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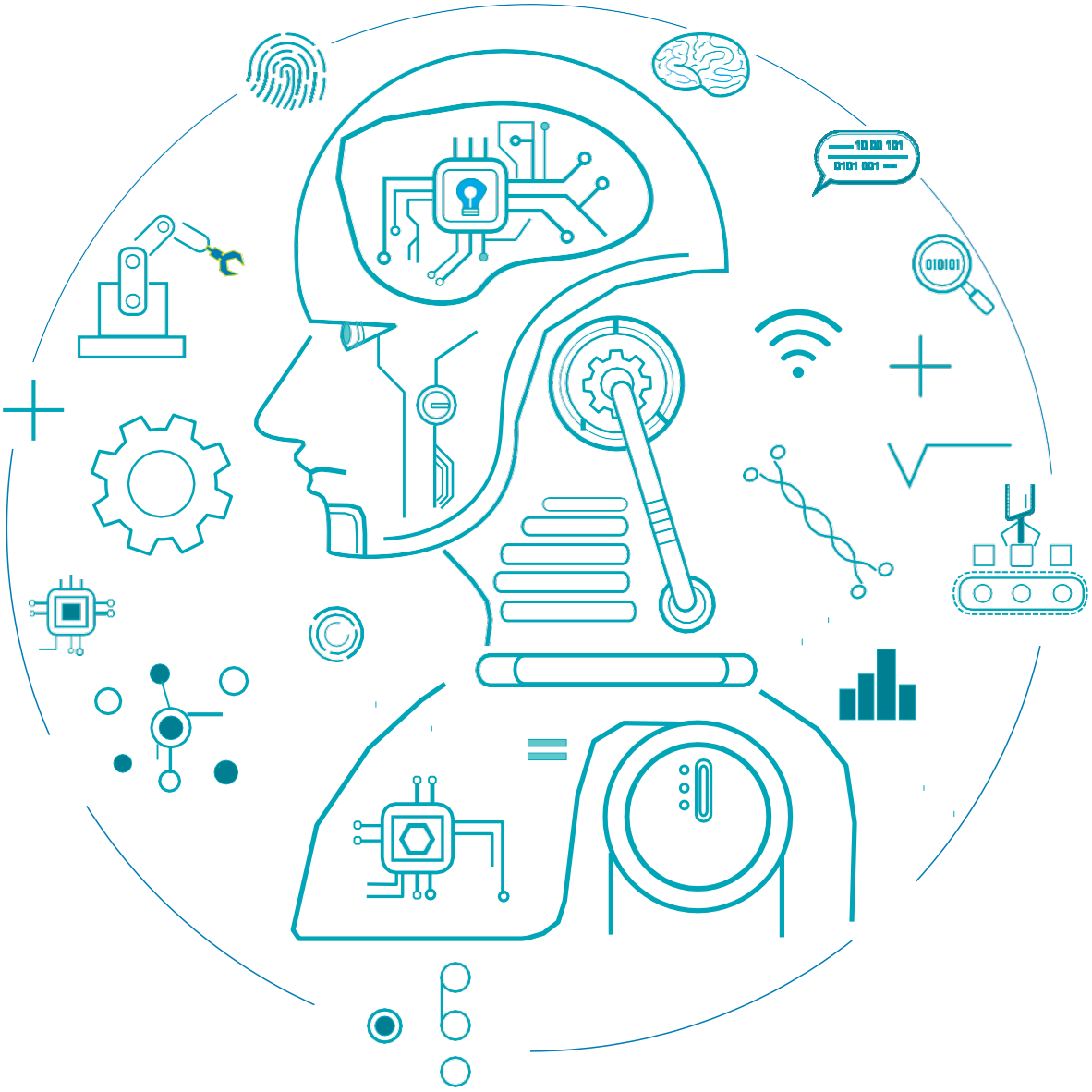


Are you ready for automation democratization?

