



Transform YOUR Business NOW!

How to Launch a
Low-Code Digital Factory





Let's Go!

In 2015, IDC predicted that two-thirds of Global 2000 CEOs would have digital transformation at the center of their corporate strategy by the end of 2017. At the end of 2016, Forbes noted that digital transformation sat atop the strategic agenda for the C-suite in enterprises. And, as we enter 2018, Gartner says that digital transformation is identified most often as a top business priority for CIOs and IT organizations. So, how are these efforts looking?



Something's Wrong

According to a 2017 CIO survey, 90% of digital transformation efforts are coming up short. Eighty-six percent of respondents blamed a lack of agility when developing new digital applications. The main culprits: complex and aging IT architectures and lack of skilled resources. IT appears to be hitting a wall.



What Are the Barriers?

This apparent wall, or barrier, to digital transformation success has many facets, but four major challenges underlie them all:

- Massive backlogs
- Legacy debt
- Scarce resources
- Uncertainty

To overcome these challenges and drive digital transformation at pace and scale, IT needs to apply new methods and tools to meet the four objectives that are foundational for digital transformation success:

- Enabling more innovation and coping better with uncertainty
- Achieving more successful adoption of agile
- Architecting more flexible, easier integration
- Delivering software faster, more reliably, and with fewer errors

Modern software development and delivery methods like DevOps address these objectives. And the tool? Low-code. It's a virtuous circle: the right tools help modern development methods work more effectively. Those same methods help you get the most out of low-code.

The Road to Success

Digital transformation should be seen as a journey rather than a destination, and as with any new journey, it's useful to have a map or guidebook to refer to. The good news is that thousands of OutSystems customers have trod this path before, and the result of their experiences is a new concept called the low-code digital factory.



Introducing the Low-code Digital Factory

A low-code digital factory is an approach to accelerating digital transformation that enables you to:

- Deliver new software applications for your business up to 10x faster than traditional development.
- Scale your team's output from just a few apps to hundreds (yes, hundreds) per year.
- Establish a sustainable capability for enterprise-wide, digital transformation.

It balances the structure that prevents your digital transformation initiatives from hitting a wall with the agility needed to overcome today's challenges. It addresses the three dimensions of digital transformation and guides you on your journey.

How the Low-code Digital Factory Addresses Digital Transformation

Accelerating a digital transformation journey with low-code is based on three key concepts:

- **Digital use cases:** Not all low-code platforms solve the same problems. This complicates things when you're trying to understand how to use low-code. There are three distinct use cases for low-code that impact the adoption of low-code technology from a number of different perspectives. The low-code digital factory meets the needs of each.
- **A framework for change:** Digital transformation for any organization is a significant undertaking that puts an end to "business as usual." As such, it needs a framework designed specifically for the launch and scale of a low-code implementation. A low-code digital factory provides that framework.
- **A three-stage digital journey:** Digital transformation is a revolutionary path with three stages that companies go through as they adopt and then mature their use of low-code. The low-code digital factory adapts for each stage, making it possible to move successfully through them.



Digital Use Cases

Broadly speaking, there are three distinct use cases for digital transformation that are addressed by low-code: digital operations, digital experiences, and digital core.

Digital Operations

The improvement of internal business operations that previously involved cobbled together combinations of email, spreadsheets, and manual efforts.

This is often an early proving ground for low-code because it's easy to build a digital operations app quickly with a small team and demonstrate that low-code works at the same time.



Digital Experiences

The improvement and creation of brilliant, customer-focused digital experiences. Often entailing mobile apps and portals.

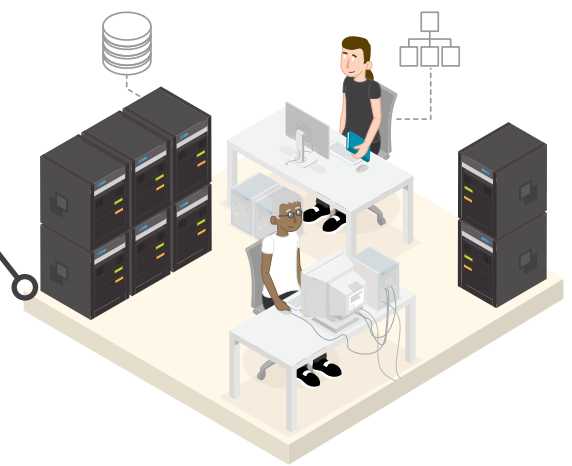
Having mastered low-code with one or two digital operations solutions, the development team is ready to embrace more challenging development that involves rapid prototyping, pixel-perfect UX design, and the need for massive scalability and security.



