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Charting the course

Defining a North Star for your DevEx initiatives

Want to build a developer experience that accelerates developer productivity while supporting your organization’s strategic objectives? Setting an ambitious, yet actionable, North Star for your DevEx efforts is key to creating a standout environment that empowers developers to do their best work.

There are more than 27 million professional software developers today,¹ expected to grow by 25% within the next decade (more than three times the growth rate of other professions²). Developers are not only builders of the \$880 billion software economy,³ but also key buyers and influencers of technology. In fact, 57% of developers surveyed by Stack Overflow said they have influence over technology purchases in their organization.⁴ Furthermore, generative AI (GenAI) advancements across every industry have placed developers at the forefront of leading the growth trajectory within their organizations.

Enabling developers effectively has a significant payoff—organizations with leading DevOps/DevEx capabilities are twice as likely to exceed organizational performance goals (e.g., profitability, market share) as low performers.⁵

Improving developer experience is a logical investment, whether companies have a dedicated DevEx team or not. However, to focus the investments in a way that truly empowers developers without ballooning costs, leaders must first set a DevEx North Star.

Navigating DevEx in a sea of challenges

Given the increasing importance of developers, many companies have recently embarked on a journey to improve their developer experience (DevEx). However, these organizations may face complications due to a constantly shifting market and operating landscape. Engineering leaders, when embarking on DevEx initiatives, are confronted with three realities:

- **Heightened stakes**

Customer expectations are reaching new peaks: security, reliability, privacy, and seamless experiences have now become table stakes. One in five consumers would switch to a competitor after just one negative product experience.⁷ Developers—with the products they build often being the most prominent interaction between companies and their customers—find themselves in the hot seat for building differentiated, delightful, and trustworthy experiences. DevEx leaders must determine how best to enable developers to accelerate innovation, while balancing security, quality, reliability, and cost concerns.

- **Complex operational environment**

New development tools, frameworks, and playbooks are emerging at a rapid pace. In 2022, there were 200 million active code repositories on GitHub.⁸ More recently, GenAI-enabled coding assistants (e.g., GitHub Copilot, Amazon CodeWhisperer) have gained popularity. While these tools are meant to decrease time to market and lower the cost of development, they also add another layer of complexity; developers are now confronted with the paradox of choice. Many developers find themselves working within a convoluted tools environment of more than 250 SaaS products,⁹ often with limited cross-platform integration and little guidance from leaders on the “preferred way” (sometimes called a “golden path” or a “well-lit path”). DevEx leaders acknowledge the need to streamline the developer tooling environment but may struggle with where to start given the sheer number of tools to evaluate and the delicate balance between short-term and long-term needs.

- **Rise of citizen developers**

The proliferation of low-code/no-code platforms such as Appian and OutSystems have lowered the barriers to software development, enabling business users and non-developers to build applications. By 2025, an estimated 70% of new applications developed within enterprises will use low-code or no-code technologies, compared to only 25% in 2020.¹⁰ This “citizen developer” movement brings new opportunities, such as enabling faster innovation by decentralizing software development across the

Developer organization —or DevEx team

A developer organization, sometimes called a DevEx team, is a group tasked with enabling and empowering a company’s internal developers. Developer organizations come in a variety of shapes and sizes: they can be highly centralized, consolidated to serve the entire enterprise at large, or fragmented and embedded within distinct business units and product areas. They often drive both strategy and execution activities.

While not all organizations have dedicated DevEx teams, almost all will have leaders (e.g., engineering team leaders, CIOs, CTOs) who care about improving DevEx. When we refer to DevEx leaders, they can be leaders at the helm of dedicated developer organizations or DevEx teams, or those who care about DevEx but carry other formal titles within their organizations.⁶

business. However, it can also pose potential risks around governance, security, and tech debt accumulation. To harness the potential of citizen developers while mitigating risks, DevEx leaders need to provide the right guardrails, platforms, and enabling capabilities.

