

# Solving the Need for Agility with a Secure, Maintainable, Available, and Reliable Enterprise Architecture



# You probably recognize these challenges:

- Best-in-class customer experiences are a priority, but navigating a web of complex and fragile legacy IT systems is the reality.
- You're feeling the pressure to address an enterprise-wide IT and application strategy with an architecture that weaves together technology for the development and delivery of applications.
- Any architecture you devise must have the security, maintainability, scalability, and reliability needed to prevent disruption and build resilience.

What are you doing about these challenges?  
What technology are you using? Did you know that there is a low-code platform that can help?

OutSystems supports a high-performing, highly available, and secure architecture, along with an accelerated app portfolio development strategy. It is the ideal platform for addressing your challenges.

OutSystems has had proven success with a wide variety of businesses, from Humana to Honda and ING to Logitech. OutSystems is redefining what's possible with the only kind of low-code that supports full-stack software development, end-to-end lifecycle management, as well as continuous innovation and evolution of app portfolios: high-performance low-code.

# The OutSystems Story

Since 2001, low-code pioneer OutSystems has been transforming how enterprise software is delivered. In 2021, OutSystems was named a Leader in the Gartner Magic Quadrant for Enterprise Low-Code Application Platforms for the fifth year in a row.

Today the company has offices around the world and:



