

DEPLOYMENT AT THE SPEED OF BUSINESS:

Bringing Agile and DevOps Together for Immediate Impact



.|| NORTH HIGHLAND INSIGHTS

The following report draws on the results of a North Highland-sponsored survey conducted in April 2018. The survey identified the emerging trends in technology domains, along with the tactics and techniques that correlate to digital effectiveness. This report utilizes those insights to spotlight opportunities for organizations to bring Agile and DevOps together for faster deployment and greater responsiveness to end-user feedback.

Survey Participants

Technology & Digital

More than 300 director-level and higher employees with leadership responsibilities in technology/digital categories at global companies with revenues in excess of \$1/€1 billion were surveyed in April 2018.

.|| KEY TAKEAWAYS

The problem: The leaders in the race to customer-centricity all embrace a common philosophy: Deploy with as much quality and speed as required to keep your audiences happy.

The analysis: We believe that Agile processes and tools alone are not sufficient to meet the needs of today's businesses and users. DevOps, when paired with Agile, drives greater value than Agile alone by enabling deployment at the speed of business.

The solution: Within this piece, we identify the critical failure points of an Agile-centric approach, along with the actionable DevOps cures that IT, data, technology, and product executives can apply across people, processes, and technology.

More than a hundred sole-searching sneakerheads marched into New York City's Washington Square Park, smartphones held high, on a June afternoon in 2017. The diverse mix of high schoolers, hipsters, and stroller-pushing parents swept their cell phones from side to side. Seconds later, they took off in a dead sprint.

The unlikely group funneled into a small open area just off the park's eastern entryway. One by one, they came to a halt, still glued to the screens of their phones. Then they pulled out their credit cards.

This is how Nike is selling sneakers in the digital economy.¹ On this day, it was a pair of limited edition PSNY x Air Jordan 12s, available exclusively through real-time clues from the Nike SNKRS app to its location. The app is open to all, but if you aren't fast enough (or obsessed enough), you're out of luck.

Nike's new retail experience is groundbreaking. Gamified shopping has helped Nike recapture the fervor of the company's days before e-commerce, when shoppers would wait for days, through rain, snow, and heat, outside brick-and-mortar stores for the newest kicks. In comparison, standard online shopping experiences fell flat and average consumers weren't fast enough to compete with reseller-run bots that would quickly snag—and promptly mark up for eBay—the online merchandise.

Nike is among the leaders but isn't alone in its race to deliver differentiated shopping options through a combination of groundbreaking digital and in-person experiences—all at a pace that continues to accelerate. Tesco South Korea has created a combination

of e-commerce and “store” with a subway billboard that you can use to order groceries delivered to your home. Menswear brand Alton Lane uses a futuristic app-based body scanner in its showrooms to take precise measurements for its high-end suits.

And while these retailers' approaches might be unique, they share a common development philosophy: Deploy better and faster.

Agile adoption and maturity has grown as organizations seek to achieve what Nike and Tesco have accomplished.

