

Low code, high impact

Here's a business solution maturing just when it's needed most. It lets non-techies do coding, and thus brings great flexibility and agility, saving cost and time



The COVID-19 pandemic has forced distancing and mobility restrictions, pushing everything online. This has led to a spurt in digitisation. A typical organisation faces a curious situation: Just as IT teams are under immense pressure of increasing workloads and decreasing timelines, some of the non-technical employees with analogue specialisations have little work left to do.

What if there was a way such members of the organisation, the ones without any clue about coding, could join hands with the tech people? It would not only solve an HR problem, but would also lead to better solutions as the developers would get insights from the business side. As it happens, such a possibility has been developing over the past few years, and with the pandemic push, it is finally enjoying its moment under the sun.

Called 'low-code development platform', it is a user-friendly way to do coding, create software applications – without any skill requirements, because its user interface is graphical. This means, a non-technical person – any citizen, actually – can develop customised applications easily, thanks to low code. Within an organisation, various non-tech teams can easily develop their own solutions using low-code platforms (or its cousin, 'no code'), leaving the tech team free to do more complex, traditional, 'hand coding'. Low code thus imparts flexibility and can spur creativity – apart from saving time and money.

Such solutions have been around since 2011 in rudimentary forms, and in recent years the market for it is picking up. (It also means this technology is nascent, and evolving, and thus not without its glitches.) Low code is already at the forefront of many critical areas, like COVID-19 testing, PPP loan processing, remote meal delivery and workplace safety. The pandemic-induced conditions are

already making it popular in business organisations, and its demand can only go up in future.

Low-code application platform (LCAP) supports rapid development and greater technical agility to adapt to market needs with reduced human error at a decreased cost. In its most recent low-code Magic Quadrant, Gartner has predicted that more than half of development over the next few years would be done using low-code solutions.

The enterprise LCAP supports enterprise-class applications that offer high performance, scalability, high availability, disaster recovery, security, SLAs, resource use tracking, technical support from the provider, and API access to and from local and cloud services. Low code helps not only with coding but also with the quick setup and deployment.

"Simply put, low code helps customers build applications more quickly. Based on Forrester Research, investment in the low-code market segment is expected to reach USD 21.2 billion by 2022, exhibiting a compound annual growth rate of approximately 40%. This demonstrates the growing imperative for IT leaders to find better solutions for tackling their backlogs and meeting the changing demands of the business. IT is overwhelmed with the demand for digitisation and low-code shows promise for helping solve those problems," says Mark Weaser, Vice President APAC, OutSystems.

Suman Reddy, MD, Pegasystems, India, adds: "The COVID-19 pandemic created an urgent requirement for digital services across the public and private sectors. We have witnessed multiple sectors digitally transform to survive and sustain the drastic market shift. Given the benefits of rapid development and deployment – lower costs, faster delivery, and greater accessibility, low code is a silver bullet to address a myriad of challenges."



SIMPLY PUT, LOW CODE HELPS CUSTOMERS BUILD APPLICATIONS MORE QUICKLY. BASED ON FORRESTER RESEARCH, INVESTMENT IN THE LOW-CODE MARKET SEGMENT IS EXPECTED TO REACH USD 21.2 BILLION BY 2022.

— Mark Weaser, Vice President APAC, OutSystems



GIVEN THE BENEFITS OF RAPID DEVELOPMENT AND DEPLOYMENT – LOWER COSTS, FASTER DELIVERY, AND GREATER ACCESSIBILITY, LOW CODE ADDRESSES A MYRIAD OF CHALLENGES.

— Suman Reddy, MD, Pegasystems, India

TRADITIONAL PROGRAMMING VS LOW-CODE DEVELOPMENT ENVIRONMENT

Traditional programming involves designing and coding using software languages such as .Net, Java or Python; and for each aspect such as experience, backend, services, specific coding is required, explains Ashish Varerkar, Head – Cloud Practice, L&T Infotech. “Compare this with the major shift being offered by low-code platforms in form of a visual way of development thereby simplifying the entire coding value chain – it is virtually drag-and-drop of relevant elements of coding. APIs have made seamless integration of multiple components as easy as plug-and-play. Thus, one need not have even technical/coding skills to write a code or develop a programme.”