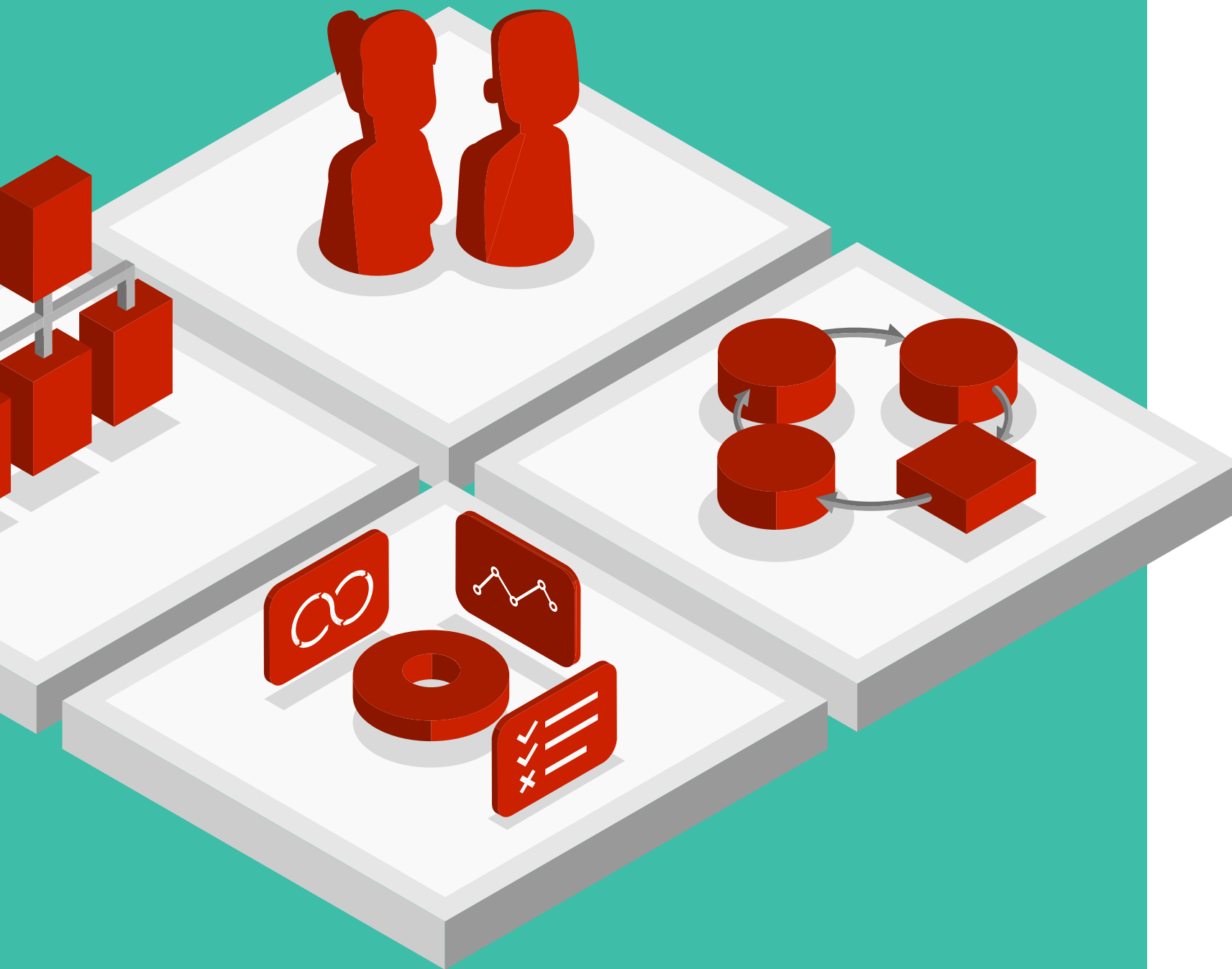
Digital Core

The final use case for digital transformation addresses the combination of aging legacy systems and highly customized packages. These core systems are not keeping up with the demands of the business.

