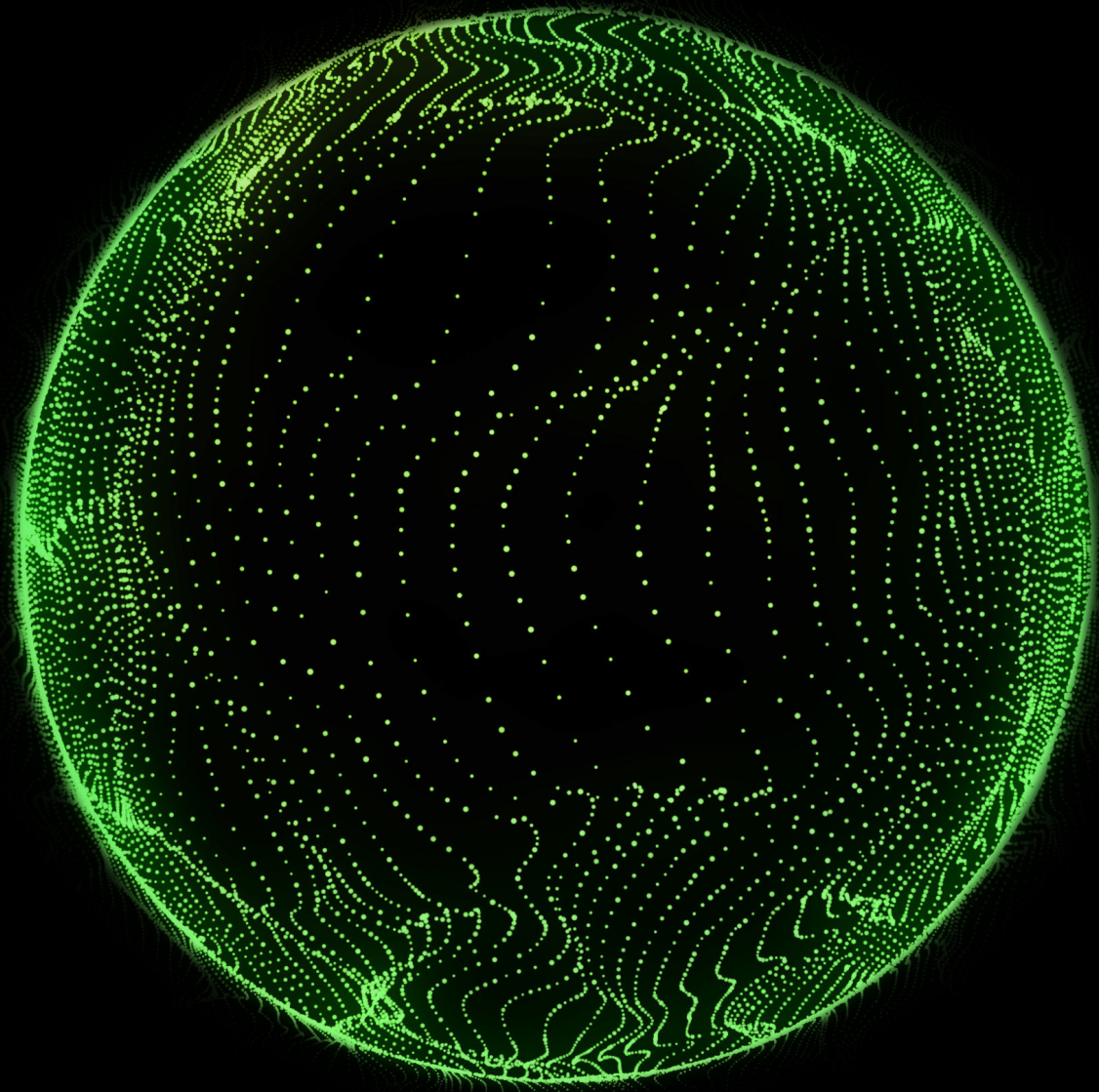


Deloitte.