The role of Citizen-driven development as part of an organization's set of Enterprise Automation Delivery Capabilities

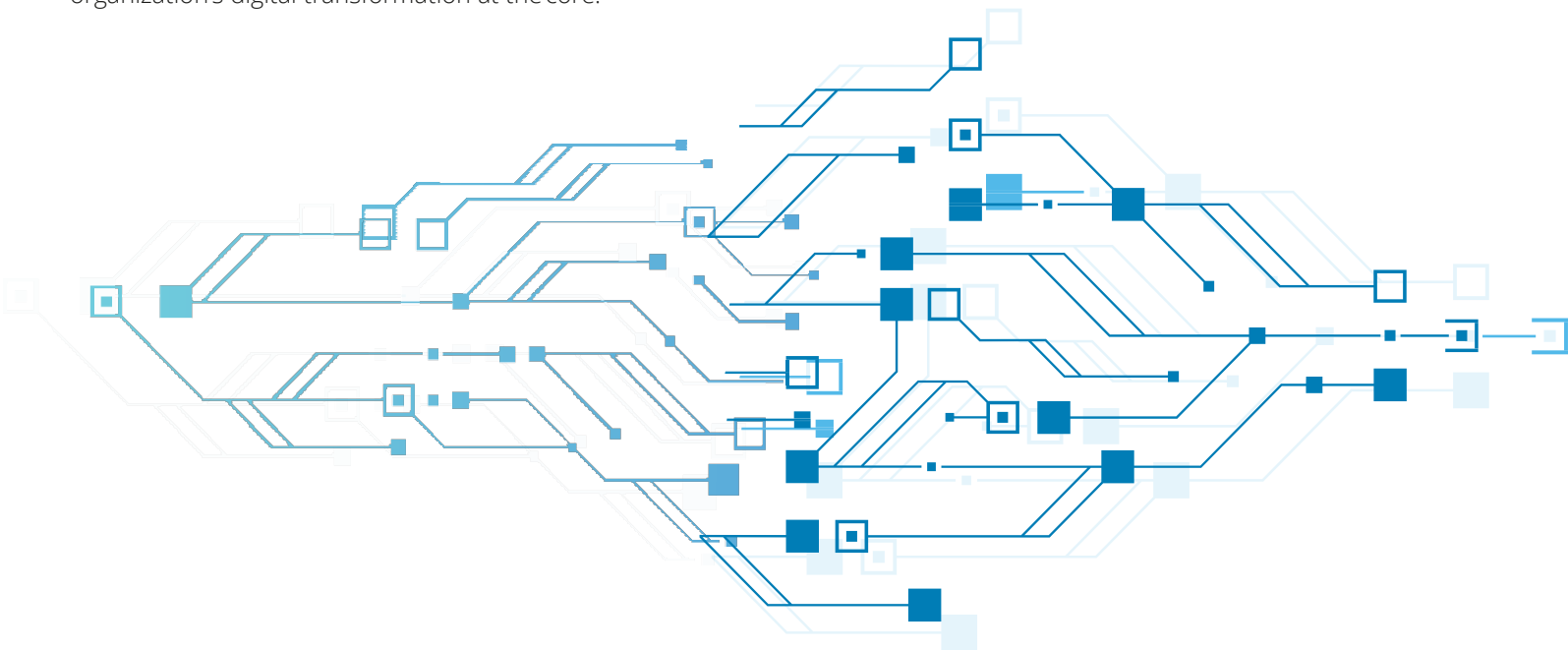
Gartner predicted that 2020 would be the year of the Citizen Developer, and indeed the strategic technology trend of Citizen Development continues to gain traction in the world of automation—enjoying active support from automation vendors, service providers, and organizations pursuing automation. However, several questions remain unanswered: Are Citizen Developers the panacea for organizations' automation challenges? Can Citizen Development be the sole strategy for achieving an organization's automation goals? And what role should it play in an organization's journey toward digital transformation?

While automation Citizen Development can support building an organization's digital DNA at the ground level by weaving automation into the fabric of business processes, it can also help knock down the misconception of automation as a technology to replace humans, by instilling a "humans with machines" outlook in the workforce. Giving the gift of automation to every employee could rapidly accelerate an organization's digital transformation at the core.

Let's start from the beginning. Consider this scenario: you have led your organization on an automation journey and achieved significant benefits. You're leveraging standard automation tools such as Robotic Process Automation (RPA), Optical Character Recognition (OCR), Business Process Management (BPM), and Case Management. And your automation program has reached a level of maturity. Yet, significant opportunities remain untapped.

Yes, you have increased the capacity of your workforce through automation. Yes, you have reduced labor costs and improved the bottom line. And yes, you have boosted throughput and made your processes more robust. But where do you go from here?

