



White paper

6 reasons to select a low-code environment



Summary

Low-code platforms represent one of the fastest-growing markets in the tech industry. What is low-code technology? And why is it becoming so popular?

This paper explores six reasons why organizations are choosing to deploy low-code environments. It also examines the potential downsides, and looks ahead to what the future might hold for these tools.

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The big business of not writing code

In the 1967 movie “The Graduate,” a businessman tells a young Dustin Hoffman that he has just one word to share with him. That word: plastics. The businessman goes on to explain, “There’s a great future in plastics. Think about it. Will you think about it?”

When young people graduate today, they often get similar advice. But the one word they hear isn’t “plastics” – it’s “code.”

Microsoft founder [Bill Gates](#) says, “Everyone can benefit from learning the basics of computer science.” Businessman [Richard Branson](#) echoes that sentiment, lamenting, “We don’t have enough people who can code.” Even fashion model [Karlie Kloss](#) says, “Code is a superpower every young woman should be able to access.”

Despite this encouragement to learn programming skills, businesses struggle to find the talented coders they need. As a result, they are increasingly turning to low-code tools.

According to [IDC](#), the market for low-code, no-code, and intelligent developer technologies is growing 17.8% per year and will likely hit \$21.0 billion by 2026.

Looking farther into the future, [Research and Markets](#) more optimistically forecasts, “The global low-code development platform market is predicted to generate a revenue of \$187.0 billion by 2030, rising from \$10.3 billion in 2019, and is expected to advance at a fast pace, 31.1% CAGR, during the forecast period (2020-2030).”

The analysts at [Gartner](#) also agree that the market is growing quickly. “Organizations are increasingly turning to low-code development technologies to fulfill growing demands for speedy application delivery and

highly customized automation workflows,” says Varsha Mehta, Senior Market Research Specialist at Gartner. “Equipping both professional IT developers and non-IT personas – business technologists – with diverse low-code tools enables organizations to reach the level of digital competency and speed of delivery required for the modern agile environment.”

This market demand raises a couple of questions: First, what is a low-code environment? And second, why is it becoming so popular?

What “low-code” means

In the broadest sense, a low-code tool is any technology that allows people who don’t know how to code to create simple applications, or workflows with prompts. Given this definition, some people trace the advent of the low-code movement back to the 1980s, when Microsoft Excel began enabling macros via Visual Basic for applications.

More recently, Forrester began using the phrase “low-code platform” around 2014. [The firm](#) explains, “Low-code platforms employ visual, declarative techniques instead of traditional lines of programming. Both developers and non-developers can use these products, and they require less training to start. Common features include reusable components, drag-and-drop tools, and process modeling. Individuals or small teams can experiment, prototype, and deliver apps in days or weeks.”

Similarly, [PwC](#) defines low-code platforms as “software solutions that enable a user to build and deploy software applications, with no or minimal coding and hence, through enhanced and amplified drag and drop features, a non-technical user with a flair for IT or, as some define, as a ‘citizen developer’, can effectively deploy software applications.”

The low-code category includes everything from general-purpose application development platforms to workflow automation, to customer relationship management and marketing software. And low-code features are particularly popular in tools that harness artificial intelligence (AI) capabilities. In fact, according to [McKinsey](#), “AI high performers are 1.6 times more likely than other organizations to engage nontechnical employees in creating AI applications by using emerging low-code or no-code programs, which allow companies to speed up the creation of AI applications.”

And while they are often lumped together, low-code and no-code tools are slightly different. Anyone can use a no-code tool, but they may be more limited in what they can accomplish. A low-code tool requires some domain or business knowledge, and can accomplish more complex tasks. For many businesses, low-code environments represent a balance between enabling a somewhat larger group of employees to be involved in complex tasks without trading away flexibility.

Reasons to select a low-code environment

So why are organizations increasingly deploying low-code environments? Experts point to six key reasons:

1. Enabling citizen developers

Traditionally, application development and advanced analytics have been the responsibility of software engineers and data scientists. But these roles command high salaries, and there simply aren't enough qualified individuals available to fill all the job openings.

In the US, the [technology unemployment rate](#) is 2%, which is even lower than the low overall unemployment rate of 3.7%. According to the US Bureau of Labor Statistics, the median [software developer earns](#) \$124,200 per year, and open positions are likely to increase by 25% by 2032. [Data scientists](#) earn a little less (\$103,500), but the number of jobs is growing even faster – 35%.

Because it has become so difficult to find qualified computer science or data science graduates, training other people in the organization to serve as “citizen developers” has become a top priority for many firms. [Forrester reports](#), “How to establish, govern, and scale a citizen developer strategy is the most common low-code inquiry topic from Forrester clients – and Forrester data shows that at least two-thirds of firms currently have a citizen developer strategy, or plan to have one in the next 12 months.”

