



The Ultimate Guide to No-Code



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Abstract

You've probably heard it buzzing through the corporate corridors. The talk about the new and improved way of building applications. Are the rumors true? Does there truly exist a magic tool that lets you build complex software without writing a single line of code?

Well, yes and no. There is a new way of developing and it's gaining popularity in the tech scene and beyond (because isn't every company a tech company nowadays?). And it's not magic, but rather a strategic tool with the potential to change the way organizations build IT solutions as we know it.

This whitepaper explores the possibilities and massive potential of no-code and low-code development platforms to drive your innovation. The goal is to provide you with a crash course in everything no-code, from how it works to who can use it to how to leverage it strategically.

Step by step, we will explain what you need to know, why you should care, and what no-code can do for your digital transformation.



Why You Need This Guide

The world is changing at a faster pace. Businesses need to keep up with changing times in order to stay ahead of the competition. As innovation increasingly takes place in the digital field, no-code can play a decisive role in driving these transformations.

That's what this guide is for. To explore all there is to know about no-code platforms. During our journey, you'll learn exactly how they work, who their users are, and what problems they can help solve.

What is No-Code?

No-code platforms enable application development with no manual programming required. Instead of coding, these platforms use visual modeling, where users can drag-and-drop components into logical sequences to create functional applications.

The removal of manual programming from the development process solves two major issues (among some secondary benefits, which we'll dive into just a bit later):

1. Coding by hand is an extremely time-intensive and complex process.
2. There is a serious shortage of qualified developers to meet the current demand for software.

No-code platforms can speed development up to 16 times faster, depending on the platform. This enables developers to quickly create working prototypes, and significantly reduces the time to market for applications. Because of the speed of development and ease of use, no-code platforms align the business and IT by making it possible for business users to contribute directly, rather than waiting for an idea to have its turn on IT's long backlog.

From one-off solutions to extremely complex enterprise grade applications, no-code is proving to be a widely adopted method in organizations' IT strategies.



How Does No-Code Work?

While traditional coding is done via text-based and numerical languages that are difficult to master and require certain skill sets, a graphical language enables people with little to no programming skills to build applications easily and fast. With visual building blocks and a drag and drop functionality, the end-user only has to put the correct elements into place.

On the other hand, low-code platforms reduce the amount of coding needed to create applications. Some degree of coding is required to build complete

applications, but developers can save a lot of time. Low-code platforms are great for trained developers, because it's possible to develop faster by coding less. Low-code platforms require proficiency in at least .NET or Javascript languages to fully operate, which is often cited as a limitation to ease of use.

As the next generation that evolved from the low-code movement, no-code platforms offer an alternative because they enable a new class of developer — the Citizen Developer. Because extensive programming knowledge is not required, any tech savvy employee can build applications on a no-code platform.

Essentially, a no-code platform is a low-code platform that makes it possible to build applications without coding at all. No-code platforms have been criticized for being less powerful or only capable of supporting applications with relatively low complexity for this reason. But as with low-code platforms, a good no-code platform will provide opportunities for more experienced programmers to support the no-code functionality with coded customizations. It's the best of both worlds: simple enough to build without coding at all, but flexible enough to customize any needed level of complexity.

A no-code platform is no replacement to your existing IT department. Rather, it functions as an extension of your IT team which allows for a better collaboration between the business and IT. Implementing a no-code strategy also doesn't happen overnight. It requires persistence, the right mindset, and proper supervision and guidance. But when done correctly, you'll be producing more software, and more developers, driving your business forward in a digital age.



Low-Code vs. No-Code



No-code and low-code platforms both use visual modeling to increase the development pace. Although they have some overlap, there are also quite a few distinctions between the two. According to industry analysts, the traditional market of low-code and no-code platforms can be divided into two major segments:

Restrictive no-code — *for business users to build simple apps*

Restrictive no-code has been around for ages, especially for Citizen Developers. You can think of Microsoft Access as a no-code tool for example, since it allows users to build applications easily without the use of code. Businesses already use these traditional no-code platforms, but most often they can only create very simple applications. If your aim is to build new products and improve entire processes, this requires a little more than what you can accomplish with a restrictive no-code platform.

General purpose low-code — *to speed up existing development processes*

General purpose low-code platforms are intended for professional developers, aimed to speed up the development time of already existing software applications and IT infrastructures. These can be very helpful if you have a team of .NET or Java developers at your disposal, but they represent a significant barrier for non-developers and they don't facilitate Citizen Development.