Having proven low-code in the previous use cases, there's a reappraisal of the future of legacy systems and some packaged applications. Upgrade plans are shelved in favor of custom low-code replacement.



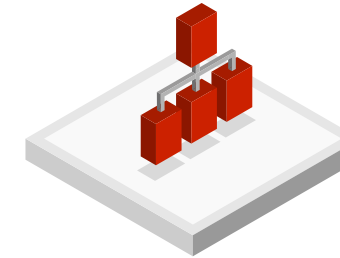
Although customers often start their use of low-code with smaller solutions in the digital operations arena, the sequence by which you address these three use cases will depend entirely on your organization's burning issues and priorities.



A Framework for Change

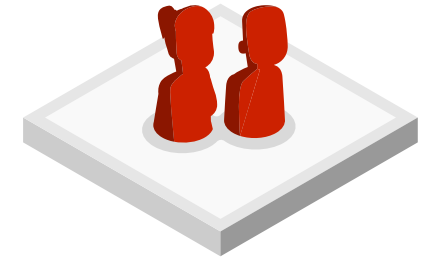
A low-code digital factory offers four critical elements for how you organize your digital transformation initiatives: structure, talent, ecosystem, and process (STEP).

Structure



An organizational structure designed specifically for successful low-code development and delivery addresses questions of team size, roles, where architecture fits, governance, and testing.

Talent



The talent element is the detailed approach for identifying and sourcing the roles needed for successful delivery of low-code projects:

- What skills are required?
- How do existing team members map to the low-code approach?
- What are the enablement paths for individuals?

Ecosystem

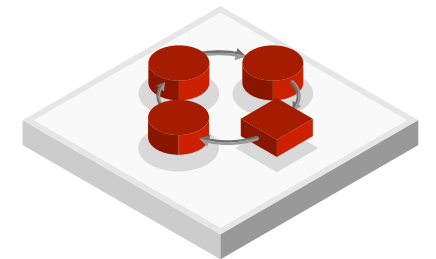


The applications and systems developed with low-code as part of digital transformation projects do not exist in isolation. They integrate with a wide range of systems, including:

- Systems of record
- Data services and service buses
- Cloud services
- DevOps tools, and more...

The ecosystem element is the guidance on the sequence needed to tackle this integration.

Process



No change management framework would be complete without guidance on how to modify, establish, or support new ways of delivering software with answers to questions like:

- How should the different parts of an organization interact?
- How does low-code fit with agile?
- How do business and IT work closer to ensure customer needs are met?

Structure, Talent, Ecosystem, and Process Come Together

The low-code digital factory provides practical guidance on who does what, when, and why. Based on proven agile development practices with a low-code twist, the following six functions help form the foundation of your low-code digital factory.



- Business User
- Product Owner
- Tech Lead
- Developer
- Adoption Champion
- Adoption Expert

This schematic illustrates the initial team structure at the "foundation" maturity level.

Case Study

Randstad Builds Customer Portal in Six Months Using OutSystems and Three Developers

Randstad's two-year-old customer portal, which served more than 20,000 users, was showing signs it could not scale further. With a mandate to increase the features by 20 percent and with a six-month timeline, Randstad made the strategic decision to build an entirely new customer portal using OutSystems. In just four months, a team of three developers built an entirely new portal. Two months later, version two was released based on real-time change requests from business users. The Randstad Customer Portal is now a custom solution that is future-proofed and growing in user adoption.



“We were able to deliver a solution that sets us apart in this competitive market.”

—Vasco Teixeira-Pinto, Service Manager, Randstad

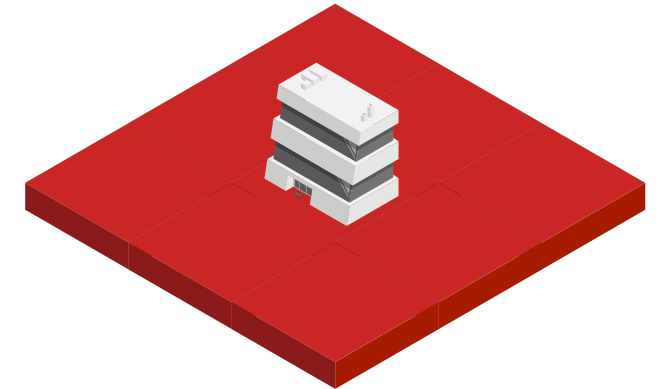
Three Stage Digital Journey

Rome wasn't built in a day. You need to start simply, score quick wins, and then use the success and kudos as the basis for progression. You can do this by following a three-stage evolutionary path.