## 635,000+

community members



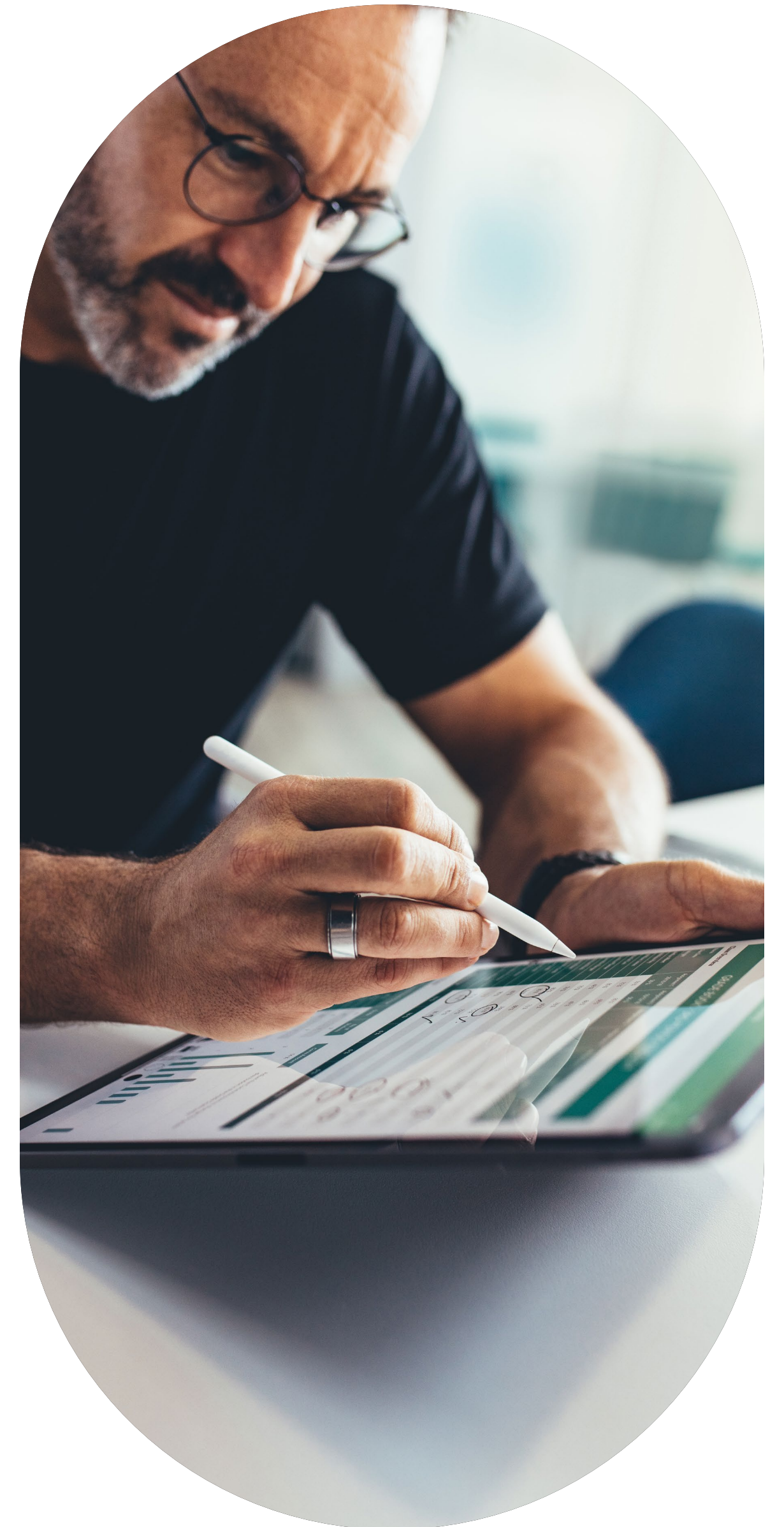
## 350+

partners



## Thousands

of active customers in  
**87 countries** and across  
**22 industries.**





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# Different Tech Challenges. New Opportunities.

It's amazing to think about how enterprise architectures have had to adapt and evolve over the past few years. You have had to adjust them to meet changes that are the result of lockdowns, supply chain challenges, increased security concerns, and remote access to what were once internal applications. Meeting these challenges requires prioritizing efficiency and cost reduction while eliminating silos.

Enterprise architects like you are at the center of these challenges and solutions. It's up to you to define the technology strategy that is a critical piece of running your company's business. Scalability, security, availability, reliability, obsolescence, and maintainability are all factors that must be considered when making technology investments.

This ebook, written for enterprise architects, can help you:

1

**Understand how OutSystems can help you weave together your enterprise architecture with high-performance low-code, which is different from regular low-code.**

2

**Discover how your company can use OutSystems to create highly productive teams that can deliver business-critical applications that are adaptive, secure, resilient, and durable.**



# What is High-Performance Low-Code?

## Initial skepticism about low-code is common:

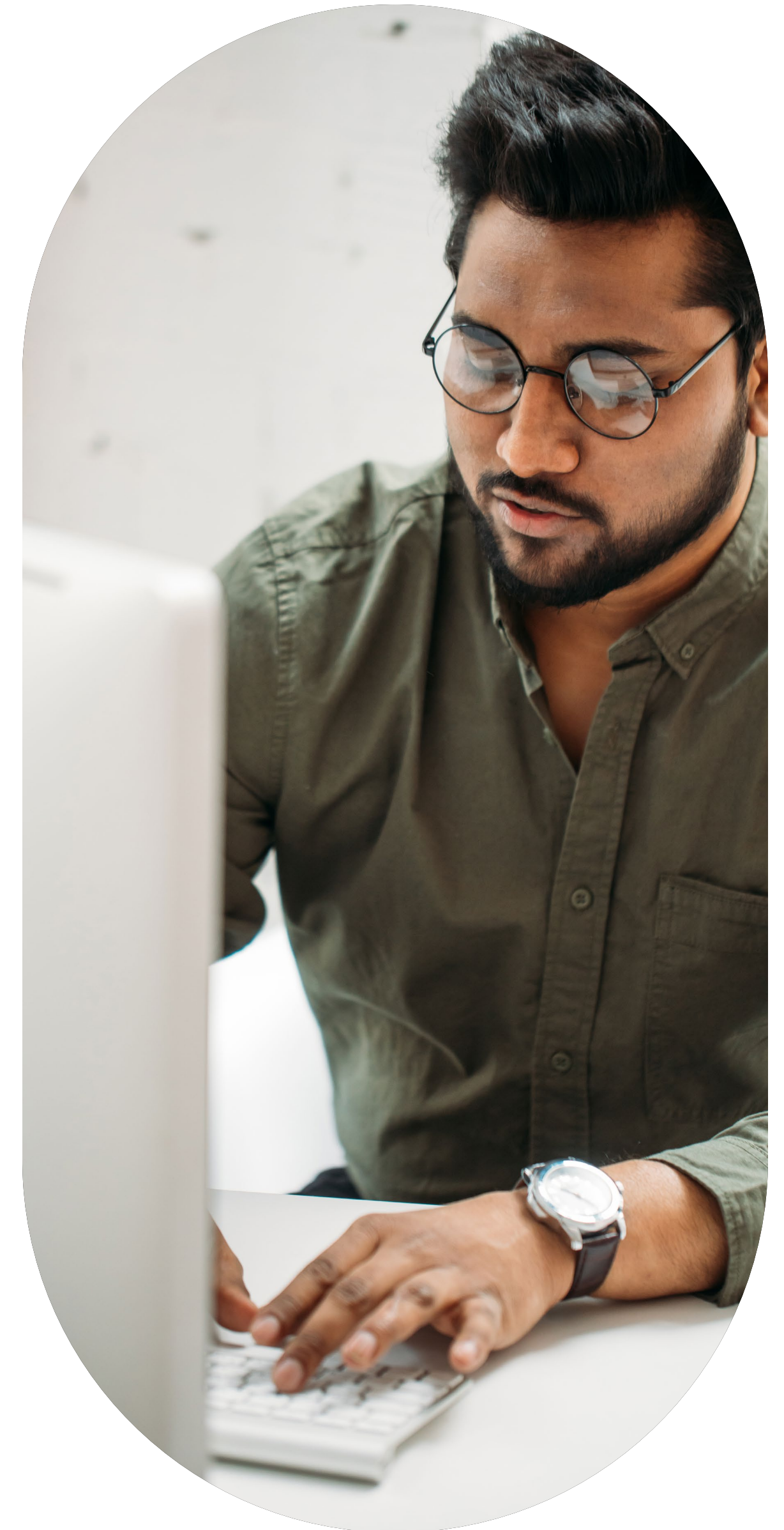
“Low-code doesn’t seem enterprise ready to me.”,  
“Low-code seems to lack control over specific details.”  
or “My tech stack is designed for building customized applications, so low-code doesn’t 100% fit into my vision.”

