

Future-Proof the IT Workforce

Retrain your IT talent for the future of business



Edited by

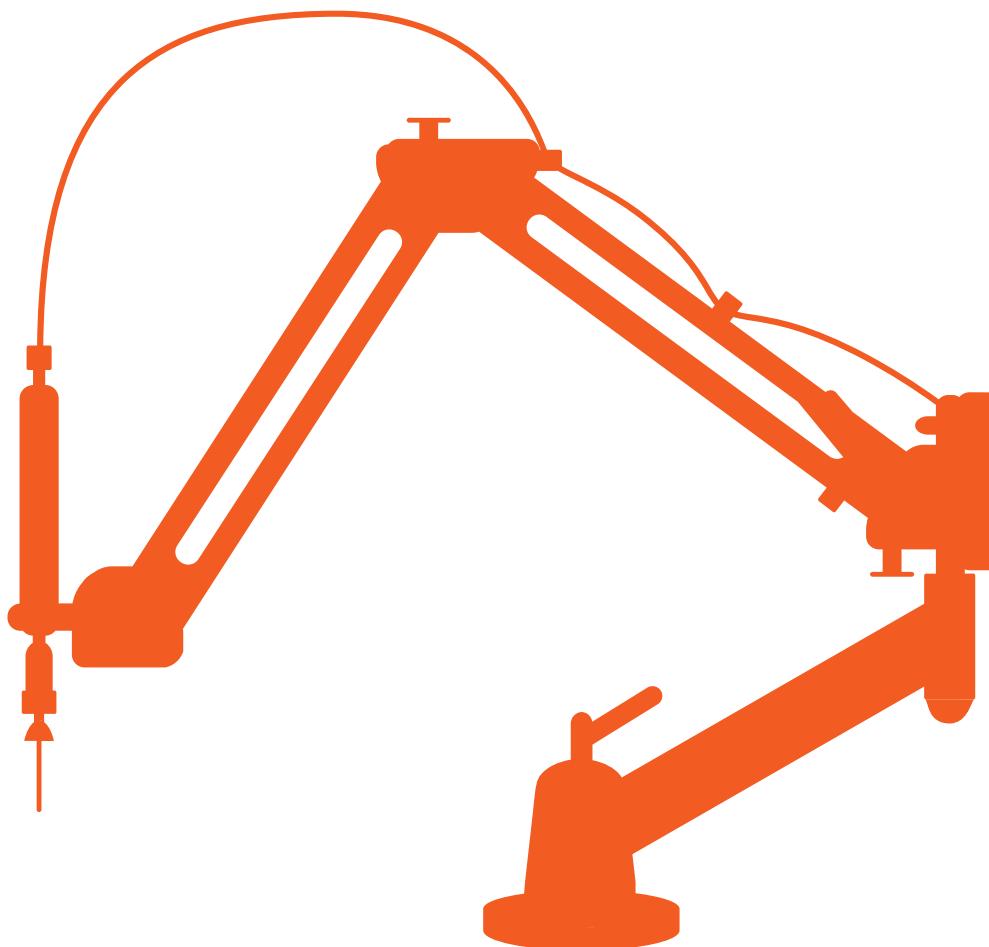
Lily Mok, VP Analyst, Gartner

“What must-have skills and competencies do we need to achieve our digital business ambition? Does the current IT team have the necessary business expertise and technical skills to design and deliver digital business capabilities? Can I future-proof the IT workforce to adapt to changing business needs?”

CIOs have many questions around talent in the world of digital transformation and increasing amounts of emerging technologies. But ultimately, they need to find technology talent with the right skills and competencies to successfully execute digital business strategy. CEOs believe digital is a key driver for business growth and transformation.

It's a clear mandate, but it's difficult to know exactly where to start. Luckily, the first and foremost solution is within your existing team.

“Lacking talent and skills is the top internal constraint to digital business growth,” says Lily Mok, VP Analyst, Gartner. “To overcome this challenge, CIOs must rethink how they plan and source for new digital skills and competencies, focusing more on the reskilling and development of the existing workforce.”



