



**PERSPECTIVES ON**

**Technology**

**Skill**

**Development**

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PERSPECTIVES ON

# Technology Skill Development

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Welcome to *Perspectives on Technology Skill Development*, a collection of articles by leaders who recognize their organization's success depends on their ability to consistently and predictably build tech skills. The speed of technological change and pressure to deliver innovations to market means the old ways of "training" teams aren't cutting it anymore. The leaders featured in this book are proactive and intentional about developing the skills they need now and into the future, and they're here to show you how you can, too.

We've gathered their perspectives on this new category to introduce you to technology skill development, show you the value in it and set you up to make this change successfully in your organization.



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**The  
what  
and why**





## Aaron Skonnard

Co-founder and Chief Executive Officer, **Pluralsight**

 @SKONNARD

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Technology skill development:

# A critical strategy for every organization

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**You can't hire your way out of a skills shortage. Your team can't Google their way to proficiency. If you held in-person training before every new project, you'd never deliver anything.**

The methods companies have traditionally relied on to build technology skills just don't cut it anymore. They're not sustainable. They're not scalable. They don't keep up with technological change. In fact, they're a first-class ticket to digital extinction.

But a new strategy has emerged called technology skill development, and it's the difference between thriving, surviving and falling behind. Technology skill development is the most efficient way to continually upskill technology teams, representing an organization's ability to use technology skills as a competitive advantage and driver of business outcomes. Just as sales leaders rely on CRM and product leaders on CX, the most strategic CIOs and CTOs are relying on technology skill development (or TSD) to continuously outperform and outpace their competition.

## What's at stake

To better understand how organizations approach technology skill development today, Pluralsight recently surveyed more than 900 tech leaders, directors and above. Of these, 70% believed success in the next three years depended on their ability to use technology to drive business outcomes and having the right people with the right skills to quickly deliver innovations to market.

If that seems like a tall order, that's because it is. Unless your organization can make tech skill development a priority, the pace and complexity of new technology will outpace your ability to capitalize on it. Look at the illustrious Fortune 500. Since 2000, 52% of the companies have fallen off the list. Those that have held strong, like IBM, have continually transformed their businesses and their workforce to keep pace with technology.

But it's not just about longevity. Building the right skills is the difference between surviving and thriving. According to IDC, a lack of tech skill development will burden 90% of all organizations with adjusted project plans, delayed product/service releases, incurred costs or lost revenue totalling \$390 billion annually, worldwide.

**The good news:** It's not too late to rethink how your organization makes tech skill development a core competency.

### Your success depends on skills (and how you think about them)

I've spent the last 16 years working with companies of all sizes, across industries and at varying stages of digital transformation.

The organizations seeing the most success are being intentional and proactive about their skills strategy and prioritizing what their employees need to continually grow and deliver.

In our survey, 69% of leaders agreed that providing their technologists with robust upskilling opportunities was essential to survival but only 36% believed they have the skill development tools and programs in place to succeed today. That means many organizations feel like they're falling behind.

### How to build a tech skill development strategy

After years of research and thousands of discussions with our customers, we noticed patterns around the people, processes and technologies being used to facilitate tech skill development—some highly strategic and thoughtful, some reactive and disorganized. We developed a maturity matrix based on these findings

to help organizations evaluate where their strategy stands today and recognize the characteristics of a more advanced approach.

The best practices we've seen among the most strategic orgs include:

#### *Leadership needs to lead the charge*

Technology skill development has to evolve from a fringe effort to the forefront of an organization's strategic initiatives. And that happens only when CIOs and CTOs get involved. You have to champion it. You have to embrace continual skill development as a competitive advantage and the key to driving business outcomes.

#### *Hiring a tech skill development leader*

Gone are the days of leaving skill development decisions up to a person or team who doesn't understand your technology strategy or business needs. A new role is emerging that should be at the top of your hiring list: the director of technology skills. They have a deep understanding of the organization's

business and technology strategy combined with best practices to execute a skills strategy aligned to your goals.

#### *Indexing skills across your teams*

First things first: You need to know what you're working with. You can't organize your teams to be efficient without indexing the skills you have, identifying the skills you need and shining a light on the gaps.

**The good news:**  
**It's not too late to rethink how your organization makes tech skill development a core competency.**



### ***Aligning skill development to your goals***

Your technology skills director should work with your tech leaders to map skill development to your business and technology needs. With the help of a technology skills platform, each team member can have a custom skill development plan based on their proficiency level, so they can focus on the skills they need and not waste time on what they already know.

### ***Upskilling employees into modern tech roles***

With skills mapped to your strategic initiatives, you can begin to upskill your teams into the roles you need. Personalized

recommendations based on knowledge gaps help employees streamline their skill development and build skills efficiently and confidently.

### ***Tracking progress and planning for tomorrow***

As expertise grows, business needs change and the market continues to evolve, your tech skills director will continually evolve and improve your skills strategy. They'll leverage skills insights to measure progress and deliver quantified impact on the business. It's their job to ensure employees are always prepared for what's coming next and building the capabilities to capitalize on it.

### **Your journey starts here**

In this anthology, you'll hear from leaders on the strategic end of the matrix practicing these tactics to create a company-wide shift toward continual technology skill development. To succeed at your organization, you can't afford to ignore their advice. Read through their stories, learn from their successes and failures, and get tactical tips on how to build a strategy that helps you keep up, move faster and achieve more.

Technology teams are only as successful as their skills are relevant. This book will expose you to the perspectives and ideas you need to make technology skill development your competitive advantage and a source of reliable, predictable success. •

**Aaron Skonnard cofounded Pluralsight in 2004 and has since grown the company to more than 1,600 employees and more than 1,500 expert authors. As CEO, Aaron focuses on business strategy, future direction, product development and strategic partnerships. Through his leadership, the company has flourished and made its public market debut on May 17, 2018 (NASDAQ: PS).**





 @TONY\_SALDANHA

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Innovation velocity:

# Build new skills that translate into Wall Street metrics

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If your company is going to survive the fourth industrial revolution, you'll need to upskill your people. If that sounds like an absolute statement, it's because my research and experience as a Fortune 25 executive over three decades has taught me that without company-wide, continual commitment to technology skill development, chances are that your organization won't survive.

Today, it's essential that everyone in your organization has a basic level of digital competency. Everyone. CEOs that fully rely on CIOs and digital officers for technical knowledge risk developing blind-sides on new business models and strategies that are technology-enabled. Your Board of Directors should also know enough about technology to lead for the future. According to a McKinsey study, only around 20% of boards are equipped with the know-how they need (and only around 5% of boards have a digital director).

## Tony Saldanha

Former Vice President of IT and Global Business Services, **Procter & Gamble**  
President, **Transformant**

Your engineering team, however, can't get away with just current technology competency. Their skills will depreciate if you don't have a strategy for technology skill development. Simple training solutions don't cut it. You have to know where disruption could come from, and be in a position to lead your team through that disruption by empowering them with the right skills at the right time. A formal technology skill development strategy fuels innovation velocity—how quickly you can build new skills that translate into Wall Street metrics.

### **What makes you successful today could be a millstone around your neck in the new digital era**

Fortune 500 companies have a lot of assets that, if properly taken advantage of, can yield incredible results. These include a network of suppliers and customers, plus venture capitalists, that can help them along the way.

I enjoyed making the most of resources like this during my time at Procter & Gamble, and we did incredible things with this toolkit. We were considered best-in-class in our industry, but we faced a very ironic problem. About four years ago, we realized being the best in our class was insufficient because our competition was no longer other large companies. It was startups. They had a 50% cost advantage and a 10x agility advantage. We needed to figure out how to compete with them.

In general, larger companies are less nimble and slower to enact change. At Procter & Gamble, we had to figure it out—and fast. To stay competitive, we focused on continuous improvement and disruptive innovation, which required a willingness to experiment with new approaches. Technology skill development was critical to making innovation velocity our competitive advantage.

what the boards and CEOs at the Fortune 100s that I consult with fear the most. They wonder, “How do I revamp my team’s agility and digital skills to compete with startups?”

At Procter & Gamble, it started with clarity. Once it became clear we had to create an edge organization to disrupt our global business services, we set a goal. We would take on a project only if we found a way

to do it with a 10x return. I was not interested in a 20% or 30% improvement. We aligned completely to our goal of 10x by being direct about vision with everyone involved—from partners to employees. From there, we organized and operated very much like Alphabet’s X (formerly Google X), pushing boundaries of what was possible. And we could

do it because systemic technology skill development was at our core.

If you want a chance at survival, you need to have a technology skills strategy that’s continually being activated and refined. Amazon recently announced that it is investing \$700 million in skill development for its employees. I almost fell off my chair when I heard that because Amazon is one of the most tech-savvy companies in the world. They realize that this is not a static goal but a constant reinvestment; it’s the difference between a company that’s just starting to think strategically about technology skills and one that’s

# **At Procter & Gamble, it started with clarity.**

### **Your North Star can only be reached through clear communication and commitment to skill development**

To innovate quickly, it’s imperative you get clear on your goals and understand exactly which stage you’re at as you work toward them. Many companies don’t do this well, and they also don’t communicate these details well to their teams.

These companies are challenged with how to change the behaviors and the motivations of their team so they can act with the agility and urgency of a startup. That’s a hard transition. And that’s really



# Technology is changing the way companies compete—and which ones compete.

a disciplined market leader, having reached the peak stage of digital transformation, which I refer to as stage five in my book *Why Digital Transformations Fail*.

## Both digital transformation and technology skill development are continuous

Digital transformation has become a common phrase among leaders across every level of a company. And while it's said often, many organizations don't yet grasp that digital transformation is a long game. It's an ongoing journey and the only way to get on the right path is by changing the technology DNA—or skills—of your team.

You have to change continually. It's not enough to wait to be disrupted by an outside threat. You need to cannibalize your own business models and reinvent them. And this should continually inform your technology skills strategy. In the top 1% or 2% of companies in the world, this practice is second nature. Netflix has reinvented its business model four times now, from mail-in to streaming to original

content to international. It's paid off multiple times over in metrics investors care about.

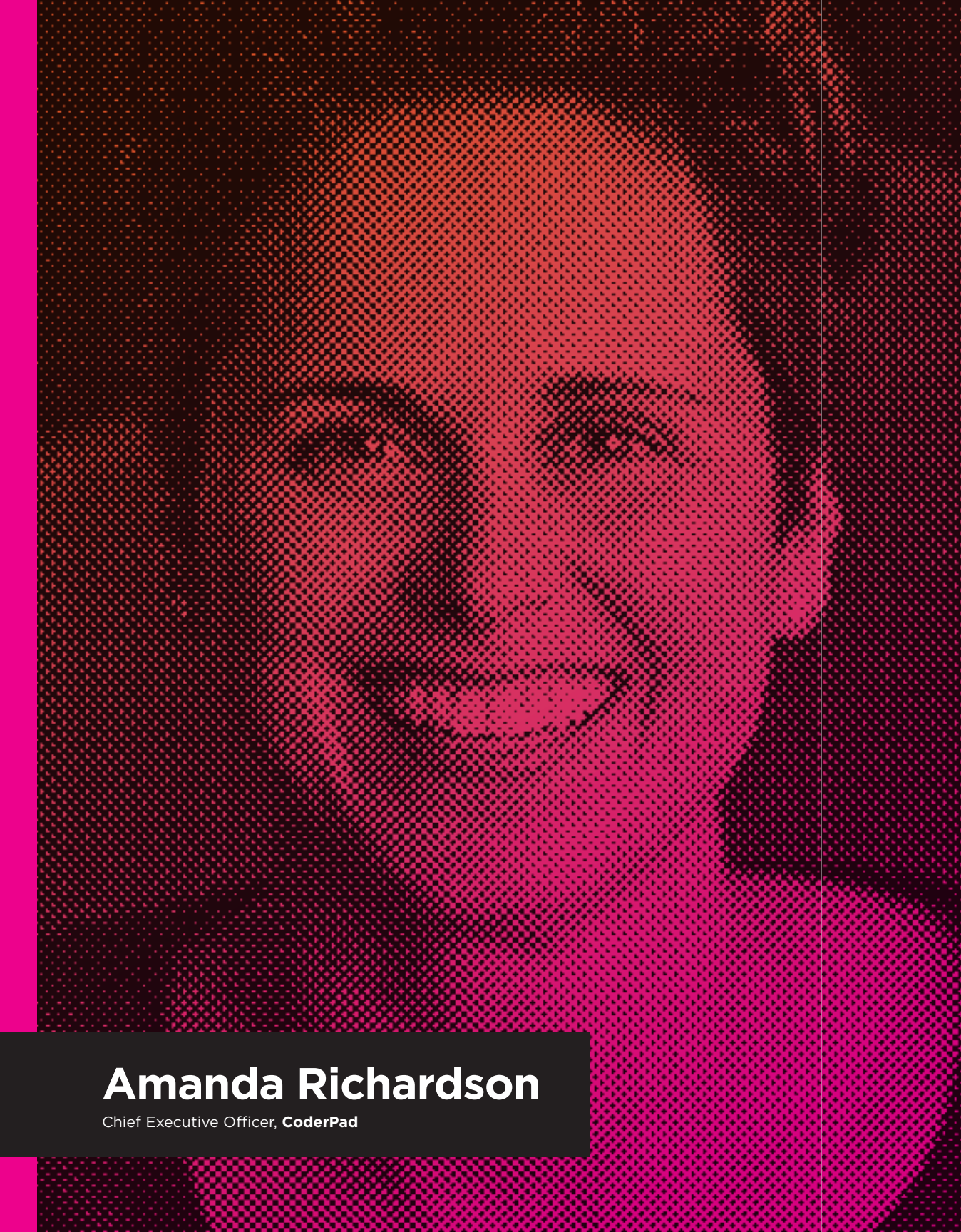
It won't matter if you have the best ideas to cannibalize your business or disrupt someone else's if you don't have the right skills to propel them. Establishing a solid strategy for technology skill development will allow you to stay ahead of evolving trends and avoid a situation where your engineers become less useful the longer they work for you.

Technology is changing the way companies compete—and which ones compete.

You can no longer be only aware of the traditional players in your space; you also need to be on the lookout for emerging competition from completely different industries. The competitive advantage today doesn't belong to the company that's learning the fastest; it belongs to the company that's aligning and applying new skills in a strategic way. Bottom line: A skill development strategy is non-negotiable in 2020—if you want to make it out of the fourth industrial revolution alive, that is. •

Tony Saldanha is a globally recognized expert and thought-leader in Global Business Services (GBS) and Information Technology. He ran Procter & Gamble's famed multi-billion dollar GBS and IT operations in every region across the world during a 27-year career there. Tony has over three decades of international business expertise in the U.S., Europe and Asia. He was named on Computerworld's Premier 100 IT Professionals list in 2013. Tony's experiences include GBS design and operations, CIO positions, acquisitions and divestitures, outsourcing, disruptive innovation and creation of new business models.

