Everything you need for your next digitalization excursion
Digital transformation requires having a vision, a means to execute, and a way to measure its success. Learn how you can transform your application development practice with Mendix’s modern enterprise application development platform and accelerate your digital transformation with our digital execution expertise.
Achieving Digital Transformation

Look up.

Over the top of your screen. Through the doorway. Out the window. Beyond your office.

Look all the way up. That’s right. See the very top? Focus. Do you see them now, way up there? Look so far that your eyes strain to catch even the hint of a horizon line.

What do you see?

Those are your digital transformation goals.

If you’re like the thousands of businesses around the world striving to digitize, the goals you set or set a while ago are grand and vital. But they can be difficult to attain.

How — in a world that’s always disrupting and being disrupted — do you reach those goals? How do you get to the end of your digital transformation journey?
You never will.

**Because your digital transformation journey should be an endless one.**

and the sooner you understand that the better. Once goals are set and accomplished, you need to reset and go after new ones almost immediately. The difficulty lies in creating a process by which you can attain those goals.

That’s not easy.

It’s challenging because an always-evolving technical landscape and changing workforce mean those goals are a moving target. They’re always getting higher, set on a seemingly ever-growing peak of the unconquerable mountain that is digital transformation. It’s not just you though. The challenges are many, and the success rate is poor at best. Boston Consulting Group states that “70% of digital transformations fall short of their objectives.”

While every business is different and their challenges may vary, there are some common impediments. For one, businesses and employees can be risk-averse. For example, authors Lovallo, Koller, Uhlancer, and Kahneman cite in their Harvard Business Review article that businesses self-impose a risk aversion tax. In one case, a company missed out on improving its performance by 32%.

Another impediment that tends to burn companies is when they’re beholden to a highly regulated industry. Also, people can be stubbornly reluctant toward any bit of change. Finally, legacy systems and applications can be an obfuscated mess to sort through, which is why 52 of IT departments spend at least 70% of their budget on maintaining those legacy systems versus building more innovative solutions, according to the 2022 Win with Customer Experiences survey.

With all these challenges, the idea of energizing and activating your entire organization to tackle such a large-scale, seemingly unmanageable task seems like the stuff of fairy tales rather than a how-to book. Regardless of the potential obstacles and inherent difficulty, digital transformation is—without question—necessary. If you’re not adapting to and keeping pace with the changing world, you risk being left behind to wither into irrelevance and eventual failure.

This climb towards your lofty goals is arduous, indeed. But it’s not impossible. **Enabling a holistic digital transformation centers around application development.**
Enterprise Application Development

To some, it might not seem obvious, but you know that application development courses through the veins of an entire organization. The solutions that you and your department have built and deployed for employees and customers fuel HR, finance, the warehouse, sales, the supply chain, marketing, your off-site agents, the factory shop floor, everything.

App development is at the center of your digital transformation because that’s where those solutions are built. Business demand is outstripping IT’s ability to build. 76% of CIOs, according to the Gartner CIO Agenda 2021, report an increased demand for new digital products and services. However, almost 1/3 of software projects are delayed by six months.

So just grab any old commercial-off-the-shelf (COTS) product and solve your problems, right? Sorry to break it to you, but this kind of thinking can hurt. Buying single-point solutions creates silos, making it difficult to scale. If you can buy COTS, so can your competition, meaning there’s no differentiation happening. Oftentimes, a business purchases a COTS solution and deploys it, expecting change. But it’s not enough. Application development—and therefore digital transformation—isn’t just about technology. Digital transformation by way of enterprise application development requires a holistic approach with organizationally-aligned goals.

At Mendix, we’ve always believed that application development is the centripetal force of any digital transformation initiative. Since 2005, our goal has been to close the gap between IT and the business, ease the burden of IT, and help the business innovate. We’ve enabled and fostered business collaboration in over 1,600 organizations across numerous industries, helping them attain their digital transformation goals.