The challenge of hiring talent

At a leadership off-site meeting, the CEO of a large marketing organization announces a plan to focus on developing data-led business opportunities. The CIO immediately alerts the Human Resources (HR) team that they'll need to hire data and analytics specialists and data scientists.



Myth

It's faster to hire from outside the company.



Fact

Looking for the perfect fit outside the company often means roles go unfilled for long periods of time.



Reality

You can't hire your way out of the talent deficit. In fact, doing so can compound the problem.

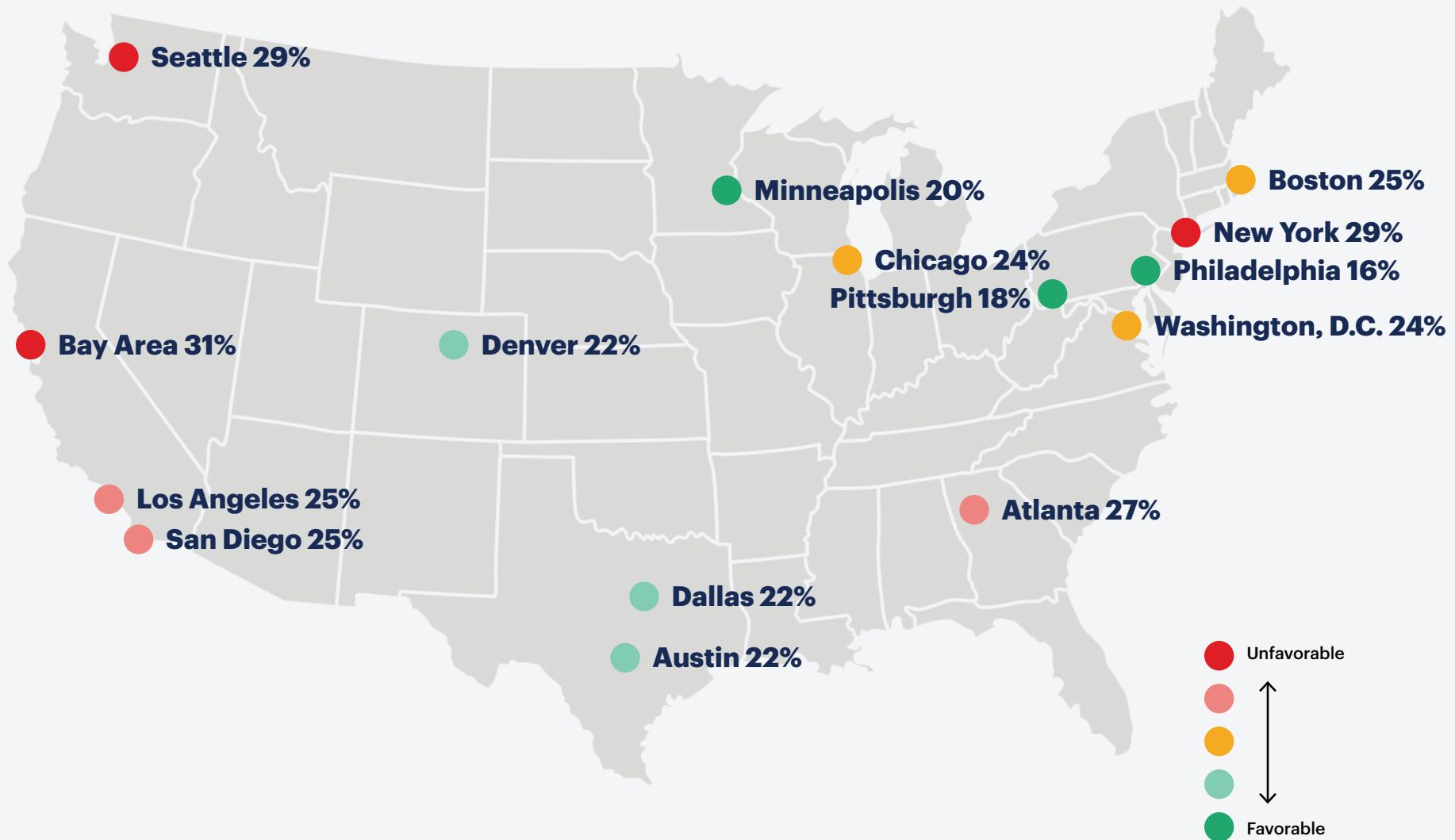
What she doesn't know is that companies looking to hire data and analytics experts face steep competition. There are more than 236,000 data and analytics job openings in the U.S. alone and a 43% growth rate year over year, according to Gartner TalentNeuron™. And more than half of those jobs take longer than six months to fill. Some cities in the U.S. and globally face steep competition and wage pressure, making it difficult and expensive to acquire talent, even if the talent is in ample supply (see figure on page 5).

