QualityClouds

Citizen Development White Paper

2024

Citizen Development is Here Here's How To Make It Work In Your Organisation

'By 2025, 70% of new applications developed by enterprises will use low code or no code technologies'.

Decentralization of technology is taking place across the business, but organizations still need to manage the change. It's the classic organizational struggle; the business demands fast transfor- mation, IT needs to maintain control and visibility.

In this whitepaper, we take a look at what citizen development is, why it works, how to avoid the pitfalls and strategies to help you implement it in your organization.

The Rise oF Low-Code Apps: What are the benefits and how to avoid the pitfalls

Controlling Citizen Development

• Best Practices

• Establish Regular Communication Channels

• Shift Left

The Future: Faster Low-Code, But Maintain Quality

The rise in citizen development has been precipitated by the rise of IT sanctioned low-code/no-code platforms such as ServiceNow and Salesforce to create business applications. The rise in post–pandemic distributed development, shortage of skilled and qualified programmers, and pres- sures of big business innovations in the 'new age' technological paradigm means outputs are now struggling to keep pace with ideas. Platforms such as ServiceNow and Salesforce are increasingly acting as development platforms - thus giving rise in the demand for citizen developers.

The Rise of Low Code Apps:
ServiceNow and Salesforce

The sustained increase in remote work post-pandemic has given opportunity to make changes - enabling teams to work from home collaboratively. According to Gartner, by the end of 2023, 39% of the world's 'knowledge' workers were hybrid focused. Traditional methods of delivery, technological advancements and two-way empowerment of developers is on the rise - therefore changing the nature of software development, moving away from '9-5' mindset towards more discreet, autonomous pieces of independent work that delivers value.

Low-code apps bring two-way trust between managers and developers, as well as between architects and citizen developers, to deliver these objectives. These apps enable you to work from anywhere - as the browser acts as your own development platform.

"I want to build out our citizen development process but do not want to sacrifice quality." - ServiceNow Client

What are the benefits and how can you avoid the pitfalls?

So where do low-code platforms come into play? We continue to see with our customers that, through leveraging low-code capabilities such as ServiceNow App Engine Studio or Flows and Omnistudio on Salesforce, that non-tech business professionals can now build powerful applications and workflows at scale and at speed. These platforms are designed in such a way where IT can focus on architecture and coding, whilst citizen developers can implement configuration based changes to deliver solutions quicker. This seems fine at first glance, but how do teams build out citizen development processes without sacrificing quality?

What are the benefits and how can you avoid the pitFalls?
For CTOs or Chief Digital Officers looking to drive transformation, the arrival of citizen developers is a potential game-changer. Now, anyone can solve a customer or departmental problem with a new app without having to wait for the gatekeepers in IT to develop the solution. The benefits that citizen development can bring to the organization include:

- **Development speed**

The challenge for many organizations is keeping up with the pace of change, including demands from external and internal users. Giving some of the development responsibility to the business, rather than the IT department, should improve the rate of change at which new ideas can be implemented.

- **Business Focus**

Citizen developers come from the non-IT sections of the business. Their focus is likely on users' needs, whether they are clients or internal teams. Citizen developers also tend to be on the frontline of the business, meaning their thought processes are often led by commercial logic. Like their counterparts in IT, they are problem solvers who confront inefficient processes and investigate more effective ways to achieve their results.

- **Cost-effective**

IT teams have to keep the show on the road and manage change. They are often over- whelmed with requests for apps, whilst also needing to maintain security and the fundamental systems that run the organization. Citizen Developer programs can also increase the technical understanding of the broader organization. This frees up the IT team to do more complicated work, making better use of resources.

What are the benefits and how can you avoid the pitfalls?

Increase productivity

Low-code/no-code platforms make it easier and quicker for teams to produce their own apps, which increases productivity. It also makes it easier to make changes as the system evolves. However, some of the pitfalls of citizen development include:

Keeping up with change

The pace of change can be hard for citizen developers to follow. Constant updates to applications and programs require ongoing training, which starts to impinge on the citizen developers' day jobs.