We’ve codified this experience into a Digital Execution practice that, in conjunction with our enterprise application development platform, gives you a repeatable, scalable way to accelerate application development.

Read on as we walk you through the three pillars of digital transformation development, and help you more quickly reach your goals, keep pace with disruption, and outpace your competition.
3 Pillars of Digital Transformation

**Vision**
This is your desired change for your business. In this section, you'll learn how to set a strategy and how to gain alignment across the entire organization.

**Value**
Part of achieving digital transformation is knowing how to measure success. In this section, you’ll learn how to measure the value of your application development practice.

**Execution**
Your path to not only getting to your goals, but getting there again and again. In this section you’ll learn how to activate every facet of your organization and transform the way you develop and deliver solutions so your business will stay relevant for years to come.

Your ascent to digital transformation—to those heretofore unattainable goals—begins now.
Before you can begin the climb toward your goals, you need to make sure you and the rest of your organization know where you want to go.

We believe that a disconnect between strategy and execution is what leads to digital transformation barriers like risk aversion and resistance to change. Harvard Business Review suggests this is a common occurrence, with only 8% of executives being proficient at both strategy and execution.
At the strategic level, executives define their digital transformation initiative. It’s here that you decide the direction of the company as well as the balance of modernizing or optimizing current systems versus transforming and creating new products or entering new channels.

For every vision, you need a reason. For every “improve customer engagement,” you need a “to protect existing market footprint.” Every “Build innovative technology” requires a reason like “to break into a new industry.” This provides clarity to the people you then share your vision with—the department heads who then go and ensure the goals of their departments match those of the strategy.

At the project level product owners who are in charge of ensuring any software built that drives business value like creating revenue, saving costs, or increasing customer engagement.

In the organizational gap between digital transformation executives who set the goals and the product owners who verify their business value are the departments who are asked to execute the goals. Every department will execute your digital transformation strategy based on their resources, skills, and needs. This could result in deliverables that vary wildly from the vision you set.

There’s a boundless chasm between those setting the vision and those executing it.

There’s also a broken-down channel between the business impact that software solutions can make, and how they affect the overall strategic bottom line. According to McKinsey, the potential loss of value in a transformation initiative begins as early as day one. The largest loss happens during implementation.

“Only 8% of execs are proficient at both strategy and execution.”
To bridge this gap, you need to put into place a program level to ensure vision alignment at every level, across every department. At this level, program owners or managers empower collaboration across departments. This will ensure that every solution will always meet the criteria and support the goals of the vision.

It’s about trying to create software that delivers immediate value, which requires input from and collaboration with many people across your organization, most of whom will not have a background in traditional coding.

This new means of developing software and delivering value may raise some questions for you. If everyone can be involved in the software development life cycle, how do you manage all of that? How do you create a systematic approach to building a new way of development that lends itself to the goals of your digital transformation vision?

The answer to these questions can be found in our Digital Execution practice. In the next chapter, we’ll teach you the ins and outs of setting up this way of an application development process that lets your organization experiment, explore, build, develop, deploy, and maintain software in a structured, repeatable, scalable way; a way to make digital transformation more attainable.

Programmatic Vision Setting
You have your vision. The rest of the organization knows where they all have to go. Now you have to make sure they’re prepared to get there.

The Mendix Digital Execution practice affects every aspect of your organization, not just how you code an application. That’s because the software you develop needs to be aligned with your vision, meaning the processes and technology put into place and the people building the software need to all be aligned. The goal is to improve the overall development process and accelerate your ability to achieve your vision. If you don’t approach this holistically, you risk slowing down or derailing your digital transformation.

Elements of Digital Execution
Digital transformation is more than just technology. It means activating the 4Ps: the right people, with the right processes, to create the right portfolio use cases and applications, using the right application development platform. According to Gartner, “Agile methodology, DevOps, and Co-creation are elements of a successful execution of digital transformation projects.”