Besides looking externally for these new skills, the CIO really should look internally to the current IT workforce and across the enterprise, reviewing skill sets and examining who she can upskill and reskill to fill the role.

IT and business leaders report an average of six months to fill new roles externally, and nine months to develop internal candidates, according to a Gartner Research Circle survey. However, it will often take much longer to recruit externally for in-demand jobs. The time that passes while searching for a candidate is also time the enterprise spends without the skill set, compounding the issue and putting the organization further behind.

For a CIO looking to future-proof the IT workforce, relying on hiring talent to fill new skill gaps is not sustainable, especially when in-demand skills constantly evolve and competition for talent becomes fierce.

Demand Pressure for AI Talent, by Location



Source: Gartner TalentNeuron

Note: Demand is based on the total number of open jobs in 2Q18, and supply is also based on 2Q18 data.

Big Data Drives Better Strategic Talent Sourcing

AI roles (including blockchain, DevOps and related skill sets)



After comparing locations, some are more favorable: Talent supply is high, demand is moderate, salaries are low and AI adoption is widespread.

Notes

1. Talent supply is as of 2Q18.
2. Median salary cost is the salary cost for all the job roles combined for each location.
3. Demand pressure is defined as talent demand/talent supply.

*Business Unit
Source: Gartner TalentNeuron

Assess the business needs

Start with step one: Determine critical roles and skills necessary to design and deliver key business capabilities.

A recent Gartner survey asked IT and business leaders to identify the top critical role to establish or improve bench strength over the next three years, and five roles emerged:

- 1 Digital business designer/architect**
- 2 Data scientist**
- 3 Enterprise architect**
- 4 Chief digital officer**
- 5 Cloud architect**

When asked to rank the top three technology domain investments for the next 12 months, leaders selected data science and analytics, cybersecurity, and API and service platform design. When the timeline was pushed out to three years, they ranked machine learning and artificial intelligence (AI), API and service platform design, and cybersecurity as top priorities.

All of these investment options provide potential value to digital business transformation, but CIOs must carefully assess which investments will enable the organization to compete within their industry and mature their digital business. For example, a manufacturing company will focus more on machine learning, whereas an insurance company might invest more in data science and analytics.

The strategic roadmap of technology investments (and their current maturity) should guide the determination of roles and skills requiring the focus of the IT workforce. Re-examine whether the current workforce has the capabilities and the desire to fill these new roles.

If employees lack the specific skills for emerging technologies, it is possible to reskill them and build on their established skills to meet new technical needs. Plus, investing in your current employees and creating a culture of continuous development has a direct correlation to higher engagement, loyalty and motivation.

Develop the existing workforce

CIOs should focus on growing and reskilling their teams in both competencies and technical skills.

Focus on three steps to develop the workforce internally:

1. Assess and prioritize needs.

Begin by determining what roles, skills and competencies are critical in the short and long terms, based on business goals. Assess your current workforce against those requirements and determine gaps. Then evaluate which outcomes will be most impacted by the gaps. This will help create a strategy that focuses on closing critical skills and competencies gaps.