Recently, a new hybrid variation entered the market:

Citizen Development — *for complex applications by business and IT*

A Citizen Development platform meets right in the middle. It allows you to create complex no-code applications where business and IT work together in a great way. The software is ready-made so it can be used by anyone in the business, instead of just your existing IT developers. So projects can be kickstarted and completed by a new group of no-code developer under the supervision of Central IT.

Citizen Development: Unlocking Your Workforce's Full Potential

To get the most out of your innovation potential, you may need the third option. Here's why.

In contrast to the traditional forms of low- and no-code, Citizen Development is about more than creating low-profile applications for business users or simplifying processes for developers. Although it functions allow for this too, Citizen Development is more than just a platform. It's not just about speeding up development, it's about empowering your entire workforce to work towards the best solution. It's a movement, a way of thinking that everyone in your company can employ, a drive towards constant innovation.

Citizen Developers and no-code go hand in hand. In terms of technical requirements, a Citizen Development platform is no-code platform with a central IT strategy. It connects business users and IT professionals by still offering the latter the option to personalize applications using code, and by giving the former central support and governance from IT.

And why exactly will your business suffer without a solution? Click the links to read more.

The top 4 things a no-code platform can do for you:

1. [Enable faster development](#)
2. [Enable more flexible development](#)
3. [Create more developers](#)
4. [Provide more control, collaboration, and transparency throughout the development process](#)



Myth Busting: Common Misconceptions About No-Code



Now you know how low-code and no-code platforms can impact your innovation process and your business. Just to make sure things are clear, let's get rid of some of the common misconceptions that still exist around no-code.

1. No-code allows everyone to build an application right away (false)

While no-code platforms significantly lower the barriers for non-developers to build software applications, your Citizen Developers still need basic (and recurrent) training in order to fully understand the platform.

2. No-code can fully replace professional IT developers (false)

This claim is very far from the truth. No-code platforms and Citizen Developers can be optimized with collaboration from your IT department. They form a symbiotic relationship that unleashes innovative power throughout your entire workforce.

3. You can't build anything complex that delivers business value (false)

Thanks to the close collaboration with IT, and provided that no-code platforms have an escape hatch that allows for traditional coding too, Citizen Developers

and IT professionals can build complex enterprise-grade applications that have great business value.

4. It makes coding and programmers obsolete (false)

Although some programmers might state that: "The only reason we should be writing code is to ensure we write less code tomorrow," no-code doesn't replace programmers (yet). Some day coding might be wholly obsolete. But until then, Citizen Developers rely on skilled programmers to do their work properly.

5. No-code development lacks security (false)

Some no-code platforms are designed to be governed by Central IT. Many run safely from the cloud and are ISO 27001 certified, meaning that the security of your data is guaranteed. Not only does this central infrastructure and governance strategy enables Citizen Developers to freely develop their own applications from their web browser, it also prevents the risk of shadow IT.

5 Things You Need to Consider When Browsing For No-Code Platforms

No-code is picking up steam throughout the tech industry. There are a lot of different vendors out there that offer low-code and no-code platforms, but which one best suited for your line of business? There are 5 key things to take into account when evaluating no-code/low-code vendors:

User base

Who will be using your platform?

The -ilities

What functional requirements fit with your business' needs?

Support

What about the availability of tech and product support?

Governance

How effectively can the platform be governed and supported by IT?

Features

What problems or processes do you want to fix?



What Can You Build with No-Code?

No-code can provide solutions for a variety of wide-ranging problems. Whether it's about optimizing and/or automating existing processes, or building new innovative applications that can drive your business forward. The way you deploy them is completely up to you. So what, for instance, can you build with them?

No-code platforms are especially useful for creating the following types of applications:

Back-office applications

A back office application is the backbone of an organization's internal operations. This application type is purely for use by employees and will be your primary data management and administration tool.

A no-code platform uses pre-built back office modules to get the business up and running as soon as possible. This means that users have access to all the key features they need, right out-of-the-box.

