

# Meet Your Citizen Developer

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# Abstract

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According to Forrester, a leading global research and advisory firm, in the U.S. alone there will be a deficit of 500,000 developers by 2024 (How To Harness Citizen Developers To Expand Your AD&D Capacity, Forrester Research, Inc., April 19, 2017).

Across all industries and global markets, the demand for software is skyrocketing higher and faster than traditional Java or .NET developers can keep up with. IT departments can only manage to maintain the basic necessities of enterprise organizations to keep the ship running smoothly, leaving sales, customer service, marketing, and field operations departments behind with their needs unmet.

Here's some good news--there's a solution. No-code platforms open the door to a new kind of developer. There is a significant population of untapped potential in the workforce, and no-code can help bridge the gap between software needs and manpower--and align business needs with IT strategy and implementation in the process.

# Meet Your Citizen Developer



Who are these unsung heroes? They're called Citizen Developers, and now is the time to let them rise to the challenge.

[The Citizen Developer](#) is a user who builds applications to facilitate the processes of business operations while following the development guidelines of IT. Unlike a professional developer, they may not have formal training in programming, and developing may not be part of their actual job description. They think of creative ideas

to improve areas of business such as customer relationship management, internal operations and product development.

But citizen developers need a platform. Not only does a no-code platform give citizen developers the resource they need to build applications and innovate within the organization, but a unified system is also crucial to ensure that all activities are sanctioned by IT. Citizen Developers use the platform to build and deploy applications, while IT and other stakeholders can easily share information, projects, and see an overview of the work.

Betty Blocks is a cloud-based platform where users build applications using a drag-and-drop interface, with no coding needed whatsoever. It is the first no-code platform to be ISO27001 certified, making it optimally secure and well-suited to enterprise organizations. Because it is entirely in the cloud, IT departments can easily monitor all applications from a single controlled environment.

Because of the platform's ease of use (yet powerful capabilities), it is now possible for citizen developers to rise from the shadows and be the force organizations need to drive digital transformations forward, and alleviate the burden on IT departments that are stretched too thin.

So how do you find them?

# Citizen Developer Profiles

The term citizen developer is not just a buzzword, and as such, there can be quite a degree of nuance as to who can be considered a citizen developer. Based on interviews with 25 leading IT companies, Forrester Research, Inc. identifies 3 profiles of citizen developers (Figure 1; How To Harness Citizen Developers To Expand Your AD&D Capacity, Forrester Research, Inc., April 19, 2017).

## Line of business developers

Line-of-business (LOB) developers have likely had some previous application development experience, although their expertise is the processes of business operations. LOB developers may even already be partnering with IT to deliver solutions, even though they are embedded in another department that focuses on business operations rather than IT.

## Business developers

Business developers are business experts first and developers second. They work on apps part-time, maybe even in their spare time, to fill a need for additional IT solutions within their team, or to move business forward. Business developers are motivated by the challenge of technical problems, and likely have some background in technology--for example, they may have taken programming classes during their studies.

## Citizen Developers

	Line-of-business (LOB) developer	Business developer	Power user
Definition	Pro dev who delivers admin and analysis use cases	Business pro who delivers admin and analysis use cases	Business pro who delivers personal and team apps
Developer status	Full-time	Part-time	Part-time
Title	Administrator/developer	VP to individual contributors	Individual contributor, team lead
Reports to	Division director	Operations leader	Department, team leader
Technical background	Process, data analysis tools; some coding	Process, data analysis tools	Personal tools, some coding
Developer career path	Rapid developer	LOB developer	Business developer
Motivation	Deliver to LOB's app strategy	Fill underserved apps needs	Improve own, team's work

Figure 1; How To Harness Citizen Developers To Expand Your AD&D Capacity, Forrester Research, Inc., April 19, 2017

## Power users

Power users are also part-time developers, but who build apps for their own use in order to streamline tasks--think of someone who always pushes the use of spreadsheets or databases to improve the flow of office work. They may create applications as tools to help their teams become more organized or faster, but mostly work on personal apps.

With each of these profiles comes a unique set of skills that can benefit your organization in ways that perhaps traditional developers cannot. One benefit of being able to employ them in a citizen developer capacity is that your organization can be infused with new and fresh perspectives, which promote innovation. In other words, citizen developers have a lot to offer by bringing to the table the benefits and successes of other disciplines.