Continuing on the same path can only take you so far. Soon, you will likely run out of standard automation opportunities that are high-value and relatively easy to implement, leaving behind a long tail of lower-value, task-based opportunities (in addition to high-value but highly complex and challenging opportunities that require advanced intelligent automation capabilities such as artificial intelligence and machine learning).



At one end of the spectrum, the lower-value, task-based opportunities could save time for individual business users but aren't worth the cost and effort of assigning them to your dedicated automation development team. At the other end of the spectrum, your automation development team might not have the skills or time necessary to successfully capitalize on high value, but complex automation opportunities.

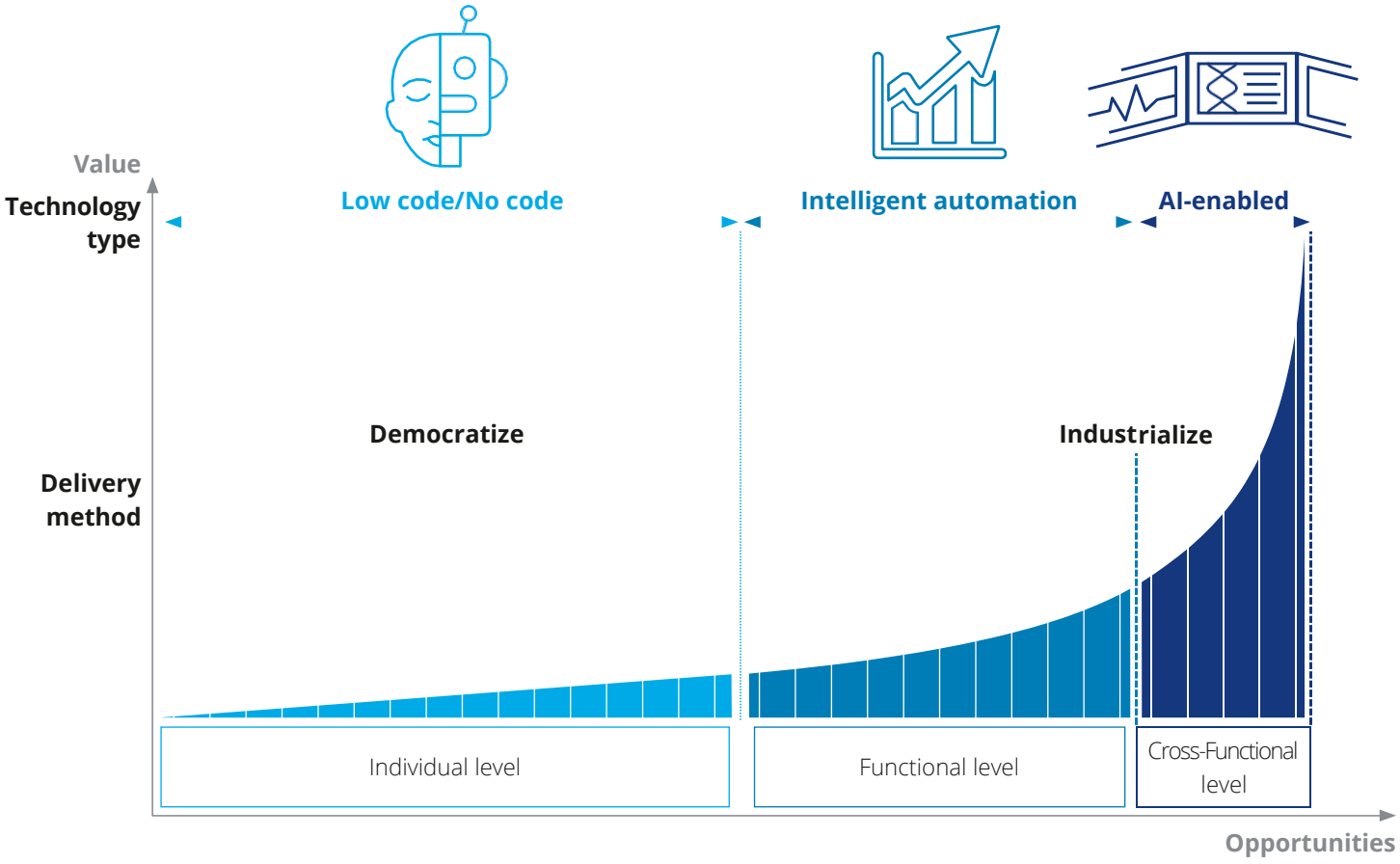
Identifying and understanding all the available automation opportunities within your organization—and setting the right priorities—can require a set of Enterprise Automation Delivery Capabilities (EADC).