Meghashyam Simha, Global Head – Digital, 3i Infotech, agrees: “Traditional or bespoke application development is much easier when the requirements are simpler. But today’s requirements are generally complex and involve multiple streams of development. This approach requires a lot of resources working on different technologies and ends up with different codebases depending on the chosen technologies. All these make it an expensive proposition, and further, time-to-market is dependent on various factors like estimation issues, coding errors, and testing challenges.”

“On the contrary, in a low-code scenario, all the above-mentioned development can be done within the same development environment, with a smaller number of resources and it takes at least 50% less effort to develop the same set of applications,” he adds.

However, traditional development leverages existing technology frameworks and does not attract recurring costs like in the case of low-code platforms, Simha points out, adding, “Essentially, a low-code platform is

more effective for an organisation that takes a strategic approach to rationalise its existing application portfolio with defined business case.”

A similar calibrated approach is advocated by Sundar Ramaswamy, Senior VP and Head of CoE, Digital Process Automation, Happiest Minds Technologies, who says low code programming “is still a new technology that is far from reaching the maturity and scale that the traditional programming applications have achieved”.

According to Ramaswamy, low-code programming is preferred for use cases that need rapid deployment at small scale with medium complexity and risk within the organisation where traditional programming development efforts would not be considered on account of low priority and inability to deliver on time. “Traditional programming and development approach will still be the first choice at the moment for enterprise wide, high complex and risk applications. While this may be the current situation, it is expected that low-code programming will in a few years’ time catch up and possibly overtake traditional programming for all application development scenarios.”

WHO CAN BUILD WITH LOW-CODE?

Being digital-first or pure-play is no longer a niche and innovative thing. It’s a prerequisite for businesses, public services, and governments. Low-code models that were traditionally designed for lay consumers are now being fashioned with enterprise needs. To automate the redundant and most boring tasks in the work pipeline: auto-machine learning solutions are the best-case study because they offer to take the dumb data processing, basic feature engineering, and even model deploying off of the hands.

Raghunandan Dixit, Senior Director of Business Development and Strategy, Business Automation,



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– Ashish Varkerkar, Head – Cloud Practice, L&T Infotech

Persistent Systems, says, “Low-code platforms are making it much easier to design and develop new solutions. Business leaders, sales professionals and application users can develop quick business solutions using low-code platforms. The Low-Code No-Code Movement is to reduce the dependency on certified or highly skilled individuals.”

The beauty of low-code platforms, as Reddy points out, is that anybody with an idea or vision can build applications. “It democratizes application development and allows business users, developers, and IT users to build and change, despite having little to no coding knowledge. They are able to collaborate, innovate, and deliver critical applications from one inclusive environment. These enable organisations to build apps faster and smarter.”

USE CASES OF LOW-CODE PLATFORMS

Low code initially benefits business professionals who want to build apps without the complexities of traditional software development. Its positive impact reaches all

members of the organisation. Low code is also gaining ground due to the investment and backing of some of the biggest names in the game. Google and Amazon now offer various low-code tools. They were recently joined in the space by AWS with its launch of Honeycode, a managed service that allows users to build mobile and web apps.

An example of low code usage at a scale is Schneider Electric, a European multinational company providing energy and automation digital solutions for efficiency and sustainability. “To continue innovating for customers, Schneider needed to boost agility and efficiency in its business processes, capabilities, and operations. By deploying low-code platform, the company transformed its IT landscape by setting up a ‘Low-Code Digital Factory’, which doubled its development speed, producing more than 60 new apps in about 40% of the time than previously would have been needed,” Weaser says.

Another example Weaser offers is of Edelweiss Group, an investment and financial services company based



IN A LOW-CODE SCENARIO, ALL THE WORK CAN BE DONE WITHIN THE SAME DEVELOPMENT ENVIRONMENT, WITH LESS RESOURCE AND IT TAKES AT LEAST 50% LESS EFFORT.

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in Mumbai. “Like others, the company was faced with the challenge of too many different applications and technologies used for loan processing – making its whole process and system complicated. To better manage its large number of customers (over 1,400,000), it was vital for Edelweiss to increase its scalability quickly across various products, continue to innovate and launch new products with shorter time to market.”