Why you need a DevEx North Star

In this increasingly complex developer landscape, it can be tempting for DevEx leaders to over-index on incremental operational improvements and lose sight of potential disrupters or opportunities for critical impact. Articulating a compelling DevEx North Star can help set the right balance to guide investments and ensure that DevEx initiatives build on one another to achieve greater long-term results. Moreover, a clear North Star drives focus, accountability, and motivation for DevEx teams, aligning all team members to a common goal.

What is in a North Star

Crafting a compelling DevEx North Star requires articulating the organization's aspiration statement, role, focus areas, and cross-functional engagement. As we shared in our first article, "[Accelerating developer experience \(DevEx\)](#)," articulating the North Star for the DevEx organization is the first step in building leading developer experiences. In our experience, a highly effective DevEx North Star is an actionable, compelling document that consists of four elements:

1. Why does your organization exist?

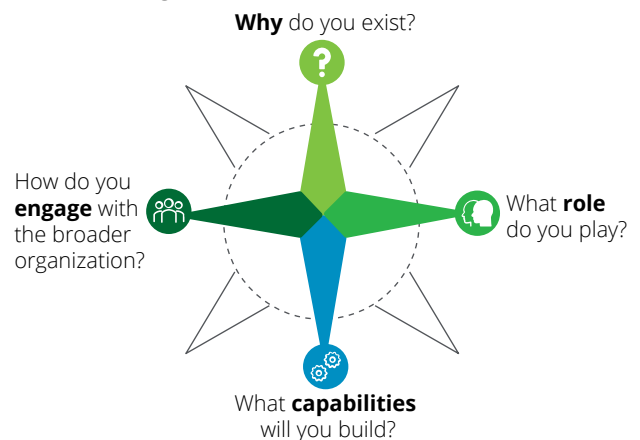
Start by defining the foundational purpose for your DevEx organization. Create a pithy, aspirational vision statement that can serve as a rallying cry, galvanizing DevEx teams while simultaneously articulating value to stakeholders across the organization, all the way up to the C-suite. This statement should be simple, memorable, and enduring enough to be "evergreen" for the next three to five years. It should also lead with impact. For example, one e-commerce company embarked on a multi-year DevEx initiative in 2020 with a goal to bring elements of the company's overall mission of humanizing e-commerce to its developer population.¹¹

2. What role do you play?

The role of a DevEx team articulates what company objectives your team will help the organization achieve. There is no one-size-fits-all role that every DevEx organization plays to enable developers and drive business value. Some DevEx teams choose to focus on improving developer productivity and efficiency by streamlining processes, communication, and cross-functional collaboration. Other teams aim to be a strategic adviser to the business, helping product leaders sense market signals and major shifts—such as GenAI—and driving product decisions. The e-commerce company's DevEx team played the role of an internal advocate for human-centered developer experience. They offered engineering leaders and product managers a fact-based understanding of their developer pain points via surveys and interviews. They also took the lead in working cross-functionally to prioritize and secure support for DevEx initiatives that optimized efficiency, reduced burnout, and improved satisfaction.¹²

To help DevEx leaders think about the unique role of their own DevEx organizations, we have developed four conceptual archetypes based on our research and experience. The role that a DevEx organization chooses to play is usually a mix of one or more archetypes (see sidebar "DevEx role archetype") and should support the vision statement. We'll dive deeper into the four common archetypes and implications in the following section.

Figure 1. What is in a North Star



DevEx role archetype

DevEx role archetypes are conceptual constructs that characterize a DevEx team's identity. They are important for four reasons:

1. They align the DevEx team efforts with the broader organizational vision, ensuring every action propels the organization closer to its strategic goals.
2. They outline what the DevEx team offers, including the scope and scale, to the rest of the organization.
3. They articulate how the DevEx team engages with customer-facing product and engineering teams.
4. They help ignite a culture of collaboration, innovation, and belonging within the DevEx organization by articulating a shared goal.