Web applications

A web application is the face of your organization. It consists of 2 parts: a front end visual interface and a back end. Customers will always interact with the visual interface. What they see is simply an interpretation of your back end

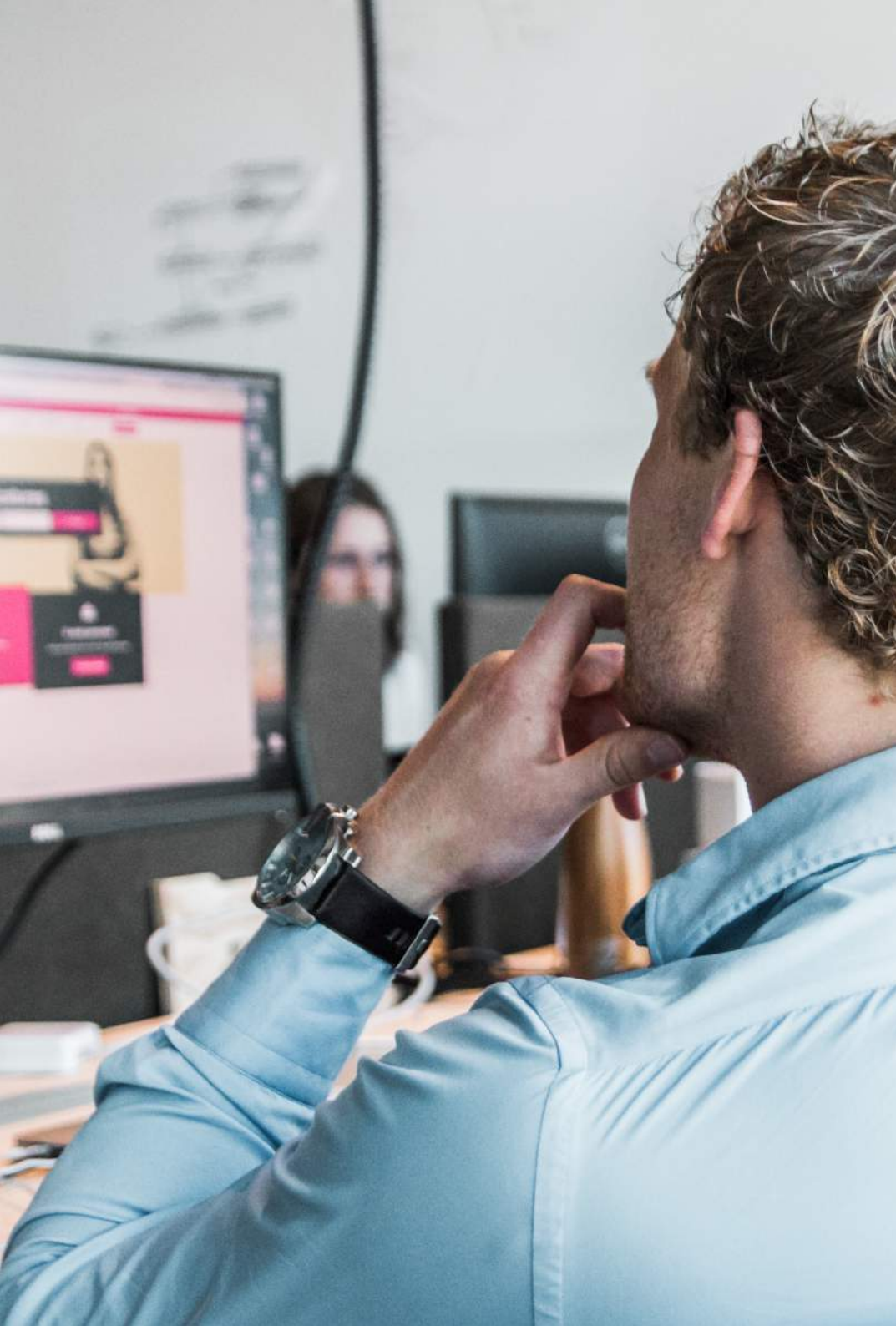
system. What you have then are two modules that feed data between each other to maintain, monitor and administer data seamlessly.

You want to create an online space which represents your brand, service, and product effectively. No-code is especially powerful here thanks to the pre-built connections between modules, allowing you to focus on your service and identity.

Mobile applications

Mobile applications have become more than just a convenience. They can be essential for a business as they enable users to monitor and influence their work even when they are out of office. A successful mobile application needs to deliver everything a web application can while on the move. No-code platforms enable multi-device development. This means that, while you're building a web application, the mobile application is instantly created.





Business Applications for No-Code and Citizen Development

Because of their flexibility, you can build a wide variety of applications with a no-code platform that can replace workflows that now run in Microsoft Excel and Access. The platform allows you to optimize, automate and innovate specific processes in multiple branches of your business.

Need some inspiration? Here are some more specific examples of areas where no-code platforms have proven to be a great solution.

