

The Rise of Citizen Developers

November 2020 – Connie Moore

Spend time in the process automation field and you'll hear the term "citizen developer" bandied about. Everyone – businesses, vendors, consultants, research firms – wants citizen developers to seize their destiny and quickly assemble configurable processes with minimal, if any, IT involvement.

But on closer inspection, in the majority of situations, citizen developers' skills, experience, and responsibilities typically go far beyond a typical businessperson's. As a result, you can't assume that everyone means the same role when they mention citizen developers. For example, their view could be any of these:

→ **A full-time business analyst in either IT or a business unit to support a range of business technology functions.**

This person helps gather digital process automation requirements, collaborates

with businesspeople to implement and use process automation systems, and provides a bridge between business and IT. These business analysts need a rich mix of technical skills (low-code tooling, data modeling, process modeling, and analytics) and soft skills (stakeholder management, business case development, communication, organizational change management, project management, and problem-solving).

→ **A full-time business analyst in a center of excellence (e.g., process, innovation, and agile centers of excellence).** This person has multifaceted experience in agile, digital process management, RPA, and systems development, and helps businesspeople develop use cases, data dictionaries, data models, process mining analytics, low-code process models, business rule catalogs, decision tables, and possibly even customer journey maps. Highly skilled individuals may also have experience with master data management or in methodologies such as Six Sigma or Lean.

→ **A businessperson (working full-time or part-time) on temporary assignment along with an application developer to create automated business processes.** The professional developer works side-by-side with the businessperson to use



This report was commissioned by Catalytic.

configurable low-code tools, such as prebuilt forms, preconfigured applications, data model templates, process templates, and connectors, to build automated business processes.

→ **A non-technical businessperson empowered with no-code, easily configured automation tools to rapidly build work processes whenever and however needed.** This citizen developer could be anyone – an accountant, engineer, attorney, salesperson, or technician, for example. Instead of leaving their jobs to develop processes full-time alongside an application developer, become full-blown business analysts, or move into a center of excellence, *these businesspeople continue doing what they were hired for, and process automation tools come to them.* In this scenario, process automation joins the pantheon of many other end-user business tools, such as PowerPoint, Excel, Visio, email, collaboration, and analytics.

It's been a long time coming, but the citizen developer era (described in the last bullet above) has finally arrived. As no-code, configurable process automation evolves into a widely used business productivity tool, application developers on high-end automation projects will be bolstered by full-time businesspeople to create many workgroup processes. Following are examples of this transition from highly specialized jobs/software to pervasive technologies/users over time:

→ **Before word processing software became ubiquitous there were word processing centers and word processors** (individuals) that specialized in creating reports and other documents for business users. A businessperson would submit a handwritten or marked-up, unformatted

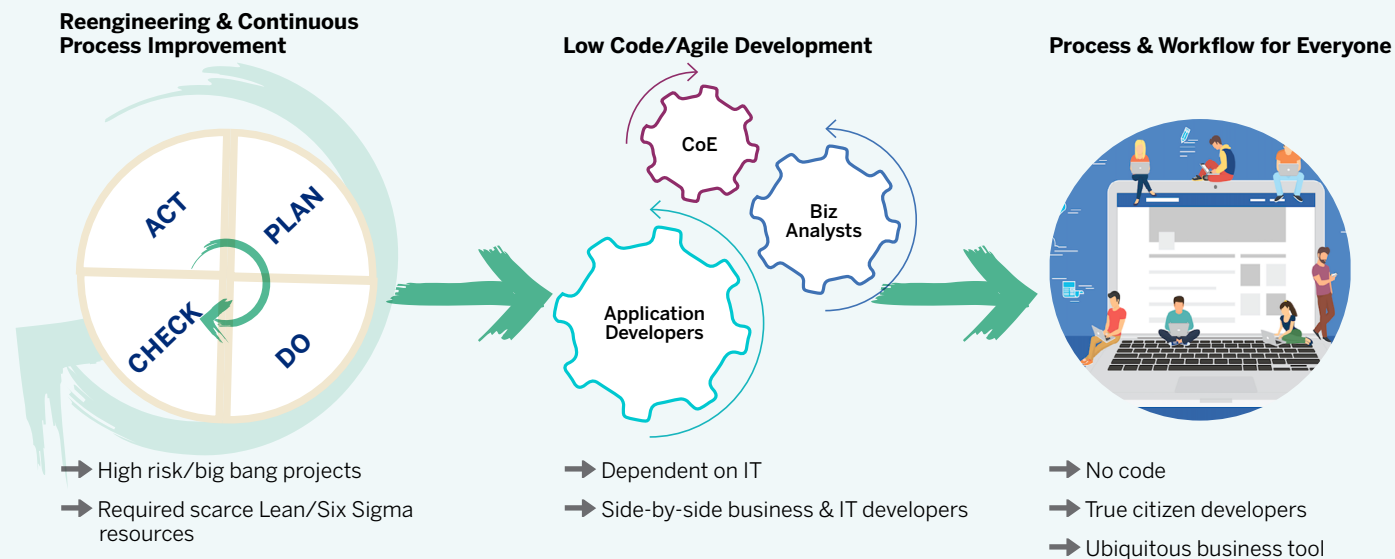
version of a document and wait for the final work product to be delivered. Finishing a final deliverable could take time and multiple iterations. This wall between word processing and businesspeople is almost unimaginable today, but that's how it worked.