It's important to note that these citizen developers aren't less capable or talented than their professional developer colleagues – they simply have different skills and goals. [Forrester finds](#) that they are 2.5 times more likely than professional coders to say that “changing our business model” is a top goal. It notes, “Low-coders are more business focused and technology advanced. That is, low-coders know and care much more about business conditions and results, but they are also more likely to work on ‘advanced’ or cloud-native architectures and use cases, such as containers, service mesh, and IoT apps.” It adds that the typical low-code user is someone who “cares more about solving business problems rather than strictly technical ones, who wears many hats to get the job done, and who willingly uses new or advanced technology to do it.”

By adopting low-code tools, organizations are both addressing a labor shortage and making a strategic decision to put more power in the hands of business-focused employees.



2. Increasing agility

Organizations also turn to low-code tools as a means for increasing their speed. [One report](#) finds that a low-code automation tool “can potentially shave 50-90% off development time vs. a coding language.” [Another](#) says, “[Low-code tools] have the potential to make software development as much as 10 times faster than traditional methods.”

That kind of agility makes a huge difference in competitive markets. And CEOs know it.

One [report from KPMG](#) explains, “Over two-thirds of chief executive officers believe that agility is the new currency of business. If they fail to adapt to a constantly changing world, their business will become irrelevant. This is a stark choice.”

With a low-code environment, organizations don't have to wait for a developer or data scientist to become available. If they need to kick off a brand new project or make changes to an existing one, one of the citizen developers can do the necessary work with a low-code environment – and in most cases, they can complete it faster than a developer writing code from scratch.

This can be particularly helpful when the low-code environment is part of a workflow automation tool. Because automation generally increases speed and productivity, the low-code tool amplifies the effect, leading to even greater agility gains.

3. Improving productivity

Low-code environments increase productivity in several different ways. First, because they allow people to complete coding tasks faster, so they help free up time to accomplish other tasks. This effect is noticeable, whether it is citizen developers, or full-time software engineers using the tools.

Second, because it allows citizen developers to take some work away from developers and data scientists, it frees up those highly skilled resources to work on more complex tasks. As a result, they are able to complete more work on the advanced projects most likely to impact on the bottom line.

Third, because low-code environments allow organizations to iterate quickly, it gives teams more freedom to try different and innovative things. If you can pivot quickly, you face less risk when implementing a novel approach. That allows organizations to find new opportunities to further increase productivity and get ahead of the competition.

Iron Mountain InSight

A few years ago, McKinsey estimated that about half of worker hours worldwide were spent on tasks that could be automated. Now it has raised the figure to as high as 60% to 70%.

With Iron Mountain InSight Intelligent Document Processing (IDP), you can quickly turn documents into information you can use. It digitizes, extracts, classifies, and verifies information with speed and accuracy, so you can make more informed decisions and enhance customer service.

InSight IDP includes a low-code environment that offers all the tools and libraries your team needs to create and customize automated document processing workflows. Or, you can choose to deploy IDP as managed service run by Iron Mountain's in-house experts.

Either way, you can reduce time, effort, cost, and errors with intelligently extracted and classified data that speeds time to discovery, or audit response. That has tangible impact on a company's financial situation. In fact, according to McKinsey, automation can help some organizations increase operating profits between 9% and 15%.

Iron Mountain has more than 70 years of experience protecting customers' most trusted assets. The Digital team also has extensive experience from custom engagements with some of the world's Fortune 1000 customers to create automated workflows for government, e-healthcare, mortgage and banking, human resources and contracts, intelligently processing billions of documents quickly with accuracy. Find out how they can help your team embrace automation to improve productivity and financial performance.

Finally, low-code benefits tend to increase over time. The graphical, drag-and-drop interfaces of low-code platforms encourage modular development with reusable components. As you work in the environment, your team can build up a library of components that you can drag-and-drop into new projects for additional efficiency gains.

4. Encouraging collaboration

Those productivity gains are also closely related to another benefit of low-code tools – greater collaboration, particularly between technical and business teams. [Gartner's Jason Wong notes](#), "Empowered by the intuitive, flexible and increasingly-powerful features of low-code development tools, business technologists and citizen technologist personas are developing lightweight solutions to meet business unit needs for enhanced productivity, efficiency and agility – often as fusion teams."

With their graphical interfaces, low-code environments make it easy for anyone to see what is happening in an application or workflow. That makes it possible for more people to contribute, even if they have no coding knowledge. As Wong observes, teams sometimes see the biggest gains when business people and IT people work together, each contributing their particular expertise to the project.

In addition, many low-code tools have built-in collaboration features that make working together easier, across geographies. For example, Iron Mountain's InSight Intelligent Document Processing platform features a low-code environment with collaborative annotation and labeling capabilities. This allows users to make notes on workflow automation or AI model builders, fostering teamwork, and improving results.