Account management, declarations and billing

Processing invoices is a routine activity that every company has to deal with. When you need to manage hundreds or thousands of invoices a month, a good back end solution is indispensable. A no-code strategy allows you to automate these processes through a web portal, saving you loads of time.

CRM systems

A solid Customer Relations Management system is key if you're in the business of networking. To connect the right institutions to the right individuals, you need to keep the lines between them short and clear. With no-code, you can build special applications that create a great overview of your network and work processes.

Data management

Service companies require sophisticated forms of data management that enable them to respond more quickly to market changes and trends. An effective management system of customer preferences and information, allows companies to neatly tailor information and products to their customer's needs.

Payments and subscriptions

For businesses that revolve around responding to emerging trends and linking them to products and services, it is useful to have a supporting application that automates routine tasks. This way you can focus on exploring new markets and making your product or service offering more interesting. A no-code platform you can help keep track of subscriptions, create address stickers and administer payments.

[\(See our case study of Beer in a Box\)](#)

Automating analogue processes

A no-code platform allows you to build applications that transform previously analogue processes into automated online solutions. This is ideal for digitally streamlining existing workflows by getting rid of manual bulk activities. Thanks to the application, issues such as requests, checks, inspections and reports can be processed much faster.

[\(See our case study of Waterschap Zuiderzeeland\)](#)

APIs and web extensions

If you have an existing system that needs to be integrated with new functionalities, a no-code platform is the right choice. The software makes it possible to link multiple systems (through interfacing) and enables the seamless integration of API's and web services that extend the functional scope of your overall system.



Why Your Business Needs No-Code Now

Today, software development is everyone's business — whether or not your company is in the tech industry. The need for software is explosive, between internal applications that support the smooth functioning of the business and customer-facing applications in an increasingly competitive market where the customer experience is constantly evolving. The organizations who don't keep up with digitization are the ones who fall behind.

So how do you stay alive? You turn everyone (or at least a larger part of your organization) into a software developer. By having more people participate in the software development process, you reduce the backlog of your existing IT team while also empowering your business users. Instead of being fully reliant on IT, empowered users of a no-code platform — the Citizen Developers — can speed up innovation by kickstarting applications themselves.

To prevent the risk of shadow IT, your no-code platform is supported and governed by your central IT department. Not only does it facilitate the business in a safe and secure way, it also allows for your IT team to become more involved with the corporate side of things, resulting in better alignment between business and IT.

With innovation increasingly takes place in the digital realm, the implementation of a no-code platform makes sure that your IT department no longer represents a bottleneck that slows down the innovation potential of your workforce. A survey by global research firm Forrester revealed that 23% of global developers already used low-code platforms in 2018, and another 22% planned to do so within the next year (The Forrester Wave™: Low-Code Development Platforms For AD&D [Application Development & Delivery] Professionals, Q1 2019).



No-Code in Action:

Case Studies

So you've heard us preach about the incredible potential of low-code and no-code platforms for your business, and now you want to see some proof. Luckily, there are already many businesses out there who have implemented a no-code strategy and noticed its effects on their work processes.

Here are a few examples.



Univé

Insurance company cuts down time-to-market with 75%

In line with their new business proposition, insurance company Univé set out to offer customers a set of new preventative services. That is, to become the kind of insurance company that firstly focuses on preventing risk and limiting damage and secondly making sure the remaining damage is covered. By reducing the number of claims filed, the business would save millions each year.

Univé's Innovation Lab needed to be able to develop solutions themselves fast and flexibly, and maintain them within their own team. If they could build prototypes at low cost to measure and validate customer behavior, they could put their ideas into action and challenge expectations of what insurance companies are capable of.

“The speed of building and how little money we spend on building the system is what really draws people in. Experiments take months, but building takes days.”



Bas Wit, Innovation Manager at Unive



Armed with a no-code platform, the Innovation Lab wasn't just able to test intentions, as with normal mockups or prototypes: they could actually measure customer behavior by piloting a working application to validate that their members were willing to pay for these kinds of services. This allowed the Innovation Lab to demonstrate value and generate buy-in among stakeholders.

By using a system of smaller applications and API integrations, the platform reduced the need for separate systems licenses for CRMs and payment management systems. As a result, the Innovation Lab was able to develop, test, and launch new services for Univé customers. This not only gives them a competitive edge in the industry, but has created a unique space within the company to put an innovative mindset at the forefront.