Quality issues

Poor quality can make an app difficult to run or have an impact on other systems in the business. Companies that add applications and workflows using low-code/no- code with non-existent control processes are leaving themselves open to high maintenance costs, as each vendor has their very own best practices.

Cost-effective

An organization may need IT professionals to oversee a citizen developer's work, reducing their cost-effectiveness. It's no good having an app developed by a non-tech person if it significantly increases the technical debt on the platform. For that reason, it may continue to be necessary for the IT team to develop and test a final product to ensure its quality and functionality.

Security Awareness

Citizen developers do not have the grounding in cybersecurity of their counterparts in the IT department. They might not understand the implications of duplicating code or decide to use an open-source library against internal rules. Accidentally leaving gaps or open access to the platform is one of the biggest issues a citizen developer can cause the IT department.

Controlling Citizen Development

When talking to our clients and analyzing our data, it's clear that there is an appetite for accelerating citizen development. The question we are continually asked is how we do this while maintaining the same level of control, quality, and governance they are familiar with in their code- based development on their SaaS infrastructure.

Best Practices
Give your citizen developers standards to follow for optimal platform quality and gradually introduce them to improve those standards. These standards should be focused on the features a citizen developer builds with. For example, define best practices that help them learn to design and implement Flows that are usable, performant, and maintainable over time.

Establish Regular Communication Channels
Working with citizen developers will benefit both IT and individuals. ServiceNow and Salesforce have given teams the tools; IT should roll out those tools within teams of citizen developers, focusing on communication, training, and standards.

ShiFt-LeFt
The rise in the 'shift-left' mindset may be instilled within product, testing and development teams, but it is generally still an immature concept in citizen development. An IT professional would understand why developing in production is a bad idea - but an inexperienced citizen developer may be unaware of the associated risks.

Future: Faster, Low-Code but Maintain Quality

What does the Future look like For citizen development?

Citizen development has arrived and is here to stay. It will continue to expand across the organization driven by a desire for rapid change to meet users' needs.
It is an immensely important part of modern platform development. Therefore, it falls on IT to make sure internal procedures and tools are in place to monitor and govern the process. This will ensure the platform remains secure and under control. Working together as a Community of Practice, IT and citizen developers can greatly increase platform development while not compromising on quality.

However, the market is still immature, so to be successful, organizations must strike a balance between speed and suitability, between relieving the IT department of work and adding to it, and between rapid development and professional, secure oversight.

In the future, we will see low-code/no-code becoming standard practice for fast application development.