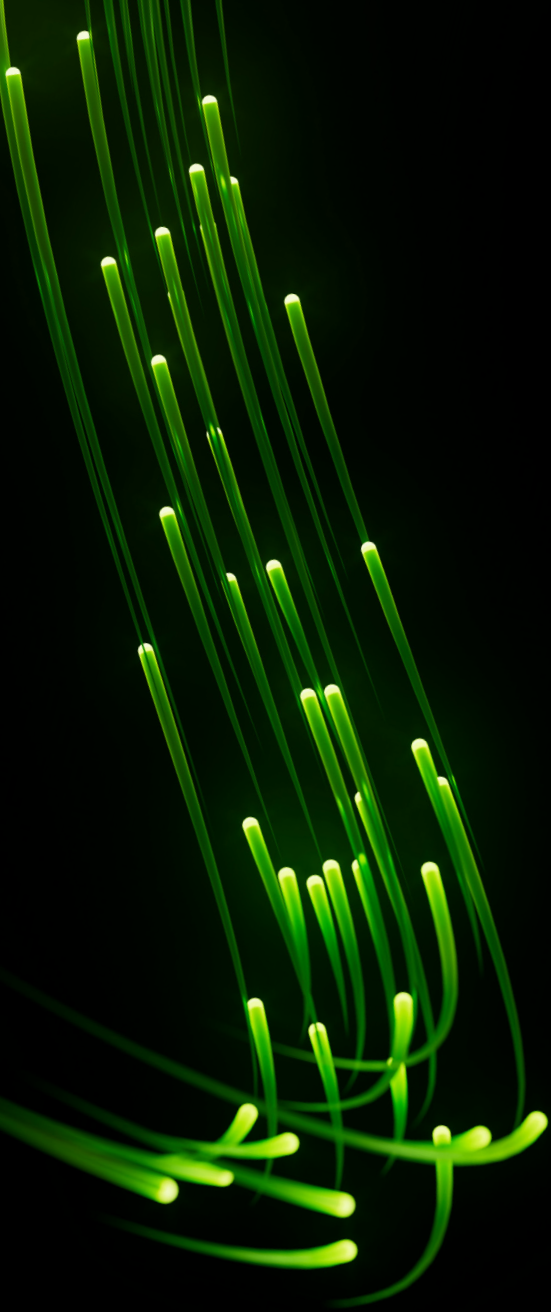
Engineering



Placing your DevEx bets

Investing in specific capabilities to turbocharge your developer experience

Establishing good developer experience unlocks innovation and leads to greater growth but also involves many interlocking capabilities. Where should you begin if you're looking to jump-start your developer experience journey? Looking to other leading companies that have already blazed this trail can provide a place to start.



Introduction

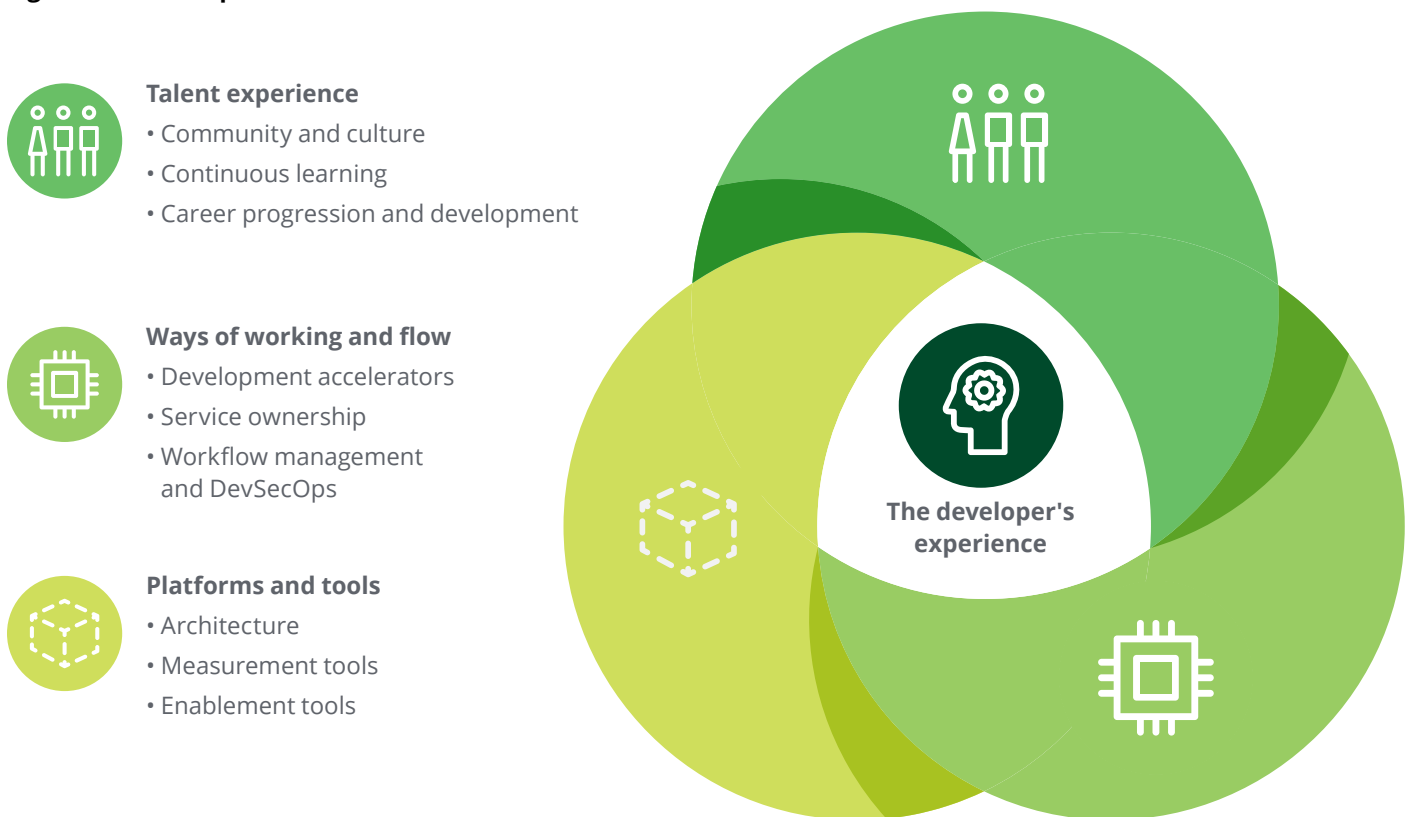
In today's rapidly changing technological landscape, developers play a crucial role in driving innovation and growth while building the technology that powers the business. Companies that invested more heavily in engineering teams and infrastructure reported better outcomes. Specifically, companies that spent more than 10% of their engineering time on developer productivity had 2.3 times higher revenue growth rates than companies that spent less than 10% of their engineering time on developer productivity.¹ Organizations that attract and retain top engineering talent were more likely to outperform their peers in terms of revenue growth, market share, and profitability.²