DevEx teams often blend archetypes to create a unique mix of vision, support, culture, and execution to drive organizational goals.¹³

3. **What capabilities will you build?**

It's important to denote the tangible capabilities that will enable DevEx initiatives to accomplish the aspiration statement and role. Think of this as the "reason to believe" why the DevEx teams will be successful. The e-commerce company focused its capabilities on enabling self-service through documentation, scaling forums for peer support, optimizing continuous integration/continuous delivery (CI/CD) pipelines, and creating personalized development environments. Crystallizing the top focus areas helped the company's DevEx team achieve maximum impact given time and investment constraints.¹⁴

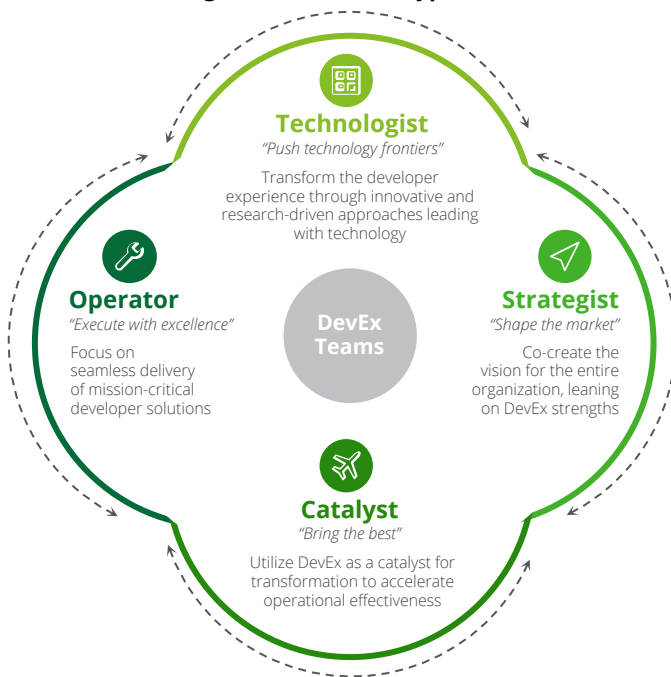
4. **How do you engage with the broader organization?**

Driving successful outcomes as the DevEx organization is highly dependent on how well it interacts with, and influences, stakeholders outside the DevEx team. These stakeholders include, but are not limited to, engineering and product leaders of specific product lines, customer experience and customer success, finance, legal, and even the C-suite. Aligning with these stakeholders on the focus of DevEx initiatives (e.g., knowledge playbooks versus in-flow development accelerators), the level of customization DevEx solutions provide, and the shared metrics to drive is essential for realizing DevEx impact. The e-commerce company, which had dedicated a meaningful 20% of its engineering capacity toward DevEx investments, adopted a holistic, coordinated effort to scale across people, process, and technology since it recognized that "scaling one without the others would result in waste." Moreover, it continuously gathered C-suite and cross-functional support by demonstrating the direct connection between improved developer experience and tangible impact to the overall business, such as reduced engineering time and costs.¹⁵

A deep dive on DevEx role archetypes

As we mentioned previously, the role of a DevEx organization is typically a mix of four archetypes, based on our research and observations (figure 2). Most organizations choose to adopt a hybrid approach that blends elements from each archetype. Moreover, a DevEx team's role is not static; it should evolve based on the needs of the organization. For example, a DevEx team may choose to focus on a blend of operator and technologist archetypes in the near term, while building capabilities to fulfill the catalyst and strategist archetypes in the long term.

Figure 2. Role archetypes



Source: Deloitte internal analysis

Technologists strive to support their developers via leading research and development, often focused on breakthrough technologies that have the potential for critical impact on developer productivity. Technologists:

- Collaborate with centralized research and development (R&D) and engineering groups to ideate and incubate next-gen solutions, such as GenAI-powered tools, frameworks, and programming languages, for both internal and external developers.
- Partner closely with their developer communities (internal and external) as "first users" to test and refine the technology.