Tony is currently President of Transformant, a consulting organization that advises over 20 Fortune 100 companies around the world in digital transformation and global business services. He is also a founder of two blockchain and AI companies, and an adviser to venture capital companies. His book titled *Why Digital Transformations Fail* was released globally in July 2019 and ranked #1 on Amazon's New Releases for Organizational Change, listed on publisher Berrett-Koehler's best-sellers for July 2019 and recommended by various publishing forums like CEO-Reads, Book-Pal, CEO Library and others. Forbes contributor Michelle Greenwald called it the "best business book ever that you're yet to read."



**Amanda Richardson**

Chief Executive Officer, **CoderPad**

🐦 @AMANDARICH01

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# The often overlooked impact of strategic skill development

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It's funny to me that businesses need to build a case for investing in tech skill development. In the reality of our industry, why wouldn't we want to learn new things? Why wouldn't we want to learn how to do things better, how to keep our teams engaged, how to keep people growing and evolving?

If the human reasons aren't enough, there's a practical business reason for developing new tech skills: Old skills become obsolete. Technologies sunset, and best practices evolve. I recently talked with a customer who runs a .NET shop, and they are having a really hard time recruiting. Technologies don't even have to be obsolete—if they're just less exciting to use than newer tech, it becomes that much harder to hire talent.

Not evolving an organization's platform, knowledge base and employee base is a business risk. Complacency will cost you. Your platforms will become obsolete. You will be unable to hire talent. Being proactive—and being smart about it—is bound to benefit your company, both in the bottom line and in ways that are less tangible.



## Complacency kills businesses and careers

Let's take a look at a non-tech analogy. Imagine we are writers. We learned to write longhand, so we never bought a typewriter because it was faster to use our pens—particularly because we hadn't learned how to type yet. Then we never bought a word processor for the same reason. Our writing competitors bought computers, and we're still using ink. Maybe it works great for us, and brilliant words flow from our pens. But we can't get anybody to read our work, and we can't take advantage of technology like our competitors can. We can't change paragraphs and spacing, and we can't send copies to thousands of readers in an instant.

If we're hiring talent to suit our handwritten ways, we end up with an adverse selection problem. We find people who don't like change, who don't like challenges, who don't want to try new things. I would be shocked to read those words in any job description. But when companies sit on their legacy systems, they create that kind of environment.

And that's a best-case scenario. People talk about middle-case scenarios all the time: Your company can get left behind by not providing new services to the market. Worst-case, though: You've got a billion-dollar problem that puts your issues in the headlines. Think of those credit card breaches that make the news. Many of the people who get bounced from those companies are tech leaders who didn't make the case for upgrading systems, or didn't lie down in the road for them.

Skill evolution is a necessity for every function in an organization. We need to get off the defensive. Skill development is imperative for business survival, and our job as tech leaders is to look ahead and set up our companies for success. That means looking beyond short-term ease to long-term benefits. Continuing what we're doing just because it has worked so far can end up running us off a cliff. We need to grow and adapt constantly if we want to continue to matter.

But tech skill development is more than a financial investment. It's a strategy for the long-term health of products and organizations. And like all strategies, it has risks and trade-offs. Trying new technologies and moving forward with the ones that work best costs time and money (which are the same thing, some might say). But what are the costs of maintaining old systems? What are the security risks of staying stagnant? These outweigh any possible costs of ongoing

skill development—especially when tech leaders embrace it as a continuous conversation.

Target skill development where both the organization and team members reap the greatest rewards. You're not writing teams a blank check to go develop whatever skills they want. I give teams options for the skills they can develop

and give them the resources to develop those skills in a hands-on way through conferences, online platforms, and internal and external development opportunities. It's our job as leaders to determine which skills will best develop the organization's longer-term viability and also inspire and excite our teams. We must be thinking beyond product metrics to things like employee retention, risk mitigation and infrastructure security.

# Skill evolution is a necessity for every function in an organization.

## Tech skill development is more of a strategy than an investment

Investing in tech skill development essentially drives business growth and innovation. It improves the company's ability to attract new people. It aids retention and reduces turnover. These realizations are nothing new, and neither are the hard financial benefits associated with them.

# I don't believe you can tie the hours and dollars of skill development to a specific number in an earnings report.

And this is an ongoing strategy. “No” to a budget one year doesn't have to mean “no” forever. Regularly assessing how teams can develop their skills means that new ideas are always surfacing, and skills that don't make sense now can come back around when they will make more significant impacts.

## Optimizing the business takes it where you want to go, even if you can't find it in an earnings report

At the end of the day, CEOs and other high-level leaders do care about how decisions around skill development will impact the business. We do not care which data warehouse technology we use. We care what teams are optimizing the organization for and what problems we are solving for the business.

Are we aiming for speed? Reliability? Accessibility? Our ability to hire candidates quickly? Pricing? Probably a bit of all of those. We want to know which targets we are combining, and what factors go into those choices. We want to know the choice matrix that leads to our prioritization.

Have those conversations within the organization to make sure you all really understand what the problems are and that you are aligned before figuring out which tools you need and which skills your team members need to develop. Figure out which metrics you can drive to. Demonstrate how you're going to see improvements in reliability, retention, productivity or whatever you're prioritizing. Then, trust the employees you've hired to excel in making those improvements.

Of course it's a good discipline to tie your initiatives back to metrics, and to tie those metrics back to the key company metrics—generally the ones aligned with what Wall Street cares about. But that is a complete oversimplification, and it's also total bullshit. Often these initiatives are more about the spirit than the bottom line. I don't believe you can tie the hours and dollars of skill development to a specific number in an earnings report. Reporting your returns down to the dollar sounds nice, but it can't be done. What you can do is tie skill development to employee retention metrics. Better yet, you can tie an initiative to a critical business metric—like reliability—and let skill development be one of the tactics used to ensure the goal is achieved.





It's a discipline in and of itself to be able to tie a training program or new technology strategy to outcomes, like site reliability or app speed, which may not drive specific revenue streams but may still demonstrably take the business where you want it to go.

### **Skill development ultimately builds relationships, which build teams**

Beyond improving business outcomes, skill development improves relationships, just like date nights can improve a marriage.

My husband and I have a date night every week. A date night is not a requirement for our marriage. We spend an extra chunk of change every week on dinner plus hiring a babysitter. We don't need the extra calories in that bottle of wine. Yet we get a shared experience. It gives us time alone. It gives us time to chat. I don't think any marriage counselor would say we need fewer date nights.

Investing in team skills is the same deal. If we go through a bootcamp together and we all learn the same skills, we develop a shared language. We build community. Shared experiences strengthen the team.

And that's on top of learning skills that improve our process and make us better at what we do. Think of skill development as team building—without the trust falls and maybe with a few more notes taken.

The impact of skill development comes down to team health. It's not about improving next quarter's numbers or next year's sales. It's about building an organization with long-lasting relevance.

The continuous experience of learning and growing shows employees that you care about them and want to invest in them. It's so easy for people to quit a job and

become excited about doing something new and different somewhere else. So you have to figure out how to keep it new and different where you are. You have to grow together with your teammates. And even though this may sound like the beginning of an HR violation, skill development works like a regular date night for your team, strengthening their relationships and helping them adapt to whatever new directions you choose to take together. •

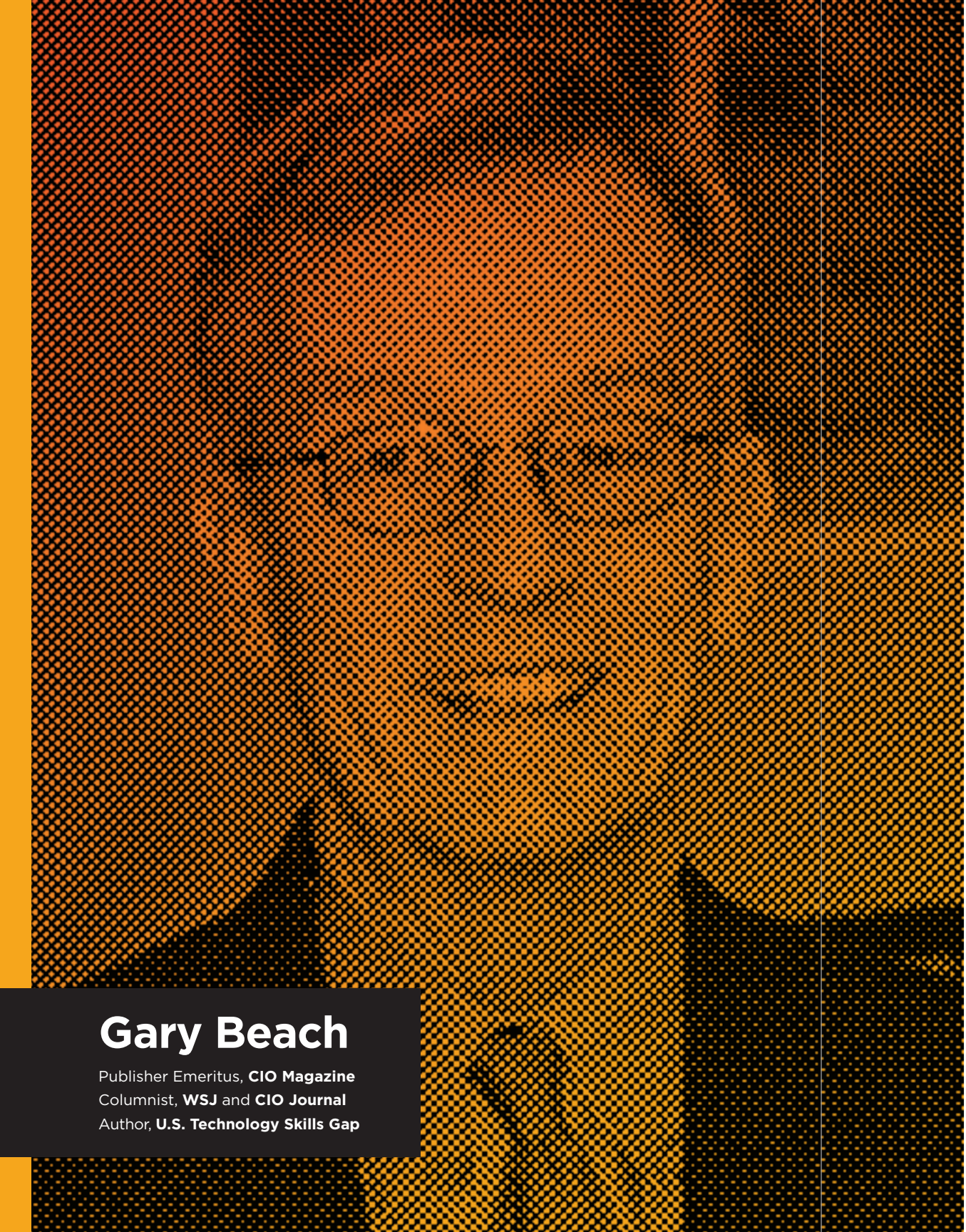
Amanda Richardson is the CEO of CoderPad and has more than 15 years of experience in product management, data and analytics, corporate strategy, operations and marketing. She was previously the CEO at Rabbit and Chief Data & Strategy Officer at HotelTonight. She also spent three years as VP Product at HotelTonight, where she managed platform relationships with Apple and Google and led multiple feature enhancements that improved conversion by over 30%. Amanda has also held product leadership roles at Prezi, and was SVP of Product and Marketing at Snagajob, where she oversaw the roadmap that drove more than 30% annual revenue growth and was responsible for achieving \$20 million in advertising revenue targets.

Amanda holds a Bachelor of Science in commerce from the University of Virginia and a Master of Business Administration from Stanford University. She is an advisor to a number of startups and has been a featured speaker at the Mind the Product Conference, Women in Product Conference and Lean Startup Conference.



**The  
mindset  
shift**





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# A radical rethink to replenishing the talent pool

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All is not well in the global talent arena. The digital “skills gap” that emerged last decade is widening into a chasm. According to International Data Corp’s FutureScape 2019 report, two million jobs in artificial intelligence (AI), the Internet of Things, cybersecurity and blockchain will remain unfilled by 2023 due to a lack of human talent. Some experts claim the only solution is a structural reset focused on how individuals learn. Most agree that the transition won’t be easy.

That’s because the skills gap has deepened. It started in 1964, when the International Association for the Evaluation of Educational Achievement fielded the First International Math Study (FIMS), which ranked student math proficiency of students in 13 developed countries. The U.S., which finished last, was already experiencing a skills imbalance. The first signs emerged in 1942, when the U.S. War Department’s Army General Classification Test indicated that 40% of Americans aged 17 to 24 had the cognitive ability of an eight-year-old.



By 1983, officials in the Reagan Administration were so concerned that they commissioned a report entitled *A Nation at Risk*, whose ominous conclusion warned: “Our once unchallenged preeminence in commerce, industry, science and technological innovation is being overtaken by competitors throughout the world...if an unfriendly foreign power had attempted to impose on America the mediocre educational performance that exists today, we might well have viewed it as an act of war.”

Alarmed by this finding, education administrators and politicians used the report to usher in the era of standardized testing, seeking accountability for the nation’s investment in public education.

But times have changed. Rick Miller, president of Olin College of Engineering, proclaimed back in November 2014 that “We live in an age of just-in-time learning facilitated by powerful online search engines, and in the workplace of the future, what one knows will be less important than what one can do with what one knows.”

### Who will fill the gap?

And yet, in a recent study by Cognizant’s Center for the Future of Work (CFoW), only 27% of business executives claim their employees have the skills to work or interact with top emerging technologies, such as AI, big data/analytics, IoT, mobile technology, open APIs and cybersecurity.

That is a huge skills gap. And corporations aren’t necessarily looking to higher

education institutions for help. In the CFoW study, 67% of business leaders said they’re concerned about the effectiveness of higher education institutions to prepare the workforce of the future.

AI skills are needed right now in the workplace, but it could be 2025 before many college students will find an AI course in their school syllabus. Higher education institutions, after all, refresh their curriculum only every two to six years, according to the CFoW study.

## If there’s a looming shortage of two million workers for jobs in emerging technology areas, where are companies going to find the competent instructors to teach them?

No wonder, then, that according to the study, roughly 6 in 10 companies are beginning to bear the burden of learning for their employees, whether by overhauling their corporate learning and training development programs (65%), increasing their investment in reskilling (62%) or offering specialized training on emerging technology (60%).

That’s encouraging. But many chief information officers (CIOs) with whom

I speak are reluctant to fully embrace these kinds of programs.