These concerns were part of a continuous feedback loop that fueled (and continues to fuel) the design of the OutSystems platform, and it shows. Today, many who once were skeptical are using OutSystems to transform their organizations. They have found that it offers a different kind of low-code –**high-performance low-code**– one that gives them the agility to establish a robust architecture better suited to deliver meaningful, business-critical, enterprise-grade applications and systems. Not only that, but they gain the flexibility to adjust to evolving environmental, social, and governance (ESG), and security requirements while dramatically reducing development backlogs, all at an accelerated pace.

What is high-performance low-code, then? It’s low-code that supports end-to-end, full-stack development and delivery of the complex applications required today, at a turbocharged speed.

High-performance low-code generates code, not model interpretation, which accelerates development and iteration. AI embedded throughout the platform takes the guesswork out of next-best actions during development, checks your app portfolio for errors, provides best practices for improvement, and helps you maintain availability, performance, and security. A choice of Windows and Mac IDEs means you don’t need simulators that slow developers down, and app store packaging prepares your mobile apps for the App Store and Google Play with one click.

All this adds up to low-code that transcends the claims of the 275+ other vendors who offer regular low-code. High-performance low-code delivers quick, out-of-the box integration, greater efficiency, scalability, control, and security.



**Low-Code That Integrates:**

You know that enterprise integrations are far more than connecting A to B. There is so much legacy technology involved, plus the changing nature of environments, from on-premises to cloud, and hybrid. High-performance low-code can play a critical role in connecting and integrating the disparate systems and components your architecture and apps require.

High-performance low-code supports intense agility and is more than just a pre-deployment tool. With its visual tools and strong governance, it fosters collaboration and communication between IT and the business, stakeholder-oriented people, allowing these two groups to work through the application integration requirements continually. The ability to build your own integrations in a special IDE is also a key component in high-performance low-code that you won't find in other platforms.



Forrester Research estimated that

# 75%

of app development would use low-code platforms by the end of 2021<sup>2</sup>

**Low-Code That's Efficient:**

In a recent study commissioned by OutSystems, Forrester Consulting revealed that the OutSystems platform paid for itself in less than six months and delivered a [506 percent return on investment over three years](#).<sup>\*1</sup> This is the kind of efficiency you can only get with high-performance low-code. One of the reasons is model-driven development that generates standard code (as opposed to interpreting code) and data models so that it's easier for new developers and new teams to pick up projects and changes.

<sup>\*</sup>Results are for a composite organization.

<sup>1</sup>**OutSystems:** <https://www.outsystems.com/1/low-code-roi-tei/>

<sup>2</sup>**Forrester:** <https://www.forrester.com/blogs/predictions-2021-software-developers-face-mounting-pressure/>



**Low-Code That Scales:**

The OutSystems high-performance low-code platform has been proven to scale to millions of users. To sustain this high scalability, the OutSystems distributed architecture supports load balancing and removes single points of failure in the execution environment.

**Low-Code That You Control:**

You and your teams can build anything because all layers of your applications are extensible with code so you always have complete control. You always own your IP and will never be locked in.

**Low-Code That Secures:**

High-performance low-code ensures that speed and security go hand in hand. OutSystems has more than 500 out-of-the-box features to help your teams deliver enterprise solutions that meet the highest security standards.

