



eBook

Supercharge your developers

Essential Mendix platform capabilities
for developer glory.

Maker Manifesto

Are you just a thinker? Do you just...make plans? Do you meet about processes and applications and moving things from point A to point B but never really see anything change? Do you do these things? We don't think so. We think you're more than that.

We think you're a maker.

Someone who gets things done. Someone who wants to build things in a smarter way because that's what it will take to win.

Whether you're making it yourself or building a team to get it done, whether you write complex code, a little code, or no code at all, now, we're all makers. Now, you have what you need to make more things faster and better than ever before.

We exist for those who hunger to make a difference; to deliver more value to the enterprise than ever before.

So you can go make what counts the most.

Reimagine the way you make apps. Create full stack apps at the speed of thought.

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Supercharge your developers

According to a recent survey, **88% of companies are adopting low-code platforms to rapidly develop applications.** And your developers are wondering if they're still valuable in this new world. They are and you're going to show them. We've created a list of all the platform capabilities that make Mendix the right low-code platform for your team.

Before we get into platform capabilities, let's talk about your developers. It's important to consider their perspective when thinking about low-code platforms. Developers' value comes from their ability to solve problems. The first thing they are looking for is how

the platform utilizes their existing knowledge and skills. Enabling them to make an impact with greater efficiency and more productively is the goal, right? But it's important to note that not all low-code platforms are created equal. If all the platform does is make developers go faster, it doesn't mean that they're delivering on what the customer wants, and that is what makes life difficult.

Here are the Mendix platform capabilities that make developers' lives easier while maximizing their impact on the company.

UI Design

A key aspect of ensuring applications deliver their intended benefits is designing the right user experience. A Gartner survey reveals that, **on average, enterprises have just one UX designer for every 17 developers, while 35 percent of organizations have no UX design competency at all.** This means there simply aren't enough designers to support existing development teams.

If you lack in-house UX resources and your developers don't possess UI/UX skills themselves, how can you possibly enable your development teams to build engaging user experiences at scale? The key is to put ready-to-use, easy-to-leverage UI components that adhere to best practices in the hands of every developer within your organization.



Built-in design system to easily build your own design language

Developers aren't designers, but they want to make beautiful, highly usable apps. The Mendix Atlas UI framework is a fully responsive, open source and extensible design language that brings greater user experiences to enterprise apps, enabling developers to create their own unique design language with minimal effort.

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Extensibility at all levels

It's more than likely your developers believe low-code platforms are black boxes with constraints that limit what they can build with them. They don't want limitations put on their creative problem-solving abilities. While Mendix offers the full capability to create robust, full-stack applications, we don't want to limit creativity and the ability to fully customize an application for a unique customer use case. With Mendix, we encourage developers to extend our platform to suit their needs by promoting open APIs and reusability at several levels of the application lifecycle and by enabling expansion with custom code when necessary.



API all the things

Developers can extend the Mendix platform with APIs to integrate with existing tools. Mendix has an extensive range of APIs to help developers integrate the platform into their existing DevOps pipeline. By using tools like VSTS or Jenkins deployment, the APIs automate the pipeline and remove manual work.



Shareable and reusable components

Craft shareable or reusable interface elements, models and snippets inside the development environment to accelerate development across the team. Building reusable components not only makes life easier for your professional developers, but also extends their expertise to business developers, who utilize these components. By allowing business developers to utilize these components and create their own apps under IT's guidance, pro developers have the capacity to work on strategic initiatives and products.

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Extend the model using custom code

Developers can use their existing coding skills in Java, JavaScript, CSS, and more to build back-end connectors and front-end widgets that they can make available to a vibrant community of developers in the Mendix app store. Mendix also supports native integrations like REST, SOAP and OData.

By leveraging the Model SDK, developers gain programmatic access to the meta model information, enabling them to build supporting tools around the Mendix platform to extend its capabilities.

Built-in plumbing



We automate the plumbing, you build stuff people want. Every Mendix project includes automated refactoring, real-time error checking, remote debugging to the cloud, and version control, enabling developers to solve problems better and faster.



Automated refactoring

The Mendix platform has extensive support for model refactoring. For example, when a developer refactors the name of a page or a microflow variable, the Modeler will propagate the refactoring in all parts, keeping the model consistent. The Mendix Platform automatically and consistently propagates such refactoring throughout the entire model.



Real-time error checking

Mendix automatically performs 10 to 20 times more consistency checks than compilers do in traditional programming platforms. Developers want to understand not only when there is an error, but also the context of where that error is within the application. The Mendix platform provides immediate feedback while developers are in the act of development, and points the developer to exactly where the error is in order to speed up development.



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Remote debugging to the cloud

Developers shouldn't have to build a debugging tool; this functionality should already be available during runtime. Mendix has built debugging tools into the development environment which allows developers to visually step through logic in real time and interrogate variables. The debugging tools also allow developers to attach to any cloud-based instance of an application and debug remotely from their local machine.

Handling errors is critical to providing a controlled user experience. With Mendix enables, developers can trap errors and exceptions at runtime to gracefully handle any issues that may occur.



Version control

When collaborating with the business and other developers on a project, it is important for developers to be able to manage multiple versions of software and software revisions, and be able to manage branch-lining and merging.

The Mendix Platform ensures that versions are automatically normalized so there's no additional effort in upgrading to new capabilities, and ensures that there are no broken tests or required changes. By outlining what functionality has been delivered in what revision, the Mendix Platform closely ties version revisions to user stories and requirements that are defined at the Agile Project Management level to ensure transparency across the project.