“By deploying low-code platform, the group was able to launch ‘Business Loan’ in eight weeks by leveraging readily available modules from OutSystems Forge, which enables easy customisation and shortens delivery time – the development cycle of app is complicated and usually takes up to 40-50% of the project time.”

LOW-CODE MAKES AUTOMATION MORE AGILE

Businesses are increasingly adopting various digital transformation initiatives to solve the unique challenges of the “new normal”. Utilising low-code automation, businesses can automate the repetitive tasks related to designing simple application without high-end coding.

Virender Jeet, Senior Vice President (Sales and Marketing/Products), NewgenSoftware, adds: “Low-code platforms support anything from simple, departmental to complex, mission-critical application requirements of an organisation and help develop solutions that are scalable, agile, and resilient. It can enable developers across teams to configure applications that can handle large volumes of data and perform complex operations with high reliability.”

“Take banking, for example. It can enable banks to rapidly build and deploy an online solution for account opening that can improve employee productivity and enhance customer experience while adhering to security standards and regulatory compliances.”

Low-code platforms will certainly make a mark in programming or application engineering landscape, believes Varerkar. “There is a thrust even now particularly in the integration space from automation point of view. Also, with dependency on infrastructure to build software on such platforms being as low as access to a browser only, the reach of low-code platforms is likely to grow. It



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— Raghunandan Dixit, Senior Director of Business Development & Strategy, Business Automation, Persistent Systems



LOW CODE CAN ENABLE BANKS TO RAPIDLY BUILD AND DEPLOY ONLINE SOLUTION FOR ACCOUNT OPENING THAT CAN IMPROVE EMPLOYEE PRODUCTIVITY AND ENHANCE CUSTOMER EXPERIENCE.

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looks likely that about 25-30% of work can easily migrate to such platforms in coming future.”

Dixit also highlights the fact that with drag-and-drop features and the ability to build apps 10X faster, enterprise-grade applications can be deployed in weeks, which give businesses great agility and a platform to experiment and evolve.

WILL LOW-CODE AFFECT THE PROGRAMMERS?

Low code is meant to supplement the efforts of good, old, traditional programming, not to take its place. On the contrary, as more and more non-technical team members are empowered to create and edit websites themselves, developers can concentrate their time and effort on doing more complex, value-add tasks. After all, it's these kinds of problem-solving tasks (as opposed to updating content and design work) that drew many to coding roles in the first place.

Due to the traditional ways of working with developer bottlenecks, larger companies often deliver at the speed of their technology infrastructure. Adopting enterprise-grade platforms that democratise tasks means that even larger companies can move at the speed of their customers. This is crucial in situations like COVID-19 when customer behaviour and expectations are changing every day.

“Some developers have viewed low-code as a threat to their role or to software quality,” admits Weaser. “But as low-code platforms have matured, several direct benefits to developers have emerged. Our latest research report highlights the importance of ingenuity and adaptability in the current dynamic environment. Yet the data reveals that the bulk of survey respondents indicated that their average application delivery time is about three to six months, which is considered an eternity these days. Given

the speed of the COVID-19 spread, it is more crucial than ever that those organisations act fast.”

It is clear that in this New Normal, digital-first and cloud-first transformation has become even more urgent, he says. “While COVID-19 has caused many disruptions, it also presents opportunities for digital innovation and differentiation initiatives. As a result, demand for applications is increasing. Four percent of respondents from IT organisations in Southeast Asia have 25 or more applications scheduled for delivery in 2020, and 27% of respondents said that they have plans to deliver 100 or more applications during 2020.”

According to a research by IDC on low-code landscape in Asia-Pacific, 28% of enterprise leaders in India list faster integration of customer feedback to speed software releases as the main business goal, notes Weaser. “Addressing these challenges and enabling Indian developers to successfully shift their priorities is where modern, visually-driven, AI-supported platforms excel. By utilising the technology, it speeds up innovation, boosts agility, while providing benefits for both IT and business users alike. This new technology will not replace developers. Instead, it will help be more productive and will help them work more closely with the business to meet its changing needs and challenges.”