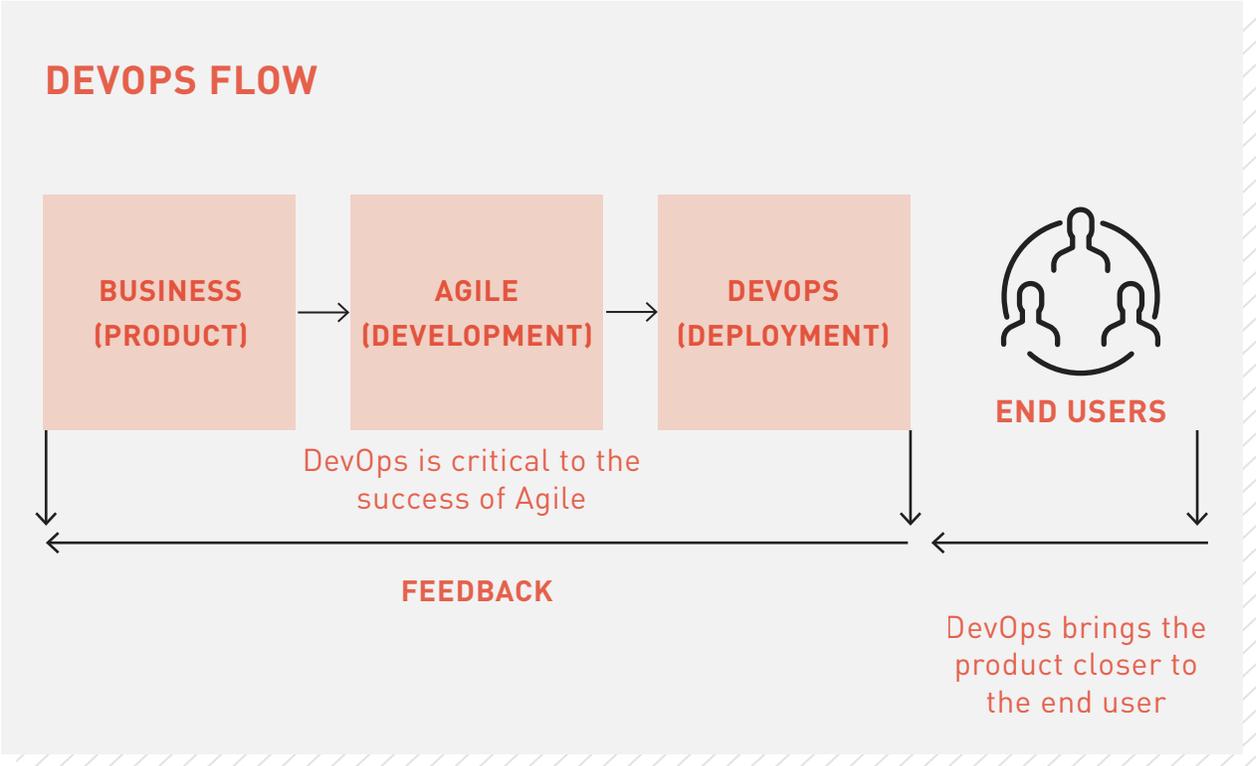


97% OF LEADERS REPORT THEY'VE PRACTICED AGILE SOMEWHERE IN THEIR ORGANIZATION.

For example, 97 percent of leaders report they've practiced Agile somewhere in their organization.² However, it's no silver bullet for deploying at the speed of the business for one simple reason: Agile ends with development. While Agile has set the stage and laid the organizational groundwork, it's now DevOps' time to shine. It's the only philosophy that allows software deployment and support to keep up with the pace of 24/7 product cycles and customer demands.

At its foundation, Agile is about responding to changing requirements through close collaboration with users. The Agile practices that most companies implement—those which focus solely on development—are not truly Agile. If organizations cannot get working software into the hands of those users regularly, they lack the customer feedback loop that’s critical to Agile methodology. We believe that DevOps, and its focus on deployment, is essential to the success of Agile. Unlike Agile, DevOps is not satisfied until the product is active. It breaks down the silos between support and development to enable deployment at the pace of the business. In our work, we have observed that a lack of DevOps often severely compromises the success and efficacy of an organization’s Agile implementation initiatives.

In this piece, we apply experience and new research on Agile performance to demonstrate to IT, data, technology, and product executives how DevOps and Agile can work together to enable faster, higher-quality applications now.



THE NEED FOR SPEED: MOVING FROM AGILE TO DEVOPS IN THE RACE TO CUSTOMER-CENTRICITY

Don’t call it an overnight success, but Agile methodologies have reached savior status, enabling organizations to drive faster release cycles with greater responsiveness to feedback from the market. And for good reason:

organizations with high levels of enterprise agility outperform their industry average more than 80 percent of the time.³

In many ways, Agile has become table stakes

for organizations seeking to keep up with the pace of technological and business change. But with 74 percent of organizations reporting, in our research, that the pace of digital tool/app development has increased over the last three years, keeping up requires organizations to look beyond Agile alone.

DevOps incorporates similar principles of Agile but takes development one step further to deployment. The pursuit of this end game has driven a growing number of Agile users to incorporate DevOps methodologies, with 71 percent of respondents in the 12th Annual State of Agile Report noting that a DevOps initiative was in progress or slated within the next year.

THE TELLS: FOUR SIGNS YOU'RE READY FOR DEVOPS

It's a common Agile tale: Your team is successfully producing software and features are piling up, but you struggle to get any of it into the hands of users. No one—not the team and certainly not the business—wants semi-launched software. But in this case, that's often as far as Agile ways of working are getting you.