As we mentioned in the [first article of our Developer Experience series](#), accelerating DevEx has become more pivotal than ever, but many companies are still deciding where to start or how to focus their efforts. In this article, we explore a framework of mutually reinforcing capabilities that an organization can use as a “gameboard” in thinking through their DevEx investments.

How to think about DevEx capabilities

In our last article, [“Defining a North Star for your developer experience,”](#) we introduced a set of developer archetypes that characterize an organization’s DevEx ambitions. Each developer archetype has a distinct vision and execution strategy, and—as a result—requires a unique mix of capabilities across talent, technology, and ways of working. In this article, we dive deeper into the specific set of capabilities organizations may choose to focus on in each archetype. First introduced in our [Tech Trends 2024](#) series, our DevEx capabilities framework represents a set of mutually reinforcing capabilities that companies can weave together to accelerate developer impact.³

Figure 1: DevEx capabilities framework



All archetypes rely on categories of capabilities: platforms and tools, culture and talent, and ways of working; however, they prioritize and sequence specific capabilities in different ways, depending on their strategic objectives.⁴

Platforms and tools

This category of capabilities includes strategic architectural decisions, sophisticated tooling, and robust frameworks—establishing the critical technology underpinnings to **support relentless improvement**. A well-designed architectural foundation lays the groundwork for streamlined workflows while minimizing technical debt and enabling developers to focus on innovation. Cutting-edge tools that are meticulously curated based on industry best practices can contribute significantly to efficiency gains—automating repetitive tasks and helping developers stay in flow.

- **Architecture** underpins the developer tooling ecosystem. A well-designed structure reduces complexity by simplifying development tasks, enhancing code readability, and minimizing technical debt—all in service toward system **performance improvements**.
- **Measurement tools** via telemetry capture and analyze various metrics and performance indicators throughout the development life cycle. These tools help developers identify bottlenecks, track progress, and ensure adherence to coding standards, providing the critical **transparency** that engineering teams need for continuous improvement.
- **Enablement tools** include a variety of resources that support developers in their coding tasks, such as integrated development environments (IDEs), documentation, training materials, and collaboration platforms. Enablement tools play a crucial role in enhancing developer experience and **productivity** through contextual learning, which helps teams reduce task-switching to stay in flow and minimize onboarding time.