They remain convinced that once they reskill employees in an emerging technology area, they’ll add this skill to their resume and head off to a different employer.

I disagree with this contention. Thankfully, so do many forward-looking business executives. According to the CFoW study, these executives are prioritizing skill enhancement programs for workers in robotics/AI (82%), human-centric skills like communication, collaboration and problem-solving (80%), tech skills/web design/UI design (73%), project planning (67%) and discrete tech skills in STEM disciplines (63%).

### Overcoming a last-century reskilling mindset

But here’s the rub. These approaches to upskilling are often grounded in 20th-century learning methods such as instructor-led classes rather than on-the-job training, e-learning and video learning. If there’s a looming shortage of two million workers for jobs in emerging technology areas, where are companies going to find the competent instructors to teach them? I was also surprised to see learning approaches based on AI (28%) and augmented reality (19%) far down the list. That’s another skills gap to reckon with.



A study by global recruitment firm Harvey Nash offers further insight into how CIOs are strategically dealing with the skills gap. Respondents were first asked about which tech areas are most impacted by a skills gap. Responses included big data (46%), enterprise architecture (36%) and security (35%).

For me, the key question in the study is this: “Which method do you use to find the right skills?” Rather than innovative reskilling, responses ranged from “using contractors/consultants to fill the gap” (85%), “using outsourcing/offshoring to supplement internal teams” (71%) and “using automation to remove the need for headcount” (67%).

If corporations aren't interested in reskilling workers for emerging technologies, and higher education institutions are reluctant to change their insular business models, what options remain for workers looking to learn emerging technology skills?

Look in the mirror.

### **A digital badge of courage**

A new approach to learning has emerged in the past five years called “digital badges.” They work like this: Imagine a 25-year-old is interested in learning more about digital engineering or AI. With the digital badge

model, this person signs up for a course and completes the curriculum, mostly online. Rather than be awarded a certificate suitable for framing in the office, the person is given a hyperlink to a digital badge administered by the organization offering the course.

**What options remain for workers looking to learn emerging technology skills?**  
**Look in the mirror.**

The digital badge holder can embed the link in their profile on social media sites like LinkedIn, or when responding to open roles on job sites like Indeed. Prospective employers can simply click on the digital badge link to verify the applicant's skills and course accomplishments. Verification of skills and competency is the hallmark feature of digital badges; this separates them from traditional e-learning initiatives.

Scott Bittle, Director of Communications at Burning Glass Technologies, says digital badges address two skilling challenges: Employers need a more precise way of determining whether potential hires have the required skills, and workers need to earn these credentials in short training sessions that are both quicker and cheaper than a traditional degree.





Kathleen deLaski, founder of Education Design Lab, says digital badges have gained a lot of traction quickly, but “we need corporate hiring managers to give clearer signals to validate these as credentials.”

A recent study from iCIMS of a thousand technology hiring executives offers three findings that suggest these “clearer signals” are emerging:

- 80% of respondents said they would offer tech job candidates the same salary regardless of whether they had a relevant tech degree
- 61% said a four-year college degree alone does not prepare job seekers to be successful in today’s workforce
- 45% said they believe that in the next two years a coding bootcamp certificate will be as meaningful a qualification for a skilled technology position as a college degree

Digital badges have shortcomings. Most notable is the lack of industry standards for course quality or the amount of personal commitment required to earn one. But from what Roger Schank, founder of Experiential Teaching Online and former chief education officer at Carnegie Mellon University, tells me, “In the end, credentials mean what we think they mean. ‘I’m a high school graduate’ used to mean something; now if you bragged about that, you would be laughed at. The real issue is what one has actually done and being supported by any credential that means something to corporations. The future belongs to digital credentials.”

### **A different kind of bridge to the future**

What’s clear is that companies and higher education institutions are not doing enough to bridge the widening technology talent gap. Frank Gens, Senior Vice President

and Chief Analyst at IDC, offers this ominous prediction: By 2023, the global economy will create 500 million new native applications—the same number created in the past 40 years. To compete in that environment, Gens says, C-suite executives “must consider everyone a developer.”

Francois Voltaire, a 17th-century French philosopher, wrote, “One day everything will be well, that is our hope. Everything is fine today, that is our illusion.” With a shortage of 900,000 emerging technology workers looming in a global digital economy seeking to roll out 500 million native apps, all is not well. This is especially so in an ecosystem in which “talentism is the new capitalism,” as Klaus Schwab, co-founder of the World Economic Forum, says.” Business and technology leaders know this first hand.

It’s foolish to continue believing that higher education institutions and corporate training programs grounded in traditional 20th-century approaches will offer meaningful solutions to this talent gap.

In the fourth industrial revolution, individuals can no longer primarily rely on higher education institutions or corporations to learn new skills. While it’s incumbent on these entities to restructure how they train and teach, that isn’t happening quickly enough. In the interim, it will be up to workers themselves to relearn how to learn, or rely on organizations that offer more agile and less costly approaches to upskilling.

As the landscape of work continues to shift in the digital era, all participants—higher-education institutions, corporations and workers themselves—have a role to play in making the future of work and the future of learning a reality. •

This article first appeared in *The Cognizanti Journal*

*\*IDC FutureScape: Worldwide IT Industry 2020 Predictions, Doc # US45599219, October 2019*

**Gary Beach’s career spans over three decades in the information technology media business. He has held executive posts at McGraw-Hill on Data Communications, the world’s first digital networking magazine, and at International Data Group, where he was publisher of Network World, Computerworld and CIO Magazine. In 1999, he founded CIO India Magazine.**

**He is the author of *The U.S. Technology Skills Gap* and a regular columnist for The Wall Street Journal’s CIO Journal, where he writes on the topic of technology talent.**





## Stacey Rivers

Director of Tech Human Capital Management, **WarnerMedia**

🐦 @STACEYRIVERS13

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# Why learning is the next skill your team should master

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Remember grade school, when we had folders and subject notebooks for each course? If you are a parent, you're intimately aware of this because of money spent every school year on different colored folders. Teachers have a system designed to help students focus and retain knowledge for the specific subject area through organization and memorization. L&D and technology leaders also need a system to help their teams keep up with tech, build business-critical skills and apply them on the job in record time.

How effectively you acquire a new skill is specific to your learning style, which is the ability to retain information in a way that is practical and adaptable. "Learning" is not passive; it's a skill that requires the same retention process you endured as a child, just at a faster pace. With the advancement of technologies such as cloud, AR, VR, AI, blockchain and cybersecurity, the way we work is quickly changing. We have to proactively build the right skills on our team, and build them rapidly enough to capitalize on these new trends and technologies. Learning how best to upskill your team efficiently is just as important as the act of upskilling them.

If you're still not convinced, here are my top five reasons why learning is the next skill you should master:

1. Technology will continue to advance and change the way we work.
2. Jobs will require emerging skills for companies to stay relevant.
3. Higher salaries are commensurate with higher level skills that are not easily obtained.
4. Employees enjoy their work more when they have the right skills for the job.
5. You take your skills wherever you go.

Once you've committed to focus on skill development at your organization, your next step is discovering the most effective way to do it, taking into account individual preferences, topics, delivery methods and consequences. Yes, "consequence" can be a motivator or stressor because some

skills require exams to validate the required knowledge has been retained. The higher the stakes are for gaining a new skill, the more challenging it can be for the learner to process and apply it successfully.

One way to account for each individual's unique skill development style and needs is to partner with a technology skills solution that provides a personalized experience for each employee. When evaluating solutions, ask yourself the following questions about how your team builds skills:

- What was the last skill an employee learned that they were able to apply regularly?
- Did they learn it from a formal course or an informal arrangement?
- How was the information delivered: online, in person, on-demand? Was it a video, podcast, book or e-course? Did employees attend with peers, or was it self-paced?

- How long did it take them to apply their new skill(s)?
- What were the steps they took to retain the info?
- How did they apply what they learned?
- Was the process easy or difficult?
- If difficult, how did they overcome the challenge(s)?
- If employees could change how they engaged with new information to better suit their needs, what would this look like?

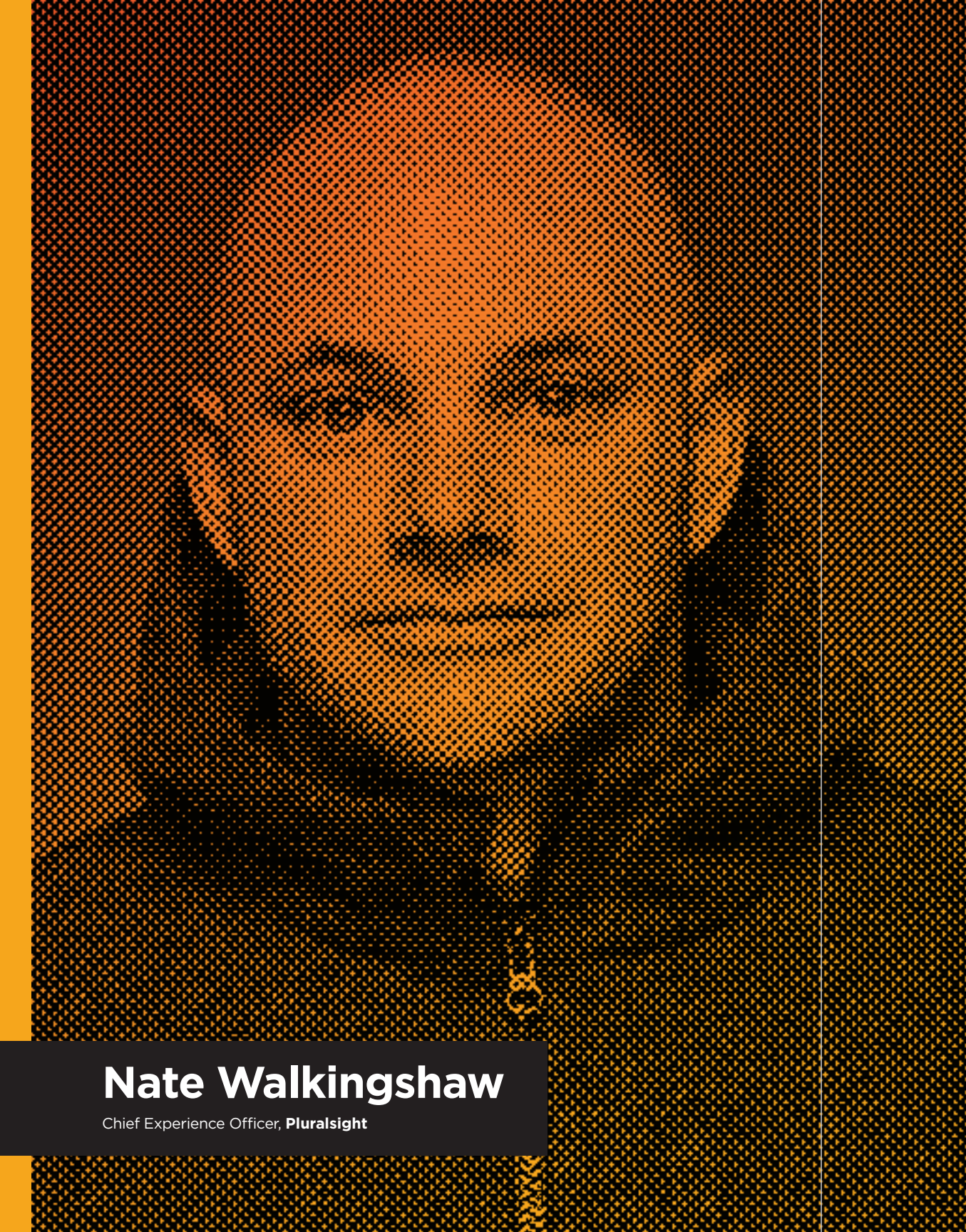
Once you answer the questions above, you should have some sense of the kind of solution that would have the greatest impact on your teams' ability to build, retain and apply skills efficiently. Remember, an employee's level of interest in a specific topic area is also a big factor in their learning process. The less interested they

are, the less likely it is that they will retain the information. The pay-off comes when the topic is interesting, the delivery method is engaging, and the learner is committed to applying their new skill. Even further, continuing to research, refine and solidify their knowledge will take them from novice to expert.

As an L&D or tech leader, your job is to facilitate your team's skill development. You are building the skill of upskilling others. With the right approach to developing skills in a personalized way to support each individual's learning journey, you can reliably build skills across your organization and guarantee you are prepared for the future. •

**Stacey Young Rivers is the Director of Tech Human Capital Management at WarnerMedia (formerly Turner Broadcasting). With expertise in developing strategies to close skills gaps and develop talent pipelines, she is also a mom, author and an avid blogger who loves to write about her career journey and share her lessons with others. Rivers is passionate about helping people succeed in their career aspirations with a special focus on students and early career professionals. Her latest book, *How To Get R.I.C.H. and Other Career Hacks* is currently on Amazon.**





## Nate Walkingshaw

Chief Experience Officer, **Pluralsight**

 @NWALKINGSHAW

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# Improving outcomes through psychological safety

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If you're asking yourself more and more often, "Why are we not shipping? Why are we not communicating? Why have we slowed way down?," then you're experiencing misalignment. And while it can be caused by a variety of factors, you should also know that misalignment is a strong indicator of an unhealthy team.

It's likely you'll want to start rooting around for individual solutions to your team's misalignment so you can get back to a healthy dynamic. But without first creating psychological safety, you're unlikely to see results.

Psychological safety is the key to creating an environment where people can grow and learn new skills.

Whether by your company culture, experiences on previous teams or just plain human nature, your team has been conditioned to hide the parts of themselves that may put their employment or social status at risk. This is evidenced by the lack of team members speaking up, taking chances, asking questions and leaving room for the input and opinions of others.

Healthy teams are stacked with people who behave in ways that reflect and encourage psychological safety—a phenomenon first described by Harvard Business School professor Amy Edmondson in the '90s, but now more critical than ever to the survival of modern organizations.

Amy wrote in her book, *Teaming*, “In psychologically safe environments, people believe that if they make a mistake, others will not penalize or think less of them for it. They also believe that others will not resent or humiliate them when they ask for help or information.”

She also says, “Psychological safety does *not* imply a cozy situation in which people are necessarily close friends. Nor does it suggest an absence of pressure or problems.”

This dichotomy poses a challenge. Many leaders struggle with striking a balance between caring for employees on a personal level and upholding disciplines and standards. If you lean too far in either direction, the result is the same: You slow down.