DevOps takes the baton from Agile to bridge the gap between development and deployment, matching the best of Agile development with business-pacing deployment speeds. And organizationally it employs a series of philosophies that all leaders can get behind:

- Deploy stable solutions faster
- Get the right support
- Embed a culture that supports breaking down barriers and delivering end-user value

Becoming a DevOps organization requires a

Where Agile has had 15 years to solidify its brand, DevOps has only had five. Its principles are derived from manufacturing, with emphasis on starting where you are, making the work visible, and making sure continuous improvements are readily applicable in many business functions. We believe that leaders who embrace DevOps can help their organizations advance along the path to customer-centricity that Agile helped pave.

Eighty percent of software organizations now practice some form of Agile, but only 29 percent believe their companies are extracting its full value.⁴ Is it time to focus solely on Agile? Or is it time to expand to DevOps?

massive transformation. However, one of the greatest gifts Agile has given organizations is the framework for the adoption of massively transformative ways of working: Start small and scale across the enterprise via proven quick wins.

In that spirit, the following section spotlights common symptoms of an anemic Agile organization and discusses how DevOps can allow leaders to demonstrate success before expanding across the enterprise.

The Symptoms of Agile Anemia

#1 Your outputs are (too) buggy. The knee-jerk reaction is to add more quality assurance (QA), but real value can only be derived if the product is higher quality from the beginning. Increasing quality is not, and cannot, be the

job of a QA team, yet Agile isn't designed to optimize for QA through the entire system.

DevOps can help by... shifting testing to the left. DevOps principles move QA upward in the value chain and identify and apply upstream solutions. DevOps works by shifting the job of improving quality into the realm of the product team. The result: High-performing DevOps teams recover from downtime 96 times faster—usually in a few hours, instead of several days—and experience a five-time lower change failure rate.⁵

#2 Things are (too) slow. You can't get anything out the door fast enough, and your pace is slowing down the business.

DevOps can help by... incorporating automation, continuous integration, and continuous delivery across development and deployment. High-performing DevOps teams deploy more, faster, with a commitment-to-deployment lead time that is 440 times faster than non-DevOps teams.⁶ Automation adds gas to DevOps' speed, and high-performing DevOps teams automate 33 percent more of their configuration management, 27 percent more of their testing, 30 percent more of their deployments, and 27 percent more of their change approval processes.⁷

#3 You're solely focused on Agile because you're concerned about cost. Poor branding is partly to blame for DevOps' high-cost reputation. While DevOps can be more expensive at the onset, in our client work experience, it generates higher value.

Value comes in many forms. Like many enterprises, Fidelity International had several business units developing software

applications and was burdened with legacy release processes that placed huge demands on its teams. Apps were deployed manually across hundreds of servers, with each app requiring customization. Manually introduced errors frequently broke the process.

When it came time to develop a critical trading application with a firm launch date, the organization knew its error-prone, manual process would jeopardize the project. Fidelity used the opportunity to embrace a DevOps approach and implement an automated software release framework that would enable it to meet the rollout schedule.

That solution resulted in more than \$2.3 million per year in cost avoidance for that app alone.⁸ Since then, the Fidelity team has automated the release of dozens of applications, reducing release times from two to three days to one to two hours and decreasing test-team downtime. The process has also made it easier to display regulatory compliance and has enabled predictable release schedules that stakeholders can rely on.⁹

DevOps can help by... creating increased quality and speed for the same investment. Specialist teams are more efficient at specific tasks in the short-term, but long-term, the handoffs and silos slow things down. If your only goal is to lower costs, then hire siloed specialists. Quality and speed come from a generalist DevOps-oriented approach.

#4 Your culture reinforces status quo ways of working. In our research, 51 percent of organizations cited leadership alignment as a top-three enabler of the successful design and adoption of technology platforms and solutions. Make no mistake; the application

of DevOps will be massively impactful on your people. That impact can be hugely positive, but it can also be painful if not carefully managed and if leadership is not aligned. Most organizations are not built to support DevOps; however, status quo ways of working won't sustain you in the near future.

DevOps can help by... triggering small transformations. Look for immediate opportunities to make single improvements to current ways of working. Implement small and learn from the results.