Local deployment

Developers often spend time standing up an environment for testing and troubleshooting. The need to recompile generated code every time a change is made is tedious and slows down the development process dramatically. With Mendix, developers no longer need to do this. Instead, the Mendix Platform allows developers to locally deploy in minutes with just one click.

When working offline, developers can continue modeling, running and testing applications locally without an internet connection. In offline mode, all changes are stored in the local version repository. When these changes need to be shared with the rest of the app dev team, developers can go online again and commit to the Team Server version control repository.

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Governance tools

Mendix provides three unique tools directly within the platform to constantly shepherd developers toward success: the Application Quality Monitor (AQM), Automated Test Suite (ATS), and Application Performance Monitor (APM). Each tool aligns itself with the ease of use that Mendix offers, creating an application governance experience with a minimal learning curve and immediate returns. Now developers can prevent the threat of technical debt, seamlessly incorporate testing, proactively address performance and streamline the discovery of issues to allow for immediate optimization.

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Quality monitoring

There is a strong correlation between the maintainability of an app and the effort put forth to handle issues and implement enhancements. Issue resolution time increases exponentially as quality drops. The Mendix AQM tool provides a dashboard that offers instant insight into the quality of the app models based on the ISO/IEC 25010:2011 standard for maintainability. By proactively monitoring quality on a daily basis, developers can improve maintainability and reduce lifecycle costs.



Automated testing

With the Mendix Platform, developers can automate functional tests for the user stories they are developing and reduce the overall cost of testing to less than 10 percent of the project budget. The Mendix ATS offers a number of tools for embedding testing in the application lifecycle and integrates seamlessly with the Mendix Team Server, exposing every user story that has been created and enabling organization of your functional tests for each story.

What makes ATS truly powerful, however, is that it extends the speed and ease of use that Mendix provides. The ATS GUI sits on top of Selenium and utilizes its API to generate scripts not through code-writing, but keystrokes and mouse activity directly within the application. With ATS developers can bulk test by uploading data from Microsoft Excel. ATS is an amazing tool that not only reduces the need for testing expertise—enabling anyone to engage in the functional testing phase of development—but also reduces the amount of testing time by more than 50 percent.



Performance monitoring

The Mendix platform enables development teams to not only develop but also maintain and support applications with enterprise-grade, non-functional requirements. Mendix provides a number of out-of-the-box monitoring solutions to support development teams. Rather than relying on traditional troubleshooting methods like log and CPU Usage interpretation, Mendix's Application Performance Monitor (APM), allows developers to engage in a much more specialized monitoring experience.

APM continuously monitors and measures performance of an application in order to diagnose and resolve performance issues. It provides point-in-time visibility, tracking and diagnostics into Mendix Runtime performance at both a high level for user experience performance and at the lowest possible level for details on microflow activity performance. This allows developers to continuously improve their app's performance and user experience.

Holistic view of application lifecycle



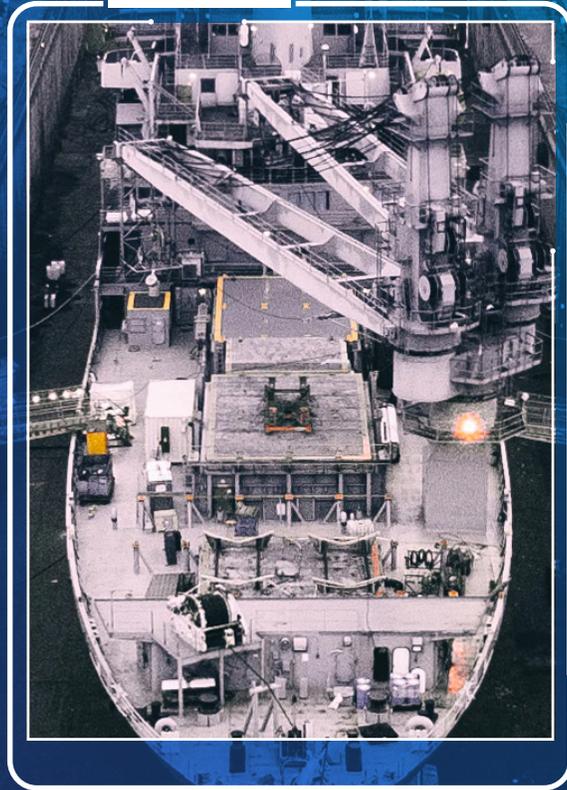
Transparent feedback and collaboration channels

Transparency is a key driver of time-to-value. Mendix has built-in capabilities that ensure transparency throughout the application lifecycle. The platform portal is a central place where everyone involved in the application development process—from business analysts to traditional developers—has instant visibility and context into what is happening with the application. Features like comments and user stories tie together software development to the stories and provide developers a deeper understanding of the business goals and requirements.

The Mendix platform extends the tenants of an Agile methodology to encompass the business owners. Linking stories and comments to the software being developed provides context to the receiver and reviewer, reducing ambiguity and the probability of misinterpretation and error, while making everyone more productive (and happier).

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Build fast, build right

These platform capabilities are critical to include in your criteria for a low-code platform. Using the Mendix Platform will guarantee better efficiency and productivity within your development team, ensuring that your developers are building the right enterprise-grade applications at the speed of an idea. When your team develops smarter, they become the heroes, producing a higher volume of apps and delivering more value to the business than ever before.

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About Mendix

Mendix is the fastest and easiest platform to build and continuously improve mobile and web applications at scale. Recognized as a market leader by leading analysts, we help our customers digitally transform their organizations and industries by building, managing, and improving apps at unprecedented speed and scale. More than 4,000 forward-thinking enterprises, including Kuehne + Nagel, Philips and North Carolina State University use our platform to build business applications to delight their customers and improve operational efficiency.

We made this for you with care (and lots of coffee).

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