While the business potential of the low-code platform is rich, now as well as in the post-COVID world, equally significant is the fact that it opens up the coding to all. It lets non-specialists too have a taste of the fun and excitement of programming applications and turning their vision into reality. It has the potential to become a citizen-led movement and radically alter the landscape of programming.

With inputs from Shubhendu Parth

“IT IS A DARK HORSE IN THE ENTERPRISE TECHNOLOGY DOMAIN”



MEGHASHYAM SIMHA
Global Head – Digital, 3i Infotech

Early this year, we saw Google acquire AppSheet, bringing no-code development to the Google cloud. Does this mean low code and no code is emerging as a mainstream software development solution?

It is clearly established that low code is a strategic move for all organisations, with the intent of making their applications to be more development – and support-friendly, by moving away from coding and instead to make it a more function-oriented, low-skill activity. From private enterprises to government entities embracing low-code development, it is undoubtedly entering the mainstream, which is evident in some of the recent acquisitions. In essence, it is a clarion call for organisations to embrace a low-code platform before their competition does so, and be ready to face the post-COVID scenario with confidence.

So, can we expect the enterprises to adopt it in a big way?

There used to be a time when customer requirements were revolving around typical portal development or an application development for backend or a stand-alone application development for desktop use. It would have then translated into development of these individual applications using specific technologies either based on the customer’s preferences or the vendor’s suggestions.

As technologies evolved, usability of information got diversified demanding organisations to make content available across multiple platforms like smartphones, tablets, wearables, smart speakers, and chatbots, and web-based technologies became dominant as the best way to develop applications to satisfy the ever-growing list of platforms. Organisations will have to build multiple applications to cater to all the platforms to reach out to all types of customers – from baby boomers to Gen Z. This led to the question of how to provide an omni-channel approach to information access, while developing, deploying and maintaining all the related applications –

customer-facing, middleware, back-end, integrations – in a faster, easier and secure way.

And the industry found its answer in low-code development. With digitalisation, the number of applications in organisations is multiplying fast and low-code development is offering an approach that enables full-stack development in a single platform, one that can integrate with internal and external systems and provide automated software lifecycle. Organisations have started seeing the benefits of this centralised approach to manage their portfolio of applications, to better manage innovations, to better connect with other digital initiatives like RPA and chatbots, and to ultimately beat competition in the process, thereby increasing the demand for low-code development.

So, how would you compare traditional programming with a low-code development environment?

Traditional or bespoke application development is much easier when the requirements are simpler. But today’s requirements are generally complex and involve multiple streams of development. Let us take an example of developing a new portal and a mobile app. Traditionally, portal development will go in one stream, and the app, assuming a hybrid approach for Android and iOS mobile app, will go in another stream. In case the mobile app needs to be developed with native technologies, it will again be in two separate streams. The back-end development will be another stream to enable the workflows, business logic, integrations, analytics and so on, as well as API development. This approach requires a lot of resources working on different technologies and ends up with different codebases depending on the chosen technologies. All these make it an expensive proposition, and further, time-to-market is dependent on various factors like estimation issues, coding errors, and testing challenges.

On the contrary, in a low-code scenario, all the above-mentioned development can be done within the same



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development environment, with a smaller number of resources and it takes at least 50% less effort to develop the same set of applications.

At the same time, traditional development leverages existing technology frameworks and does not attract recurring costs like in the case of low-code platforms. Essentially, a low-code platform is more effective for an organisation that takes a strategic approach to rationalise its existing application portfolio with defined business case.

But is it easy or difficult to manage a low-code platform, particularly since there might be different versions of the software and applications that may be developed using varied platforms?

Collaboration among the development team members is especially important for low-code platforms to offer full-stack development and full-lifecycle agile approaches. Low-code platforms offer built-in features for different developers to work on different modules at the same time, with a shared deployment plan. Various features are available to developers to compare and merge, and to resolve conflicts. Version control is core to any low-code platform where all versions are centrally managed within the platform's repository, so that downloading or rolling back is possible at any time. As different types of applications are all developed within the same environment while using built-in features for agile execution and version control, it becomes easier to manage releases in low-code platforms.

What about development, test, and production? How do we test the application or software?