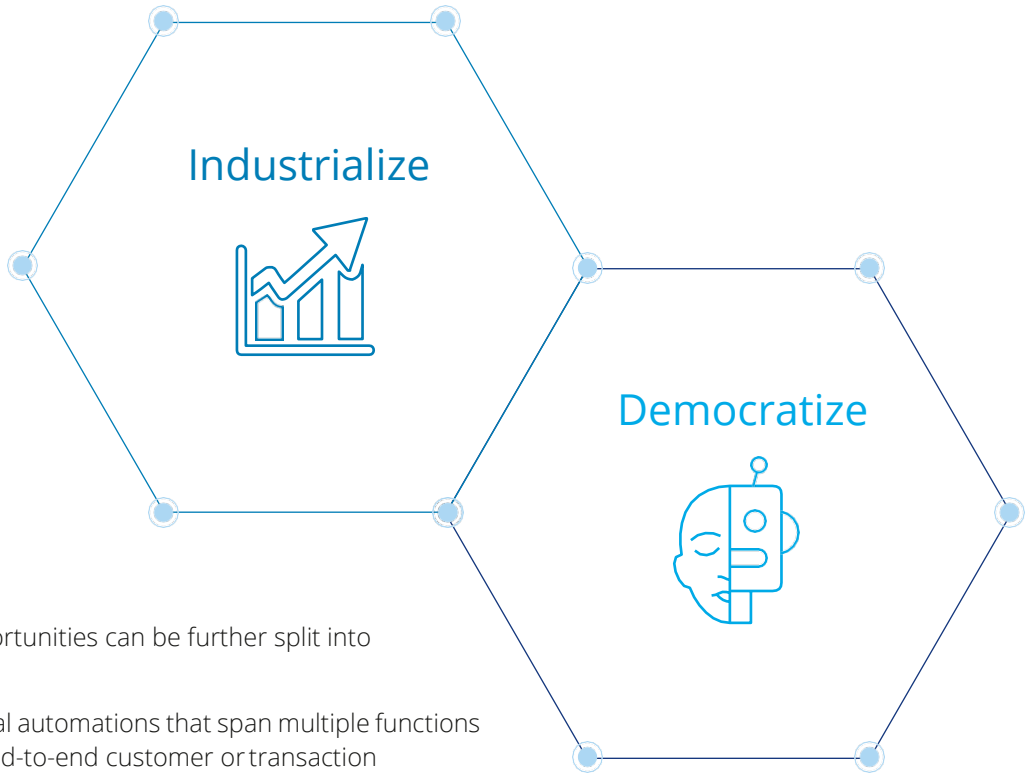
Seeing the big picture

Before discussing how Citizen Developers can help your organization pursue more automation opportunities and achieve its automation goals, let's first examine what these EADC are—and how they can serve as the path to the North Star vision of your organization's automation journey.

A set of EADCs can help your organization harness the full power of automation—defining the scope and ambitions for your automation program. There are two flavors of automation to be considered when defining the scope of an automation program: Industrialize (at functional and cross-functional levels); and Democratize (at the individual level) (Figure 1).

Figure 1: Components of Enterprise Automation Delivery Capabilities



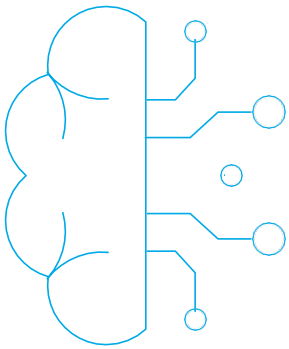


Industrialize opportunities can be further split into two groups:

- Cross-functional automations that span multiple functions (or an entire end-to-end customer or transaction journey) to unlock tremendous value for an organization. Capitalizing on these highest-value opportunities typically requires automation with sophisticated cognitive capabilities, such as Machine Learning, Data Analytics, and Artificial Intelligence. Examples include: Procure-to-Pay; Order-to-Cash; and Record-to-Report.
- Functional automations that help entire business units/functions avoid repetitive transactional processes. These function-wide automations typically run in a scheduled, unattended manner, significantly increasing the function's labor capacity and avoiding non-labor costs related to process waste, fines, penalties, etc. They also tend to feature automation capabilities that complement RPA, such as OCR, text extraction, BPM, and Natural Language Processing (NLP). Examples include invoice processing, bill of material management, and data management.