Foundation

The foundation stage of digital transformation focuses on enabling the first project team and successfully delivering the first project.

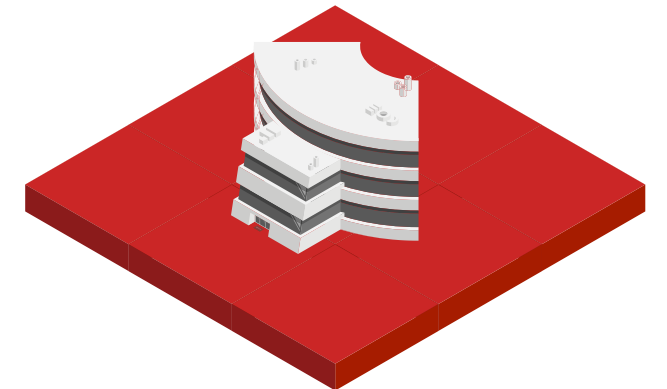
As with any change program, establishing an early win is critical to maintaining momentum. Delivering value to the business builds confidence in low-code and paves the way for subsequent projects.



Center of Excellence

The next step in the journey involves building out a low-code center of excellence.

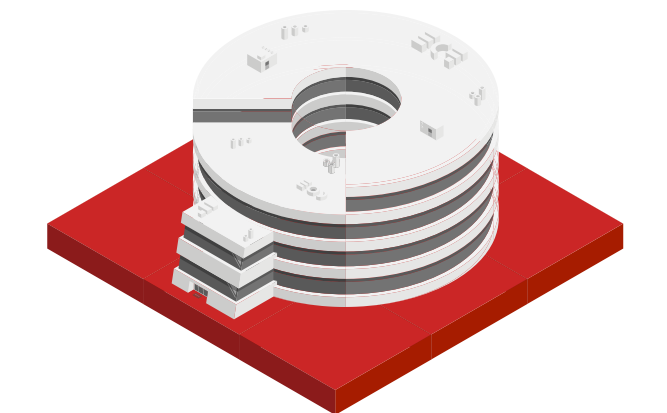
Now that the first team is successfully delivering projects, more teams in the organization will want to do so, and it becomes necessary to scale. Governance becomes critical as more teams are enabled. Low-code is integrated with an increasing number of other systems. During this stage, organizations establish a self-sustaining low-code capability.



Full Digital Enterprise

With the appropriate supporting structure in place, organizations can now scale low-code across multiple lines of business.

The journey to becoming a full digital enterprise includes embracing all of the use cases for low-code. With a truly agile digital core, businesses are equipped to adapt quickly to seize new opportunities and respond faster to competitive pressure.



Case Study

Terminal Giant Vopak Transforms Its Business with Rapid Low-Code Development

Vopak, one of the world's largest tank terminal operators for the oil and gas industry, is using OutSystems to deliver large mission-critical applications to support their core processes, which includes logistics. One such project is a new terminal management system, which took the Vopak team just 12 months to build with OutSystems and has increased terminal productivity.

“OutSystems enables us to build our own 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 on the forefront compared to our competition.”

—Leo Brand, CIO, Vopak

Get the Digital Transformation Playbook

We've just scratched the surface in this eBook. If you are interested in going deeper into the low-code digital factory processes, including information about the roles, responsibilities, required skills, and development paths, there's an entire digital transformation playbook with all the details for setting up your low-code factory.

outsystems.com/dt-playbook



Next Steps

As mentioned, the inspiration for the low-code digital factory was the result of the needs of customers and the solutions we've been developing together since 2001. We owe a debt of gratitude to the thousands of companies that have helped OutSystems become an acknowledged leader in the low-code application development market as demonstrated in the reports from leading global industry firms. Here's how to access them.