With Mendix and the 4Ps, you can optimize your existing resources to execute an enterprise-wide holistic digital transformation strategy.

**People**
People are absolutely crucial to the success of your digital transformation program. Diversity of skills and experience lends itself well to creating new types of software. Success starts at the top, where senior executive buy-in is a must. As mentioned earlier, a program manager to lead the program and mandate change is vital. Architects and user experience professionals can also help establish architecture, infrastructure, governance, and standards of quality by which apps are built and designed. Product owners are key players in a successful program because of their in-depth knowledge and awareness of the end-user. Of course, experienced developers are needed to address technical issues that may come up.

**Portfolio**
Portfolio management is a top-down process led by a portfolio manager and decision-makers. The main purpose of portfolio management is to assess potential initiatives and ensure they’re aligned with business goals. Getting your digital transformation program off the ground starts with identifying the right projects. It’s important to have a diversity of use cases, to show that your portfolio can reach many different departments and address a variety of needs. Creating and nurturing a project portfolio allows you to stay true to your digital transformation strategy and prove the value of your program.

“Agile, DevOps and Co-creation are elements of successful digital transformation execution.”

**Process**
Organizations have long struggled to adopt Agile as a software development methodology. That’s changed. According to the “15th State of Agile Report” from Digital.ai, Agile adoption within software development teams jumped from 37% in 2020 to 86% in 2021. But you can always up-level your Agile practices.

If your transformation vision is a balance of optimizing what works and creating something new that replaces something that doesn’t, your development processes should match that. What’s succeeding for you as a product can be made better with BizDevOps. Startup and lean development are key. Developing MVPs to garner quick value is important.

**Platform**
An issue that can affect a lot of digital transformation initiatives is the potential technical debt. There’s always going to be the next Blockchain or a new wave of AI or whatever is going to make quantum computing look outdated in 10 years. What this means is that companies adopt many disparate systems that are only properly enabled by a select few and therefore bog down the entire IT infrastructure.

To truly enable your organization to change, you need an application development platform that could bring your entire enterprise into the software development cycle, easily integrates with your current tech stack, and is primed for any future technology trends. The Mendix Platform enables you to accelerate development by turning it from an isolated discipline to one of collaboration across your entire organization. By using the Mendix Platform’s visual language, enterprise-wide governance tools and controls, development guardrails, containerized architecture, and built-in collaboration tools, you can safely expand who gets involved in the software development life cycle, while ensuring your stack is future-proofed.
You’ve got your equipment ready and your team prepped. But knowing when you need what is vital in this journey. You don’t use every tool and person at your disposal to build that first application in your portfolio. That can cause confusion and delays.

Instead, use the Start, Structure, Scale method to define a way forward that makes sense at every stage. We’ve been using this approach with customers for over 15 years, and it works.

Within each stage, the 4 Ps take on very different shapes. Here’s a breakdown of what you need to do at each stage regarding your people, processes, portfolio, and platform.
Start

This is where you pick a small group of people to work on a handful of applications (one to three) applications that align with your digital transformation vision. You’re putting the necessary prerequisites in place in terms of how to build and who builds what. Beginning here lets you easily come up with quick wins that prove the value of your new approach.

People

ESTABLISH YOUR FIRST TEAM
These are the leaders (in either an unofficial or official capacity) throughout your organization that will understand the requirements and the processes needed to build your first applications.

TRAINING YOUR TEAM
Because this is a different way of developing applications, your new team will need to be trained on the new application development platform, any new processes, and how to intake new ideas.

ENABLE YOUR PRODUCT OWNERS
These folks will know what needs to be built, but may not have the experience to actually build. Train them in whatever development methodology you choose (ex: Lean, Agile, SAFe).

GO BEYOND DEVELOPERS
You’ll want to include an architect and UX/UI designer to work alongside your product owner and developers.