- Pre-built IAM integrations
- SOC2 Type II compliant cloud platform
- Continuous protection
- Security monitoring
- Data encryption

“We were most impressed by the completeness, maturity, and development philosophy of OutSystems.”

*Ed Longstrom,  
Senior IT Architect at Fluor*

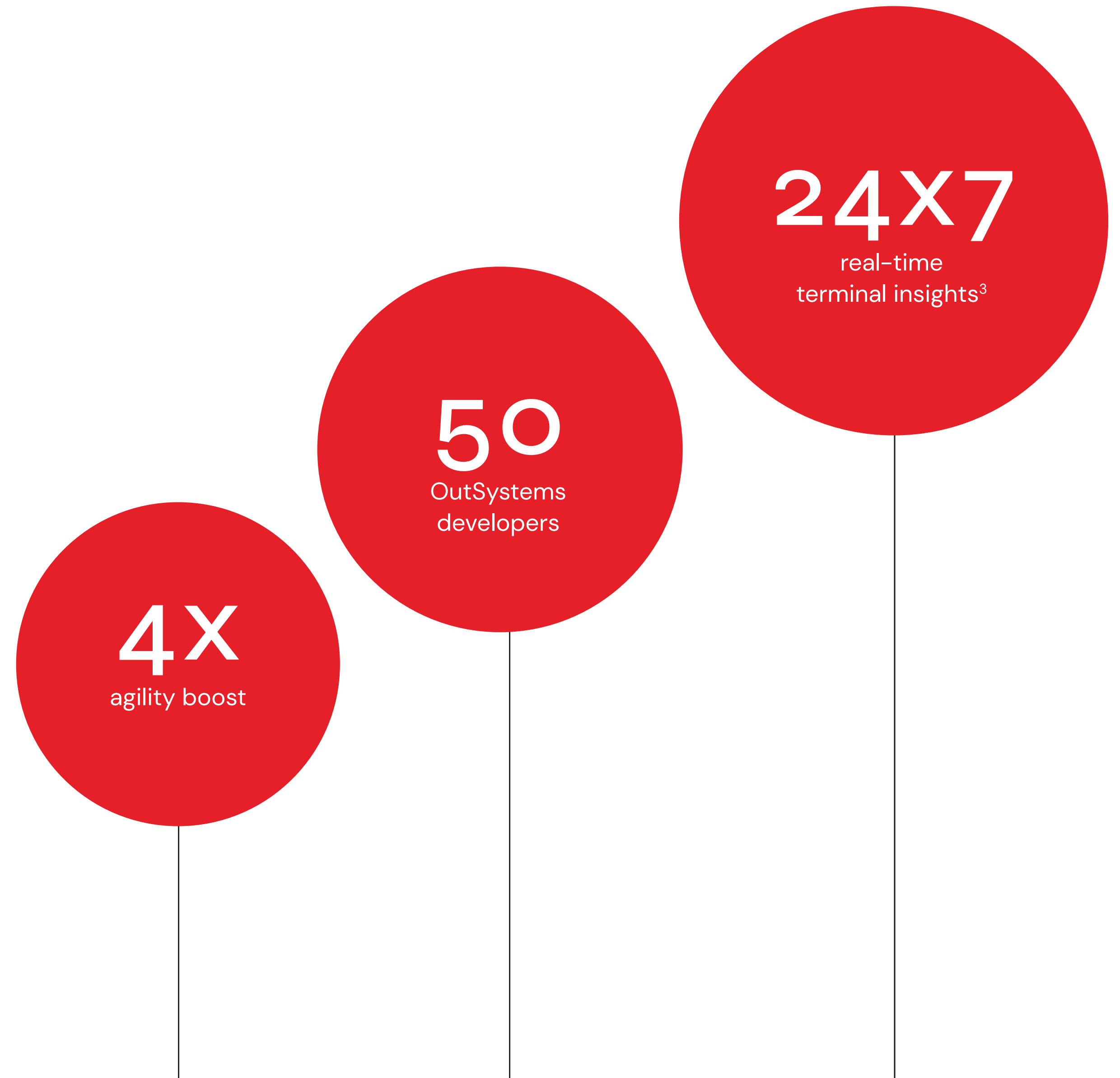




# Vopak Gains 4x Agility Boost by Escaping ERP Lock-in

When the world's leading independent tank storage company, Vopak, needed to replace its JD Edwards ERP system, the company looked at several alternatives, but all presented a continuing problem—lack of fit and slow speed to market for innovations and enhancements.

