



How to Unlock the Power of Your Existing IT Systems





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The world is changing faster than traditional IT systems can handle. Trends such as remote work, supply chain disruptions, rising customer expectations, and new business models have accelerated, especially in response to the COVID-19 pandemic. This means that digital transformation, once a long-term strategy, now has to happen yesterday. Yet many legacy systems (yes, even COBOL) still perform the core functions they were designed for. Scrapping them entirely would take untold time and resources. Instead, consider strategies that let you bolt new cloud and mobile capabilities onto your existing software in a way that speeds modernization while steadily reducing technical debt. That way, you can modernize at your own pace, without the risk of rip-and-replace, to meet today's requirements as well as future needs.





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The struggle between IT and business is real

IT and lines of business both want to deliver innovative solutions to customers and internal stakeholders, but that's where their alignment ends. Unfortunately, each face their own challenges that can make it difficult to align their priorities, leading to frustration on both sides. Competition, regulations, tech disruptions, and black swans drive the business to demand new services and innovation from IT departments. Requests for rapid updates, modifications, and new services can be met with long delivery schedules that can't keep up with the rhythm of the business.

However, in many cases, the IT department may not have a choice. Most of their budget goes to keeping existing systems up and running. Even if that weren't the case, traditional development methods are slow while highly skilled programmers are expensive and in short supply. It's a lose-lose situation resulting in lengthy time to market, overburdened IT teams, and frustrated business owners. One typical result is that lines of business turn to one-off SaaS solutions to solve their business problem, leading to a growth in disparate systems and Shadow IT that is ungoverned, potentially insecure, and creates data silos. Organizations need a solution that provides IT with the speed and agility to deliver the systems the business requires to innovate.

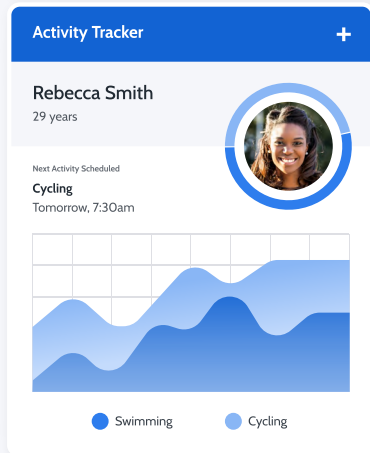
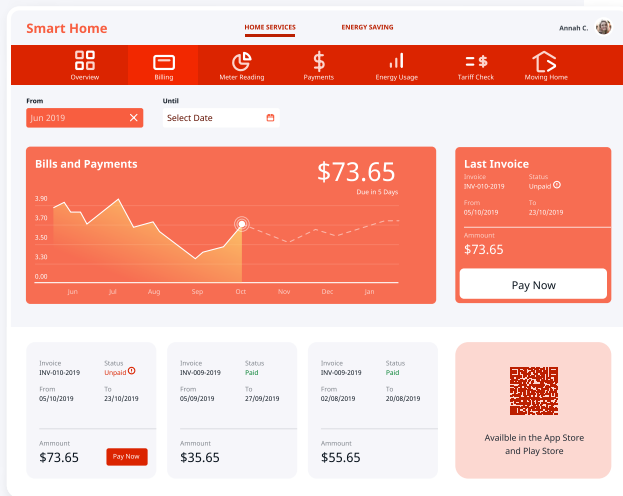


Three strategies to modernize existing IT systems

By taking an incremental approach to modernizing existing applications, you can build, deploy, and manage the software you need to drive your digital transformation while making the most out of your IT investment. There are three ways that you can use a modern application development platform to modernize your legacy systems:

- 1 **Extend your systems** with new touch points and new customer journeys according to your business needs without the risk, cost, or special skills needed for traditional customization of your legacy system.
- 2 **Refactor your systems** by transforming specific components and creating a modular and interoperable architecture that you can change easily at your own pace.
- 3 **Re-build your systems** to create exactly what you need at the speed of buy, and to build cloud-native and feature-rich apps with the resources you currently have.

Let's take a look at each strategy in greater detail.