5. Strengthening risk management and governance

Low-code tools trade away some flexibility to enable more people to be involved in development processes. A loss of flexibility might seem like a negative, but in many ways it is actually a benefit.

When developers or data scientists are writing code from scratch, they can create anything they want. Unfortunately, this means that sometimes the code includes bugs. Developers working directly in a programming language might also write code that does not comply with security or privacy policies.

If you don't have strict governance procedures – and follow them – this situation can result in non-compliance for your organization. That can lead to fines and loss of customer trust. And even if you remain compliant, bugs can introduce problems that lead to poor decision-making and/or reduced customer satisfaction.

By limiting the available options, low-code environments can make it easier for organizations to maintain compliance. And while they don't completely eliminate the possibility of bugs, they do make them less likely, which can reduce the negative impact on your bottom line.

6. Reducing costs

The other five benefits mentioned above all lead to the greatest benefit of low-code environments – cost savings.

By enabling citizen developers, organizations can spend less money recruiting developers and data scientists. And they can assign the highly skilled employees they have to high-value tasks, resulting in financial benefits for the organization.



Low-code automation in action

Iron Mountain InSight's low-code environment makes it easy for people with little or no coding skills to create and manage automated workflows.

Users begin by choosing an existing dataset or creating a new one. Each dataset ties to a series of documents, which users can easily see in the thumbnail representations. They can edit document types and locations as necessary, as well as adding confidence thresholds. To train the model, they select documents, highlight the data that should be extracted, and map it to the appropriate fields in the document type. They can then try out the model and workflow, making adjustments as necessary.

By increasing speed and agility, companies can reduce the amount they spend on workers' low-value activities. For example, one Iron Mountain customer saved ~\$1 million on labor costs alone by deploying InSight Intelligent Document Processing with its low-code environment.

Greater productivity and collaboration can also reduce costs by allowing employees to accomplish more and higher-quality work in less time. Improved governance and risk management can add to cost savings associated with non-compliance and/or buggy code.

It should come as no surprise then, that [87% of surveyed CIOs and IT pros](#) say that low-code environments help reduce costs.

A few words of caution

Despite all the technology's benefits, deploying a low-code environment won't solve all your organization's problems. You should also be aware of some potential issues:

- **Beware of hype** – Vendors are very aware of the high interest in low-code platforms. As a result, some startups slap the “low-code” label on products that don't truly have low-code capabilities. When evaluating potential products, evaluate how long the company has been in business, and the depth of their customer list. Consider a proof-of-concept to make sure that it actually delivers on the benefits you are anticipating.
- **Flexibility trade-offs** – While citizen developers can be helpful, they aren't necessarily the solution to every problem. In some complex use cases, your organization may need professional developers writing code from scratch. The key is to evaluate each project, paying attention to any unique needs, before deciding which approach works best.
- **Hiring low-coders** – It is generally easier to find citizen developers than to find software engineers and data scientists, but that doesn't mean you should assign low-coding tasks to just anyone. You'll have

the best success if you have highly knowledgeable business experts with a high degree of interest in technology. And if you don't have anyone like that available for a project, your vendor might be able to assist. For example, Iron Mountain InSight customers have the option of deploying the platform as a managed service, so that Iron Mountain's experienced staff handle the workflow and AI model design tasks.

- **Shadow IT** – When you make low-code development tools widely available within your organization, you run the risk that employees will use them in unintended ways, or create applications that don't align with your policies. The risk is somewhat less with low-code environments built into other tools, like workflow automation platforms, but it is not zero. Organizations can help mitigate this risk by establishing and enforcing appropriate policies.

While organizations should be aware of these risks, the downsides are generally more than offset by the potential benefits of deploying low-code environments.

The future of low-code

Industry experts predict that the popularity of low-code environments will persist for some time. For example, [IDC's Michele Rosen says](#), “The market for [low-code and no-code] technologies is being driven by the global shortage of full-time developers. This situation is expected to continue throughout this decade, creating a strong market for technologies that increase developer productivity or expand the potential pool of developers.”

This market is likely to increase as companies increase their use of AI. Organizations that want to remain competitive can benefit from taking a closer look at low-code tools, and how they can help achieve their goals.

For more information on Iron Mountain's low-code environment inside InSight Intelligent Document processing, visit ironmountain.com/insight.

About Iron Mountain

Iron Mountain Incorporated (NYSE: IRM), founded in 1951, is the global leader for storage and information management services. Trusted by more than 225,000 organizations around the world, and with a real estate network of more than 85 million square feet across more than 1,400 facilities in over 50 countries, Iron Mountain stores and protects billions of valued assets, including critical business information, highly sensitive data, and cultural and historical artifacts. Providing solutions that include information management, digital transformation, secure storage, secure destruction, as well as data centers, cloud services and art storage and logistics, Iron Mountain helps customers lower cost and risk, comply with regulations, recover from disaster, and enable a more digital way of working.



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