Portfolio

FOCUS ON APPS THAT GO LIVE QUICK
Some projects are more complex than others. It’s important to start off with a project that has few integrations and minimal requirements.

KNOW THEIR WORTH
You want to make sure your first projects or applications have high biz value that’s easily understood and measured.

UNDERSTAND WHAT’S NEXT
Go light on integrations and dependencies, but be sure to keep thinking a few steps beyond the MVP.
KNOW HOW YOU’LL MANAGE THE PROJECT
Different use cases call for different kinds of project management. If you’re aiming for an MVP, it might be best to use the Lean approach. If your first few applications are slightly more complex (and that’s OK if they are) consider a BizDevOps approach.

ESTABLISH OPEN + CONSTANT FEEDBACK
Accelerating your digital transformation means speeding up your development process, which means making sure that feedback loops are open and constant so you can be sure that you’re always working toward a better version of your software.

DEFINE YOUR PROCESSES
You want to formalize your best practices around your MVP or BizDevOps depending on the needs of the application use case. Ensure that you have repeatable testing and QA cycles.

DON’T FORGET TESTING + DEPLOYMENT
These can slow down your development, but you’d go even slower if you didn’t test at all.

ENSURE ACCESS
With an enterprise application development platform like Mendix, you can invite whomever you think is appropriate to help get the application built. Make sure everyone on your first team has appropriate access to the platform.

CREATE AN INTEGRATIONS STRATEGY
While you’re aiming to minimize integrations at this stage, you still need them. Make sure you have your architect review the applications to see if they match the integration strategy that you set with your vision.

ALIGN YOUR DEPLOYMENT STRATEGY
Similar to above: have an idea as to how you need to deploy your first applications. This will help you establish best deployment practices for different use cases for the next stage.

GET SET UP
Just because this is a new way of developing applications, it doesn’t mean you can cheat on the other parts of the software development life cycle. Ensure that development, test, and production environments are provisioned.
Structure

Once the value of your new development process is proven and your processes are worked out, it’s time to codify what you did right and replicate it. The Structure stage is about growing from your first set of applications to a portfolio that addresses multiple use cases. These applications may become more complex as well in terms of integrations. It’s at this point where you also formally dedicate and build out the team that’s going to be taking on this work. Give the team a name and make sure its purpose is aligned to your strategic digital transformation vision. We’ve seen our customers call it a Center of Excellence or Innovation Factory. Practicing what we preach, we too have formalized our internal application development process at Mendix. We call it the App Factory. Name it whatever resonates with your organization and vision.

People

**DIVIDE AND TRAIN**

At this stage, you’ll have more teams of more product owners and developers building out more of your application portfolio.

**EXTEND YOUR CAPABILITIES**

You can begin to officially include roles like UX/UI designers, quality assurance managers, or architects on these teams. You can also place them more formally in a center of excellence-type function.

**BRING IN A PROGRAM OWNER**

Including a program manager is important because someone will have to ensure the multiple teams you’ve created are all working in the same manner toward the same goal.

Portfolio

**EXPAND YOUR USE CASES**

Now that you’ve got the first few projects out of the way, you can start to expand your use cases and build applications that have a higher level of complexity. But don’t confuse complex with valuable.

**REPEAT**

Create a repeatable value intake and validation process for all incoming project ideas.

**KNOW WHAT COMES NEXT**

Establish a clearly understood prioritization process that aligns with your value intake process as well as with your vision.

**RE-THINK FUNDING**

Because you’re using a new means of developing software, you’ll most likely need a revised method for acquiring budget and funding.
Process

ESTABLISH FUNCTIONAL GOVERNANCE
At this stage, you know what works and what doesn't. Be sure to create a governance program that facilitates a cohesive development process between business and IT.

SOLIDIFY TECHNICAL GOVERNANCE
Similar to the above, now that you know what it takes to develop and deploy these applications, create governance documentation that sets up guardrails around that.