Organizations need to understand citizen development if they are to be successful over the coming decade. While it is a marked shift for many businesses, it can enable innovation, improve productivity, and lead to growth when implemented successfully.
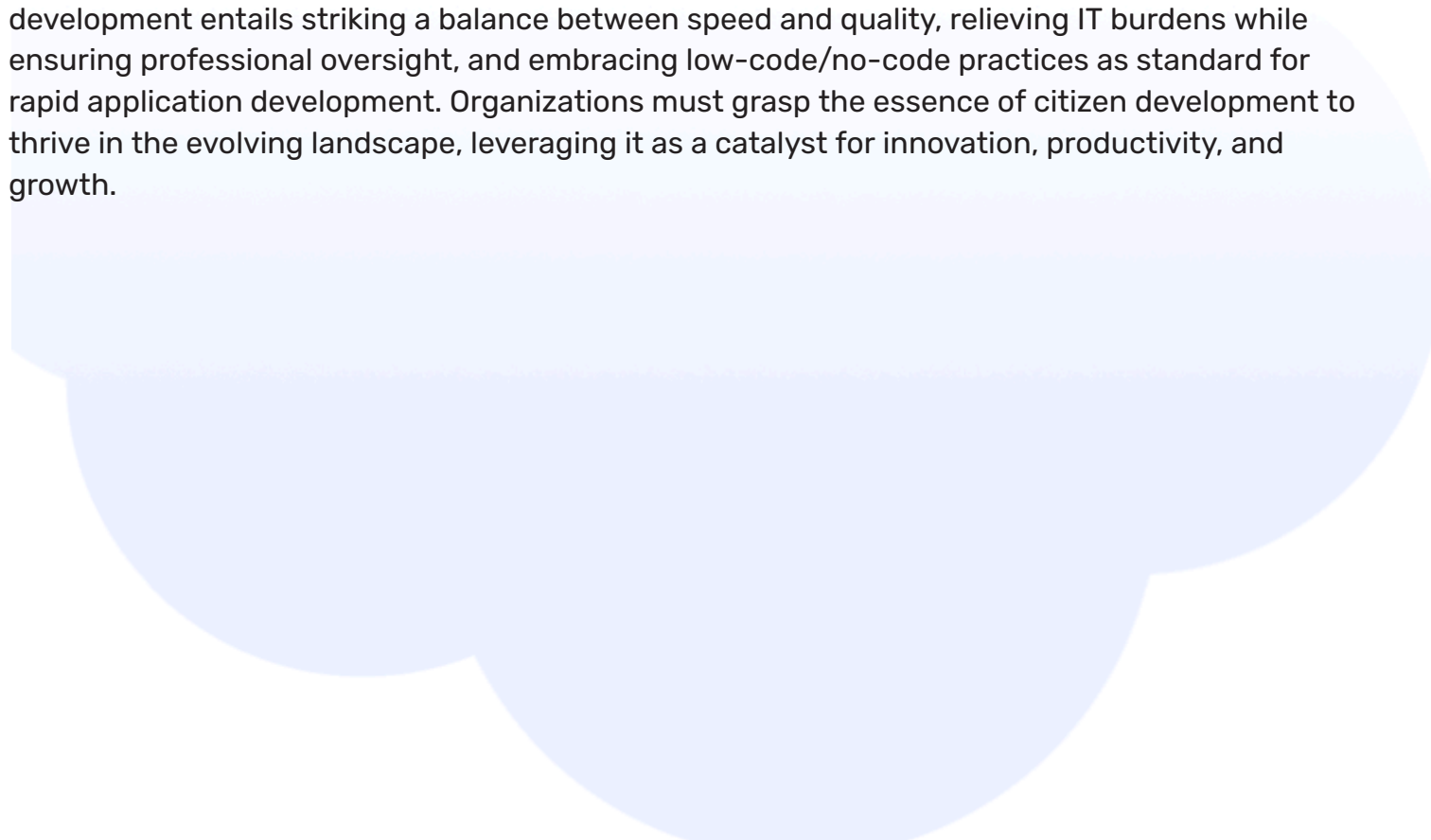
80% of organizations consider citizen developers to be extremely critical for their success.

In Summary

The report explored the burgeoning trend of citizen development, propelled by the increasing prevalence of low-code and no-code platforms like ServiceNow and Salesforce. These platforms empower non-technical professionals to create applications and workflows, addressing the growing demand for rapid innovation amidst the distributed work environment post-pandemic. While these developments promise faster deployment and greater autonomy, they also introduce challenges in maintaining quality and security, as citizen developers may lack expertise in these areas.

Benefits of citizen development include accelerated development speed, enhanced business focus, cost-effectiveness, and increased productivity. However, pitfalls such as difficulty in keeping up with technological changes, quality issues, cost-effectiveness concerns, and security risks must be addressed. Strategies to control and optimize citizen development involve establishing standards, fostering regular communication channels, and implementing a "shift-left" mindset
to mitigate risks associated with inexperienced developers. Looking ahead, the future of citizen development entails striking a balance between speed and quality, relieving IT burdens while ensuring professional oversight, and embracing low-code/no-code practices as standard for rapid application development. Organizations must grasp the essence of citizen development to thrive in the evolving landscape, leveraging it as a catalyst for innovation, productivity, and growth.

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