To avoid the common pitfalls on the way back to a healthy, productive team and to create psychological safety, take these three steps:

### 1. Really learn who you're working with

On healthy teams, every dimension of every person shows up to work with you every day. Yes, even in remote

work environments. It just takes some groundwork. Learn how your teammates individually process feedback, solve problems and communicate. And be sensitive to what may be going on outside of work. For some, work may actually be their safe space, making them sensitive to changes to that environment. For others, prior experiences or situations playing outside of work will understandably impact how they show up. Be approachable. Know who you are and how you're experienced by others, and encourage others to follow suit. Ask questions to identify their unique working style, and celebrate authenticity.

### 2. Encourage curiosity in your communications

It's your job as a leader to “set the stage” for psychological safety in your workplace. That means modeling the behavior you expect to see and being thoughtful about the ways your words either encourage curiosity or stifle opportunities for collaboration.

There are certain questions you can ask at every stand-up, or even during remote meetings, that will draw your team's natural curiosity. Say, “What am I missing?” or “What else should we consider?” to invite input. Recognize your own fallibility in your quest to see every angle of every problem. Someone on the team will be able to spot the gaps in your thinking, which will move the whole team forward together faster.

Once you've created space for everyone to contribute, follow up on your team members' input with both acknowledgement and action.

**Pro tip:** Good communication requires more listening than speaking. Make it clear that even if someone already knows the answer to a problem, they listen to other people's ideas with a learner's mindset and stay open to alternative perspectives.

### 3. Take risks, then reap the rewards

Psychological safety is an indicator of team performance—the thing we're all after. Get everyone on your team into the practice of being bold, speaking up, asking questions and admitting mistakes. A signal of reaching psychological safety in your team dynamic will be that people are empowered to say, “I don't know” or “I messed up” more often. This is a good thing! Only when people flag mistakes or identify gaps can they be addressed. By taking the risk out of these behaviors, the whole of your team becomes stronger than the parts.

The main goal here is to remove the fear of failure from your organization. Tech leaders are the authors of what's to come. We need every voice to share knowledge, share stories, listen and include each other in order to really honor a learner's mindset. This creates psychologically safe environments where people can get the business of admitting they're human out of the way and move on quickly to creating powerful outcomes. •

**Most widely known for his keen product development methodologies, Nate Walkingshaw is obsessed with how products are built and the teamwork it takes to build them. As CXO of Pluralsight, Nate has crafted an organization that is centered on user experience, and also created collaborative teams including: product managers, UX designers, analysts, and persona researchers.**





**KC Jorgensen**  
Chief People Officer, **Textio**

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Take the moonshots:

# 4 shifts to succeed with tech skill development

Talking about “training” is pretty much standard operating procedure in the tech industry. But training doesn’t go far enough when it comes to upskilling technology teams—and that’s a big problem.

You need to shift conversations toward *tech skill development* and focus on skill initiatives that are workforce driven, collaborative, ongoing and ultimately more creative.

## 1. Shift from top-down training to employee- and-objective-driven skill development

The interest in skill development in service of career growth continues to rise among tech employees. More and more people are pressuring executives and businesses to provide them with opportunities to acquire new skills on the job. They embrace the perspective of constant improvement and understand that tech skill development never ends.





It's essential that C-suite executives champion skill development and understand which skills their people want to gain. What do they need to be effective today? Which skills will they need tomorrow?

Filling the skills gap really comes down to a) understanding the strategy of your organization, b) identifying which skills your people have and c) identifying the skills your people need (and want) to meet company goals. As leaders, it's on us to

**KEY TAKEAWAY:** In my experience, these efforts cannot be solely top-down. Listening to your people and surfacing their suggestions results in more interest and higher levels of engagement. When you can tap into existing desires in a way that aligns with business objectives, you can create a solution where everyone wins and employees understand the “why” behind what they're learning.

## Listening to your people and surfacing their suggestions results in more interest and higher levels of engagement.

### 2. Shift from one team's problem to a company-wide journey

People often ask me whether the CIO or the CTO should initiate tech skill development or if it's dependent on HR seeking out opportunities to build tech skills initiatives.

Honestly, it's neither, and it's both. Anyone at the C-suite level should be having regular conversations with other executives to understand the organization's pain points. The HR team can offer a different perspective on what the organization needs than the

CIO or CTO. The conversation around new skills can originate in either office or from a different role altogether.

implement the right types of programs and platforms to fill gaps and make sure people are quickly building the right skills.

**In short:** How are you helping people uplevel their knowledge to unleash their full potential?

Anyone who cares about the skills and education of the people who work within their org can start the process, but it helps if you also have someone fully dedicated



to tech skills at your company who can build programs around the information.

**KEY TAKEAWAY:** The most important thing to understand is that relevant, productive skill development starts from a place of partnership. Having an open dialogue is much more critical than identifying whose job it is to initiate it.

### 3. Shift from emphasizing quick wins to the value of the long game

To build a successful tech skill development strategy, you should establish meaningful goals from the beginning. Every leader needs to identify the right measurements for their organization. Just as critical is setting benchmarks for progress. Where do you want to be a year from now? When will you stop and assess the changes you're implementing?

The truth is that most successful tech skills initiatives are suited to the long haul. If your organization implements skill development with the goal of immediate returns, disappointment is likely. Mastering and applying new skills takes time, and delivering results to customers requires even more. Skill development exchanges short-term costs for long-term gains.

Which is exactly the point. You have a knowledge workforce, and you don't want to just do what everyone else is doing. You want to lead the market. You want to excel.

That requires investment in your people and patience as their skills develop.

**KEY TAKEAWAY:** You may not be able to measure the impact perfectly in either the beginning or the long term. Accepting this fact is difficult in such a data-driven field, I'll admit. But if you have a firm grasp on why tech skill development matters to your org and to your workforce, having clear and adaptable goals becomes more paramount than precision.

### 4. Shift from finite thinking to taking the moonshots

I'm often inspired by an idea from Simon Sinek's book *The Infinite Game*. He writes about the difference between an *infinite mindset* and a *finite mindset*. In business, we sometimes get stuck on doing X to achieve Y results. That's a finite mindset. The rules are clear, the objectives defined. An infinite mindset acknowledges the open-endedness that exists in much of business. The real challenge isn't winning the game, it's to continue playing.

When you realize how much the world of work constantly evolves, especially with a knowledge workforce, you understand the importance of an infinite mindset around constantly giving your people access to knowledge. It will have a positive impact on your business, however imperfectly you can measure it.

Adopting the infinite mindset is perhaps the biggest shift of all. It can be terrifying to recognize that your plans may not happen when you think they will or that you'll accomplish goals you can't yet imagine. You should see the learning process as more of a hypothesis to be tested.

Moonshots change an organization's direction, mold the expectations of employees and customers and sometimes uncover new lines of business. They aren't supposed to "work." You'd never optimize for them because the economics don't line up. But in retrospect, they look genius.

**KEY TAKEAWAY:** How do you balance optimization with the need for creativity, innovation and room for growth and improvement? Remember that data is retroactive. You use it to make informed decisions. But you shouldn't follow the data just for the sake of saying you did. Data helps us predict the future, but it doesn't define it.

Shifting from "training" to technology skill development is critical for organizations to thrive as the pace of change accelerates. But for a skills strategy to be productive, it can't be top-down. It should align employee career growth with key business objectives. It needs long-term championing throughout your org. And though identifying success might not be a perfect science, that can't discourage your efforts.

**This moonshot is one worth taking.** •

**KC is the Chief People Officer at the award-winning startup Textio. A self-proclaimed People & Culture nerd, KC loves all things talent management and excels at developing talent strategies that are in line with the operational goals, building out global rewards programs and leading teams of exceptional recruiting and HR professionals. Throughout a successful career, she has developed a reputation of exemplary leadership, advocacy, employee relations, and talent development. A natural recruiter, she has proven to be an outstanding assessor of talent.**

**Whether engaged in organizational transformation or developing new programs, she devises strategies and plans that coincide with corporate objectives and always maintains a keen eye towards fostering cultures that deliver on the promise of equity and belonging.**

**Overall, KC is driven to make sure Textio is an amazing place to work.**

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The emperor's new skills:

# Sorting the real from the imaginary in tech skill development

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Until recently, I wasn't too familiar with the classic Hans Christian Andersen tale, *The Emperor's New Clothes*. I'd always dismissed it (or rather, the people in the story) as kind of absurd. I didn't realize until I actually read it that the first person to pretend had a very logical reason for doing so, and once he made that choice, the rest of the plot fell into place like a set of dominoes.

See, there were two con artists who cleverly created the ruse by stating that the emperor's clothes were made out of material so delicate and refined that if you couldn't see it, you were either not qualified for your position, or you were a simpleton. So, person after person, not wanting to admit what they couldn't see or be called a fool, lied until people started to believe that something imaginary was real.

Building skills in your organization is just like *The Emperor's New Clothes*. There is a difference—and not a small one—between those with real skill development practices, and those with imaginary skill development who pretend their strategy will lead to real results.



**Isaac Strack**

Head of Professional Services, EMEA/APAC, **Pluralsight**



I've spent the last three years creating skills strategy plans for companies of all sizes, and I've observed distinct differences between organizations that make real progress and those that struggle.

You'll identify with some of the real practices, and also probably identify with a few of the imaginary ones, which are areas where you and your teams can improve. That's normal and to be expected.

As you consider these scenarios, take inventory of where you are by grading yourself and your org on each topic. As you take inventory, you'll see the exact areas where you need to focus, and you'll be better able to implement initiatives that will move your skills strategy from "imaginary" to "real."

### Lifelong learning

**Imaginary =**

"I know what is required to do this job effectively and that's enough."

"There is no 'good enough' when it comes to skill development. If employees stop learning, we stop innovating."

**= Real**

For the above, please remember: A culture of learning is about the overall belief that there is no "good enough" when it comes to skill development. Paul Eldridge at Salesforce has created one of the most comprehensive and thorough cloud skill development strategies

I have ever seen. Guess what he's busy revising at this very moment? Guess what he'll revise again next month and the month after that? The company's cloud skills strategy. Technology doesn't sleep, and neither can your strategy. It's easier to stay on top of a subject than it is to try and catch up.

### Intensity and regularity

**Imaginary =**

"Learning programs are a good perk, like rewards and recognition, free lunches or ping pong tables."

"Skill development is critical to our daily success and is as important as production time, flow time and team collaboration."

**= Real**

The difference is in the intensity and regularity. Do you learn something new every day? Do you or your team watch courses on your commute or during lunch breaks? Your competitors do. I know, because I work with them. And not only that, but they've also made learning new skills a habit. We all have priority lists and the list of critical things is short. Companies with truly great cultures put time to learn new skills on the short list. What does that look like? It could include tying manager compensation to "20% time," or extending timelines on projects to allocate time for learning. A company could also regularly sponsor hackathons, learning lunches or internal conferences.

When it comes to prioritizing skill development, you have to mean it. If leadership takes it seriously, so will your teams.

### Flow of learning

**Imaginary =**

"We are too busy to prioritize learning time when it comes to other responsibilities."

"Skill development is part of our culture, encouraged by leaders and doesn't just come from courses or a classroom."

**= Real**

There's a lot to unpack in this one.

Protecting formal skill development time is critical to success.

An organization committed to skill development also recognizes that not all learning happens in such a formal manner. Learning happens in real time when one colleague helps another, or when a developer performs a Google search. On-demand, tribal knowledge, guilds, pair programming—there are a large number of modalities and "quick wins" when it comes to learning, and orgs that recognize and cultivate learning flow stand the highest chance of success.

## Measurement

**Imaginary =**

“The best way to measure learning progress is to find out how much time is spent consuming content.”

“The best way to measure skill progress is to find out if the right skills are being acquired.”

**= Real**

It's difficult to accurately measure skill progression. But whether you intend it to or not, the things you measure send a clear message about the things you value. Over the years, I've observed that in organizations where it's all about completion—checking that box at the end of a course—employees aren't truly invested in developing themselves. This is ineffective. Mature organizations measure skill progress by using assessments and analytics that show growth by an individual over time.

## Skills autonomy

**Imaginary =**

“Frameworks are the answer! We need to tell everyone what to learn and how to learn it.”

“People know what skills they need to develop better than we do. We give them directional guidance and then get out of the way.”

**= Real**

Focusing on time spent learning drives activity; focusing on skill development drives outcomes.

You can't document a forest fire; it grows and shifts too rapidly.

Sounds obvious, doesn't it? But how would you describe the impossible pace of technology releases and the ever-growing skills gap that results?

And how do you approach this skills gap?

In an effort to identify skills gaps, some companies try to document every skill, at every role, at every level. They create “skills frameworks” and other documents that are outdated the moment they're published. On top of that, even though they aren't trying to, they wind up telling employees with 10 years of expertise in their craft what skills they should be acquiring.

Great companies see technology for the forest fire that it is, and empower their teams to solve this problem. And this is the fundamental principle of Agile: They trade control for results.

This too may sound obvious, but removing the traditional “top-down” control model and replacing it with trust and empowerment is easier said than done. In my experience, companies that do this successfully involve their people in the decision-making, rather than inform them about a skill development framework built by L&D.





## Reduced complexity

**Imaginary =**

“We map skills and content by role and role level.”

“We align skills to objectives.”

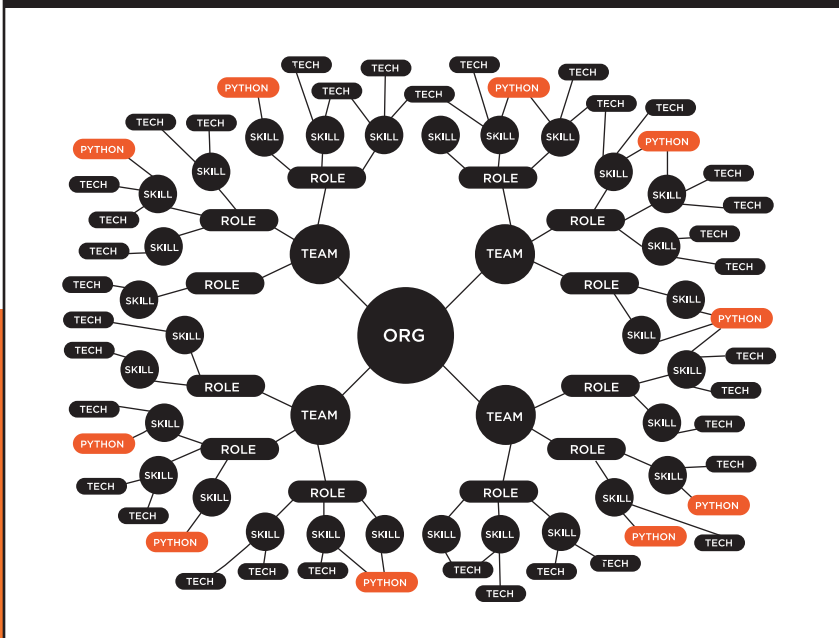
**= Real**

The key to creating a manageable skills architecture is to make skills modular.