The company adopted OutSystems in 2015 to spearhead its legacy escape. Its new terminal management system built on OutSystems gives the company the ability to differentiate with fast customer-focused innovation, alongside off-the-shelf SaaS packages that require minimal customization.



<sup>3</sup>OutSystems: <https://www.outsystems.com/case-studies/vopak-escapes-erp-lock-in/>

“OutSystems enables us to build custom applications, bringing them to the business as a PaaS, and implementing changes extremely fast. This gives Vopak the ability to innovate the company’s core processes, really putting us at the forefront compared to our competition.”

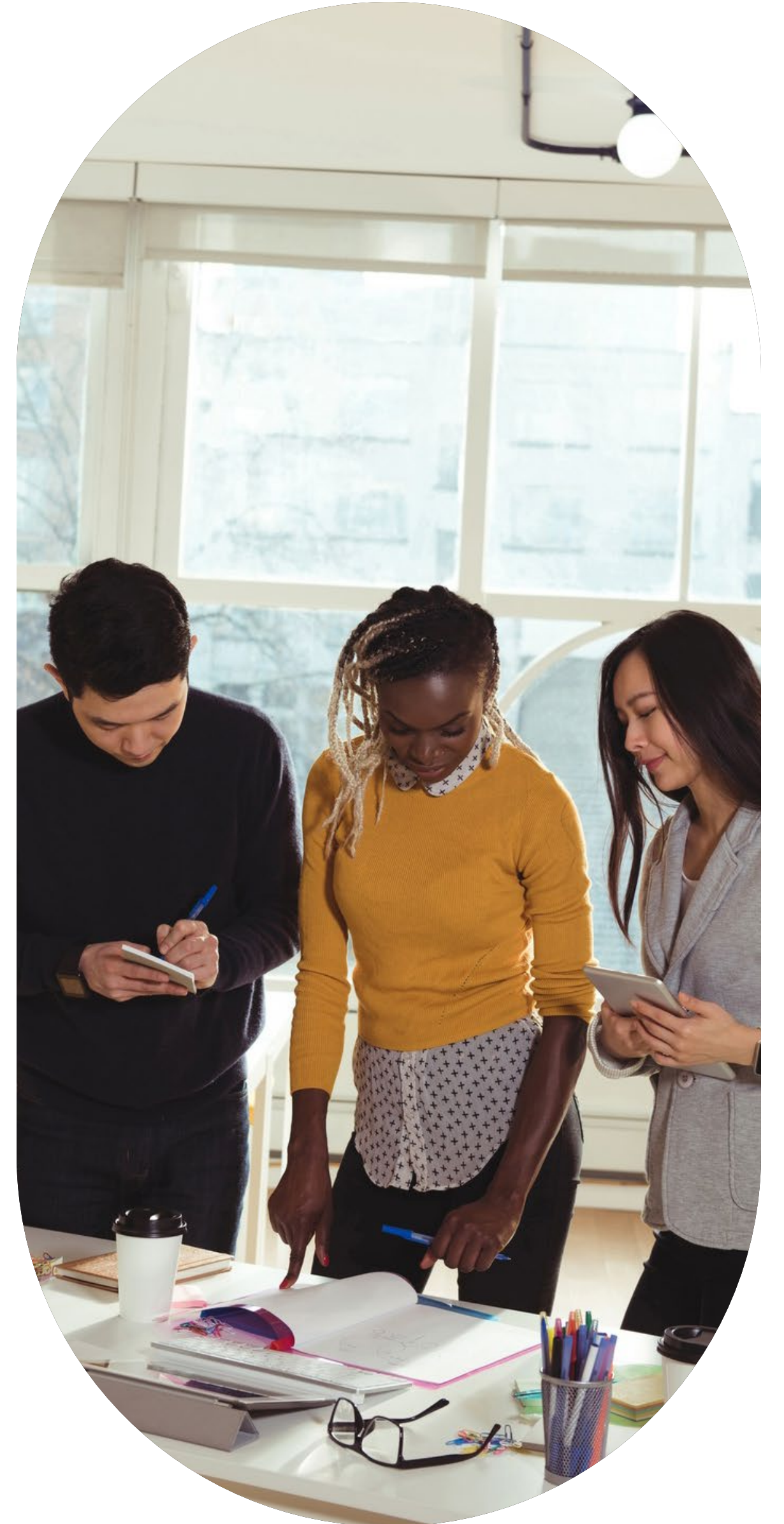
*Leo Brand,  
CIO, Vopak*



# Meeting Your Architecture Needs Today and Tomorrow

The OutSystems platform enables agile delivery with exceptional security and productivity. OutSystems is adaptive, secure, resilient, and durable—which are the characteristics that distinguish high-performance low-code from regular low-code.