Ways of working

This set of capabilities focuses on the day-to-day experience for developers allowing them to prioritize the most important work and get through their tasks efficiently by achieving **consistent and predictable flow**. “Ways of working” include the following capabilities:

- **Service ownership** simplifies and streamlines responsibility for the entire life cycle of a service—from development through ongoing maintenance—to reduce dependencies, improve quality, and enhance reliability. Clear service ownership results in greater performance of the developer tooling ecosystem.
- **Workflow management** provides tools to help developers prioritize the most important tasks, while establishing processes that automate manual handoffs, reduce ambiguity, and enhance cross-functional collaboration. The result is greater **developer harmony** and **product quality**.
- **Development accelerators** speed up the software development process by reducing repetitive tasks, minimizing manual errors, and providing consistent development patterns. The result is greater **efficiency** across the software development life cycle (SDLC).

While the surge in AI-assisted coding tools has catapulted development accelerators into the spotlight, it often a synergistic combination of capabilities across all three “ways of working” DevEx investments that maximize developer impact.

Culture and talent

This set of capabilities focuses on building **better teams** through learning and development, career progression, and culture. Often overlooked, these “talent experience” capabilities are critical to cultivate a developer-centric mindset that drives true developer productivity. Moreover, these capabilities may present the most effective path to addressing some of the most difficult and complex issues confronting the future of software development: trustworthy AI and greater equity and inclusion in the developer community. Commitment to these capabilities will not only elevate developer satisfaction and productivity but also reduce churn—affecting both the top and bottom line.

Community and culture are the manifestation of shared values and a common language, bringing a sense of purpose and belonging to team members, resulting in greater **collaboration** and teaming.

- **Continuous learning** supports developers through the ongoing acquisition of new skills, knowledge, and capabilities (both soft and technical). This can include formal education and training programs as well as informal, self-directed learning. Designing programs with the long-term success of developers in mind (beyond the scope of just their current role), elevates the **proficiency** of the entire developer workforce.
- **Career progression and mobility** creates opportunities for advancement, skill diversification, and role exploration. Developers are more likely to stay with an organization that invests in their professional growth and provides clear pathways for advancement. Investments in this category contribute to developer **satisfaction** and reduce churn.



Archetypes and corresponding investments

In the previous article, [“Defining a North Star for your developer experience,”](#) we established that most internal developer organizations choose to blend elements from each DevEx role archetype—Operators, Catalysts, Technologists, Strategists—and that the role should evolve over time based on the needs of the organization. Below, we demonstrate how companies with traits of a particular archetype have managed time and investment constraints to invest in specific capabilities that have helped them meet their DevEx objectives.



Operators

Operators prioritize “keep the lights on” (KTLO) investments that seek to achieve greater scalability, reliability, security, and compliance. Most companies start their DevEx journey by focusing on this archetype since the opportunity cost of lagging behind in KTLO capabilities can be staggering (estimated to be \$10.5 trillion annually for cybersecurity and compliance alone).⁵ Many of the companies under the Operator archetype start by transforming their architecture. One streaming platform, for example, had adopted a microservices architecture early on, but found that this approach led to excess much fragmentation in its developer tooling ecosystem as the company grew; it decided to build a federated platform console that consolidated dozens of developer services and tools into one single interface.⁶

Another common pattern for Operators is to invest rigorously in measurement tools so that they can establish a baseline with an eye toward continuous improvement. A digital content marketplace, when faced with explosive growth due to an acquisition and the launch of an AI-based product, decided to adopt a tailored measurement approach involving surveys to its entire engineering population; the survey included both technical (e.g., system reliability) and non-technical (e.g., collaboration and satisfaction) dimensions to capture its increasingly complex operating environment.⁷

Often, companies may undertake simultaneous improvements in architecture and measurement tools to maximize impact. An enterprise software-as-a-service (SaaS) company, when moving to cloud-based architecture, also took that opportunity to implement DevOps Research and Development (DORA) metrics and launch centralized platform engineering efforts, led by a developer enablement team, to deploy continuous developer improvements at scale across its broad product portfolio.⁸ This helped it become more agile in its ways of working and responsive to developer needs.