Curing Agile Anemia: What to Do Next

Taking these symptoms into account, we've identified the actionable cures—across technology, processes, and people—that can enable your organization to be DevOps-ready.

Before getting started, conduct a holistic assessment of your organization. This assessment is best done by an objective third party. Before a major UK-based retailer took on a massive software development transformation, it turned to North Highland to provide a holistic assessment of its people, processes, and technologies to identify current maturity gaps and build an action plan and roadmap for the future. The output of extensive employee and stakeholder interviews was a heat map showing the company's maturity set against its desired future states and a series of recommendations around the areas requiring the most attention and care. With that, the company was able to strategically target its efforts leading into the transformation and develop a pilot custom-designed to capitalize on its greatest strengths and grow the capabilities they would need in the near future.



People

- Before changing anything, honestly assess your people and your culture. In doing so, be wary of overconfidence in your enterprise levels of resiliency. Use findings to strategically fill capability gaps and correct cultural shortcomings before adopting DevOps. Like all systems, a DevOps system can only produce as much as its weakest link.
- Take a hard look at your team and leadership. DevOps is a transformation. And like Agile, the success of DevOps comes down to people and the transformational power of their leadership. "People issues" were cited as the top challenge to expanding DevOps in an organization,¹⁰ and DevOps teams without transformation leaders are half as likely to be high performers.¹¹
- While most organizations hire specialists, focus on finding generalist skill sets. This philosophy supports the DevOps silo-busting approach. Generalists are competent at flexing and scaling to fit where needed, as opposed to living within their predefined categories.
- Build greater transparency into ways of working and visibly champion fast failures. A DevOps culture discourages secrecy, fear-based motivators, and penalties for failure.