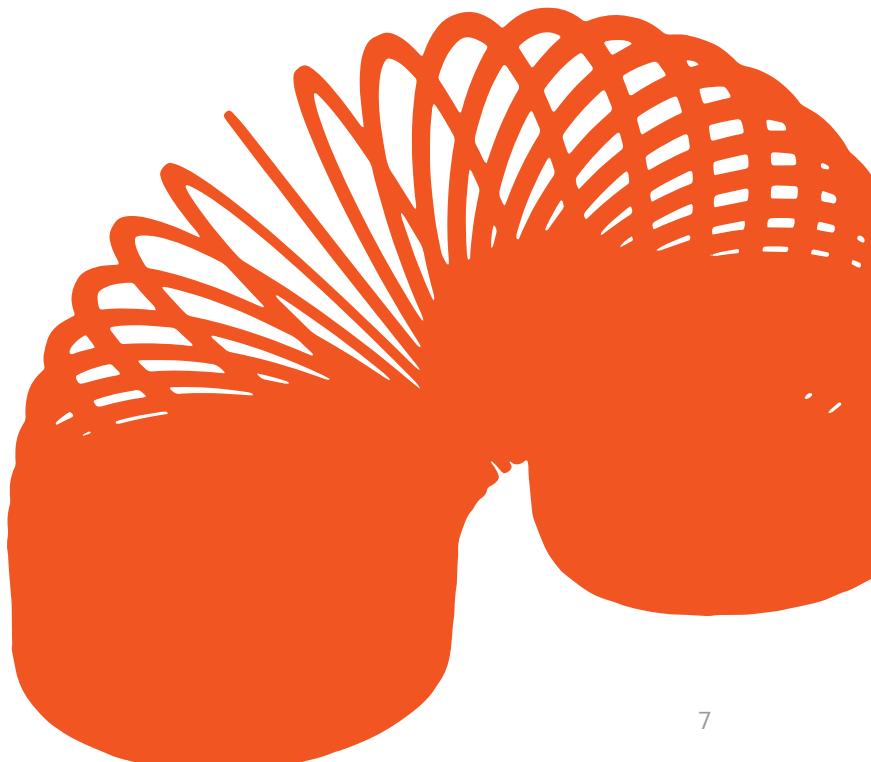
2. Blend different learning delivery mechanisms.

Employees will learn in different ways, which means CIOs need to provide a variety of learning experiences.

3. Drive shared ownership of continuous learning.

Challenge managers to become effective coaches, and hold them accountable for understanding individual needs and personalized approaches to learning. Empower employees to set goals and work with managers to develop action plans.

“Understanding the skills and competencies needed to improve performance today and prepare the workforce for the future puts the organization in a healthier position to meet and exceed their digital ambitions,” says De’onn Griffin, Senior Director Analyst, Gartner.



Focus on improving digital competencies

What is preventing CIOs from looking internally for candidates? They do not believe their current workforces possess sufficient capabilities to meet the demands of the digital arena.

Logistically, leaders believe internal development requires more resources and time, and they find the number of options for learning at work daunting. Organizations often lack the investment, processes and competencies to retrain their existing workforces.

Further, IT professionals will need knowledge beyond how the technology works and into the business acumen that will enable them to apply the technology to:

- 1 Drive new revenue streams**
- 2 Deliver greater business value**
- 3 Improve customer experience or citizen engagement**



COMPETENCY [noun]:

A set of characteristics of an individual that are observable, measurable and predictive of superior performance in a given role.

Anyone being trained for these emerging technologies must have a deeper understanding of how technology can be applied to business growth and scale. Perhaps more importantly than being trained in specific technology, IT professionals will need to expand their business knowledge and know how IT can improve its contribution and help transform the business.

“It is more important than ever for CIOs to define desired behaviors and identify the underlying competencies for differentiated performance at individual and team levels,” says Mok. “Competency development motivates performance when employees are learning new work processes and skills for the digital business and digital ecosystem.”

Digital business demands higher workforce performance, and competencies are the true differentiators.

Gartner has identified 12 digital competencies for CIOs to identify and develop within their teams. All CIOs should focus on developing business acumen as a competency. Then select five to seven additional competencies based on the company's needs.