Using org structure to organize skills makes them rigid and complex, because it assigns a skill (Python, for example) to a single role (see TABLE 1.0). But skills don't belong to roles. They are definitely associated with roles—often many different roles. Organizing skills by org structure creates duplication, overlap and an overly complex hierarchy.

The best skills architectures start by aligning skills to objectives via a skills matrix (see TABLE 2.0). No rocket science required! Simply lay your functional areas (roles, teams, areas of responsibility) across the top, lay your major skills areas down the side, and presto: You've got a skills matrix.

**TABLE 1.0 : Organizing skills by org structure creates duplication, overlap and an overly complex hierarchy.**



The visualization seems simple, but it's important because it allows you to assign skills in a modular way, making it easy to apply them to roles afterward. For example, Python spans multiple functional areas (data, scripting, web development, etc.). The skills matrix captures that, so you only have to build one content track for Python, usable by multiple areas.

## The tipping point

**Imaginary =**

“I try to build something that covers everything and everyone.”

“I understand the principle of the 15% tipping point, when ‘the moment of critical mass, the threshold, the boiling point’ happens (Malcolm Gladwell) and design for early adopters.”

**= Real**

**TABLE 2.0 : The best skills architectures start by aligning skills to objectives via a skills matrix.**

	OBJECTIVE 1				AREA OF FOCUS	OBJECTIVE 2	
	CRITICAL ROLE	CRITICAL ROLE	CRITICAL TEAM	CRITICAL TEAM		CRITICAL ROLE	CRITICAL ROLE
CRITICAL SKILL	✓		✓		✓	✓	
PYTHON	✓	✓		✓		✓	✓
CRITICAL SKILL		✓		✓			✓
CRITICAL SKILL	✓	✓				✓	✓
CRITICAL SKILL			✓				
CRITICAL SKILL		✓			✓		✓
CRITICAL SKILL	✓	✓	✓			✓	✓
CRITICAL SKILL		✓		✓			✓
CRITICAL SKILL	✓	✓				✓	✓

Healthy skill development is contagious. And within your organization, 15-20% of your people are early adopters. Great companies know this and strategize to “infect” those adopters with a fantastic and healthy skill development experience. They know that if they do, the rest of the workforce will see it, develop a bit of FOMO, and in no time, your entire org will be looking for skill development opportunities.

Still, 20-30% of your employees will likely account for 80% of your skill development.

This is a law of nature. Having a “use it or lose it” policy when it comes to learning resources will only hurt your culture in the long run. Activity will decrease and the psychological safety of your entire org will take a hit.

Conversely, companies that allocate learning resources to everyone regardless of usage create a culture of abundance, where innovation can come from anywhere and small bets pay off.

### Separation of goals

**Imaginary =**

“I combine career frameworks and skill development.”

“I decouple HR and skill objectives.”

**= Real**

Successful performance management, career ladders and role levels have specific characteristics:

- They must be generic
- They must be objective
- They can't change frequently

Successful skill development models also have specific characteristics:

- They must be specific
- They must be flexible
- They have to change frequently

Building an architecture that tries to meet the requirements of both defies logic. Great companies recognize this and separate these initiatives. There is definitely still a relationship (and an important one) but treating them separately via process and architecture is critical to long-term success.

### Summary

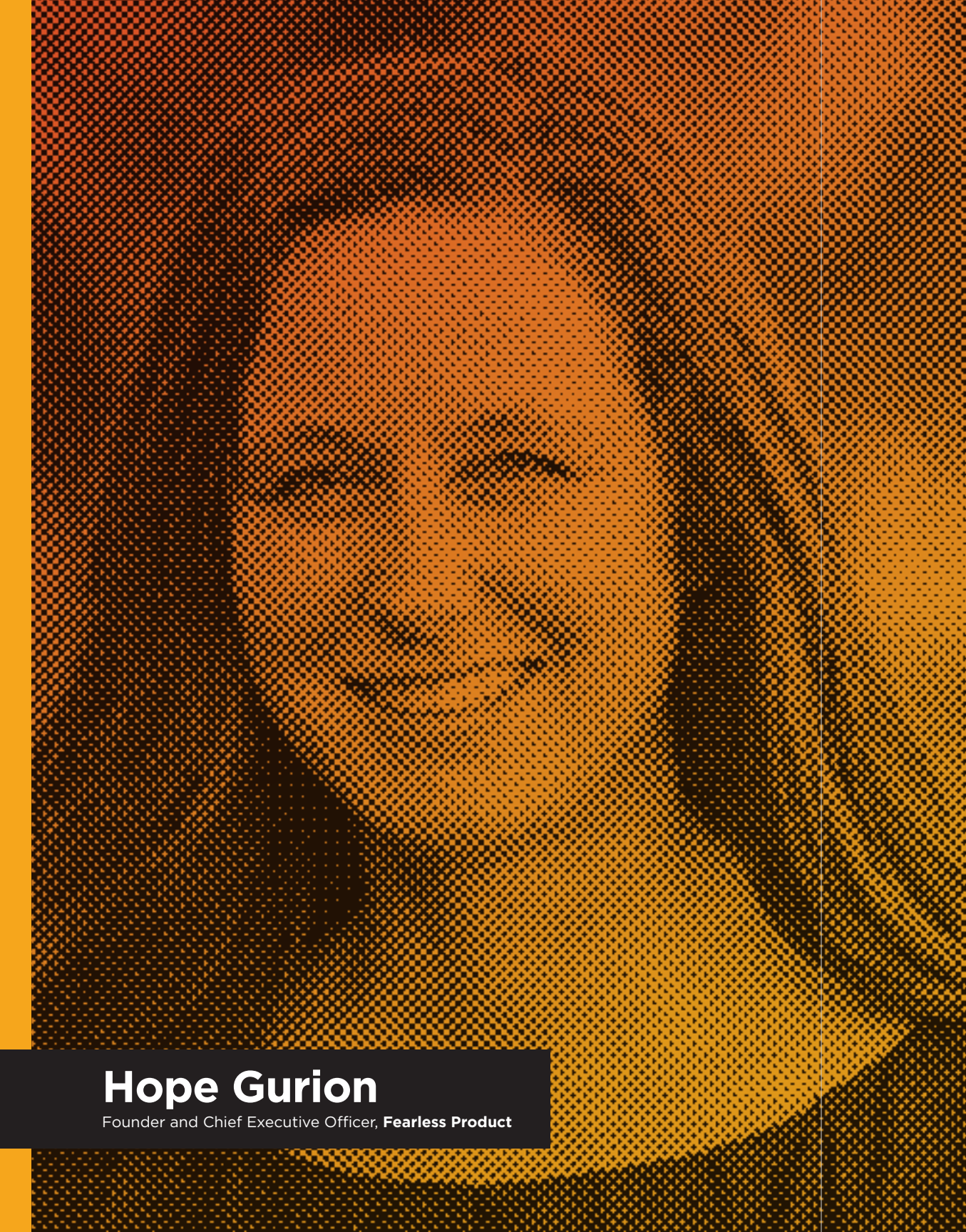
Developing a real, effective skills strategy and a healthy learning culture is hard.

But getting to something real is worth the effort. The above-mentioned patterns and practices can serve as a starting point to the larger conversations (and work!) that need to happen. I encourage you to take these patterns, add your own and close those skills gaps. •

**Isaac Strack is an author, speaker, technologist and STEM education advocate. He is currently the Head of Professional Services in EMEA, working closely with customers of all sizes to fully leverage the Pluralsight platform in developing and implementing their skill strategies.**

**Isaac is active in STEM/STEAM activities, regularly contributes to Pluralsight One initiatives, and has made it his personal mission to improve lives through democratizing technology skills.**





## Hope Gurion

Founder and Chief Executive Officer, **Fearless Product**

🐦 @HOPEGRRR

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# Coaching and skill development that puts employees in the driver's seat

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Skill gaps—the ones that keep teams and individuals from accomplishing goals—need a critical eye. As a leader, your job is to decide which skills are most important to your business objectives and how best to develop them. That's pretty obvious.

What may be less obvious is how to foster your employees' intrinsic motivation to invest in improving. They may have different ideas about how to spend their time, resent being told how to work and either passively or actively avoid the deliberate practice required to develop the skills your company needs to succeed.

Guiding the strategic development of skills while supporting an employee's own learning objectives is critical to your ability to lead well. Though it may seem convenient and efficient for a leader to develop prescriptive training experiences for the team, nothing works as well as empowering the employee to take the initiative and follow through. The more say an employee has in creating options for how to close the gap—for example, through on-the-

job experiences or projects, courses or training, teaching others via a “lunch and learn,” etc.—the more invested they’ll be in fully committing to the upskilling effort. To that end, when discussing skills or knowledge gaps with your team, it helps to ask the question, “How can I help you become even more effective in this area?”

If they choose not to follow through despite having your support, you’ll know they’re not committed to improving in that area. The effort and discussion at that point will focus on finding a different approach to their development, a role that’s more suited to their current skills and knowledge or a path to a different role that aligns with their career goals.

### **Address skills gaps without strong-arming your tech talent**

Figuring out how to help employees grow isn’t always easy, but watching them gain confidence in their new skills and abilities is endlessly rewarding. Here are five practical tips to help you engage employees in their own skill development in ways that align to organizational goals.

#### **1. Define and communicate the skills and roles you need to achieve your goals.**

The first, most important step in a skill development program is outlining a clear path from junior to senior roles, from individual contributor to management or from beginning of project to intended

# Figuring out how to help employees grow isn’t always easy.

outcome. Then, communicate what’s needed to the individuals on your team so everyone is aligned to a common goal.

#### **2. Formalize skill development evaluation and conversation.**

Your organization should have a way to measure and index skills on an ongoing basis. This is the foundation for your skill development strategy. Measuring and indexing the skills of each person on your team will give you a firm understanding of the skills they have and the ones they need. Use this information as the starting point for discussions with employees on how they’d like to approach their development going forward.

Review individuals’ skill progress throughout the year to identify where the perceived gaps were and decide how to create experiences over the next six months to improve upon those gaps. Doing so can surface disconnects between the employee and manager. It can show where an employee might

perceive they are doing well and the manager wasn’t seeing it, or if the manager had a different perspective on what the employee could do to improve.

For teams and functional roles, identifying low skill proficiency or slow skill development progress for multiple people in a similar role can help

leaders pinpoint where to invest to upskill members of the team.

Without this rigor, it’s easy to be blind to the deficiencies that exist within your team and have them linger too long, doing a disservice to the employee and the company—and the customers’ experience of the products.

#### **3. Make continuous improvement a continuous expectation.**

Too often, leaders conduct employee development conversations only during the annual review. Not only is that too infrequent but it can bring a lot of emotion and surprise into the evaluation and neglect the important teachable moments that happen all year long. Hold formal progress checks at least twice a year using a skill improvement report, and then add agreed-upon areas of development. Use this as the guide anytime you meet with the employee to check progress and identify where support is needed.



# Encouraging feedback more often will help your employees feel like they play a bigger part in their own skill development.

#### 4. Determine how you'll measure success.

Enabling an employee to improve on a skill or knowledge gap that they're motivated to address is only half the battle. Often the step that is skipped is determining whether the employee has developed the skill or sufficiently addressed the gap. Perhaps a certification or test for a technical skill will suffice. Better yet is seeing that the newly acquired ability is becoming a habit the employee practices. That's where self-assessment and manager-assessment tools can help measure whether the employee has improved in a specific area of development over time.

Self and manager assessments can provide qualitative insights into skill development. When these insights are coupled with quantitative data, the picture becomes even clearer. Not only will you feel aligned, but you'll also be able to measure those skills in practice.

#### 5. Make feedback a two-way street.

Seek ongoing feedback from your team about your company's skill development programs. Annual employee survey feedback isn't frequent enough. Conduct quarterly exercises for a fast and simple way to get a clear, prioritized to-do list that incorporates everyone's unmet needs. Encouraging feedback more often will help your employees feel like they play a bigger part in their own skill development and the company's success as a whole, rather than if you steamroll them with a strictly top-down approach.

By building a clear path to successful development and using simple, effective tools to check in regularly on progress, leaders can be more effective at growing their teams. And, as workforce shortages continue to grow, employee development has never been more important. •



**Hope Gurion has more than 20 years of product management and leadership experience, leading product, design and analytics teams. She founded Fearless Product LLC to serve companies seeking growth through product innovation. She specializes in coaching new product leaders, often from non-product disciplines, to accelerate their confidence and competence. Her “Fearless Product Leadership” series helps new product leaders learn from experienced peers how they tackle some of their toughest responsibilities. Hope has led and coached more than 50 B2B and B2C product teams in start-up, growth and mature stage companies. Prior to Fearless Product, Hope was CPO at CareerBuilder and SVP, Product Management at Beachbody.**



**The  
way  
forward**





**Tanya E. Moore**

Partner Talent & Transformation, **IBM Services**

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The C-suite's new focus:

# skills

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Technology, and the world at large, is changing so fast that traditional methods of hiring and training are no longer enough. One person, or one group, can't shoulder the responsibility for the skill set of the organization. Managing talent and skills has become a collaborative effort with both Board and C-suite giving it priority focus.

When the entire people management system of a company is based on skills, leaders come together to build a culture of continuous learning and growth. The employee experience is a priority—and, as a result, employee engagement increases, attrition decreases and business results rise.

As the C-suite aligns the entire org around skill development, there are three critical best practices to follow: make it personal, be transparent and select the right partners.

## Make it personal

Your employees can get nearly every experience in their life personalized—from what they stream on their TVs to how they order dinner. They now expect the same thing from their jobs. The historical one-size-fits-all approach to skills no longer works. No one wants to be told they need to complete 10 courses by a specific date, especially if they already have expertise in those concepts. They want to know that what they're being asked to do is worth their time.

Companies must understand the needs of the market and their business to create deeply personalized skilling experiences that are served up in the flow of work. While creating personalized skill development experiences for thousands of people may seem overwhelming, it is critical—and easier than ever with the use of analytics and artificial intelligence (AI).

### Incorporate the following:

- Use AI to infer the skills and skill depth of your workforce, going past what skills employees say they have in their resumes and social profiles.
- Don't wait for employees to ask—alert them to an internal role, learning program, or growth experience that may be of interest to them.
- Make everyone part of the solution, leveraging peer-to-peer coaching.

Making skill development personal can be a huge time-saver for managers who are juggling people management with their other

day-to-day responsibilities. Analytics that provide cognitive nudges allow managers to proactively take action. By personalizing the skill-building and career experience for employees, managers can shift their focus from people management to meaningful interactions with their team members.

they need to point people towards. Even when they do know, that knowledge is not filtering down to the workforce.