Due to the required robustness of *Industrialize solutions*—and their broad scope—they are typically managed end-to-end by the automation Center of Excellence (COE), and can take several weeks to develop.

For *Democratize* opportunities, a Citizen Developer model enables application of narrowly scoped, attended automations to selected repetitive steps in day-to-day activities for business users. Examples include data entry from a structured file into the user interface (UI) of an ERP system; sending confirmation emails to customers; and downloading attachments from emails and then categorizing them in a specified folder structure. In contrast to function-wide automations, individual Citizen Developers own the end-to-end lifecycle for these task-based automations and use low-code or no-code automation tools to develop simple automations within a matter of days. With this model, organizations don't need to squander their dedicated development capacity on relatively low-value, task-based automations.



Although the use and value of automation varies by level, a wide set of enterprise automation delivery capabilities can maximize value capture by enabling organizations to identify, understand, and prioritize all the available opportunities. It also enables broad synergies and improves coordination.

The automation journey can vary from one organization to the next, and there is no right or wrong place to start. However, many organizations start by focusing on Industrialize opportunities at the functional level, while overlooking opportunities at cross-functional level (due to their high complexity) and Democratize opportunities at individual level (due to their low perceived ROI).

The rest of this article will examine how a Citizen Developer model can help your organization avoid leaving money on the table by capitalizing on the long tail of small opportunities in your automation pipeline.

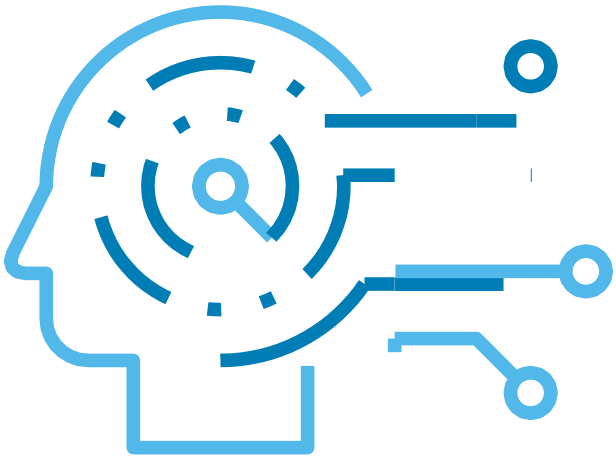
What makes Citizen Development unique?

A Citizen Developer model is a construct under which organizations empower and equip business users to leverage automation for individual efficiency gains.

Although the value of individual task-based automations tends to be lower than that of the other two levels, the overall value of Citizen Development is high due to the large volume of automations created, although its success hinges on efficient development and rapid scaling while maintaining a controlled and sustainable environment. The true value of Democratize opportunities, however, is not found in the automation ROI, but rather in the accelerated adoption of automation tools throughout the enterprise. A Citizen Developer model helps regular business users become more comfortable with the concept of automation by making it tangible and accessible to everyone. Automation will likely also be top of mind for employees of an enterprise launching and operating a Citizen Developer model, thus creating momentum to fuel additional high-value transformation.