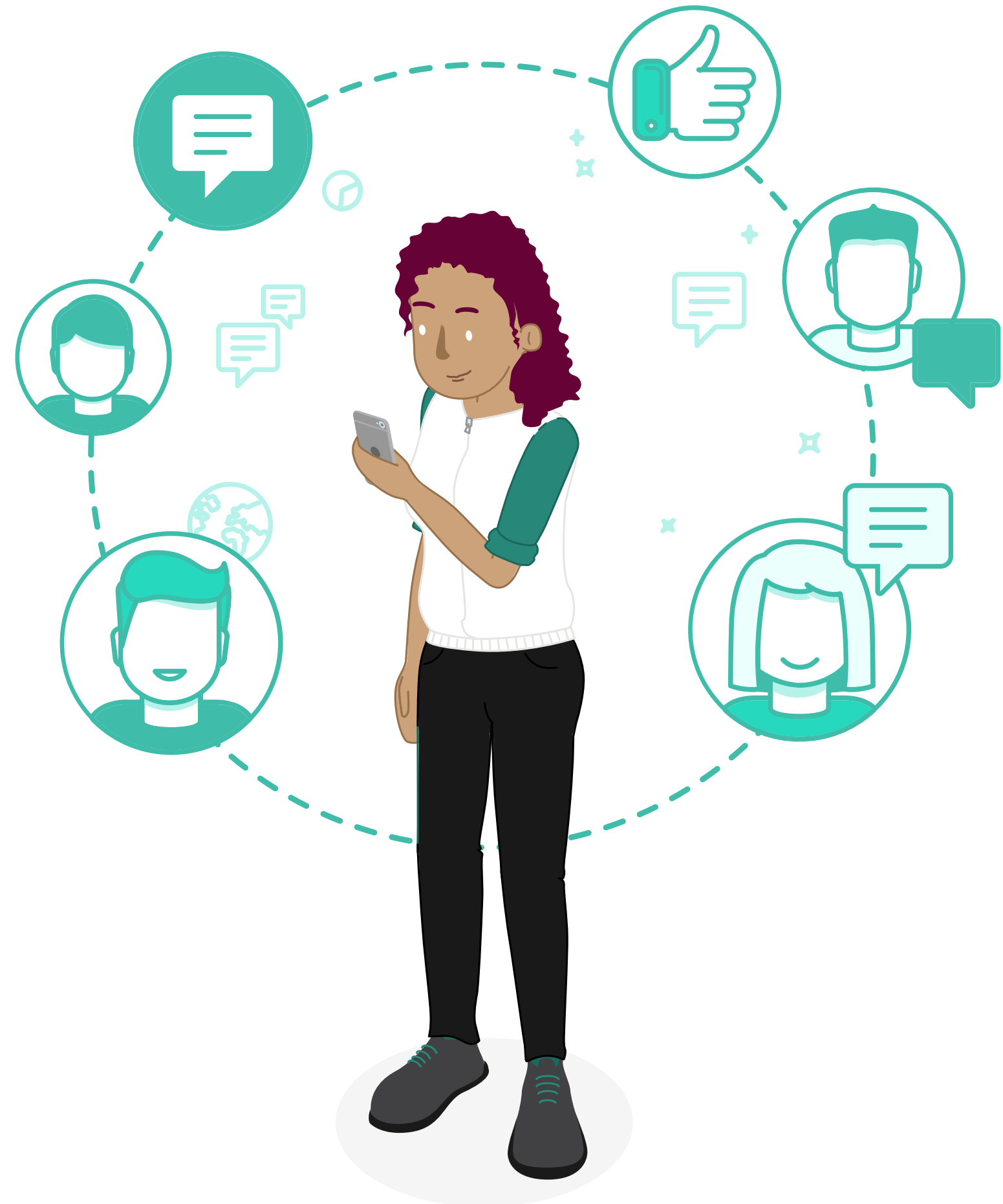
<p>Gartner A leader in the Mobile Application Development Platforms (MADP) Magic Quadrant.</p>	<p>FORRESTER® A leader in two Forrester Waves™ for Low-Code Development Platforms.</p>	<p>Gartner A leader in the High-Productivity Application Platform as a Service (aPaaS) Magic Quadrant.</p>
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Find Out Who's Using These Techniques Today

At OutSystems, 'Happy Customers' is not just a slogan - it's why we exist. It inspires us, humbles us, and challenges us in all that we do: to build the best products, to deliver over-the-top service, and to make you successful.

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