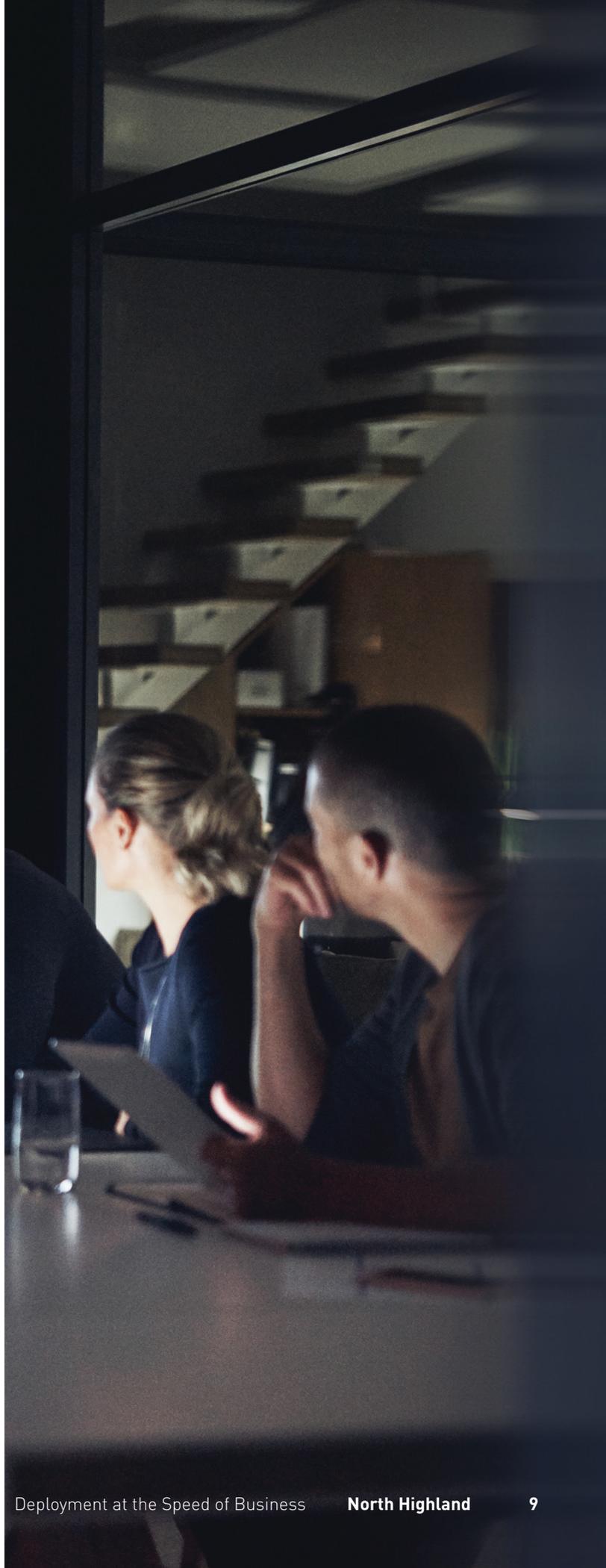
Process

- Map your current process. Leaders must trace the end product back to its source through an assessment of different touch points, departments, and organizations a given piece of work goes through. Understanding how the process works today is critical to making the work visible.
 - Conduct a holistic assessment to ensure QA is operating sufficiently. Look for the obvious process issues first. For example, are the business and Agile teams operating on the same set of requirements?
 - Eliminate cross-product and cross-team dependencies. Establish one value chain for every product and enable the team to function completely independently. Then make the case to consolidate a DevOps team that comprises skills across those different areas, including security. Specialists, including those in UX/UI and QA, don't participate directly but support the team with their expertise.
- Develop key performance indicators and metrics that match your specific product value chain. Remember, we can't all be Facebook—nor do we need to be. The desired velocity of change will be dependent on your user, your team, and your product. In other words, don't invest in building a Ferrari if a Honda better matches the speed of your business.
 - Start small and embrace micro-transformations by prioritizing continuous improvement. Nordstrom spearheaded its first DevOps project in the redesign of its customer mobile app. The team broke down the divide between development and product support, organized squads around value, and moved to continuous planning and a single backlog of work. As a result, bugs went down, throughput went up, and releases went from twice per year to monthly. Motivated by this smaller-scale success, Nordstrom realized these methods could work for any team and is continuing to apply them across the organization.¹²



Technology

- Before making changes, build a transformation engine first. A transformation engine is a fully documented and understood process with clear control points. Armed with the engine, start measuring the process. Then introduce improvements based on a program of continuous improvement.
- Based on the current state process, conduct a technology assessment for each stage. Work “down” the chain first, starting with the development team and documenting as you go. If possible, note timing for each stage.
- Look for opportunities to automate processes, such as server provisioning and testing, that can take a long time or have frequent errors. Before you automate anything, look to improve what’s manual to be reliable. Reliability is the first step to effective automation.
- Don’t over-engineer the toolchain. Processes only need to work as fast as the business. While the technology shouldn’t make the business wait, there is no need to move faster than the business.
- Take a “build to change” rather than a “build to last” approach. Realize that the tools in this area are evolving and changing rapidly. Like the software you’re building, don’t get too focused on the perfect toolchain. Be prepared to change every year (at least).