A true low-code platform allows full-lifecycle development and deployment, which involves agile execution, continuous integration and continuous delivery/deployment, monitoring and user feedback. Such DevOps-led system offers automated staging across environments for development,

testing and production, with full dependency analysis, with no downtime and automated rollback capabilities. Advanced platforms also offer APIs to manage deployments and to govern users.

With the pandemic increasing the thrust on digital transformation, will low code platforms have a bigger role to play in automation?

The pandemic has forced millions to learn and work from home, and this has forced organisations to look at a solution that can quickly and efficiently provide the ability to seamlessly enable work from home without compromising on security. In these times, the low-code platform is turning out to be a dark horse in the enterprise technology domain, as it provides ways to overcome operational challenges and at the same time to be future-ready for any similar pandemics. The demand for such platforms is evident in the fact that the demand for the low-code development platform is surging across the globe, with the low-code market size being valued at USD 83.5 billion by 2028 according to a recent research report.

It is said that low code will do to application development what social media did to traditional media by enabling the users. What are your views?

Citizen development is certainly a movement that will trigger the next wave of application development. However, it is still in its early stages, as organisations are yet to adopt and standardise low-code platforms for org-wide use. Organisations need to define the policies around wider usage, and provide guidelines for adoption and train employees; thereby leveraging low-code platforms to the best extent. The best outcome that can be expected out of this movement is to see innovations in the organisations getting accelerated. At the same time, this is limited to comparatively simpler applications, as citizen developers cannot be expected to develop complex applications.

“USE OF LOW-CODE PLATFORMS IS LIMITED ONLY BY IMAGINATION”



ASHISH VAREKAR

Head – Cloud Practice, L&T Infotech

How do you compare traditional programming with a low-code development environment?

Traditional programming involves designing and coding using traditional software languages such as .Net, Java or Python. Also, for each aspect such as experience, back-end, services, specific coding is required.

Compare this with the major shift being offered by low-code platforms in the form of a visual way of development, thereby simplifying the entire coding value chain – it is virtually drag-and-drop of relevant elements of coding. APIs have made seamless integration of multiple components as easy as plug-and-play. Thus, one need not have even technical/coding skills to write a code or develop a programme.

Low-code platforms enable ease in functional roles and related objectives as well. For example, a business analyst who would generally require numerous reports to be generated but would find Excel a bit tedious, a low-code platform can come in handy since these reports can now be generated easily in a visual drag-and-drop format.

Also, low-code platforms are now available that are customised to specific industries which take care of typical requirements of key components from an SDLC perspective. Hence, specific use cases relevant to a particular industry can be addressed more closely and comprehensively by the use of low-code platforms.

What about project management? Can one easily manage different versions of software and applications developed using a low-code platform?

Low-code platforms come with an in-built versioning depending on requirement and situation at hand such as vanilla version or pre-production version. Adequate collaboration mechanisms are also enabled by low-code platforms. However, there are situations where low-code

platforms offer limited scope for customisation or may pose challenge in compatibility with existing systems.

Thus, while they are shaping up in the right direction, low-code platforms aren't there yet and need more time to comprehensively address all the aspects.

And what about multiple project environments like development, test, and production? Also, can one deploy artifacts from one environment to another?

Since the low-code platform as a concept is still in the evolving phase, there is no single standard format or approach that developers can follow as a thumb rule. Hence, working on multiple environments using low code is still considered subjective. There are platforms that allow moving from low environment to higher environment while certain low-code platforms do have DevOps, test and production built-in. There are some platforms which allow users to build in their own environments and then move to another environment.

The pandemic has created a sudden need for the digitisation of organisations and the service delivery mechanism. Do you see low-code platforms playing a bigger role in driving automation?

Absolutely! Low-code platforms will certainly make a mark in programming or application engineering landscape. There is a thrust even now particularly in the integration space from the automation point of view. Also, with dependency on infrastructure to build software on such platforms being as low as access to a browser only, the reach of low-code platforms is likely to grow. It looks likely that about 25-30% of work can easily migrate to such platforms in coming future.

Experts point out that low code will lead to the democratisation of application development by



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extending the development capability to 'citizen developers'. How do you look at it?