Enterprises that are not “technology-first” companies will embark on broader transformation journeys and prioritize initiatives that drive both digital transformation and operational excellence for their business. A global insurance company is transforming its developer experience by enhancing platform capabilities with increasing adoption of cloud and SaaS platforms and improving software delivery through mature agile processes. It prioritizes developer enablement by reducing onboarding lead time and launching onboarding self-service capabilities. Additionally, it fosters a strong engineering culture by identifying productivity opportunities through open community dialogue via a developer community via a cross-functional DevEx community of practice, and increasing investments in InnerSource enablement (i.e., implementing open-source methodologies for proprietary software development).⁹

Catalysts

Catalysts prioritize quick wins to improve developer experience; they opportunistically take advantage of events or trends within and outside their organizations to jump-start their DevEx transformations. Many companies in this archetype already have strong capabilities in “culture and talent,” and invest surgically in enablement tools such as playbooks and best practices to boost developer productivity and maximize speed to value.

One enterprise SaaS company had an already-strong foundation of community and culture that it cultivated year after year. When it leveraged a string of acquisitions to bolster its suite of developer collaboration tools, it was able to significantly streamline communications across developer teams because the technology capabilities worked in concert with the pre-existing collaborative developer culture.¹⁰

An e-commerce company with a strong culture of human-centered design launched an 18-month DevEx initiative to bring that same ethos to its developer population. It modernized the front end of developer tooling and improved development environments to make coding more intuitive and reduce tedious and repetitive tasks, thereby demonstrating another example of tooling and culture working together to improve developer satisfaction.¹¹

Technologists

Technologists include companies that balance intense investments in all the tech-driven capabilities under “platform and tools” and “ways of working” with cutting-edge research and application of capabilities under “culture and talent.” These companies not only focus on improving DevEx for their own engineers, but also seek to propel the entire software development industry into the future. In doing so, they profoundly affect the entire ecosystem of current and future developers.

A content streaming company started its technology journey by publishing a white paper outlining its approach to community and culture—especially how it organized teams around agile principles—that quickly became a manifesto for many software engineering teams. After rapid growth, this company invested in more development accelerators, such as a set of Golden Paths (an “opinionated and supported path to build something”) for engineering teams that improved consistency and speed of onboarding for new team members, along with a one-stop-shop developer portal to help engineers collaborate more effectively through better documentation, knowledge-sharing, and standardized workflows.¹² This company eventually commercialized its internal developer portal—still one of the leading marketplace solutions in this space—which popularized the concept for the entire software development industry.

Strategists

Strategists are like Technologists in that they balance investments across all three DevEx capability categories; however, they elevate “culture and talent” to accelerate collaboration not only within developer teams but also across the entire organization. Strategists create a tight interlock between central or platform engineering teams, product engineering teams, and product management that becomes their biggest source of competitive advantage. Many companies under the Strategist archetype are in the business of creating developer tools—and deftly use their own internal developers to channel “voice of the customer” sentiments and to influence the external developer community toward their product portfolios. One such company uses its external-facing product as much as possible for its own engineering teams, including those around workflow management, knowledge management, and quality assurance; its internal engineering teams then channel product feedback to the product management and product engineering teams and champion future improvements. Conversely, it often releases its internal innovations in DevEx to its external customers as well. This continuous feedback loop between engineering and product teams is reinforced through a company culture that prioritizes openness and honesty—codified in a series of playbooks, articles, blog posts, and webcasts that the company has made available to the public.¹³ This company also has a robust DevOps Evangelism team that publishes eminence and advises its customers on DevEx best practices.¹⁴

Figure 2: DevEx archetypes and illustrative investments



From one-time bets to winning plays: Putting it all together

Cultivating capabilities takes effort, and it is essential to think about investments strategically to ensure that resources are allocated effectively in today's constrained environment. Evident from the examples and archetypes detailed above, there is no one winning formula for investing in DevEx capabilities; however, for any organization considering DevEx investments, it is important to keep the following success enablers in mind.



Make the developers the hero of the story.

Every company will have developer teams that have unique needs—dependent on technology stack, areas of focus, and skill sets. Focus on investments that target the greatest unmet needs from the developer's perspective; after all, these investments are only the means to an end.

Invest in winning plays, not isolated moves.

It is unlikely that isolated investments within a DevEx capability category will have a meaningful impact on developer experience. For every novel tool that fundamentally changes how your developer teams will work, there is a litany of new skills, new processes, and adjacent technologies that need to be considered and invested in as well. Efforts to invest in DevEx must be carefully coordinated to ensure that they build upon each other to realize a multiplier effect on developer productivity and satisfaction.

Use your DevEx North Star as a guide.