**Here is a closer look at each.**



# Adaptability Enables Enterprise Agility

## Entirely Reusable Architecture

With OutSystems, you can establish an application portfolio that enables your team to create digital products—from modules composed by business users to back-end services developed by IT. OutSystems also delivers pre-built integrations and technical components, like modules and templates, to use, modify, and reuse.

## Unrivaled Strategic Application Portfolio Capability

Unlike conventional low-code, OutSystems goes beyond making it easy to automate internal workflows and deliver internal business applications (although we offer those capabilities) to enabling teams to build high-value consumer, policyholder, and customer applications.

## Agility Means Efficiency

The OutSystems platform promotes highly productive teams. It is optimized to remove friction from an application's entire lifecycle, including complete interoperability with DevOps tooling. You can design systems to support your operating model, using our API-based, service-oriented technology architectures for rapid configuration and integration.



Code reusability gives dev teams the ability to reuse code multiple times so applications can be developed faster and with more consistency.



# Security and Governance Manages Risk and Compliance by Design

Security is one of your top priorities, if not the very top. OutSystems dramatically accelerates the development of secure applications and deploys them in a secure runtime environment. Built-in application lifecycle management capabilities promote a clear assignment of responsibilities in DevOps processes, laying the foundation for a secure software development lifecycle (SDLC).

OutSystems generates real, scannable code (not an interpretation) for security tooling, enabling the use of standard enterprise static application security testing (SAST) tools, reducing the burden of manually reviewing code for vulnerabilities and attack vectors. Additionally, the platform applies security checks and best practices systematically to your apps.

Another benefit of the high-performance low-code is AI-based code review, which identifies possible problem areas during the development stage introduced during the coding process.

In addition, more than 500 security points—from design to runtime—ensure that what you build with the OutSystems low-code platform is secure by design. Fixes for DDOS, newly identified web and mobile threats, and other protections are automatically applied to your apps.

“Our new UI is fast and highly secure, thanks to the additional security layers built into the OutSystems architecture.”

*Romel Guerra,  
Architect, TODO1 Services, Inc*

# A Simpler IT Landscape Supports Operational Resilience

Another hallmark of high-performance low-code is a streamlined development and deployment landscape, which reduces the need to keep adding tools as expectations and technology change. OutSystems is an end-to-end platform that enables you to rationalize tooling, reducing the need for multiple complex commercial-off-the-shelf (COTS) or bespoke tools and platforms.

**As a result, ongoing app creation is more manageable:**

Redundancy, repetition, and risk are dramatically reduced with AI-driven recommendations that help you create and then easily manage solid architecture foundations.

We are the number one ranked low-code platform<sup>4</sup> delivering up to:



506%

ROI in just three years.

<sup>4</sup>OutSystems: <https://www.outsystems.com/p/low-code-application-platforms-gartner-2021/>