Low-code platforms are developed and designed to enable citizen developers on a large scale. Yes, there would be occasions where technical expertise or intervention is required while developing programs using low code, however, a considerable part is still easily manageable by any user. As mentioned earlier, it allows a business user to develop programs as per specific needs and thus giving them greater control of the process.

It that the reason why we are seeing a sudden spurt in demand for low-code platforms among enterprises?

With ecosystem dynamics shifting towards quicker go-to-market, go-live or time-to-value scenarios, low-code platforms can address these asks perfectly, as they not only simplify the overall process but also accelerate the final outcome expected from software development. Additionally, in situations where existing core platforms such as ERP are deployed, an evolving need will be to also integrate multiple satellite functionalities as per business demand. Since low-code platforms allow business users to develop programs as per their specific needs, I would say that its influence is certainly on a rise.

But do we have enough use cases for low-code automation?

There are many use cases that call for perfect fit of low-code platforms. For instance, one may want to integrate data from the CRM system to a line of businesses – this can easily be turned around using a low-code platform. Thus, the use of these platforms is limited only by imagination and in coming times one will witness its increased penetration and use in the overall scheme of things.

Do you also see low-code and no-code platforms changing the way programming is done and the way programmers work in the days to come?

Low-code and no-code platforms will coexist with existing software-based coding platforms. Also, from the quality and design perspective, it will increase the maintainable quotient. Other complementing aspects include standardisation and interoperability.

Thus, overall, low-code and no-code platforms will positively impact the future of programming by ushering the best of end-user experiences and driving new standards of software development excellence and at the same time giving rise to democratisation of the entire value chain with business users taking centrestage in development.

“LOW CODE ENABLES DEMOCRATISATION OF APPLICATION DEVELOPMENT”



SUNDAR RAMASWAMY

Senior VP and Head of CoE, Digital Process Automation,
Happiest Minds Technologies

Why is there a sudden spurt in demand for low-code platforms among enterprises? Does it mean they are more inclined to keep application development in-house?

In the last few years, companies were increasingly embracing digital transformation initiatives to stay competitive. COVID-19 has only pushed these initiatives higher on CXOs' agenda as companies needed to have a strong digital presence for business continuity and growth. A company's traditional IT organisation and their partner ecosystem are not equipped to manage the speed and agility required for these transformations to occur. New tools like low-code platforms enable that agility by increasing the pool of developers that can engage in this transformation, by enhancing the productivity of the current IT organisation and ecosystem of partners and by enabling complex and difficult processes to be automated and digitised.

It is often said that low-code platforms are enabling organisations to swiftly address the rising customer demand. How does that happen?

Democratisation of the application development process is enabled by low-code platforms. Business teams

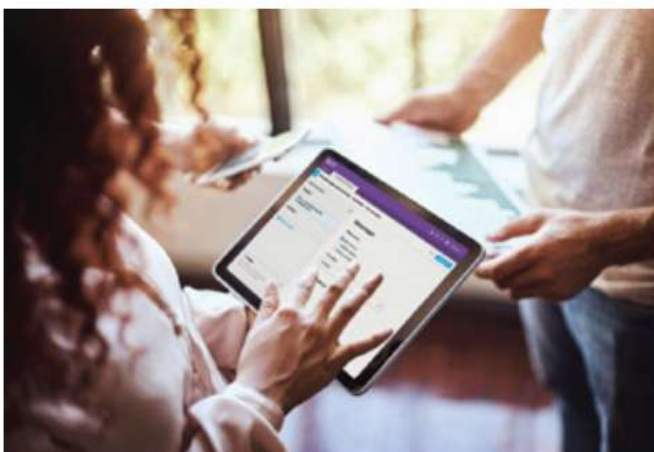
can now take part even more closely in the application development process. For example, teams that deal with customers directly can now efficiently translate the functional requirements of a customer need into an IT application leveraging low-code platforms with limited or no IT team involvement. Closer collaborations of business and IT teams using low-code platforms enable accelerated application development, enhanced functionality in existing and new applications and increased automation within and between applications.

On the development front, how easy or difficult is it to manage different versions of software and applications developed using low-code platforms?

