Enabling citizen development with Mendix

Citizen developers are non-IT business personnel who use IT to create first application outlines to visualize their innovative ideas. This article will examine how the Mendix low-code platform is empowering citizen developers.

Speed is lacking, complexity is overwhelming

Today's application development is characterized by a lack of speed and overwhelming complexity. Developers are confronted with at least four deployment platforms and three form factors to build mobile apps. Furthermore, there is a serious shortage of developers with HTML, CSS, JavaScript, Java and .NET skills. Additionally, IT faces a constant demand for change requests and innovation while 70% or more of the IT budget is spent on legacy systems maintenance.

The backlogs are large, development times are excessively long and mobility requirements are soaring. Gartner estimates that the market demand for application development will grow at least 5x faster than IT's capacity to deliver it.

Eliminating shadow IT

The issues listed above have resulted in the business taking initiative themselves to address them. We are all familiar with the IT-minded business expert who starts developing an Excel sheet. Over the years, the functionality is enriched with more sophisticated functionality like reporting functions, data analysis, downloading and uploading data to back-end systems. The Excel sheet becomes a critical business application supporting daily business decisions, and the IT department is not involved at all. The risks are clear: dependency on one "hero," data leaks and security vulnerabilities.

As the business gains more and more control over the IT budget, they may outsource their innovative projects to IT suppliers without involving the IT department. This can result in a sprawl of IT suppliers and the introduction of various technologies.

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Enabling citizen developers

The Mendix low-code platform provides a solution to overcome these issues. It encourages collaboration between business and IT and, more importantly, Mendix provides a solution to avoid and eliminate shadow IT. To enable the collaboration between business and IT, the Mendix platform includes two products:

- Mendix Studio for citizen developers
- Mendix Studio Pro for IT professionals

Using Mendix Studio, non-technical business experts and consultants can transform innovative ideas and design thinking into an application without knowing how to code. Their ideas can be transformed into a first version of the application without relying on the IT department.

Mendix Studio Pro is the integrated development environment (IDE) for the IT professional. It offers a full set of features to develop scalable, secure, high-performance enterprise business applications. Based on the first outline of the application built by a citizen developer, they enrich the application with business logic, workflow, security and integration with back-end systems. Finally, they make the application ready for acceptance testing by the user community and for deployment to multiple platforms and devices.

Mendix Studio and Mendix Studio Pro share the same repository. In fact, Mendix provides two views of the shared artifacts and application models, enabling IT professionals to coach, guide and govern the development activities of citizen developers.

Increasing development capacity

As mobile apps and social media become increasingly pervasive in our offices and homes, the mysticism of technology is diminishing. Everyone uses several apps on mobile phones, and at office everybody is using Word, Excel and PowerPoint. The COVID-19 crisis has forced us to work from home using modern communication tools. Today's graduates make apps themselves using easy-to-learn development tools, and programming is no longer the exclusive domain of the IT department.

With just three to four days of training, the business Excel hero can create an application using the Mendix low-code platform. It provides an import function for Excel sheets, transforming the contents into data entities. With the click of a button, a business analyst can generate screens for each data entity, test and deploy a prototype. Mistakes can be avoided by leveraging high levels of automation, including checking model consistency, integrity and interdependencies. The technical details are both out-of-sight and irrelevant to the citizen developer.

In addition to the benefits of business and IT collaboration and reducing shadow IT, low-code platforms like Mendix deliver another advantage: increased development capacity by leveraging the talents of citizen developers across the business.

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