→ **Before PowerPoint turned everyone into a graphic designer, there were internal graphics departments** with skilled designers who knew how to create high-impact presentations. Businesspeople would submit their hand-drawn stick diagrams to the graphics center, which eventually returned a polished presentation deck to the businessperson. Once again, multiple iterations were often required.

Initially, workflow and business process management (BPM) software had their roots in big projects for re-engineering and continuous process improvement, which often required scarce Six Sigma and Lean experts. Later, process initiatives shifted into a second era of more agile, low-code process automation for larger-scale business transformation initiatives that still required specialist business analyst and professional developer skills. We are now seeing the advent of a new, third era for automating and developing business processes, in which everyone can build and deploy automated processes for their own use, teams, workgroups, and departments.

Figure 1

The Three Eras of Process Automation: From Specialized to Ubiquitous



In this third era of process automation and workflow for everyone, citizen developers will become commonplace. It is unfolding right now before our very eyes. These citizen developers will lead or help their colleagues develop:

- **Electronic forms** that easily capture information and can be shared across multiple departments
- **Workflows** for the many business processes within and across business workgroups and departments
- **Email notifications** triggered by workflows that occur within the organization and extend to customers and partners

- **Document generation** (using Word, Excel, Adobe Acrobat, and other content creation tools) that are triggered and powered by process automation
- **Case management** processes to manage highly dynamic work that is document-, data-, and forms-intensive
- **Governance** rules to comply with regulations and to manage and track business process execution over time
- **System Integration** to fetch data and documents or update system records and databases

Citizen developers will apply their business knowledge and insights to automate line of business processes for themselves, their workgroups, or their departments. For example, citizen developers in finance might automate month/year-end close or use automation to consolidate budget spreadsheets; businesspeople in customer service might automate contract quotes or customer touchpoints; while HR citizen developers might focus on automating employee suggestions, coordinating and scheduling interviews, or coordinating employee self-reported health status.

With true no-code tools and the right governance in place, citizen developers can move away from the side-by-side approach. Citizen developers can then do all of the work themselves, as long as they work within the bounds of the company policies on data protections and other security parameters.

Let's be clear – staffing businesspeople on process automation project teams alongside application developers and DevOps will not end anytime soon, if ever. Their knowledge, insights, and skill sets are essential when organizations tackle automating complex, end-to-end processes. Instead, this

multidisciplinary approach will coexist along with a new era where businesspeople use process automation tools every day for routine work. This emerging third era will be championed by a new wave of citizen developers who automate team, workgroup, and departmental processes that were, until now, usually overlooked or given low priority by digital process automation teams.

We started with a discussion about how to define and describe citizen developers. Increasingly, the term “citizen developer” will refer to any non-technical, full-time businessperson that views digital process automation as one of many software tools used to increase productivity and efficiency, eliminate rework, support higher value tasks, and coordinate team activities. Their tools of choice (ubiquitous process automation software) will impact everyone – just as personal productivity software and social media radically changed how businesspeople and society at large view work.

Get ready – we now live in the age of the citizen developer.

About Deep Analysis

Deep Analysis is an advisory firm that helps organizations understand and address the challenges of innovative and disruptive technologies in the enterprise software marketplace.

Its work is built on decades of experience in advising and consulting to global technology firms large and small, from IBM, Oracle, and HP to countless start-ups.

Led by Alan Pelz-Sharpe, the firm focuses on Information Management and the business application of Cloud, Artificial Intelligence, and Blockchain. Deep Analysis recently published the book "Practical Artificial Intelligence: An Enterprise Playbook," co-authored by Alan and Kashyap Kompella, outlining strategies for organizations to avoid pitfalls and successfully deploy AI.

Deep Analysis works with technology vendors to improve their understanding and provide actionable guidance on current and future market opportunities.

Yet, unlike traditional analyst firms, Deep Analysis takes a buyer-centric approach to its research and understands real-world buyer and market needs versus the "echo chamber" of the technology industry.

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Connie Moore is Vice President and Principal Analyst at Deep Analysis. She joined the firm after four years as Senior Vice President, Research, at Digital Clarity Group, and more than twenty years as Research Director and Vice President at Forrester Research. Connie is a widely acclaimed speaker, advisor, consultant, and expert in digital process automation, customer experience management, digital experience platforms, and content services. In 2014 Connie received the Workflow Management Coalition's globally recognized Marvin Manheim Award for influence, contribution, and distinction based on standout contributions to the field of workflow and business process management.