Case study: European Grocery Chain

Customer-facing employees of one of the world's largest food retailer groups were hindered by an outdated custom-built retail inventory management process that took them away from helping customers on the store floor. The company used a modern development platform to merge multiple existing applications into a single mobile app that drew data from its legacy enterprise resource management (ERM) system, boosting productivity, reducing employee frustration, and improving customer service.

Extend

If you think of your enterprise IT systems as a house, “extending” is analogous to building an addition or adding a new window. An extend strategy works well when core systems are functional (the house is solid) and you just need to quickly add new capabilities or new customer journeys to address urgent business needs. Working with a visual, model-driven development platform with prebuilt UX and UI components offers a rapid way to build role-specific views into enterprise data without altering the original system architecture. Modern application development platforms offer pre-built connectors to common enterprise systems such as SAP, Salesforce, and Microsoft Dynamics, so you can easily access the data you need. Use best-of-breed templates and accelerators to get up and running quickly, share real working prototypes with business users to collect feedback, and move smoothly from prototype to production by adding data, business logic, and integrations. Even better, create and deploy native mobile apps and/or progressive web apps (PWAs) to offer users anywhere, anytime mobile access that the original systems didn't provide. And you can do all this without creating technical debt.



Case study: Green Cargo

Instead of replacing its mainframe logistics and ERP systems, this leading European rail logistics firm leveraged a modern visual development platform to create a microservices-oriented architecture to build a new logistics system that orchestrated data from the mainframe without changing the underlying infrastructure. Results included real-time data integration, event-driven applications, improved API management, and automation with embedded user access control and security.

Refactor

Refactoring refers to a re-envisioning of legacy systems one component at a time. To continue the house analogy, refactoring would be like reconfiguring the floor plan room by room until you've modernized the entire house. Refactoring allows enterprises to overhaul their legacy IT stack at their own pace, starting with the most urgent needs and working down their list of priorities. As they transform specific functions and integrate them with the rest of the environment, they can breathe new life into their architecture one component at a time. Gradually, the entire system — or as much as necessary — will be transformed into a modern decoupled architecture. Each refactored component will make it easier to build new applications. All this is possible without disrupting the original systems or creating technical debt in the form of unexpected dependencies.



Case study: Vopak

This global tank storage company needed to liberate itself from a costly ERP supplier. In just 12 months, the company built a new terminal management system that could reside on any public cloud platform, meaning that the company was free of “vendor lock” and could choose the best, most cost-effective environment for its technology stack.

Re-build

If legacy systems are at the end of their life or no longer meet a company’s needs, they can be rebuilt entirely with a modern visual development platform, just as you might have to knock down a dilapidated house and start from scratch. This approach results in a ground-up, purpose-built, cloud-native solution that meets the organization’s exact requirements. As is the case with extending and refactoring, rebuilding doesn’t mean throwing out the legacy baby with the bath water. Thanks to the multiple data connections available to a modern development platform, the new solution can tap into the original data sources so that once the new, cloud-based system is ready to go online, the switchover can happen as quickly and seamlessly as possible.





Strike the right balance between your priorities: quick-win innovation and foundational, long-term modernization.”

It's your digital transformation. Do it at your own pace.

Your company has spent years and resources building out its core technology stack, and while you need to move quickly to compete in a rapidly changing environment, you needn't abandon this investment all at once. Instead, take an incremental approach by extending existing systems with new and intuitive front ends, refactoring your portfolio to create interoperable systems, or rebuilding systems to create purpose-built apps. Using one or a combination of these strategies will result in a digital transformation process that is unique to your organization and that strikes the right balance between your priorities: quick-win innovation and foundational, long-term modernization.

Augment your IT resources with OutSystems.

A modern, enterprise-grade application development platform like OutSystems lets companies create innovative solutions to increase productivity and efficiency while improving user experience – all while still getting the most out of their investment in legacy systems. They can extend these systems with new capabilities without increasing technical debt caused by costly customizations or risky-to-update fixes. They can refactor their legacy systems one component at a time, replacing each with a modern, cloud-based application. Or they can rebuild entire systems by creating robust, secure and highly adaptable applications built on the OutSystems platform. Give your IT team and lines of business the ability to collaborate on transformational innovations to drive better user experience, streamlined internal processes and accelerated growth.





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