Case example of a technologist

Prodded into action by brand erosion and loss of technological leadership, a Fortune 500 tech company heavily invested in its developer organization, along with its R&D division, to better support developers in the early to mid-2010s. The R&D function transformed from a research-based center of excellence focused on margin improvement of a single product to a developer-friendly organization that supported innovation across all products. The developer organization focused on building modern technology frameworks (including open source), that improved developer productivity for its internal and external developer communities, thereby encouraging convergence of its tech stack and improving developer trust. Together, the R&D team and the developer organization propelled this company to the forefront of industry-leading research and eminence on developer experience. For example, this company pioneered the software industry's move away from pure performance metrics (e.g., lines of code written), to "employee fulfillment" scores that focused on developer well-being via greater empathy and collaboration.¹⁶

- Focus on needs that are common across different developer types or business units, to achieve scale.
- Measure success primarily based on technology/framework adoption, open-source contributions, research citations, and platform reliability.

Strategists often shape the entire organization's growth ambitions by treating cutting-edge software development as a critical source of competitive advantage. They keep a pulse on market trends, customer needs, and developer tool innovations, then translate the implications across their company's own product portfolio. Strategists:

- Conduct market sensing beyond just technology to identify how developments in the macro environment, the technology industry, and culture can drive innovation and growth.
- Focus on existential opportunities and threats to software development—including GenAI—translating the implications to product and engineering teams.
- Partner with product teams to establish strategic objectives, tackle known and unknown challenges, co-create developer-centric solutions, drive product road maps (e.g., GenAI-enabled solutions that are adjacent, or even transformative, relative to the existing portfolio), and facilitate feedback loops.
- Provide product teams with insights on how to leverage technology advancements and modern development practices for competitive advantage.
- Adapt or customize offerings to developer teams based on the unique needs of the particular developer types or the products they build.
- Measure success based on business metrics such as product/solution velocity, adoption rates, and DevSAT.

Catalysts opportunistically leverage other transformation initiatives at their companies to improve DevEx. Catalysts:

- Constantly monitor what works well outside of their own developer organization and the enterprise, and hand-select development tools, frameworks, and best practices that align with the needs of their internal developers.
- Prioritize quick wins that deliver immediate benefits.
- Tend to focus on improving ways of working for developers, such as tailored playbooks and guidance on leading practices, over heavy technology investments.

Case example of a strategist

A global B2D (business-to-developer) software company created a virtuous feedback loop between its external brand with developers and internal DevEx initiatives. Collaborating closely with product teams to uncover needs and co-create solutions, the DevEx organization invested in capabilities such as proof-of-concept sandboxes and code repository management solutions, to accelerate internal developers and to increase product velocity. It also incubated innovative technologies to address internal DevEx needs, such as a CI/CD solution and wiki-style documentation platform, which it eventually productized for external developers as well. The DevEx organization drove the company's culture of openness and transparency through codified knowledge-sharing via engineering handbooks and development guidelines, and shared these enablers externally as thought leadership to earn credibility and trust with the external developer community.¹⁷

Case example of a catalyst

A market-leading enterprise software company leveraged its string of acquisitions to transform developer experience. The company realized that the acquisitions were not only accretive to its product portfolio, but also to its developer toolset and infrastructure. This company quickly made the developer toolset from its acquisition target available to all its developers, transforming the way its developer teams managed tasks and collaborated with colleagues. The company already had a highly collaborative culture that was codified through its values and working norms, and it used that culture to its advantage to opportunistically bring the best aspects (technical and nontechnical) of its acquisitions to improve the experience for its entire internal developer base.¹⁸

A premier global health care organization, as part of its transformation to become a platform business, aggressively built out both its business platform capabilities and a supporting tech platform with AI/ML, data, and analytics, as well as cloud-native development capabilities. The organization quickly realized that, to accelerate the speed of business value delivery, it had to prioritize developer productivity and reduce the cost of platform and tool adoption. It elevated developer productivity and experience as one of its key transformation enablers, and it also prioritized reducing friction points in adoption of platform capabilities. As a result, the organization reduced the overall adoption lead time by 20 times.