Low-code platforms are increasingly getting matured and integrating tools and functionalities that enable for enterprise-wide large scale development and deployment. With proliferation of these platforms in a company and increasing use of developers with little or no formal programming experience, there is a risk of application build-outs that are hard to test and change as they may not conform to programming best-practices, are security risks that increase threat vulnerabilities in the organisation and are hard to manage as they are built with minimal governance and standards. Organisations would need to tread a fine balance of democratising the application build-out for greater agility with the governance controls for better manageability and serviceability.

From a developer's perspective, do low-code platforms allow working on multiple environments like development, test, and production?

Low-code platforms are becoming mature and providing the features and functionalities that traditional programming platforms provide for easier development and deployment. For example, mature low-code platforms provide drag-and-drop and point-to-click tools for rapid





LOW-CODE PLATFORMS ARE BECOMING MATURE AND PROVIDING FEATURES AND FUNCTIONALITIES THAT TRADITIONAL PLATFORMS PROVIDE FOR EASIER DEVELOPMENT AND DEPLOYMENT.

development, reusable components across apps and pre-built UIs for standard use cases to help rapid builds, build once and deploy everywhere on web, mobile and desktops across various OS – iOS, Windows, Android – as well as provide continuous development and integration for application versioning and change management as well as for deployment across environments.

How can one decide when to use a low-code platform and when to go for a traditional development approach?

Low-code programming is a new technology that is still far from reaching the maturity and scale that the traditional programming applications have achieved. Low-code programming is preferred for use cases that need rapid deployment at small scale with medium complexity and risk within the organisation where traditional programming development efforts would not be considered on account of low priority and inability to deliver on time. Traditional programming and development approach will still be the first choice at the moment for enterprise wide, high complex and risk applications. While this may be the current situation, it is expected that low-code programming will in a few years' time catch up and possibly overtake traditional programming for all application development scenarios.

Can you share some low-code automation use cases?

Low-code automation tools provide visual modelling environments that create representations of application behaviour in XML or other formats. The low-code platform in turn can directly interpret these representations as working applications in production. Using this companies have automated various processes of their back-office enterprise functions – like invoice processing under finance and accounting or employee on-boarding by the

HR team – as well as core business processes like claims processing in the insurance sector and returns processing in the consumer packaged goods sector.

There is lot of noise about 'citizen developers' disrupting the market by democratising application development. What are your views, particularly on the quality aspect?

The intent of low-code development is indeed for democratisation of application development and the rise of 'citizen developers' to make application build-outs rapid and pervasive across the organisation. However, realising the full potential of this intent is very difficult and not likely to be realisable in the short to medium term.

IT applications are increasingly at the core of any digital transformation of businesses and critical for ensuring competitiveness in the industry. Having citizen developers to build and deploy applications, even for a localised requirement, will be seen to be risky and sub-optimal. Strong governance rules and guidelines will be needed to ensure well-meaning citizen developers can develop and deploy applications that can be leveraged enterprise wide. This is far different from the way social media is managed and been able to grow at the cost of traditional media.

So, how will low-code and no-code platforms impact the future of programming?

Low-code and no-code platforms will impact programming in fundamentally three ways: Firstly they ensure a larger proportion of the organisation will participate, directly or indirectly, in the development of enterprise applications. Secondly, they give rise to new development methodologies and frameworks, and traditional development methodologies like waterfall development methodologies will no longer be used. And thirdly, they will lead to faster and more pervasive leverage of technologies and applications across all business process.

“LOW CODE MAKES THE ORGANISATION MORE NIMBLE AND AGILE”



VIRENDER JEET

Senior Vice President - Sales & Marketing/Products,
Newgen Software

What role do you see a low-code application development platform playing in the digital journey of organisations?

Today, there is a sense of urgency in addressing the needs of a rapidly evolving market. To deliver speed, we need a paradigm shift from ‘code-build-compile-integrate-deploy-maintain’ to ‘deliver-through-composition’. Low code facilitates this transformative approach that does not rely on heavy coding. Instead, it employs visual tools to create and configure applications and provides a high-level programming abstraction. More importantly, it allows non-IT staff to develop and deploy applications, making the organisation more nimble and agile.