DEFINE YOUR PROCESSES
You want to formalize your best practices around your MVP or BizDevOps depending on the needs of the application use case. Ensure that you have repeatable testing and QA cycles.

MAKE DEPLOYMENT EASIER
Automate the deployment process.

BUILD OUT YOUR DESIGN SYSTEMS
Design systems serve as a single source of truth and contain all the elements a team needs to design and develop a product. Design systems include rules and guidelines around styling (to match brand guidelines), as well as components and patterns such as widgets, templates, and design properties.

Platform

LEVERAGE REUSABILITY
With the Mendix Platform you can create reusable components as well as re-use UI templates. This will save time as you build more applications that have common components (e.g., SSO).

BRING YOUR SYSTEMS TOGETHER
As your use cases gain complexity and mission-criticality, you need to ensure that they’re able to connect to other systems of record in your tech stack. Further refine your integration strategy so that you can start to connect your disparate systems.

HOW DOES YOUR PLATFORM FIT?
Define where your app dev platform lives in your technical landscape: Who has access to it? How are your teams set up (one large team, a team per department)? What use cases are used?

CREATE HEALTH CHECKS
Make sure you establish monitoring and administrative functions for your apps.
**Scale**

Once your structure is in place, you can finally scale. This is the stage where you begin to use that **repeatable development process** you established in Structure to support a large portfolio of multi-use case applications and to monitor and measure how much value they’re creating. At this juncture application development should be a self-sustaining function of your organization. You’ve given your organization the ability to meet the goals you set.

**People**

**GAIN SPONSORSHIP**
You have established a new process led by an engaged and active executive sponsor.

**COVER THE WHOLE DEV PROCESS**
You have brought in functions to your development practice like architecture, quality assurance, testing UI/UX, and any other roles that are necessary.

**PROVIDE TRAINING**
Everyone involved in the software development practice, not just developers need to be trained and enabled.

**Portfolio**

**BALANCE YOUR PORTFOLIO**
At this juncture, your portfolio should contain a robust mix of core applications that help your business operate. It should also feature differentiating applications that set you apart from your competitors.

**DEFINE PLANNING + FUNDING MODELS**
Now that you understand the differences for funding long-term and short-term development projects, create best practice documentation for getting funding for projects across different use cases.

**DEFINE YOUR INTAKE PROCESS**
More on this in the next chapter, but as your development practice grows, you’ll need a process by which to evaluate projects and ensure they align with the strategic vision.
Process

OWN YOUR GOVERNANCE
At this stage, you have formalized a consistent and repeatable governance model. Ensure you have someone in place that can update and manage that documentation.

OWN YOUR METHODOLOGY
By Scale, you have implemented a new method or methods of development (SAFe, Lean, Scrum of Scrums) that gives your organization the agility it needs to deliver apps more quickly.

DEPLOY AT SCALE
Formalize a scalable CI/CD methodology and practice that give you monthly, weekly, or even daily deployments.

AUTOMATE TESTING
The Mendix enterprise application development platform has an automated testing suite that allows you to embed automated testing into your software life cycle.

Platform

REUSE AND SAVE TIME
Make use of reusable components from public and private marketplaces. This way, you don’t have to build twice. This system ensures that developers can discover and use only what has been previously approved, and help them to adhere to organizational design and governance rules.

DON’T FORGET ABOUT MAINTENANCE
If you’ve established your intake process, you also want to be sure that you’ve established guidelines around application monitoring and maintenance.

SHOW YOUR IMPORTANCE
Make sure to constantly prove the value of your application development platform and practice as a critical and integral part of your IT landscape—and ultimately your business’s digital transformation strategy.
Measuring the success of your digital transformation journey can be just as daunting as the journey itself. You need a way to constantly demonstrate back to the rest of the organization to show that this transformation is worth it.

For this, you need to establish a way of measuring the value of your software from idea to delivery. Then you need to formalize a way to establish the value of your new way of developing applications.
Valuating Your Apps

No matter where you are—Start, Structure, or Scale—understanding the value your applications will create is vital.