DevEx investments can quickly appear costly when leaders consider DevEx initiatives from engineering teams in a bottom-up way. Start by articulating top-down investment guidance by considering the DevEx archetypes (Operator, Catalyst, Technologist, and Strategist) to drive focus and maximize impact.

Elevate DevEx to the C-suite.

Ensure that the company's highest-level executives sponsor DevEx improvements and are aligned to the DevEx vision. Articulate DevEx's impact to the company's top and bottom line, and design your DevEx investments to show proof points early and frequently.

Investing in DevEx is not just about buying the latest tools and technologies; it is also about strengthening technological foundations where possible and advancing a culture of continuous learning to drive passionate developer communities that drive impact. A well-designed portfolio of DevEx capabilities requires a long-term vision but will also involve an iterative journey, especially when technologies like GenAI continue to significantly alter the software development landscape. By taking a strategic approach to DevEx investments—aligned with the company's long-term objectives—organizations can pave the path to greater developer satisfaction and impact.

Contact

Julie Shen

Principal, Developer
Experience Strategy and Roadmap
Deloitte Consulting LLP
julshen@deloitte.com

Seong-Kiu Kang

Managing Director, Developer
Experience Strategy
Deloitte Consulting LLP
seokang@deloitte.com

Cristina Stefanita

Principal, Developer Experience Strategy
Deloitte Consulting LLP
cstefanita@deloitte.com

Randeep Khaund

Senior Manager, Developer
Experience and Platform Engineering
Deloitte Consulting LLP
rkhaund@deloitte.com

Jimmy Zheng

Senior Manager, Developer
Experience Strategy
Deloitte Consulting LLP
jimzheng@deloitte.com

Acknowledgements

The authors would like to thank Bill Briggs, Gary Arora, John Malfetano, Cheryl Ho, Coco Yin, Carter Newman, Corey Sheehan, and Darren Chow for their contributions to this article.

Endnotes

1. Stripe, "[The developer coefficient](#)," September 2018.
2. Rob Goffee and Gareth Jones, "[Creating the best workplace on Earth](#)," Harvard Business Review, May 2013.
3. Mike Bechtel and Bill Briggs (eds.), [Tech Trends 2024](#), Deloitte Insights, 2024.
4. Ibid.
5. Solarwinds, "[Annual study: Hybrid IT acceleration has increased network complexity and lowered tech pros' network management confidence](#)," press release, June 14, 2022.
6. Brian Leathem, "[How Netflix unified their engineering experience with a federated platform console](#)," Platform Engineering, accessed April 2024.
7. Tim Juravich et al., [Charting the course](#), Deloitte, March 2024.
8. Naomi Lurie, "[Developer productivity case study: Autodesk's strategic investment as it becomes a platform company](#)," Faros AI, September 26, 2023.
9. Deloitte internal analysis.
10. Ibid.
11. Brook Perry, "[Inside Etsy's multi-year DevEx initiative](#)," DX, June 23, 2023.
12. Gary Niemen, "[How we use Golden Paths to solve fragmentation in our software ecosystem](#)," Spotify, August 17, 2020.
13. Atlassian, "[Atlassian Team Playbook](#)," accessed April 2024.
14. Andrew Boyagi, "[Developer experience is more important than developer productivity](#)," TechCrunch, January 29, 2024.

Deloitte.

Deloitte refers to one or more of Deloitte Touche Tohmatsu Limited ("DTTL"), its global network of member firms, and their related entities (collectively, the "Deloitte organization"). DTTL (also referred to as "Deloitte Global") and each of its member firms and related entities are legally separate and independent entities, which cannot obligate or bind each other in respect of third parties. DTTL and each DTTL member firm and related entity is liable only for its own acts and omissions, and not those of each other. DTTL does not provide services to clients. Please see www.deloitte.com/about to learn more. Deloitte is a leading global provider of audit and assurance, consulting, financial advisory, risk advisory, tax, and related services. Our global network of member firms and related entities in more than 150 countries and territories (collectively, the "Deloitte organization") serves four out of five Fortune Global 500® companies. Learn how Deloitte's approximately 330,000 people make an impact that matters at www.deloitte.com.

This publication contains general information only and Deloitte is not, by means of this publication, rendering accounting, business, financial, investment, legal, tax, or other professional advice or services. This publication is not a substitute for such professional advice or services, nor should it be used as a basis for any decision or action that may affect your business. Before making any decision or taking any action that may affect your business, you should consult a qualified professional adviser. Deloitte shall not be responsible for any loss sustained by any person who relies on this publication.