Citizen developers have an aptitude to use tools to their advantage to find solutions but don't need intensive training. Further, because many are digital natives who grew up with and understand the value of software, they are open to learning and implementing new tools that increase productivity and assist their workflow.





# Put Them to Work

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The citizen developer takes over an aspect of development to help organizations expand their innovative capabilities by enabling the organization to better align business and IT. In this role, the citizen developer builds applications based on the business needs and in collaboration with IT.

When IT is short-staffed and preoccupied with keeping the lights on, citizen developers can further reduce IT's backlog by building less-critical applications that require the bare-minimum of IT governance. The time to delivery is shortened with a larger development team and more so with the power user building applications faster without coding. With Betty Blocks, citizen developers can deliver applications within weeks, or even days, instead of months.

# What Can Citizen Developers Help You Build?

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Of course, it may feel uncomfortable to hand the keys over to an unknown driver. Business leaders may fear that citizen developers don't know enough to develop applications that add business value—or worse, that they know just enough to create a mess that the IT department will then have to clean up.

**Administrative and reporting applications are so far below the radar of IT in terms of backlog, that without citizen developers to step in they would never make it to production.**

And yes, these are valid risks if strategic steps are not taken to strategize. Implementing citizen developers within your organization requires planning, structure, and organization, and later we will outline the specific needs an organization must provide in terms of training and support.

The development of administrative and reporting apps, for example, is one area where citizen developers can be of greatest use within enterprise organizations. These are applications that currently run on spreadsheets or database tools, and also include data-tracking and workflow or administrative apps. Moving them to a shared no-code platform allows IT to control all of these applications, rather than having dozens of unsynchronized, unmonitored applications floating around in every department.

Administrative and reporting applications are so far below the radar of IT in terms of backlog, that without citizen developers to step in they would never make it to production. But because of the ease of use of no-code platforms, which are still capable of sophisticated outputs, business experts can pick up part of the burden from IT.

In this way, no-code platforms actually empower both business people (that is, citizen developers) and IT professionals. **Citizen developers gain the tools they need to influence innovation from within, while IT leadership gains access to oversee all of the applications running throughout the organization.**

With this approach, instead of focusing on carrying out one large digital transformation project, you can begin to make changes on a small scale. This allows for innovation to take place little by little, improving processes one by one until the entire organization reaches a tipping point over the threshold of digital transformation.

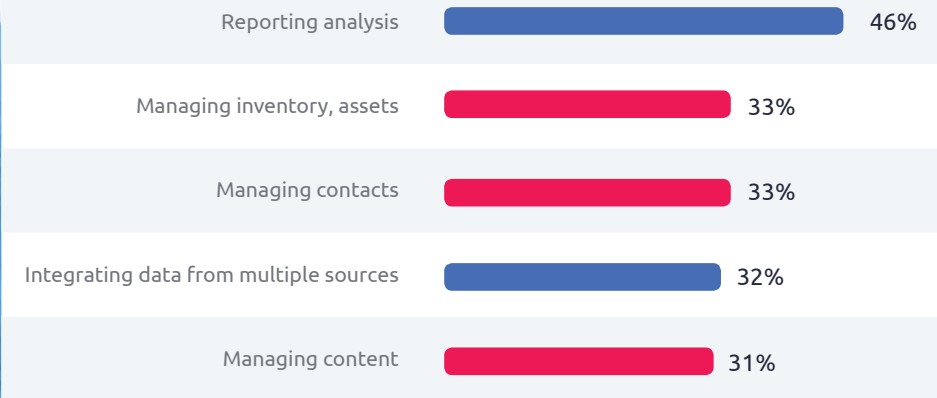


# Invest in the Future Success of Your Organization

In a survey of 350 non-professional developers, Forrester research found that a significant portion of employees were already contributing to custom application delivery, even when not considered to be IT professionals (Figure 2; How To Harness Citizen Developers To Expand Your AD&D Capacity, Forrester Research, Inc., April 19, 2017.).

