# Citizen developers and Low-code platforms

*Citizen developers are non-IT business personnel who are using IT to create first application outlines to visualize their innovative ideas. This article describes how low-code platforms are empowering citizen developers.*

**Speed is lacking, complexity is overwhelming**

Today's application development is characterized by lack of speed and an overwhelming complexity. Developers are confronted with at least 4 deployment platforms and 3 form factors to build mobile apps. Further, there is a serious skill shortage of HTML, CSS, JavaScript, Java and .NET developers. Additionally, IT is facing a constant demand for change requests and innovation. Whilst at least 70% of the IT budget is spent for maintenance of legacy systems. The backlogs are large. Development times are excessively long, and mobility requirements are soaring.

**Shadow IT**

The issues mentioned above have as a result that the business takes initiatives themselves. Well-known is 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. The IT department is not involved in these initiatives. The risks are evident: dependency of one hero, data leaks, and security issues.

And, as business is more and more in control of the IT budgets, they directly out task their innovative projects to IT suppliers without interference of the IT department. It ends in a sprawl of IT suppliers and the introduction of various technologies.

**Citizen developers**

Low-code platforms, like OutSystems and Mendix, provide a solution to overcome these issues. They encourage the collaboration between business and IT. Moreover, they provide a solution to replace and avoid shadow IT.

To illustrate: to enable the collaboration between business and IT, Mendix is offering two products:

- Mendix Studio for the citizen developer,
- Mendix Studio Pro for the IT professional.

Business experts and consultants can transform their innovative ideas and design thinking using Mendix Studio. It is suitable for non-IT, business personnel to create a first outline of the application without having to know how to code. This way they can turn their ideas into a first prototype of the application without consulting and dependency of their IT department.

Mendix Studio Pro is the integrated development environment (IDE) for the IT professional. It offers all features to develop enterprise-grade, performant, scalable and secure 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 multi-platforms and devices.

Mendix Studio and Mendix Studio Pro share the same repository. In fact, Mendix provides two views on the shared artifacts and application models. This way the IT professional can coach, guide and govern the development activities of the citizen developer.

**Increase development capacity**

As mobile apps and social media are entering the office and at home more and more, the mysticism of technology is diminishing. Everyone use several apps on mobile phones, and at office everybody is using Word, Excel and PowerPoint. The COVID-19 crises forces to work at home using modern communication facilities. Today's graduates make themselves apps. IT is no longer the shielded domain of the IT department.

With a training of 3 to 4 days the business Excel-hero can realize an app using the low-code platform. Some platforms are providing an import function for Excel sheets transforming the contents into data entities. With one push button the business analyst can generate screens for each data entity and test and deploy his prototype. The high level of automation, including checking model consistency, integrity and interdependencies, avoids mistakes. Technology details are put out of sight of the citizen developer.

To conclude, alongside of the benefits of business and IT collaboration and reducing shadow IT, low-code platforms brings another advantage: citizen developers increase the development capacity.

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