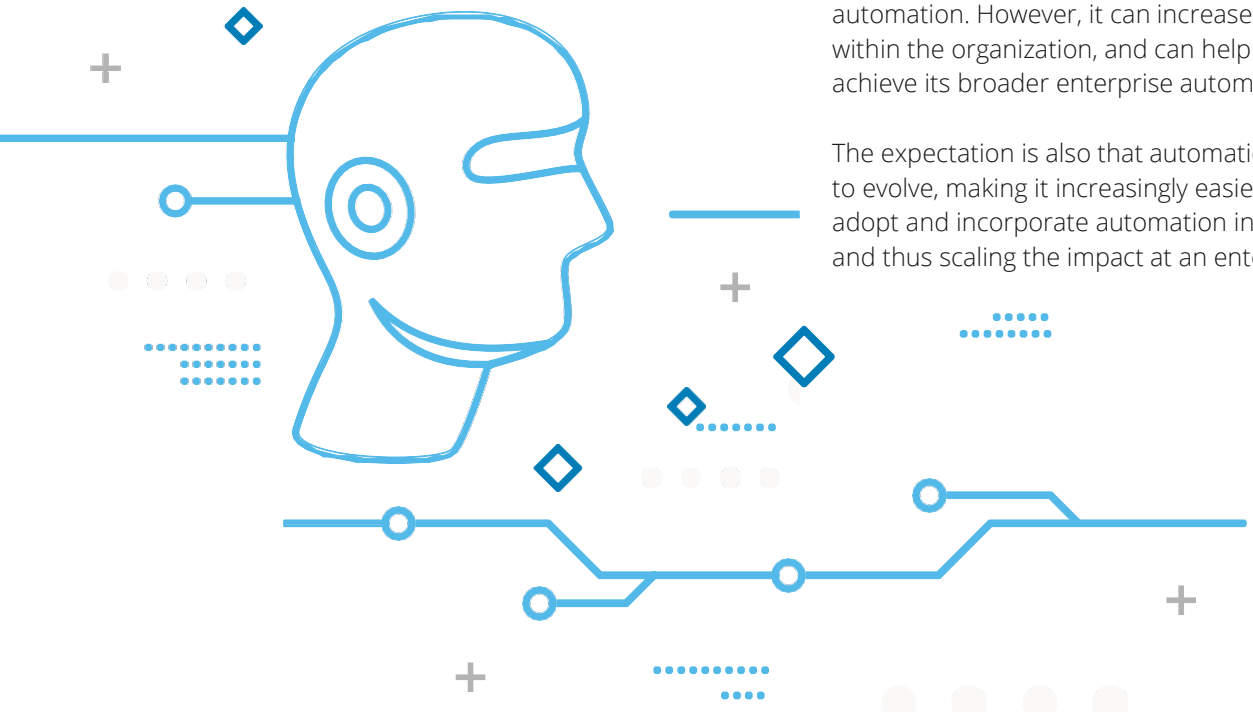
Under a Citizen Developer model, business users are trained and equipped with low-code or no-code tools that they easily use to automate their individual daily activities. These business users tend to be tech-savvy and innovation-driven, with a problem-solving mindset and the self-motivation to use all available tools to simplify their tasks. Citizen Developers typically develop automations exclusively for their own use within the scope of their current responsibilities, using their own access credentials. As such, Citizen Developers are not expected to request (or be granted) any additional access or privileges beyond what they currently have under their existing scope of work.

Automations developed and used by Citizen Developers are typically "attended" in nature, which means they are manually triggered, UI-based, and run locally on the individual's workstation—using an individual's own access credentials. (Automations that run in a scheduled manner in the background on a server or virtual machine are referred to as unattended automations).



What value does a Citizen Developer model add?
Citizen Development helps organizations scale up their automation programs, expanding the capacity for automation development beyond the COE—reducing the development team's backlog while improving the velocity of automation deployment from ideation to operation. With a Citizen Developer model, an organization can reach deeper into its automation pipeline, pursuing task-level, lower-complexity automation opportunities—including opportunities where the business case would not justify the cost associated with a standard development model.

Citizen Development helps relieve employees of repetitive tasks, boosting morale and enabling them to spend more time on higher value activities. A Citizen Developer model can be an important part of an organization's automation strategy to accelerate adoption and enable digital transformation, but it should not be the only strategy.



It is not intended to save millions of dollars in one fell swoop, or to significantly increase labor capacity with each individual automation. However, it can increase automation awareness within the organization, and can help the organization achieve its broader enterprise automation objectives.

The expectation is also that automation tools will continue to evolve, making it increasingly easier for business users to adopt and incorporate automation into their daily activities, and thus scaling the impact at an enterprise level.

The building blocks for effective Citizen Development

A strong foundation is crucial to an effective and sustainable Citizen Developer program. Such a foundation rests on five building blocks:

1. Operating model & governance. An effective operating model for Citizen Development requires an automation COE to provide guidelines for control and process standardization (as well as guardrails for risk mitigation). The role of business units and business users is to own their automations' end-to-end lifecycle, while the role of enabling functions (e.g., Risk and Compliance, Finance, HR, Legal) is to support the overall program operations.

Additional control of a Citizen Developer program is achieved by defining two different Citizen Developer personas with distinct roles and responsibilities: (1) Basic Citizen Developers are business users with limited development skills and experience who only develop automations for their own use; (2) Power users are converted basic Citizen Developers whose automation skills are more mature and who are approved to build automations for other Citizen Developers or business users. Power users also serve as the first point of contact for basic Citizen Developers to seek support and guidance.