Move to a new way of thinking. Based on your business objectives, what are the skills that you need now, and in the future? What skills do you need to buy (recruit), and

what skills do you need to build (develop/train)? How do you signal to employees the skills your business and the market require? And then how do you communicate to employees whether the skills they have now are growing, maintaining or declining?

If you think it's counter-productive to tell employees they're in a role that's declining in demand,

you're not the only one. Many companies worry that it will harm engagement or that people will quit. What we found at IBM was exactly the opposite. Providing employees real-time transparency into how their skills compare to market and business demand allows employees to know where they stand and gives them the power to do something about it. Reinforce this with a robust ecosystem of personalized skill- and career-building opportunities and a positive culture of continual growth, and you have the magic formula for building a workforce that is ready for the future.

# It's time to stop operating in the dark.

## Turn up the transparency

It's time to stop operating in the dark. Organizations need to place skills at the center of their people strategy, and aim for deep, real-time visibility of the skills position across the enterprise.

We're getting better at telling employees they need to grow their skills. Where many companies still need to improve is understanding which skills employees need to grow, and then transparently sharing this with their employees. This seems basic, but it's true. Many organizations aren't clear about the skills they need to meet their business objectives or the top skill domains



## Partner internally and externally

Gone are the days when any one company had all the answers. Gone, too, is the ability to solve the skills challenge without broader internal and external partnerships. To remain competitive, companies must adopt new ways of working, which includes partnering across the organization. How many companies still have a talent acquisition organization, a talent development organization, a learning organization, and a compensation organization—all of which operate in silos? With skills at the center of your people strategy, these organizations must work together, sharing data, resources, and expertise.

In addition, organizations must look externally for partnerships. Need to get your role and skill taxonomy in order? Don't try to create a solution yourself; buy it from the experts. Need to provide learning content on a topic that is not in your area of expertise? Buy it, too! Speed is essential. For the areas where you are an expert, do it yourself. For the areas where you are not, find a partner who can do it better, faster and probably cheaper than you can.

Building robust partnerships, both outside and inside your company, is vital. To get the most from your partnerships, adopt an open, cloud-based technology architecture that can plug and play together, giving you the ecosystem you need to meet the challenges of today—and tomorrow.

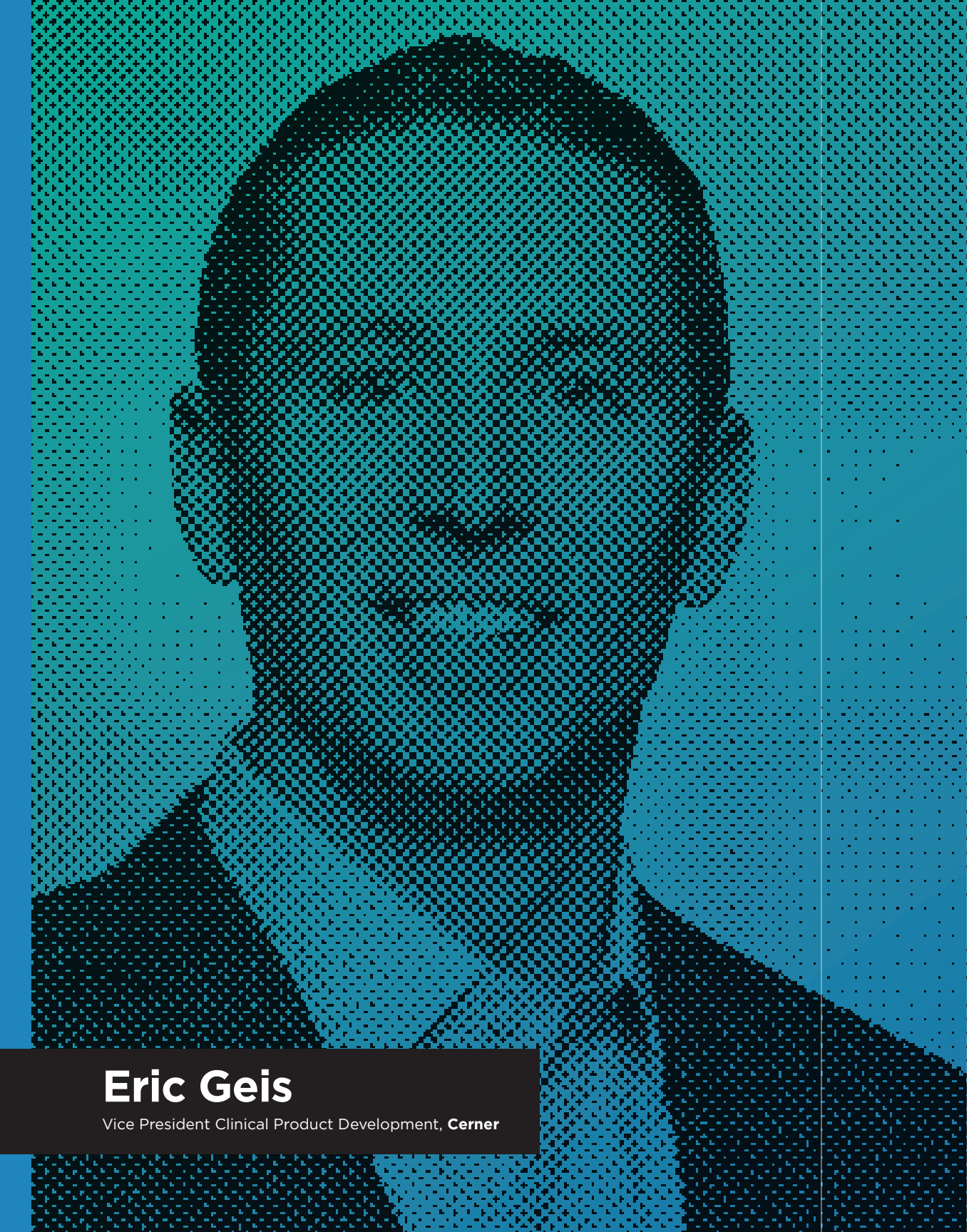
**Gone are the days when any one company had all the answers.**

## There's no going back

The C-suite knows the status quo is no longer an option. Now is the time to ensure your company understands the skills you have and the skills you need, and has a plan for closing the gaps and continually coaching employees toward the future. Creating this path for skill development will keep your employees building the talent you need to be successful in our ever-changing world. •

**Tanya Moore has over 20 years of consulting and HR experience in the private, public and non-profit sectors, specializing in complex talent transformation, strategic workforce management, skill transformation, reskilling, employee experience, employee engagement, organizational change management, culture change, digital change, and workforce and leadership development.**

**Most recently, Ms. Moore was the Global Director of IBM Career & Skills, with responsibility for envisioning and executing a new career and skill acceleration experience for the IBM workforce, which included the vision, strategy and execution of corporate-wide career and skill programs. In this role, Ms. Moore developed several award-winning programs that have become industry standards. Ms. Moore is currently a Partner in IBM's Talent & Transformation organization, bringing the best practices and lessons learned from her internal role with IBM to clients to support their workforce transformation.**



 @ERICGEIS

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Build tech skills at scale:

# Best practices from the field

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Driving any kind of initiative in a large or growing company can be a challenge. This especially holds true for implementing tech skill development programs at scale. We're tempted to build a distinct organizational structure to oversee the program—or else wrap it into Human Resources, where they already know how to implement training programs—and we're often inclined to ease the effort by making it uniform throughout the org.

Those paths may be the easiest, at least at the start. But they are not the best practices for cultivating a powerful and useful skill development strategy at any kind of scale. At Cerner, we find that bringing learning initiatives closer to the technical teams, partnering across L&D and IT to create alignment with the org, and allowing education to grow at a grassroots level are critical to our success.

The following strategies have enhanced our technology skill development, and they are adaptable for almost any engineering organization.

**Eric Geis**

Vice President Clinical Product Development, **Cerner**



## Bringing L&D into the technical fold brings your people closer to the skills they need

Historically, HR (or whatever you call your primary people organization) owns almost everything related to education and training. Compliance, after all, is their domain. So that's often where tech skill development ends up.

However, HR's education efforts tend to focus more on compliance and regulations for the entire company. They're not as versed in tech skills. Yet when tech skill development is housed in HR, it lives in a world apart from Engineering and R&D and all the other technical disciplines. So at Cerner, we decided to create an L&D team closer to development.

L&D now sits in the organization we call Product Life Cycle Services. Whether or not your company has this separate branch of the org chart, bringing tech learning closer to the engineering team improves its accessibility and impact for your people. Even a small L&D team can focus on tech skill development efforts, from entry-level onboarding all the way through reskilling the current population, based on the objectives the org is trying to deliver.

Making the request to move technology skill development closer to home was a pretty easy ask. Our HR team understood the benefits of relocating resources closer to the people they were servicing—and to the problem they were solving.

That said, the best people for the L&D team aren't necessarily technical people—although they could be. The people best



suited to running tech skill development have a deep understanding of things like project management and change management. You want people who can partner with you and your tech leaders to identify the skills your people need based on your tech strategy, and help drive an upskilling and reskilling initiative toward what you're aiming to accomplish.

### Partnering with TSD leaders greases the wheels for efficient tech skill development

While L&D is closer to Engineering, it's still a distinct entity: Our goals and operations are different, even though they're aligned in the same direction. We definitely collaborate between the tech side and the skill development side, and I view L&D as a partner of mine from both an operational and a strategic standpoint.

**At Cerner, we decided to create an L&D team closer to development.**

Here's how we establish a roadmap together:

- We start with an annual company-wide assessment. The leaders throughout the company put together organizational placemats, detailing our imperatives and initiatives for the year. As the technical stakeholders, we assemble our key initiatives and focus areas; from those, we can determine the skills we need to grow and learn. Some of those carry over from the previous year, and we always identify new ones.
- We then review the content resources we already have and fill the gaps where needed. We take what we have at hand, from our onboarding program down to the on-the-job learning experiences we offer, and adjust those as needed for our goals. We see what content and capabilities already exist within our technology learning platform. Then we try to align these resources with subject matter experts on our end—people with domain knowledge and some level of tech leadership.
- The learning organization facilitates the skill development. L&D can help do things more programmatically at scale. We need people to organize events, coordinate the attendees and handle communication. They have developed a blueprint for how to coordinate the skill development we need, at the

scale we're at. They benefit all of us by making the whole process more efficient.

- Bi-weekly touch-ins keep us on track. We meet with the learning organization every two weeks to go through what skills we're working on and how it's all going, and to adjust our annual plan as needed.

### **Grassroots skill development ignites the natural desire to learn**

As a company scales, these strategies naturally evolve. We have about 8,000 people in various tech roles, and some of them need more emphasis than others on upskilling. It's our job to pilot new programs, find success within and then provide them at scale. It's also our job to help these initiatives play out from a grassroots level instead of implementing everything from the top down.

My philosophy and experiences are that top-down efforts work better with regulatory compliance. When 100% of people need to check these boxes, that's a perfect HR effort. The tech space, though, works differently. Different people in different roles need different skills. We try not to crack the whip on enforcing their skill development. Rather, we want to continue to give people the tools, processes and mentors that will help them grow. We want them to have access to the content they need in a range of areas. We want to serve up opportunities and make it easy for our people to gain knowledge and learn.

Yet even the most motivated learners benefit from some guidance. We've purposely positioned technical leaders—both managers and people who still code on a regular basis—to use the same tools and processes as their team members. That way, they can help connect people to the skill development they'll benefit from.

Having a community of learners that includes on-the-ground leaders drives these efforts. It also builds champions, and word spreads quickly about how some course or tool or process helped them improve their skills. That kind of grassroots marketing does a better job than executives ever could.

Not every organization has an L&D team sitting as close to the technology team as we do. If yours doesn't, work toward it. This tight partnership has given us clarity, alignment and focus, with a path for how to deliver value to our population now and in the future. It's been critical to our ability to continually build new skills, leverage new technologies and drive health care innovation. •

**As Vice President of Clinical Product Development, Eric Geis is responsible for the engineering organization dedicated to developing and enhancing Cerner's clinical products. Eric's knowledge and background of Cerner solutions and the healthcare and technology industry put him in a unique position to lead and drive solutions forward.**

**Eric keeps clients in the forefront of the development process. By applying his background and experience to advance Cerner's offerings, he enables clients to focus on their primary objective of providing excellent patient care and safety.**





**Don Jones**

Vice President for Content Partnerships, **Pluralsight**

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Look where you're going:

# Align roles and skills to your goals

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One of the worst ways to manage technology skill development in an organization is to simply let employees find their own way. That doesn't mean learning should be top-down or a strict mandate by a leader. But it's important that, as a leader, you guide your team to the right skills for their career and for your business.

In some cases, your employees may happen upon exactly the right topics to benefit the business; in other cases, they may wander off in entirely the wrong direction. In many cases, they might simply do nothing at all. Getting employees headed in the right direction can seem difficult, but you can make it easier by bringing the conversation back to a simple question: What business outcomes do we expect technology skill development to deliver for us and our people?

Starting at the business outcome means looking at what you need the organization to achieve, and what job roles will bring that to reality. Once you've done that, you've unlocked the secret to effectively leading your employees: job roles.

In any organization, every single job role consists of multiple different skills. A web developer might need skills in things like HTML, CSS and JavaScript; a systems engineer might need skills like Linux administration, Microsoft Windows security and so on. Browse any hiring website and you'll see those skills expressed as job requirements, desired experience and the like. Those skills, and the way they combine to enable job roles, is at the heart of an effective, outcome-driven program of technology skill development.

### How to define roles

Most organizations recognize that their individual contributors' skill levels, for any given skill, will vary. A "Level One" software engineer is usually expected to be less skilled than a "Level Two" software engineer. Indeed, it's often the gradual accumulation of skills that leads an organization to promote someone to a higher "level." So we've recognized two things: A job role consists of multiple different skills, and someone's proficiency across that set of skills can help determine their "level" within their role.

Those two facts are absolutely key to creating a functional, practical, directed program of skill development within any organization. These are the roles we need to achieve the business outcomes we've set for ourselves; these are the skills that those roles comprise. In other words, our organization knows what it needs to know in order to be successful. We know where

to "point" our employees. If the business environment changes, we need to realign the team:

- Define new business outcomes
- Survey job roles needed to accomplish them
- Index the existing skills (and identify the gaps)
- Give employees a clear path for gaining the needed skills

improvement, where exactly do you point your teams, and how do you monitor and manage their skill growth over time?