Newgen’s low-code digital automation platform can help organisations in the rapid development and delivery of applications while saving a considerable amount of time for both IT and business developers. Organisations across industries can rapidly digitise, develop, and deploy applications and respond to dynamic business needs with speed and agility.

Do you think a low-code application development platform is helping organisations solve complex mission-critical processes? If yes, what are the advantages of using low-code application development platforms for this?

Low-code platforms support anything from simple, departmental to complex, mission-critical application requirements of an organisation and help develop solutions that are scalable, agile, and resilient. It can enable developers across teams to configure applications that can handle large volumes of data and perform complex operations with high reliability. Take banking, for example. A low-code platform can enable banks to rapidly build and deploy an online solution for account opening that can improve employee productivity and enhance customer experience while adhering to security standards and regulatory compliances.

Low-code platforms are modelled for building secure

applications. Additionally, a low-code application development platform provides tools for developing user interfaces, data models, and integrations while ensuring end-to-end process automation and support for digital document processing.

How does lowcode facilitate citizen and business developers? Can it completely replace traditional coding?

A low-code platform reduces application translation efforts through a model-driven, point-and-click application development environment, facilitating citizen/business developers. Using the development guidelines and framework set by the IT team, it promotes the democratisation of application creation, enabling business-user application development and allowing IT programmers to spend more time on complex, mission-critical tasks.

Instead of replacing traditional coding, businesses can utilise the benefits of low code methodology along with traditional programming. Organisations can leverage low code to rapidly build applications, establish the core functionality, and continue to develop more complex processes depending on their evolving requirements.

And how is low code different from no code? Does an organisation require people with specific skillsets?

No code is primarily focussed for citizen development modes, with pre-built templates, ready-to-use codes, and a drag-and-drop interface. Similar to low code, it requires little to minimal IT dependency. However, low code is better equipped to handle more complex applications (including mission-critical applications), offers more control to both citizen and pro-code developers, and supports the building of customised applications that cater to specific functionalities. The configurability and integration capabilities of a low-code application platform make it a more suitable choice for an organisation in the long run.

“LOW CODE IS A SILVER BULLET TO ADDRESS MYRIAD OF CHALLENGES”



SUMAN REDDY
MD, Pegasystems, India

What's the importance of low code to enterprises and addressing rising customer demand?

The pandemic has got enterprises scrambling to adjust to an extraordinary level of disruption while scurrying for solutions that will not only ensure business continuity but provide customer satisfaction. It has become critical for enterprises to come up with quick and robust solutions.

The COVID-19 pandemic created an urgent requirement for digital services across the public and private sectors. We have witnessed multiple sectors digitally transform to survive and sustain the drastic market shift. Given the benefits of rapid development and deployment – lower costs, faster delivery, and greater accessibility – low code is a silver bullet to address a myriad of challenges. A recent Forrester report fortifies the market sentiment and states that the low-code market will double in size to USD 14 billion by 2024. Low-code platforms create citizen developers, expanding their ability to either collaborate with IT departments to develop critical apps more quickly or develop those apps on their own. Enterprises can

have production-ready apps created in hours and will not be required to wait for days or months anymore. This enhances customer experience to promote a better, more satisfactory digital experience.

How is low code making automation more agile?

Low code optimises efficiency by giving business users, developers, and IT what they need, when and where they need it. It accelerates application development by defining core app elements quickly and easily.

Some low-code solutions handhold business users with no coding experience, while others offer complex capabilities that cater to professional developers. These solutions preserve the exact siloed approach to development that low code was intended to eliminate and further complicate the management of the entire application.

Pega's low-code solution reconciles these siloed tasks and brings users together in one inclusive, intuitive authoring environment that serves all skill levels, making automation agile in function. Business users become active participants in the development process, reacting in real time to evolving business needs. Developers, freed from legacy code maintenance, have the tools and time they need to focus on more complex, high-value tasks. All work is done within organisational guardrails set by the IT team to protect against future upgrade and compliance issues.

So, who can build on low-code?

Anybody with an idea or vision can build applications on low-code technology. It democratises application development that allows business users, developers, and IT users to build and change, despite having little to no coding knowledge. They are able to collaborate, innovate, and deliver critical applications from one inclusive environment. These enable organisations to build apps faster and smarter.