Operators target improving developer experience through operational enhancements grounded in the developer workflow. They focus primarily on KTLO: keeping the lights on. Specifically, operators:

- Offer a narrow set of general purpose, standardized services to developer teams across product areas.
- Prioritize efficiency, reliability, security, and compliance.
- Are nimble, focusing on near-term, mission-critical actions and process-centric solutions.
- Measure success primarily based on DORA (DevOps Research and Assessment) metrics such as time to restore service and lead time for changes.

As the broader technology ecosystem and the internal tools environment become increasingly complex, even the seemingly trivial task of KTLO requires considerable investment and deliberate effort. When asked how confident developers were in their organization's ability to manage technological complexity, only 16% of respondents said they felt extremely confident.¹⁹ Moreover, the opportunity cost of lagging cybersecurity and compliance—another KTLO capability—is \$10.5 trillion annually.²⁰ Most companies start their DevEx journeys in the operator archetype due to their focus on KTLO. However, while KTLO is table stakes, operational excellence rarely comes easy.

There is no one correct answer for what the right archetype for your developer organization should be. Next, we'll discuss how leaders can determine which mix of archetypes is best suited for their developer organization.

DevEx role considerations

Ultimately, a developer organization's role shapes its focus areas, its collaboration model with other teams, and its own internal structure. To pick the right role for the developer organization, leaders should consider three key questions:

1. What is your company's overarching ambition? It is critical to closely align your developer organization's role with the goals that your company's leadership has for the broader enterprise. For example, if leaders want to position their company as a next-gen technology leader, the DevEx team can support that ambition by being a technologist or strategist, or a mixture of both. If the company wants to prioritize talent and culture as levers for competitive advantage, then the developer organization might be better off being a mix between strategist and catalyst.
2. How broad is your company's product portfolio? Often, the broader and more diverse your company's product portfolio, the more challenging it is for a developer organization to offer a customized set of services and to forge and maintain deep partnerships with each product area or business unit. Developer organizations at highly diversified companies with products that straddle industries may naturally have to cater to many developer types; these companies will typically deprioritize strategist archetypes due to the constraints in high-touch interactions and high customization for every product in a vast portfolio.
3. How critical is your external developer community? The degree to which an organization relies on an external developer community building on their platforms influences the DevEx role. The technologist and strategist archetypes are optimal when an external developer community is essential to a company's business goals. By providing robust APIs, tooling, documentation, and support, these archetypes cultivate a thriving ecosystem of internal developers. This creates a ripple effect to the external developer community

Shutterstock's DevEx journey

In 2023, Shutterstock made several major announcements. In January, it released the AI Image Generator, a tool that enables users to convert text prompts to AI photos in hundreds of AI art styles. In May, it acquired GIPHY, the world's largest collection of GIFs and stickers, from Meta. In October, it released a suite of GenAI tools, including Magic Brush, which enables users to transform real photos using AI, like adding, replacing, or erasing elements.

In parallel, Shutterstock was also investing in its DevEx capabilities to support such explosive growth, as a well-functioning engineering team was crucial to continuing positive momentum. Leaders at Shutterstock felt that standard approaches like DORA to measuring engineering excellence did not capture the complexity of its operating environment and decided on a targeted approach; it started by rolling out periodic surveys to its 300+ engineers, with the following goals:

- Move toward a more sophisticated framework to measure engineering effectiveness.
- Empower engineering managers with the data that they need to proactively address issues (both technical issues and more team-oriented issues like satisfaction).

After more than six months into the journey, Shutterstock leaders realized that, in addition to meeting the goals above, the survey also yielded the following additional benefits:

- Established baseline for engineering productivity to continuously monitor and act when results were trending in the wrong direction.
- Created more transparency and collaboration between the engineering and product teams as the results were shared, resulting in ongoing dialogue on working better together.

as well as helps propel innovation in the software development landscape, thereby building trust and brand affinity across its entire ecosystem of developers (internal and external). In contrast, companies without an external developer focus may choose the catalyst and operator archetypes as they direct DevEx resources solely inward.