### Conducting a skill inventory

To be clear, inventorying the skills a job role demands can be hard. A lot of skills get subsumed by other higher-level ones, making them hard to pinpoint. But a proper skill inventory is also a step toward

a more deliberate and thoughtful approach to skills management. Start by working with technology leaders in your organization to document the skills they think their job roles require. Offer people in those job roles a chance to weigh in. And fully expect that the results, and your framework for achieving them, will evolve over time as you learn more about the skill

## This simple approach gives organizations their first step in a practical, directed, managed program of technology skill development.

This simple approach gives organizations their first step in a practical, directed, managed program of technology skill development.

Implementing such a program can, of course, be more complicated. How do you ensure that you've fully understood the skills needed by a given job role? How do you figure out where your existing teams' proficiencies lie and where they still need to grow? Given a defined need for skill

base of your organization and as you start to evolve and expand that skill base.

And this is precisely where a technology skills platform can fit into your organization. For example, a platform can get you started with archetypal job roles that represent a common view of the tech industry's major roles in software engineering, data science, IT operations, information security and more. Your organization can adopt roles that provide a close fit to your own needs,



and then add or remove the technology skills specific to your organization and its needs.

Role-based assessments can then permit you to assess each individual contributor's proficiencies across all of the skills in their job roles and even in adjacent job roles. Many organizations are often surprised to find they have more skills on the team than they'd realized, and have used this kind of assessment activity to build new teams that leverage the skills and talent they've already got.

Once you understand the skill proficiency of your team, these platforms can start directing your teams to specific learning experiences that increase their proficiency in the exact skills the organization needs. Employees would then periodically reassess their proficiency, helping company leadership monitor progress and confidently predict timelines for reaching needed skill levels.

### **Learning experiences for a successful skill development program**

Of course, making progress on your tech skill development strategy requires solid content and learning experiences, and that's where partners can really shine. There are two broad approaches that have emerged in the industry: one favors assembling as much content as possible for your team to choose from, and the other leans toward

a curated approach that puts the most appropriate content at their fingertips.

The first approach tends to assume your team knows what they want and are willing to dig around and assemble their own plans. An upside to that approach is that you get a lot to choose from; the downside is that it can be too much. You or your staff will need the expertise to filter through the available selections, assemble appropriate learning plans (ideally on an

**Role-based assessments can then permit you to assess each individual contributor's proficiencies.**

individual basis) and actually vet the quality and accuracy of each piece. Unfortunately, organizations often end up deploying this kind of learning in a one-size-fits-all motion, which frustrates advanced employees and leaves entry-level employees overwhelmed and undermotivated.



The second approach typically provides a more guided experience, beginning with broad entry-level coverage and progressing to deeper, expert-led learning experiences, with human curation and AI-driven recommendations at the core of the process. It looks at where your employees are and where you need them to be, and helps curate the best-fit path for each person on your team. This approach can require a bit more up-front commitment from leadership to fully align skill development to organizational outcomes, but it affords each employee a more individualized learning plan, and provides the flexibility to continually and more effortlessly shift skills targets as the organization's needs change.

When selecting a skill development partner, look for one that:

- Curates and controls what goes into their platform, achieving a consistent level of quality and instructional expertise
- Works with you to create role-based skill development plans that align to organizational outcomes
- Provides an individualized experience for each employee on your team, boosting motivation and letting each person experience a feeling of progress and success

The key to success? Engaging your teams in the program. Leaders at every level in the organization must treat skill inventories,

development and ongoing maintenance as a production activity. It must be part of the organization's standard outcomes, just like quarterly earnings reports. And with the right platform, tech skill development can be managed that way: You can monitor progress toward goals, develop trendlines to predict arrival at goal and detect potential risks, and regularly report on skill attainment throughout the organization.

If the business environment changes and the organization needs new job roles and skills, you simply reconfigure your job roles accordingly, adding and removing skills as appropriate. Teams assess their proficiency

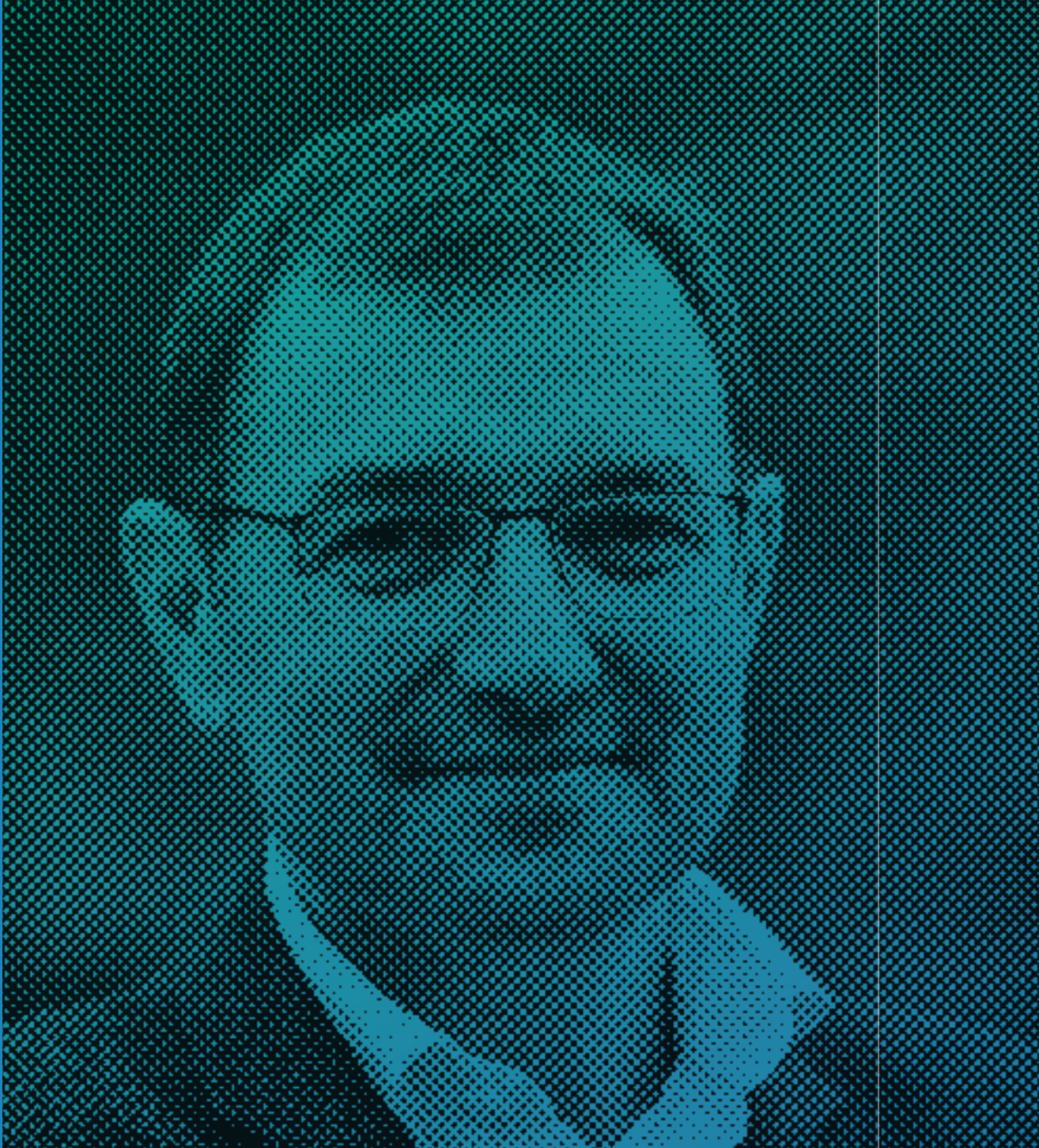
across the new skills, are directed to learning experiences and are able to support the business.

It all comes down to using job roles as a unit of learning and skill measurement, and also as a primary mover and monitor of skills management. Tech skills become linked to, and provide a conduit to, business outcomes. Job roles, and the skills that comprise them, become an organizational asset and motivator, and the organization starts to adopt a truly strategic approach to developing their people. •

**Don Jones has been a technology professional and leader since the 1990s. He's worked in everything from midrange operations to e-commerce web development, although the majority of his career has focused on technology learning. Don is a 16-time recipient of Microsoft's prestigious MVP Award, the author of more than 60 technology books and has been an in-demand speaker at technology conferences and symposiums for over two decades.**

**Don's current role involves focusing on how modern enterprises create and maintain agility and competitive differentiation by unlocking and closely managing technology skills in their teams. As VP for Content Partnerships at Pluralsight, Don is also responsible for working with technology learning experts across the industry to better address skills gaps wherever they're found.**





## William Peachey

Executive Vice President, Group People Supply Chain Officer, **Capgemini**

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# 7 principles for modern tech leaders

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### **A new trend has emerged: tech leaders as tech talent orchestrators**

Ten years ago, tech leaders focused on procurement and running data centers and networks. 80% of the spend was directed at supporting legacy; managing software licenses was a major task. But the advent of cloud freed up the tech leader's agenda for the new. And the new is talent.

Typically, the tech leader delegates support functions aimed at shaping people (L&D), supplying people (recruit and subcontract), and mapping people's skills and competences (HR). But because of the speed and scope of technological change, and the scarcity of skills in the market, tech leaders are stepping up to "in-source" these responsibilities.

There are seven key principles for taking control of the operational requirements to fulfill the new function of the tech leader successfully.

## 1. Take inventory

Your tech people are more than their HR record. This data is important, but it doesn't tell the full story. We also need to capture project experience, current (not recruited) CV, and the set of skills and roles your people have—and aspire to.

If we are going to get this level of data about our people, they need to be sufficiently invested in the idea of building their skills. And, they need to be given the time and tools to do so.

As humans, we respond well if we can see a path—a role—that we can follow and grow into. Help your people move in the right direction; mandate at least one unique path for each individual to simplify progression of skills. Give them visibility to the new opportunities available to them once they acquire their new skills.

Engage and use their records as you review and plan for the future, so your teams get used to their profiles being used and valued. At Capgemini, we have mobile and web apps to make this process easy. Our people own their profiles and are required to keep it up to date.

## 2. Gain confidence

Have you ever met a person who professes to be an expert, and then asked yourself, “But how can I be sure they are?” This is one of the reasons why relationships are so important. We build trust over time and then give that gift to others through our endorsement.

# How do we become confident in the capability of others when we don't know them?

But in big organizations, open hiring markets or gig economies, the inability to scale relationships leads us to ask, “How do we become confident in the capability of others when we don't know them?”

Endorsing and testing skills are the most reliable ways to gain confidence in individuals. Endorsements are suitable for relational skills; testing is a better choice for discrete technical skills.

## 3. Look ahead

Look beyond the two-month hiring pipeline because projects are not only filled by hiring. Rotation, progression and upskilling are better sources to fill project roles.

With a clear view of your plan, you can help your team build the skills they will need, understand where you need to hire to enable rotation and know when you need to bring people in from the gig economy to address tactical gaps. This strategy was instrumental in our ability to reskill service delivery masters—many of whom had been in their role for nearly 20 years—into much needed service management consultants.

Knowing the gap between the skills you have and those you need is key to strategically building skills, developing teams and shaping an ambition for the future of the team.

## 4. Make the case to build

When making the case to build, there are four dimensions to consider:

- **Upskill:** Are there assignments in the queue that require skills other than the ones available team members currently have?
- **Defer the cost of hire:** How much would you pay to hire someone with the skill needed to do the assignment? Remember to include the cost of a recruiter, interviewing, testing, onboarding and ramp-up. You might find that your attrition of new hires in the first year is higher than the average rate of attrition.



- **Reskill:** if someone has a particular set of skills that don't align to the needs of your future work, reskilling could be considered as part of a different budget, and is even covered by tax rebates in some countries.
- **Rotate up:** If you train this person to move into a new role, is there an opportunity to move a more junior person into the newly available spot? Bringing on people at the start of their career is vital for budgeting and efficiency, and provides an opportunity to shape a diverse and inclusive team.

Next, agree on a plan for exception management. Set a hiring limit for each team (the FIX) and define the requirements for approving additional hires (the FLEX). This enables team leads to have control while continuing to rotate and build their people. Having a process to manage exceptions has been helpful to us at Capgemini, especially when it comes to hiring software engineers. Good engineers are always needed, and a formal exception plan has helped us create better outcomes.

## 5. Grow talent, don't hire it

If we see the benefit of training people into new roles, then we need to control the capacity for managers to hire. This enables a strong tech leader to manage rotation and progression, hire juniors to grow within the organization and build dynamic teams.

First, hiring must follow rotation. Tech leaders are accountable for identifying people to rotate and the assignments to rotate them into. With planning, there is time for your people to train into the new role and to backfill the open one.

**Bringing on people at the start of their career is vital for budgeting and efficiency, and provides an opportunity to share a diverse and inclusive team.**





## 6. Align skills

You need to be able to assemble and disassemble teams, keep track of who is working on which projects, know when your people have completed their work, and plan for what they do next. Your people need a safe harbor to land in when they are not actively working on a project. The safe-harbor practice gives them a “home” in which to build their skills.

To organize around practice with a team of more than 20 people, you need a work planning platform. Effective allocation and tracking ensure you have the right person in the right place at the right time, minimizes travel helps you discover the skills available, and provides stretch opportunities for staff. You may consider an AI engine to read and

match CVs and demand descriptions across the group, with filtering to narrow down and find the best person for the job. This capability is common in recruiting, but less so in staffing and rotation. Make it part of your practice.

## 7. Measure effectiveness

Approach the job of building and managing tech people with the same data-centric approach used to manage operations: observe operations, improve efficiency of development and deployment, and measure and improve outcomes.

The previous six themes establish the foundation for effectiveness measures. If the tech team is using a unified or

extended development management platform like Git or Rational, then velocity and release can be measured, along with how the team collaborates and addresses issues.

One approach to improve the effectiveness of roles and teams that cannot be simply tested is to assess by dimensions. The work of Jonathan Kessel-Fell, an Agile coach at Capgemini, along with the Agile Leadership model, gives rise to the kind of structure that can bring new ways of thinking and working. In the Agile Leadership model, each dimension provides a way to review capabilities and gain feedback.

Once we mix people who have skills that are easily measured in terms of effectiveness, and those who have skills that are not, we need to introduce a sense

of purpose and effectiveness to drive these together. Multidimensional assessments are a good way to address this need.

## The future of tech leadership is here

Your new focus on tech talent is driven by the speed and strategic imperative of digital transformation, agile working and new expectations. Those that win at this will have the systems and tools in place to be able to manage the magnitude of such a strategy and deliver speed and value as your organization transforms. In short, they will be adept at getting the right person, in the right place, at the right time. •

**William Peachey is the Executive Vice President responsible for People Supply Chain (PSC) at Capgemini S.A., leading the global staffing function responsible for putting the right people, in the right place, at the right time.**

**Prior to Capgemini, William worked at IBM Professional Services as an engineer, architect and practice leader. Before joining IBM, he earned a master's degree in economics and spent four years working as an economist.**





## Amy Larson

Chief Technology Officer, 1-800 Contacts

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You can't out-recruit the competition:

# Invest in your internal game changers

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“There has to be a better way.”