Your new way of development requires you to have an app’s value well defined at the outset of the project.

Every application needs to start with a use case template that talks about what the application is, what it’s solving or creating, and the key performance indicators. The goal of doing this upfront is that it provides your development teams with a purpose and direction throughout the project from idea to maintenance. The use case template sets a benchmark for what the application should achieve. Measuring the value of an application should be done before development as well as post-deployment. Even intangible value drivers like “improved collaboration” should be noted in this intake process.

Another important aspect you need to think about when defining the value of an application is what happens after delivery. Program managers should create ways to effectively communicate to the rest of the organization the value that this app is creating and how it aligns with the digital transformation vision. They also need to support and foster this value intake process so value definition and measurement become just as much part of the process as the building of the application.

### DATA CAPTURE APPLICATION (B2B)

<table>
<thead>
<tr>
<th>CURRENT SITUATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Poor data quality</td>
</tr>
<tr>
<td>Too much time spent on manual data input</td>
</tr>
<tr>
<td>No splash</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>DESCRIPTION OF THE IDEA (“WE BELIEVE”)</th>
</tr>
</thead>
<tbody>
<tr>
<td>We believe that this new app can improve data quality and automation</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>IT SOLVES / CREATES:</th>
<th>AFFECTED KPIs:</th>
<th>ENABLED BY:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduce time to capture data</td>
<td></td>
<td>Mendis Studio makers</td>
</tr>
<tr>
<td>Increase data integrity</td>
<td></td>
<td>Ingenuity</td>
</tr>
<tr>
<td>Make a big splash</td>
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Valuating Your Development Process

If application development is truly the center of digital transformation and you’re building a new way of delivering software, then you need to be able to measure the value of this new way. Beyond the value of the apps that you’re delivering, how you deliver them can also be managed.

You’re now delivering applications to market faster. **The faster you do it, the quicker you begin to reap the value of your applications.**

With traditional programming and means of collaborating, your organization may be able to develop a solution in four months. Using the Digital Execution practices in conjunction with an enterprise application development platform like Mendix, you could develop it in one month, bringing you an extra three months of value.
Because you can develop applications at a more rapid pace, this gives you more time to make more apps and propel your portfolio into a value machine. This is where you begin to measure the value of your application development process itself. This is your application velocity.

With traditional programming, one app may take four months, another eight, and there’s no room in the rest of the year to build out anything from your backlog. Using this new method, enabled by an enterprise application development platform like Mendix, you gain velocity to develop more applications. You’ve built an app in one month, giving you more time to build more apps sooner, meaning they’re yielding more value sooner.

Are your applications and the means by which you’re developing worth the effort you put into them? If they’re aligned to your digital transformation vision, you can see the strategic impact that your application development process is having on it.

There’s more to the application development process we’ve outlined than just the improved outcomes of your applications and the quantifiable returns you gain from your improved efficiencies. There are also intangibles like learning new capabilities. Your ability to move from waterfall to Agile or Lean, for example, can pay dividends in the future. You could make the shift from on-premises to cloud more easily now. Perhaps you’re finally able to go mobile-first and give your customers and employees what they want.

There’s value in the change that the Digital Execution practice enables you to make.

1.5M + 900K = LOW-CODE VALUE: 2.4M
Now look ahead.

You have forged a path to your digital transformation goals. You have changed the way you think about software, how you develop it, and how you enable your entire organization to think digital-first.

Beyond, you'll see an entire range of peaks and more goals. Remember: Digital transformation is endless. It's not just one climb to make. Your vision will change and evolve—and rightfully so—with new challenges.

No need to worry, though. You know how to get there. You've prepared, you've practiced, and you have the organizational flexibility to face any disruption. You have a way to not only set those goals but achieve them. Over and over again.

Not so daunting now, is it?
End notes