Activating the DevEx North Star

Once the DevEx organization has articulated all four elements of a North Star, it's time to reinforce it through action. What follows are suggestions for how leaders can effectively activate their DevEx North Star:

1. Document the North Star—clearly articulate the vision statement, role, focus areas, and interaction model—in a five- to 10-page manifesto. Putting the details down in writing crystallizes the vision into a concrete strategic plan that can be shared and discussed.
2. Seek input and buy-in from the entire DevEx team and key adjacent stakeholders such as engineering, product, and design leads across product lines and functional areas. Incorporate their feedback and perspectives to create ongoing alignment and to sharpen impact.
3. Build a strong business case for DevEx investments, linking uplift in internal and external developer efficiency, effectiveness, and well-being to broader enterprise metrics such as market share and retention, and seek commitment from C-suite leaders to the DevEx journey.
4. Break down the North Star into clear success metrics that engineers can relate to, such as developer velocity, deployment frequency, and median code review time. This will help ensure that DevEx teams can be held accountable for driving clear results.
5. Create a road map of initiatives that align to the DevEx North Star. Define concrete milestones to measure progress over time and continuously reevaluate priorities based on learnings, evolving developer needs and preferences, and shifts in organizational strategy.

A compelling North Star gives DevEx organizations a sense of where to go and serves as a powerful alignment mechanism for not only DevEx teams but also the entire organization. While each DevEx team's North Star is nuanced, it is usually some blend of the four archetypes we explained earlier: technologist, strategist, catalyst, or operator. The right answer for an organization depends on a mixture of factors such as enterprise objectives and breadth of product portfolio.

While defining the DevEx North Star is the first step, achieving it requires significant investment, financial and otherwise. Our next article, "Placing your bets," dives deeper into how leading organizations have invested in DevEx and how they have orchestrated entire sets of capabilities across technology, people, and processes to accelerate developer impact.

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Acknowledgements

The authors would like to thank Faruk Muratovic, Gary Arora, Khurram Latif, Stephen Donnelly, Vansh Muttreja, Coco Yin, and Corey Sheeran for their contributions to this article.

The authors would also like to extend a special thank you to Sejal Amin, Steven Tear, and Lori Rodney at Shutterstock for sharing the Shutterstock DevEx story.

Endnotes

1. Lionel Sujay Vailshery, "[Number of software developers worldwide in 2018 to 2024](#)," Statista, August 29, 2023.
2. Bureau of Labor Statistics, US Department of Labor, "[Software Developers, Quality Assurance Analysts, and Testers](#)," *Occupational Outlook Handbook*, last modified September 6, 2023.
3. Gartner, "[Gartner forecasts worldwide IT spending to grow 2.4% in 2023](#)," press release, January 18, 2023.
4. Stack Overflow, "[Discover how developers are gaining influence on technology purchases](#)," July 21, 2023
5. Deloitte internal analysis.
6. Ibid.
7. Mercer Smith, "[107 customer service statistics and facts you shouldn't ignore](#)," Help Scout, June 22, 2023.
8. GitHub, "[2020 state of the Octoverse report](#)," 2020.
9. Productiv, "[The State of SaaS Sprawl in 2021](#)," October 4, 2021.
10. Jason Wong and Kyle Davis, "[Harness the disruptive powers of low-code: A Gartner trend insight report](#)," Gartner, July 18, 2022.
11. Brook Perry, "[Inside Etsy's multi-year DevEx initiative](#)," DX, June 23, 2023.
12. Ibid.
13. Deloitte internal archetype analysis.
14. Wong and Davis, "[Harness the disruptive powers of low-code](#)."
15. Ibid.
16. Deloitte internal analysis.
17. Ibid.
18. Ibid.
19. Solarwinds, "[Getting IT right: Managing hybrid IT complexity](#)," June 2022.
20. Paul McCormack, "[Maintaining cybersecurity should be an ongoing commitment](#)," ADP, October 2022.



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