile devices. Zoho is headquartered in Chennai, India and has more than 2,500 enterprise clients scattered across the globe. In 2022, the company grew by 22 percent; in 2021, Zoho Creator’s license revenue grew by more than 30 percent. Zoho Marketplace boasts more than 90 vertical and horizontal-centric applications for popular use cases, 750 prebuilt connectors for third-party integrations and a catalog of over 300 templates catering to different form factors like web, mobile and tablet.

Strengths

AI-assisted app building: Zoho Creator’s platform has built-in intelligence within the builder to help developers create optimized applications. It includes auto-generating reports with each form, automated naming assistance and design suggestions. The platform also provides intelligent guidance for developers to explore platform capabilities and offer best practices. Zoho offers conversational AI for users to generate complex multilayered dashboards using NLP for analytics.

ChatGPT integration in roadmap:

Zoho has planned an NLP-based AI-assisted development bot on ChatGPT to assist developers in building applications utilizing suggestions, suggested prebuilt components and code generation.

Fully automated mobile app development:

In the Zoho Creator platform, building an app for the web automatically generates iOS and Android versions for mobiles and tablets. The apps can be further customized specific to the device via visual builders. Users can toggle among web, mobile and tablet views to customize and preview applications from within the builder. Hence, creating a mobile app requires minimal additional effort for apps built on Zoho Creator.

Caution

Most of Zoho’s clients are from the small enterprises segment. Zoho could focus on expanding into large enterprise markets as the demand in that segment is increasing due to the increase in the number of global capability centers established across the globe.





Appendix

The ISG Provider Lens 2023 – Next-Gen ADM Solutions study analyzes the relevant software vendors in the global market, based on a multi-phased research and analysis process, and positions these providers based on the ISG Research™ methodology.

Lead Author:

Akhila Harinarayan

Editors:

Radhika Venkatachalam and John Burnell

Research Analyst:

Maharshi Pandya

Data Analyst:

Rajesh MC

Consultant Advisor:

Bill Shoemaker

Project Manager:

Abhishek Rammurthy

Information Services Group Inc. is solely responsible for the content of this report. Unless otherwise cited, all content, including illustrations, research, conclusions, assertions and positions contained in this report were developed by, and are the sole property of Information Services Group Inc.

The research and analysis presented in this report includes research from the ISG Provider Lens™ program, ongoing ISG Research™ programs, interviews with ISG advisors, briefings with services providers and analysis of publicly available market information from multiple sources. The data collected for this report represents information that ISG believes to be current as of July 2023, for providers who actively participated as well as for providers who did not. ISG recognizes that many mergers and acquisitions have taken place since that time, but those changes are not reflected in this report.

All revenue references are in U.S. dollars (\$US) unless noted.

The study was divided into the following steps:

1. Definition of Next-Gen ADM Solutions market
2. Use of questionnaire-based surveys of service providers/ vendor across all trend topics
3. Interactive discussions with service providers/vendors on capabilities & use cases
4. Leverage ISG's internal databases & advisor knowledge & experience (wherever applicable)
5. Use of Star of Excellence CX-Data
6. Detailed analysis & evaluation of services & service documentation based on the facts & figures received from providers & other sources.
7. Use of the following key evaluation criteria:
 - * Strategy & vision
 - * Tech Innovation
 - * Brand awareness and presence in the market
 - * Sales and partner landscape
 - * Breadth and depth of portfolio of services offered
 - * CX and Recommendation



Author & Editor Biographies

Author



Akhila Harinarayan
Lead Analyst

Akhila Harinarayan is a Senior Lead Analyst and the lead author for ISG Provider Lens studies with a focus on Digital Business Transformation and SAP Services. She has more than 12 years of experience across research and consulting, including provider strategy, enterprise strategy, industry roadmaps, point-of-view papers and service provider assessments across regions. She has strong expertise in strategy and transformation, digital insights, thought leadership, benchmarking, market assessments and go-to-market strategies.

She has authored many thought leadership papers and digital insight studies, devised go-to-market strategies across products, industries and regions, and built frameworks and maturity models across industries for enterprises, vendors and service providers.

Research Analyst



Maharshi Pandya
Research Specialist

Maharshi Pandya is a research specialist at ISG and is responsible for supporting and co-authoring ISG Provider Lens™ studies on Next-Gen ADM Solutions & Services, SAP HANA Ecosystem and Analytics Services and Solutions. He supports the lead analysts in the research process and authors the global summary report.

Maharshi also develops content from an enterprise perspective and collaborates with advisors and enterprise clients on ad-hoc research assignments. Prior to this role, he has been associated with several syndicated and custom market research firms, in which he worked on both secondary and primary interaction-centric research projects around

market sizing and forecasting, competitive benchmarking, pricing analysis, vendor profiles and market share analysis for several industry verticals such as information and communication technology, media and information services, and automotive. His area of expertise includes analytics, application development and maintenance, and enterprise resource planning.





IPL Product Owner

Jan Erik Aase
Partner and Global Head – ISG Provider Lens™

Mr. Aase brings extensive experience in the implementation and research of service integration and management of both IT and business processes. With over 35 years of experience, he is highly skilled at analyzing vendor governance trends and methodologies, identifying inefficiencies in current processes, and advising the industry. Jan Erik has experience on all four sides of the sourcing and vendor governance lifecycle - as a client, an industry analyst, a service provider and an advisor.

Now as a research director, principal analyst and global head of ISG Provider Lens™, he is very well positioned to assess and report on the state of the industry and make recommendations for both enterprises and service provider clients.



iSG Provider Lens™

The iSG Provider Lens™ Quadrant research series is the only service provider evaluation of its kind to combine empirical, data-driven research and market analysis with the real-world experience and observations of iSG's global advisory team. Enterprises will find a wealth of detailed data and market analysis to help guide their selection of appropriate sourcing partners, while iSG advisors use the reports to validate their own market knowledge and make recommendations to iSG's enterprise clients. The research currently covers providers offering their services across multiple geographies globally.

For more information about iSG Provider Lens™ research, please visit this [webpage](#).

iSG Research™

iSG Research™ provides subscription research, advisory consulting and executive event services focused on market trends and disruptive technologies driving change in business computing. iSG Research™ delivers guidance that helps businesses accelerate growth and create more value.

iSG offers research specifically about providers to state and local governments (including counties, cities) as well as higher education institutions. Visit: [Public Sector](#).

For more information about iSG Research™ subscriptions, please email contact@isg-one.com, call +1.203.454.3900, or visit research.isg-one.com.

iSG

iSG (Information Services Group) (Nasdaq: III) is a leading global technology research and advisory firm. A trusted business partner to more than 900 clients, including more than 75 of the world's top 100 enterprises, iSG is committed to helping corporations, public sector organizations, and service and technology providers achieve operational excellence and faster growth. The firm specializes in digital transformation services, including automation, cloud and data analytics; sourcing advisory; managed governance and risk services; network carrier services; strategy and operations design; change management; market intelligence and technology research and analysis.

Founded in 2006, and based in Stamford, Conn., iSG employs more than 1,600 digital-ready professionals operating in more than 20 countries—a global team known for its innovative thinking, market influence, deep industry and technology expertise, and world-class research and analytical capabilities based on the industry's most comprehensive marketplace data.

For more information, visit isg-one.com.





SEPTEMBER, 2023

REPORT: NEXT-GEN ADM SOLUTIONS