With the adoption of a no-code strategy, Univé has brought typical time-to-market of new applications down from 12 to 2.5 months, speeding development by 75% — but more importantly, they've found a way to quantify innovation. And in doing so, they're turning insurance into a service that improves people's lives.

Beer in a Box

*A man and his mission to stir up
the online experience of buying craft beer*



Beer in a Box is your typical startup and do-it-yourself success story. A man on a mission using the tools at hand to get what he needs, no matter what. Marketer turned entrepreneur Tim Remmerswaal had the idea for a subscription model supplier of craft beers. What has set Beer in a Box apart from other vendors is their capacity to deliver new beers catered exactly to their customers' tastes.

Through data, Beer in a Box knows exactly what you like. Every month you get a personalized box with 12 special beers. How they did it? Their back office is built on a no-code platform. With an easy-to-use visual interface combined and a 'click and go' philosophy, Remmerswaal was able to quickly deploy and adapt his software system:

"The system was perfect for someone who isn't a traditional developer but has certain process knowledge and the ability to put them together," says Remmerswaal. "The no-code platform allowed me to build an application within hours. It helps me keep track of our subscriptions, retrieves and stores customer profiles, and automates the financial administration of the company."



Zuiderzeeland Regional Water Authority

Water Authority uses no-code to roll out, test and deploy creative solutions of their workforce



The Zuiderzeeland Regional Water Authority protects the Netherlands from flooding and drought, and ensures proper waste water treatment. It recently introduced an Innovation Lab in which they experiment with new information technologies. The Innovation Lab gives employers the possibility to submit a new idea, which Zuiderzeeland Regional Water Authority will then try in real life.

According to Leslie Postema, project manager of his own innovation team: “Users of the application where pleased they could submit their input continuously during the development process. The application works seamlessly within our daily tasks. Because we were able to think along during the whole process, the application is tailored to our needs.”

Postema was one of the first whose idea was put to the test. He managed to execute the plan of digitizing parts of the processes. Within a month the Proof of Concept for his idea was ready and well received by the users.

“The whole innovation team is aligned spot on. Users of the application where pleased they could submit their input continuously during the development process.”



Leslie Postma, Project Manager
at Waterschap Zuiderzeeland

A no-code platform provided Zuiderzeeland Regional Water Authority with a web application in which employers could submit their measuring data in an easy and effective way. This resulted in less paperwork, more efficient walking routes, less errors and real-time insight in the measuring data.

Recap: The huuuge advantages of no-code and Citizen Development



We'll leave you with the 4 biggest areas in which a no-code platform can change your ways of doing business for the better.

1. Align business and IT

Benefit from the knowledge of your entire workforce to meet the needs of your business. Because Citizen Developers are working throughout various departments in your business, they know exactly what they need to do to improve processes, reduce inefficiencies and increase productivity.

2. Accelerate innovation

Citizen Developers can unburden IT as a no-code platform empowers them to prototype their own software solutions. This minimizes the time between identifying the need for a new application and its actual completion date by months. Plus, giving your Citizen Developers the tools to take application development into their own hands motivates them to think of creative solutions. By sparking the creativity of your workforce, a mindset of continuous innovation is put in place that can help drive your business (and employees) forward.

3. Continuous process and employee improvement

Whenever something needs to get fixed or there is room for improvement, Citizen Developers can instantly work towards a solution. Instead of being dependent on IT professionals, the ease-of-use of a no-code platform allows them to pro-actively and continuously work on enhancing efficiency.

4. Diminish the risk of shadow IT

Shadow IT is the risk you run by not monitoring development activity outside of IT departments. Employees might set up their own servers, or store sensitive company data on their personal cloud accounts. Citizen Development prevents this runaway software from becoming a mess as all its activities are governed by your central IT department.

About Betty Blocks

As the world's leading no-code platform, Betty Blocks empowers both enterprises and Citizen Developers to build complex applications efficiently and effectively without writing a single line of code. With its focus on people, Betty Blocks empowers organizations to work towards the right solution and enable the workforce to take control of their innovations. Cloud-based Betty Blocks is available worldwide. The company has offices in the Netherlands, Belgium, Germany, US, Mexico, UK, Japan, and South Africa.

Visit us at www.bettyblocks.com and follow us on [Twitter](#) and [LinkedIn](#).



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Greetings from the team!

By now you know why no-code is the way to go

Want to find out more about the Betty Blocks no-code platform and how it suits your business case? Discover our feature videos and platform demo right here.



[Request a demo](#)