YOUR NEXT MOVE: GENERATING GREATER VALUE FASTER WITH DEVOPS

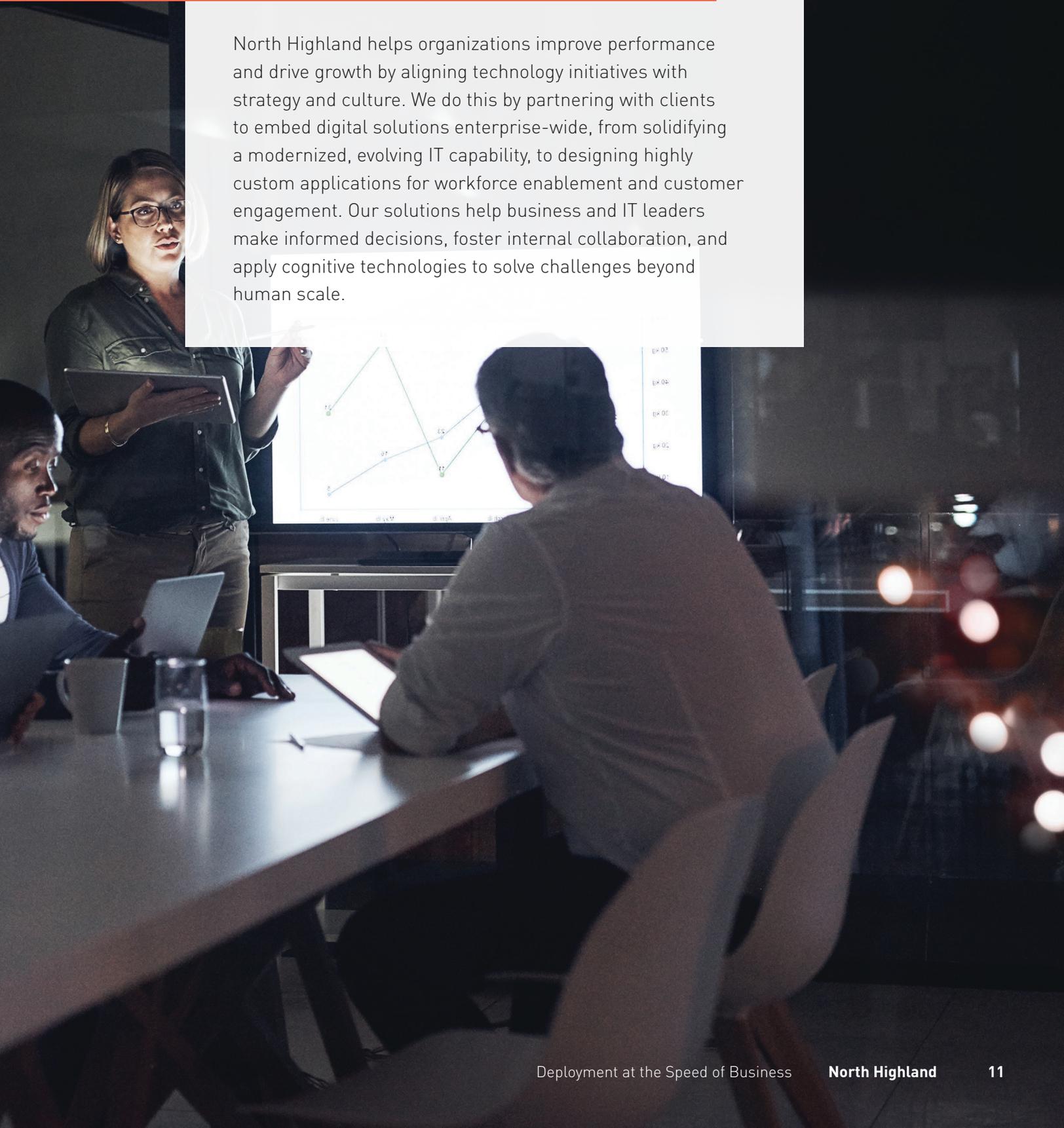
Companies using DevOps have the substantial advantage of 46 times the deploy frequency of their non-DevOps peers.¹³ Put another way, if you're not embracing DevOps against someone who is, they can do what you do 30 times faster. Whether you're wooing sneakerheads or your CEO, DevOps helps leaders generate more value in less time.

Agile is the prerequisite, and it has primed organizations culturally and operationally for the transformation DevOps will require. Start small where the benefits of DevOps will have immediate and measurable impact, and leverage those successes into a DevOps transformation that will enable your company to help develop the future.



ABOUT OUR TECHNOLOGY & DIGITAL SERVICES

North Highland helps organizations improve performance and drive growth by aligning technology initiatives with strategy and culture. We do this by partnering with clients to embed digital solutions enterprise-wide, from solidifying a modernized, evolving IT capability, to designing highly custom applications for workforce enablement and customer engagement. Our solutions help business and IT leaders make informed decisions, foster internal collaboration, and apply cognitive technologies to solve challenges beyond human scale.



ABOUT NORTH HIGHLAND

North Highland is a global management consulting firm known for helping clients solve their most complex challenges related to customer experience, performance improvement, technology and digital, and transformation. We add value and support our clients across the full spectrum of consulting, from strategy through delivery. We bring the big ideas, then we make them real. North Highland is an employee-owned firm, headquartered in Atlanta, Georgia, with more than 3,000 consultants worldwide and 60+ offices around the globe. The firm is a member of Cordence Worldwide (www.cordenceworldwide.com), a global management consulting alliance. For more information, visit northhighland.com and connect with us on [LinkedIn](#), [Twitter](#) and [Facebook](#).

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