The great brands—those that thrive and maintain relevance long after their competitors lose steam—are born from this idea. They start with the customer and think, “What could be better about their buying journey? What product could fulfill their need better than what’s currently available? There has to be a better way.”

That better way is almost always enabled by some advance in technology. That’s why it’s imperative for companies to have access to a steady pipeline of talent with the latest tech skills ready to solve the next friction point.

That talent must have a vested interest in your company, extra motivation to lend their expertise and passion for your brand. After all, the competition for technically skilled employees is fierce, and great ones even more so. On-site salons, snacks and espresso machines have become table stakes in recruiting talent.

The only way you can create a deep bench of skilled and passionate employees is by implementing continual technology skill development for everyone in your organization—from the call center to the C-suite. Sound like an undertaking for HR or L&D? It's not. To set your organization up for speedy, constant innovation, today's tech leaders are on the hook. Here's how it works.

### 1. Happy employees beget happy customers, so shift your focus

If reducing friction and providing value for your consumer is the endgame, recognizing you can't take care of every customer's needs all by yourself is the starting point. You can't take care of every customer, but you can take care of every employee—and that level of investment in your people will pay dividends.

So, as a leader, it's your job to clue into what makes your employees excited to be with your company. If you focus on what makes them care deeply about the success of the brand, they will make better decisions for the company and the customer. This can't be limited to one team or department; it must permeate the entire organization and be the foundation of every decision you make.

Employee satisfaction often comes from working with a diverse pool of other talented people, being really passionate about the job at hand and feeling like there's always an opportunity to learn. People crave teammates who lift them up, not only because they're great to work with

but also because the caliber of the talent around them makes them better. So develop a business strategy that's really rooted in professional development—specifically, technology skill development—and you'll see results that spread from person to person across the entire organization.

## Employee satisfaction often comes from working with a diverse pool of other talented people.

We applied this theory at 1-800 Contacts and built a skills boot camp of sorts called CTAC University. Anyone within the company with an interest in upleveling their technology skills can apply, and there is no cost other than their commitment to the program. Applicants participate before work hours through classroom skill development led by instructors who double as software engineers and developers within our organization. Participants receive supplemental tools and materials for measuring and stretching their tech skills, and when they graduate they can apply with confidence for the next step in their

careers. They report feeling supported and invested in, and we have instant access to talent that's ready to apply the latest technologies to our cutting-edge products.

### 2. Unify

Technology skill development done right starts at the top, championed by visionary leadership, and it reaches across all teams and all departments. Traditional organizations operating with an IT side of the house and a business side of the house need to consider the barriers that kind of structure creates. Instead, the whole framework of your company should be scaffolded by technology skills—one unit building toward your goals.

To implement your technology skill development strategy, make sure business and IT are comprehensively aligned and that the two teams aren't pulling in opposite directions.

With unity you'll find speed and efficiency. We were able to deliver Express Exam—a renew-from-anywhere vision prescription tool unlike any other—to the market faster than if the two sides of our business were competing for priority.



### 3. Align teams to objectives

Next, get clear on your objectives with your leadership teams. We've already identified the challenge: a lack of skilled, diverse talent at a time when rapid innovation is a need-to-have, not a nice-to-have. Align your teams to the company's overall goals and give them the autonomy they need to reach those objectives. That will often require they learn new skills, and it's important that you support them in that journey. By doing all of this, you've empowered your team to achieve defined business results through their own innovation. The results? Trust, ownership and pride in their work and in the business as a whole.

### 4. Give them the space (and tools) to experiment

Success happens when employees are given a testing ground to use technologies that may not be directly in their typical career path, but can be valuable for the progress of the individual and the company. Consider creating an in-house skills boot camp that gives anyone who participates access to new skills via instructor- or mentor-led training and/or supplemental video courses, assessments and hands-on learning experiences.

Another way innovative companies identify and grow untapped talent is by hosting regular hackathon events. Consider setting aside two days per quarter to encourage employees to apply what they're learning to solve friction points within the company or within the customer journey that they're most passionate about.

### 5. Measure your results

For the individual, participating in your skill development program or hackathon events can be role changing. For the company, the ways your employees apply themselves will be game changing. We've seen an app overhaul, AI- and VR-powered solutions like Express Exam, and an engaged, committed, diverse and self-replenishing pool of tech talent come from our commitment to our skills strategy and CTAC-U.

As you roll out your own programs, take time to measure success in areas such as speed to production, quality of releases and delivery of new, inventive solutions utilizing emerging technologies. Know who to turn to for expertise in a given technology, and enjoy having a broader base of talent that's up-to-snuff on the skills required to drive meaningful change.

With rigorous, org-wide technology skill development in place, managers should be able to more easily put the right people on the right teams to solve business objectives. Leaders will be empowered to have more meaningful one-on-one conversations because analytics show where your employees' passions and skills lie.

Finally, by building a company-wide foundation for technology skill development, even your hourly or entry-level associates will have a clear path into a new career, fostering loyalty to your company and a much-needed diversity of perspectives.

When you clear the way for every employee's tech skill development journey, you'll experience:

- Learners who are highly engaged with content relating to the latest technology skills. They're deeply dedicated to innovation on behalf of your company and customers
- Talent that is readily available in-house to pull off the "next big thing" in your industry
- Diversity of thought, both in your organization and the tech community as a whole

Some of the best tech talent isn't on the other end of that job posting you just

published. It's in your distribution center. It's in your call center. It's your rockstar front-end developer itching to try something new, only this time on the back-end. Upskilling your internal game changers versus trying to out-recruit the competition is your key to succeeding amid the next wave of rapid technology change.

Showing employees that you care about them should be, by design, for the benefit of your company and your customers—and now you have a blueprint to do just that. •

**Amy Larson has been Chief Technology Officer at 1-800 Contacts since 2019 and brings a record of using technology to drive business results through a relentless focus on customer needs. Since her appointment, Amy has focused on driving increased associate engagement and aligning resources to deliver business value at a faster rate. Her team of technology experts drives innovative solutions across ecommerce, mobile app, telehealth and business development initiatives.**

**Amy's 20-year career has spanned the fitness, optical, apparel/ accessory and non-profit industries and her work has been recognized with several awards over the years, including two Webby's, an Appy, a Cannes Bronze Lion and the Internet Retailer Hot 100 four times. In 2016, she co-founded Liingo Eyewear, which was subsequently acquired by 1-800 Contacts. During her spare time, Amy enjoys being with her family, riding her baby-blue Harley Davidson and being the world's okayest Crossfitter.**



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Technology skills director:

# Defining the role every tech org needs

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Forward-thinking technology leaders continually assess the roles they have and don't have in their organizations. But even the most cutting-edge may overlook one critical role that's emerging: technology skills director. This role will be a game-changer for organizations.

Many organizations have L&D departments under HR that build upskilling programs for the entire company. But when it comes to skill development for technology teams, L&D is no longer the primary driver of these programs.

So, who is driving technology skill development? Respondents to a 2019 Pluralsight survey said that managers, directors and VPs of tech teams are involved in championing skill programs for technologists 70% of the time, compared to L&D being involved only 45% of the time. And 21% of respondents said they had a dedicated technology skills role leading the charge.

**Anita Grantham**  
Chief People Officer, **Pluralsight**



## What's the org structure?

L&D is a critical partner for the technology skill development leader, but it can't be a replacement for this role. A technology skills director will sit within an IT department, most often reporting to the CIO or another senior technology leader, and be closely aligned with the L&D org.

The role exists outside L&D because the needs of technology orgs are unique. They face an accelerated pace of change, incredible competition for talent, and complexity of roles and skills across different functions. No other department feels the pains of these challenges like IT. Think about an initiative like cloud transformation, for instance. A cloud architect role alone requires skills that encompass programming languages, networking, data storage fundamentals, security foundations, cloud-specific patterns and technologies, communication and more, and that's hardly the only role a team needs to execute a multi-cloud strategy. And as cloud providers innovate, the roles and skills of an organization need to evolve too.

This is why a dedicated technology skills leader is critical. They need to constantly work with technology leaders to answer questions like:

- What skill gaps exist on your team today?
- What roles do you need to fill to meet your goals?
- What are your main technology objectives this year?

# No other department feels the pains of these challenges like IT.

- What changes are you making to your tech stack that would require new skills?

By answering these questions, a tech skills director will enable the company to build the unique skillsets that are most critical to its objectives. This role ensures that an organization can leverage talent effectively to accelerate digital initiatives. Without this role, companies risk being unable to execute their technology strategy and deliver products efficiently.

To offer this kind of leadership, the technology skills director can't give teams a one-size-fits-all solution. They need to think holistically and combine their deep understanding of the organization's technology strategy with best practices that:

- Translate the tech strategy into a skill development strategy, working with leaders to identify their goals and align skills and roles around them.
- Index skills across the technology org.

- Upskill technologists into modern tech roles with experiences personalized to the organization's tech strategy and the individual's existing or intended role and proficiency level.
- Help employees practice and apply these skills on the job.
- Measure skill development growth and impact on the business, so tech leaders can use those insights to constantly evolve their teams, with an aim to create a build versus buy strategy for talent (growing and retaining existing talent while strategically knowing what capabilities to "buy").

## Who makes a great candidate for this role?

It helps if the person who fills this role shares common language with the CIO. This could be an L&D practitioner who's spent years supporting engineering teams and thus has become enmeshed in the complexities of the tech world. But it will more often be someone who has managed technology teams directly, giving them an acute understanding of the challenges they face and what it takes to succeed.

Beyond experience, here are other capabilities you should look for in this role:

- A deep understanding of technology, tools and processes

- A track record of building trust and relationships with leaders
- Expertise in collaboratively creating detailed program plans around outcomes
- Strong written and in-person communication skills
- Excellent problem-solving abilities with the ability to understand the needs of others
- Comfort in acting as a facilitator and serving as the face of a program
- Ability to analyze data, draw conclusions and make recommendations

that success in a role starts on day one, which is why they build their own onboarding programs beyond what HR delivers. Onboarding is a time to educate new hires on the way teams work—getting them familiar with the languages, frameworks, tools and processes the organization uses—and also benchmarking their skills in the areas that are relevant to their role. They also need an introduction to the skill development tools they'll have as they prepare to take on projects and expectations as to which skills they should be developing.

## The technology skills director ensures that technical teams have the right skills at the right time.

### What do they do?

In short, the technology skills director ensures that technical teams have the right skills at the right time and that the company has an ongoing source of tech talent. To do this, they have to index skills, upskill teams and measure skill development.

To see how this role plays out, let's take a look at three common programs we see among our customers.

#### *Onboarding and career mobility*

Every engineering team has its nuances—different tech stacks and development techniques. A tech skills director knows

Once new hires are ramped, they need to know what career mobility looks like. A technology skills director should define what novice, proficient and expert skills look like by role and role level. They should guide technologists on which skills to develop by giving them tools that assess their proficiency and provide learning recommendations.





**Upskilling technical and non-technical talent**

A technology team is never done hiring, and constantly recruiting from the outside is costly in both time and money. Technology skills directors build programs to upskill and reskill internal talent. One of our customers, a technology learning and development director at a leading financial services company, put it this way: "Tech skills are incredibly important because the rate of change in technology is unprecedented, and we cannot go out and recruit all of the people that we need."

To help solve this challenge, many of our customers have built months-long

programs that take hourly, non-technical employees and upskill them into technical roles. These programs usually involve in-person classes, weekly assignments, mentorship and a skills platform that provides a breadth of learning content and skill progression data to assess job readiness at the end of the program.

For example, one retail giant runs an immersive skills boot camp, led by a director of technology enablement who reports up through the technology org, combining classroom learning with access to our skills platform. The program has created a self-sustaining pipeline of skilled associates to

fill the tech roles they need to maintain a competitive edge long into the future.

Companies that consistently run programs like these do two things: They provide employees with an incredible opportunity to level up their careers at no cost to the individuals, which is a boon to company culture, and they're able to identify and elevate internal talent that will best fit the needs of their technology teams.

Technology skills directors are also responsible for upskilling existing tech talent into new roles as business needs shift, i.e., moving an enterprise architect into a cloud architect role. They should

provide technologists with resources to build skill adjacencies and practice applying new skills in real-world scenarios.

**Conducting skill inventories to align roles to digital initiatives**

To unlock hidden talent and reskill opportunities within existing tech teams, technology skill development managers conduct skills inventories across the org. Many CIOs are surprised to learn that a junior developer has advanced machine learning knowledge or that a .NET developer is also an expert in Angular.

**Our customers use several variations of the technology skills director title to define this role, but the job requirements and responsibilities are the same:**

- Director of Technology Skills Analysis & Development
- Director of Learning for Technology
- Director, Technology Development
- Director, Engineering Practices
- Director of Technology Enablement

Modern tech orgs have realized that manually entering skills information into a spreadsheet doesn't cut it, and they're turning to tools that provide skill assessments and skill and role analytics by team member. Having accurate data allows the technology skills director to then align skills to the CIO's top initiatives, making skills gaps visible and empowering leaders to put the right people on the right projects.

This level of insight into skills allows a tech skills leader to provide the right upskilling opportunities to future-proof an organization. A global IT services company we work with says strategic skill development allows them to replace the capabilities of their people without replacing their people. The company has a talent development group director whose job is to position the importance of skill development and provide all 28,000 employees with the opportunity to reskill as the tech landscape shifts.

**The impact**

If an organization fully embraces what this role can create, technology teams will go from strategic partners to drivers of innovation. Every organization today needs a technology skills strategy, and a technology skills director to lead it. •

**Anita Grantham oversees the entire employee journey at Pluralsight, from recruiting and acquisition to employee growth and retention. Whether she's negotiating better benefits or helping design workspaces to better serve Pluralsight's teams, Anita loves creating an environment where people can do their best work.**



## About Pluralsight

Pluralsight gives you confidence you have the skills and insights you need to execute your technology strategy. You can upskill your teams into modern tech roles, improve workflow efficiency and build reliable, secure products. We are the technology skills platform.

By leveraging our Skills product, which includes expert courses, skill assessments and one-of-a-kind skills and role analytics, you can keep up with the pace of change, put the right people on the right projects and boost productivity. With our Flow product, you can debug your development processes with objective data, identify bottlenecks and keep a pulse on the health of your software teams.

Used together, they empower you to develop, measure and deploy critical skills at scale and improve engineering effectiveness.

