Do Citizen Developers Represent a Threat or Opportunity for IT Departments?

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With the rise of low-code and no-code development tools, ordinary business users with little to no technical expertise are taking it upon themselves to build applications, heralding the era of the so-called citizen developer.

These DIYers fill a critical role as IT departments struggle with insufficient staff and resources to meet all the demands put upon them, In fact, a survey by IBM in 2014 found that 80 percent of cutting-edge enterprises were turning to citizen developers to plug these gaps.

This revolution parallels the broader trend toward self-service in IT and offers enterprises clear benefits. But there are also risks, leading many to question whether citizen developers will ultimately prove a threat or an opportunity for corporate IT.

"The days of IT being the sole source provider are gone. IT is never staffed or funded enough to meet all the needs of the organization. Empowering the business customer to take care of its own needs is a good thing. But there is a dark side," said Charles Araujo, principal analyst at Intellyx and the founder of the Institute for Digital Transformation, referring to potential security threats and data silos.

Power to the people: Emergence of the citizen developer

Several trends sparked the rise of citizen developers: growing personalization of software, the rise of cloud computing, the influx of digital natives into the workforce and the growth of accessible development tools.

IT research firm Gartner is generally credited with coining the term "citizen developer" in about 2009, when it predicted that within five years these enthusiastic amateurs would build at least one-quarter of new business applications.

The number of development platforms has surged since then. A Forrester report earlier this year found 42 vendors of low-code development tools primarily structured as PaaS (platform as a service).

Citizen developers often come reluctantly to be app builders, but rapid application development (RAD) and rapid mobile application development (RMAD) tools make it a logical next step.   These line-of-business users, with little or no programming background, are building applications that automate processes, improve efficiency, strengthen collaboration and help customers.

Key Benefits of Citizen Developers

As IT managers weigh the pros and cons of citizen developers, they agree these users bring many benefits to enterprises. These include:

- **They enable IT to do what it does best**. Generally, citizen developers tackle narrower needs, not strategic ones, enabling the IT department to focus on more complex projects aligned with the broad corporate mission. That's important because technology these days drives competitive advantage even in non-technology industries.

- **Users are happier.** Having the power to meet their own needs improves user satisfaction. Plus having those who need the application build it can achieve a better result than when a user tries to explain his or her needs to a professional developer.

"Products and services developed with serious engagement by business stakeholders, or in some cases potentially by the business players, are more likely to be better received by the business and better adopted. They are more likely to meet the requirements of the target audience," said IDC analyst Al Hilwa.

- **Citizen developers enable business needs to be met more quickly**, rather than a request going to the back of the IT department's queue. A Forrester Research analysis of the impact of one low-code tool found it reduced development time 60 percent to 85 percent, representing an eight-week average reduction in app development time.

- **Citizen developers are a financial win**. In a composite use case in the Forrester study, the average company avoided hiring two IT developers as well as reaped about $4.4 million in increased business value over three years from the applications

designed.

But Citizen Development Presents Dangers Too

Despite these benefits, the rise of citizen developers frightens some CIOs who fear it poses dangers similar to shadow IT, the explosion in projects and systems brought into businesses without the approval or knowledge of corporate IT.

- **Citizen-developed apps raise worries that companies face greater security risks.** These include concerns that applications offer hackers easier access to sensitive corporate data and systems, and that corporate and legal standards for data security, privacy and handling may not be met because the IT department doesn't have tight control over the applications.

If applications are built with development platforms using state-of-the-art security, fears of data breaches are not generally more valid for citizen-developed apps than other corporate systems. But these concerns do underscore the need for citizen developers to incorporate corporate policies on data handling and legal compliance into their applications.

- **Concerns about governance abound.** A bigger danger, Araujo argued, is that the proliferation of user-developed applications can lead to data silos being created.

In a Wild West scenario, data can be created and stored in apps without it being accessible to the rest of the enterprise. "You can get massive islands of data and people duplicating effort and creating competing apps," Araujo said.

The explosion in citizen-developed applications also puts a burden on the enterprise to manage a growing body of user-generated processes over their lifecycle, a new responsibility.

This highlights a need for a portfolio management process, standardized approaches to data, guidelines for permitted solutions and even creating an app store for the enterprise so that business users can easily find what others have done and build upon it.

Despite these worries, the case for citizen developers is so compelling that there is no turning back. "Given the increasing importance of software and its role in modern business disruption, I think the population of business people that become involved application development and delivery will continue to increase at a brisk pace," Hilwa said.

The answer for IT departments is to guide the citizen developers, so they can harness the benefits and control the risks, helping users integrate what they built into the enterprise. "IT has to sponsor a community...and shift into being a resource," said Araujo.

**Download our B2E App Guide** _**for a full phased approach on how to empower citizen developers and successfully launch business apps at your organization.**_