With a no-code platform and support from IT, however, this is not all citizen developers are capable of. As citizen developers are empowered and supported, their development skill will increase and they will ultimately be able to contribute applications that have higher business value and require greater development skill. **The message is clear: an investment in citizen development is an investment of the future success of your organization.**

## Popular citizen developer use cases



● Reporting, analyses      ● Administrative apps

Respondents: Worked in orgs of >5 employees, created, contributed to custom app delivery, did not classify themselves as IT pros, were not full-time app developers.

Source: FileMaker 2017 Stage of the Custom App Report, N = 350

Figure 2;How To Harness Citizen Developers To Expand Your AD&D Capacity, Forrester Research, Inc., April 19, 2017

# But What About Shadow IT?

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To set the record straight, citizen developers should not replace IT. Nor should they contribute to the problem of “shadow IT”, the presence of applications running throughout an organization that are outside of the control of the IT department. The role of citizen developers is meant to lessen the burden on IT department backlogs so that IT can maintain focus on larger, more complicated projects.

Indeed, precautions must be taken so that the presence of citizen development does not create a shadow IT situation. Dangers include increased security risks, lack of modernization, standardization, and slow implementation, lack of internal support, and software upgrades that damage other areas of the organization’s IT infrastructure, to name a few.

These pitfalls can be avoided with a secure and centralized platform like Betty Blocks that is ISO27001 certified and which can also be fully monitored by IT. Here are some additional tips that will ensure a citizen developer initiative does not result in the creation of shadow IT.

## **Training and mentoring**

Citizen developers are already technologically savvy and self-motivated learners by nature. It’s what makes them citizen developers in the first place. But that doesn’t mean that they don’t need guidance.

Training and mentoring can help citizen developers gain new skill sets, more confidence, and learn new working techniques. The more professional development and guidance

you can afford your citizen developers, the better equipped they will be to align with IT’s expertise and the goals of the organization.

## **Collaboration (and governance) from IT**

IT departments can actively collaborate with citizen developers by delegating administrative and reporting apps, for example. IT departments should also generally be actively involved in overseeing citizen developer projects to eliminate the risk of shadow IT and too many unmonitored applications running throughout the organization. While this promotes security and control, citizen developers can also learn from IT by working on projects led by traditional developers.

## **Continued support**

In order for a citizen development program to live up to its full potential, CIOs and IT managers need to promote the movement throughout the entire organization. This ensures that the culture of the organization as a whole is supportive of the citizen developer movement.

Continued support on the organization level is essential because there is no endpoint to innovation. A successful citizen development strategy leaves room for continued adaptation and improvement. Citizen development lets even large enterprise organization be more flexible and agile. As long as IT governance is both strong and adaptive, organizations can quickly adapt to any changes that come their way and respond to new opportunities for growth.

# Are You Ready?

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Another important consideration is the readiness of the organization as a whole to accept and implement a citizen development initiative. It is tempting to think that a no-code platform could be a one-stop solution for all things digital transformation, but that is simply not the case. According to Betty Blocks CEO Chris Obdam, “It is really important to note that you do not solve this with a platform alone. That’s what people tend to think, just get a low-code or no-code platform, get up and running, and that’s it. But there needs to be a very big organizational change--and a strategy-- as well.”

## **You understand the need for innovation**

As a leader in your company, you are well-aware of how your industry is changing. You know about digital transformation and you may have already taken steps to achieve some success with digital tools. You know you can no longer afford to sit back and maintain the status quo with customers. Otherwise, your competitors will reach them first.

While you’re aware of the need to innovate, the obstacle comes when you want to implement change in your organization. You may be unsure what tool would best help your organization through the process of innovating. You’re hearing a lot of buzzwords like citizen development but can’t see a connection with your organization. As a result, you check what your competitors are doing, what tools are available, even seek out content that supports you in this endeavor. What’s important now is to bring your team on board with your planning.

## **You have started to make an organizational change**

You have been relying on your IT department to create new applications that would innovate your business. But, they’re busy keeping the lights on and as a result, innovation stagnates. With your understanding of the need to innovate, you have met with your IT team to discuss the possibilities with adopting citizen development. It may not be easy to convince your traditional developers at first, but the important piece of the puzzle is that no-code and citizen development won’t replace IT and instead support their efforts to innovate.