2. Automation lifecycle. Establishing a significantly leaner automation lifecycle—with reduced documentation requirements and a simplified audit process—reduces the hurdles to building and deploying automations. A key step is to include checks and guidelines to support and guide Citizen Developers through the automation lifecycle.

3. Risk and mitigation framework. Citizen Developers are empowered to run operations at higher speed through automation. This creates the risk of propagating human error at the speed of digital. To avoid potential business, technical, and security/compliance risks, it's critical to coordinate with risk and security teams to identify program vulnerabilities specific to the organization. It's also important to establish mitigation guardrails and lines of defense within the program framework.

4. Change management and communications strategies. Robust strategies include:

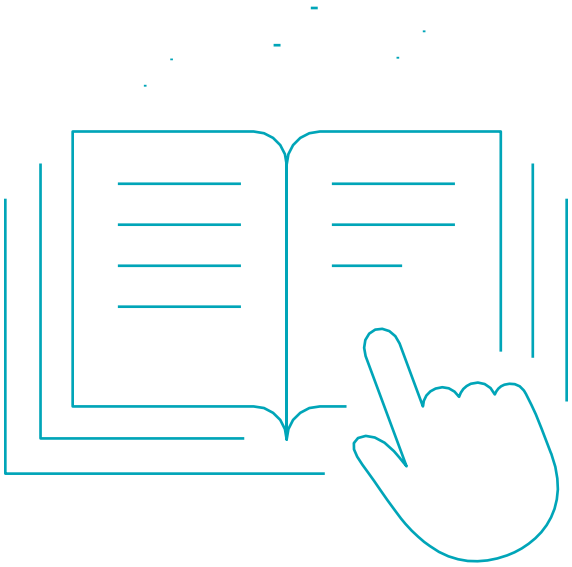
- a *change management plan* to help users embrace a new way of working with machines, and evangelizing the power of automation and how to enable users with AI technology;
- a *communications plan* to help reduce complications when scaling up, enabling an organization to capture and communicate the full value of Citizen Development;
- a *reward and recognition framework* to encourage employees to become Citizen Developers—and to sustain momentum by continually building new automations and identifying new automation opportunities; and
- a *comprehensive training plan* that is accessible, streamlined, and available online. Citizen Developers can only succeed if they are equipped with the skills necessary to support their automation initiatives.

5. Tools and technology. When governing a Citizen Developer program, it helps to have a set of tools to manage details such as pipeline management, tollgate approval, and value tracking. The selected automation platform/vendor should also be aligned with the organization's technical architecture, existing vendor relationships, and business strategy.

Building on this strong foundation, a key to success with Citizen Development is to start small, then grow. Proving the value and readiness of a Citizen Developer program in a small, controlled setting can be the first step to achieving the full benefits across the organization. As lessons are learned and the program scales up, the framework, guardrails, and model itself can then be refined.

Case study: Automation Citizen Development for a Large Healthcare Organization

Deloitte has helped leading organizations in various industries set up Citizen Developer programs tailored to their size, goals, and infrastructure needs. Recently, we helped a large healthcare organization establish and launch a Citizen Developer program for automation. Key activities included: defining an optimal operating model and governance structure; designing a lean automation lifecycle, as well as a risk and mitigation framework; and developing and implementing a change management and communications plan. The effort also included running a Citizen Development pilot for six business units, which resulted in ramping up 10 Citizen Developers, with 10 automations built in a 6-week timeframe.



Bottom Line: Embrace a "Humans with Machines" mindset through Citizen Development

An automation Citizen Developer program can help an organization achieve its full automation vision, as long as the program is not expected to be the panacea for all the automation challenges of an organization. Citizen Development can be a critical component of a holistic enterprise automation strategy of an organization. That said, it should not be viewed as the sole strategy for an organization.

Citizen Development can be instrumental in driving the outlook of an organization towards the future of "humans with machines". At the same time, automation Citizen Development can also help with capturing the long tail of lower-value automation opportunities, adding capacity at the individual level, and freeing up employees to focus on more valuable tasks.

For more information, please contact:

Gina Schaefer
Managing Director
Deloitte Consulting LLP
gschaefer@deloitte.com

Saurabh Vijayvergia
Senior Manager
Deloitte Consulting LLP
svijayvergia@deloitte.com

Gabriela Valera Quenza
Manager
Deloitte Consulting LLP
gvaleraquenza@deloitte.com