## Durability Ensures System Maintainability

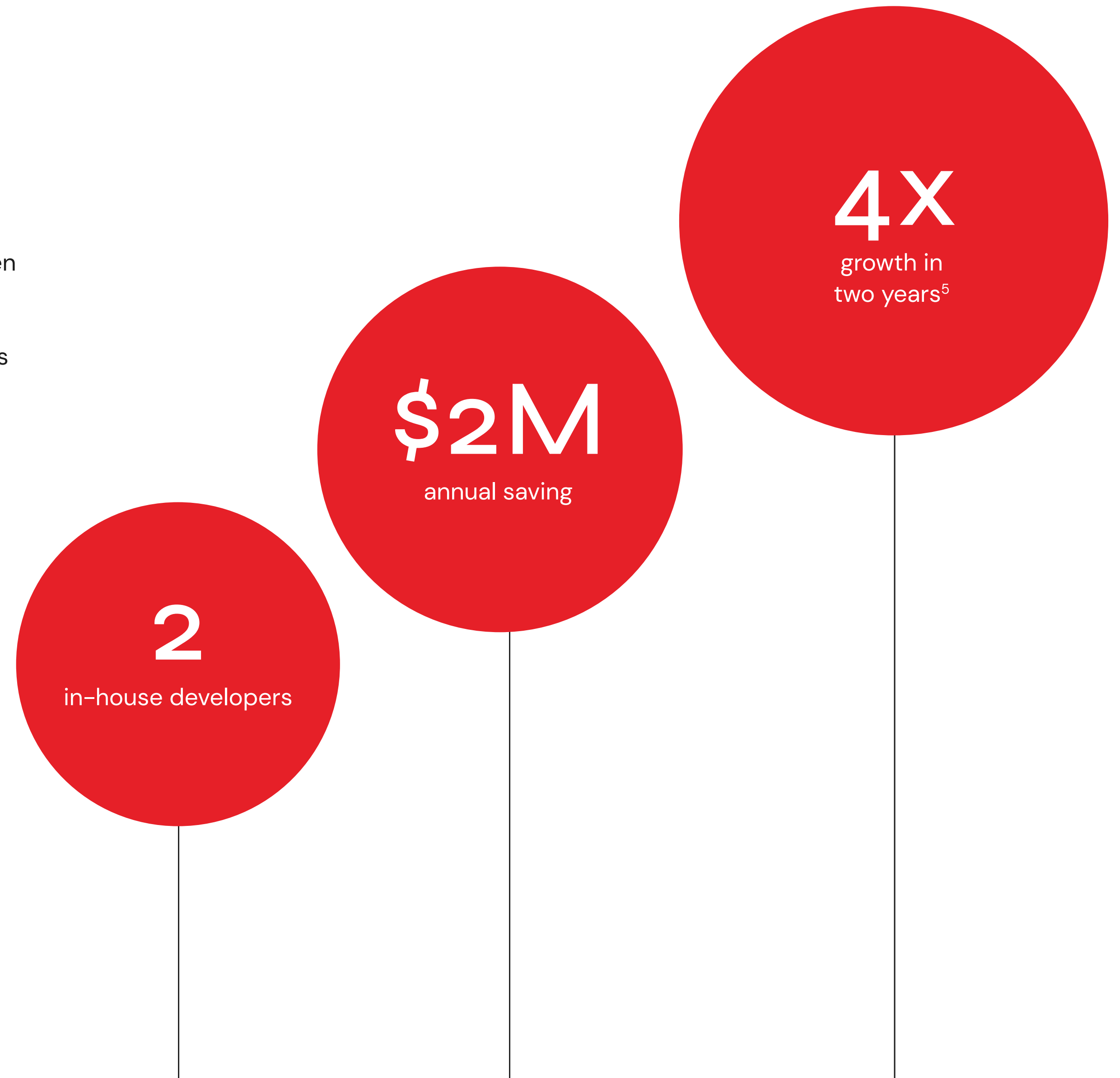
The OutSystems tech stack is evergreen so that you can be confident you're building apps with the latest technology. Your apps run on the most up-to-date cloud infrastructure and enable your team to work with the latest tech. The platform's security is patched and updated automatically, so you're always protected.

Applications developed with OutSystems 20 years ago are still in use and editable today, spanning 11 versions of the platform.

**There has been no need for them to update the platform as the underlying technology stack evolves.**

# US Acute Care Solutions Supports Acquisition Growth Strategy with OutSystems Apps

Founded in 2015, US Acute Care Solutions (USACS) now serves around seven million patients annually at over 300 hospital-based locations in 20 states. USACS's meteoric growth depends on efficient, easy-to-use web and mobile apps that support physicians at their place of work. OutSystems has powered many of these applications since 2016, helping USACS efficiently scale with an IT cost-base considerably lower than its industry peers.



<sup>5</sup>OutSystems: <https://www.outsystems.com/case-studies/usacs-supports-growth-with-outsystems/>



"We're now much more in control of our product roadmap. By eliminating SaaS sprawl and legacy debt, we're no longer dependent on external vendors for new features. We're now much **more responsive** to business requirements."

*Jesse Eterovich,  
Vice President of Technology, USACS*

# Open Standards

## A platform that's designed to work with what you already have

Low-code platforms are not valuable to you if they only target business users and are designed to function outside of IT. This is why you need high-performance low-code delivered by OutSystems. The platform is built for professional developers by professional developers and is designed to function as a first-class citizen in your enterprise development environment.

OutSystems integrates with your existing DevOps tooling (from Jenkins to Azure DevOps). It makes things simple by offering out-of-the-box integrations with all of your systems-of-record and databases-of-record. In addition, it supports your chosen identity provider and integrates with your observability and monitoring investments. OutSystems even supports your enterprise security analysis tools. And this is just the beginning.

OutSystems helps you get the most value out of the code and infrastructure you already have. Your development teams can build web services that expose core business applications and access existing code libraries that have been built with traditional tools and frameworks. OutSystems can even help make your non-low-code developers more productive and turn front-end developers and back-end developers into full-stack developers.