If IT is on board, you may have already introduced a designated innovation team or even a few citizen developers in coordination with IT. These teams combined will be the engine of your digital transformation and it’s necessary that you turn on the ignition. If your team is equipped with the right tools, they can begin turning ideas into solutions immediately.

## **You have innovative ideas but lack resources**

So you know your organization needs to innovate and you’re starting to shift the company mindset. While you have your plan to transform your business, you may be lacking the developers you need to reach your goals. Your organization’s search to hire more developers may encounter difficulties because after all, there’s a lack of developers available in the workforce. Luckily, there may be an easier way to gain the same value. With citizen developers, you can find your innovative team among a much broader workforce and equip them with a no-code platform to quickly and easily build solutions.

# The Future of Citizen Development

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In today's digital age, the workplace and workforce are both undergoing significant shifts in terms of needs and composition. It is no longer sustainable for organizations to rely on spreadsheets and other quick and dirty stopgap measures counter to innovation, because in the end, these types of solutions only set the organization further back.

Further, employees do not want to be reliant on IT anymore. They feel capable of not only recognizing the need for innovative software solutions to facilitate their work, but of taking a hand in developing these solutions themselves.

**More employees want to be a driving force for the company, and to initiate action themselves.**

This is why the future of citizen development is inextricably linked with the future of no-code application development. **Change agents need an instrument of change, after all.**

No-code app development platforms give citizen developers the tools they need to get the movement towards innovation started.

Because many citizen developers are intrinsically motivated in the direction of change and innovation, an important matter to note is that they will likely seek out solutions with or without your help. As the pressure for innovative solutions increases, organizations risk runaway applications and ungoverned citizen developers. This may result in non-approved servers and other insecure means of storage, which IT will then have to clean up in addition to their growing backlog.

Some experts predict two paths forward for the no-code market. One such direction is the empowerment of business people to have a greater role in IT. In order for businesses to undergo complete digital transformation, and reap the full benefits, more business minds need to be in leadership roles within IT—for example, by acting as citizen developers to contribute business applications.

On the other side of the coin, IT can also be more involved in business. A second line of developments in the no-code market geared toward traditional developers rather than citizen developers facilitates this as well. The emphasis here is on the speed with which traditional developers can deliver prototypes for business cases.

In either case, there is a need for collaboration between business initiatives and developers. **The solution to misalignment between business and IT is to integrate more business within IT, and more IT within business.** No-code platforms allow for this type of collaboration to be possible, facilitating innovation.

# Innovation in the Hands of People, Not Systems: Software Becomes Everyone's Business

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Technology is not separate from the human experience, but rather builds directly into it. Social media, smartphones and the like have so easily become integrated in (and even overrun) our daily lives because they build on natural human tendencies. They merely amplify the potential of humans to communicate, connect and form networks.

No-code platforms similarly amplify the existing potential of humans to innovate by enabling the citizen developer. The power of no-code is that it will allow us to capitalize on human potential to solve problems and transform organizations, because it removes programming as a barrier to developing solutions. It democratizes software, which is necessary in an era when software is everyone's business.

Humans are the force behind innovation, and as such systems should never be a barrier. When armed with a no-code platform and supported by the organization and IT, citizen developers are empowered to close the gap between business and IT and move your organization forward.

Want to see firsthand how Betty Blocks can give your citizen developers the keys to drive innovation? Sign up for a free [demo!](#)



# About Betty Blocks

Betty Blocks is the leading no-code application development [platform](#) in the world. As the only, truly no-code platform based in the cloud, Betty Blocks enables you to build complex, enterprise-grade applications efficiently and effectively. With the focus on the people, Betty Blocks' no-code platform empowers any organization to experiment towards the right solution and take control of their digital transformation.

With an annual growth of 210% in 2017, Betty Blocks has reached triple digits each quarter. The winner of the [Holland Business Award](#) and the first ever no-code platform to have obtained the [ISO 27001](#) certification, Betty Blocks is validating its platform in the areas of security and customer satisfaction. As rapid as Betty Blocks makes application development, they are rapidly expanding internationally. They currently have offices in the Netherlands, Germany, US, UK, Japan and South Africa.



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Greetings from the team!