By working well with all of your existing development investments, OutSystems can help speed up innovation for your entire organization, not just your OutSystems development teams.



# Green Cargo Adopts OutSystems to Drive Innovation and Incremental Legacy Cloud Migration

Global railway transportation services giant Green Cargo, was about to rip and replace its mainframe logistics system and SAP ERP. But, realizing that this would cost millions and place digital innovation on hold for seven years, new company CIO Ingo Paas made a counter-proposal -- find new ways to access data in the legacy systems and shift digital innovation to the cloud.

With a combination of Microsoft Azure and OutSystems, Green Cargo has rediscovered its innovation mojo, delivering digital innovation up to ten times faster with a growing team of in-house developers.



<sup>6</sup>OutSystems: <https://www.outsystems.com/case-studies/green-cargo-legacy-cloud-migration/>











“The architecture workshop played a crucial part in our decision. We learned how we could build a scalable microservices oriented architecture with OutSystems, that would help us to digitize the company over many years.”

*Ingo Paas,  
CIO, Green Cargo*

# Low-Code. High-Performance.

The OutSystems low-code development platform is changing the game by leveling the playing field. OutSystems enables developers at all levels to innovate and address urgent business needs quickly. The OutSystems low-code software application platform unlocks the boundaries legacy IT puts on teams, liberating teams to build new capabilities and innovation.

## Features and capabilities of the OutSystems platform:

-  Leverage emerging tech by connecting to any system through Open APIs
-  Accelerated omnichannel strategies with existing teams and resources
-  Delivery to any app store with automated app packaging
-  Unified place to develop all your apps on any scale
-  Tailor-made customer onboarding experiences
-  5x faster development speed
-  Intuitive visual programming
-  Enterprise-grade security



# The Platform Built for the Speed of Today

OutSystems enables accelerated digital transformation at lower risk, through the sustainable development of superior customer experiences and hyper-automation.

## Bring Your Vision to Life

Front-end, back-end, process orchestration, integration, and data development—all in one environment—enable you to create everything from serious applications that automate critical business processes to global-scale digital offerings.

## Accelerate Impact

AI, advanced tools, and easy integrations speed up development tasks and eliminate waste so developers deliver at the pace of elite CI/CD experts. One-click publish, dependency analysis, and SDLC automation transform application backlogs into innovation opportunities up to 10x faster.

## Stay a Step Ahead of Change

Flexible, resilient architecture maintained by OutSystems ensures that the latest technology is always at your fingertips so you can continuously innovate. Dependency alerts, AI-powered architecture review, automatic updates, and more, make change as painless and easy as possible.

## Address Technical Debt

Reduce technical debt during development and get assistance building a best-practices architecture to efficiently deal with it in the future. OutSystems orchestrates the entire deployment process to identify errors in real time.

## Save Time and Money While Boosting Productivity

Build agility into processes where legacy systems could not. Adapt to market changes and consumer demands in record time by quickly building new products and services. Visual modeling and automation of business processes can handle requests faster and meet compliance needs.

## Work Intuitively with Visual Coding

Employ visual programming language that enables programmers to describe the process in terms that make sense to humans, not computers. Low-code takes the promise of visual programming and applies it to reduce the complexity of modern software development.

## Derisk with Enterprise-Grade Security

Work inside a secure runtime environment and the tools necessary for secure development. OutSystems provides a dedicated computer security incident response team (CSIRT) for managing security threats 24/7 and proactively monitoring reputable industry sources for newly discovered security vulnerabilities.





# A Powerful Platform Backed by Powerful Numbers

## A Modern Application Development and Delivery Platform for Enterprise Architects

OutSystems delivers high-performance low-code that enables your teams to create custom digital experiences that bring you closer to customers, employees, partners, and businesses. You can differentiate your offerings and stand apart from the competition.

The OutSystems platform radically disrupts the economics of build vs buy. The visual simplicity of the platform combined with the depth of capability and a broad collection of accelerators enables you to meet the evolving needs of your enterprise.



INTEGRATION WITH

# 275+

third-party enterprise systems,  
databases, and custom applications



# 200+

out-of-the-box features to help your  
teams deliver enterprise solutions that  
meet the highest security standards



# 5,000+

reusable, open code modules, connectors,  
UI components, and business solution  
assets in the OutSystems Forge



# Ready to harness the power of OutSystems for your business?

Visit us online to try a free product demo today [↗](#)