The goal is to develop the competencies that will enable individuals and teams to learn and adapt to a changing digital world. For example, if the competency to be developed is business acumen, the learning plan may include formal training and development activities illustrated in the following table. The learning plan may look slightly different for each employee, depending on individual learning style and current competency level.

12 Digital Competencies		
		
Adaptability	Business acumen	Collaboration/synergy
		
Decisiveness	Design thinking	Digital dexterity
		
Outcome-driven	Political savviness	Risk-taking
		
Diversity mindset	Growth mindset	Innovative

Example Development Plan for Business Acumen

Competency	Development Activities	Recommended Training
Business Acumen 	<p>Align role with business strategy. Meet with others to learn about your organization's business strategy; consider ways to align yourself with this strategy. Review the functions of your role and determine how these functions will enable you to contribute to the business strategy of your organization.</p> <p>Consider customer requirements. Consider the effect your decisions have on customer requirements and needs. Make this consideration a prime factor in your decision-making process.</p> <p>Participate in business process improvement activities. Volunteer as a participant on teams that address business processing re-engineering.</p> <p>Spend a rotation in business operations. Take a short rotation in the operations of the business (for example, in retail, work in a store; in manufacturing, work on the manufacturing floor) to better understand the internal and external customer experience. This can last for a period of two to three months or be conducted on a predetermined basis.</p> <ul style="list-style-type: none">• Attend business-unit staff meetings to understand what's happening.	<p>Customer value and satisfaction: A course designed to enable employees to understand customer value and customer satisfaction and their impact on the organization.</p> <p>Financial goals: A course that examines the financial goals and objectives of an organization.</p>

Use a blend of learning approaches

This “grow-your-own” approach to talent development means that CIOs need to select and cultivate programs that enable their teams to learn and grow. This will vary depending on resources and personalities, but options exist across the spectrum of high and low time and resource investment.

Low time and low investment

Mentoring programs: One-to-one relationships between people (internal and external) that facilitate learning and professional development and build self-confidence.

Consider a variety of pairings: A senior executive could mentor a less-experienced employee for professional development, a junior employee could mentor a senior employee on new technical requirements and peer mentors can share experiences with new employees.

Lunch-and-learns: Lunchtime gatherings of employees from across the organization to discuss new ideas and emerging practices and collaborate.

Hackathons: Gatherings of programmers, developers and other technical employees to solve a problem, usually in a very short period of time. Hackathons can be used for technical issues, but also culture changes, team requirements or decision making.

Job shadowing: A team member working alongside another, usually in a different role, with the purpose of the team member gaining a deeper understanding of the tasks related to the selected role.

Low time and high financial investment

External executive coaching: Conducted by a certified coach, this long-term activity is focused on identifying weaknesses and having structured regular meetings to support behavior changes.

Simulation training: An employee uses computer-created scenarios to learn how to perform certain tasks or better prepare for situations.

On-the-job training: Employee training while doing the actual job under the supervision of an experienced person and after a formal training class.

Virtual instructor-led training: Training delivered in a virtual environment, i.e., instructor and learner in separate locations, either in real time or on demand.

High time and low investment

Internal coaching: Frontline managers and leaders incorporate feedback and coaching into the way they lead the individuals on their teams.

Job rotation: A 6- to 18-month assignment with enough exposure to each job that employees in the rotation can own deliverables and see results.

Lead an organizational change initiative: Selecting a team member to lead a change initiative enables the individual to focus on and learn to lead from the perspective of the people, processes and stakeholders and less on the technology and system changes.

Assignment to cross-functional projects: Employee works on a cross-functional team to share/teach others and contribute across the organization. This option builds enterprise acumen and enables employees to make connections.

High time and high financial investment

Degrees/professional certifications/leadership development programs: Employees pursue formal degree programs or certifications delivered by educational institutions.

Instructor-led courses (ILT): Training facilitated by an instructor that enables the instructor/facilitator and learners to interact, discuss and apply the skills individually or in a group.

Apprenticeship programs: A system of training and development across the enterprise on the skills and competencies of critical roles with on-the-job training, accompanying study and work that furthers agency objectives (refer to chart on the next page).

E-learning: Conducted by electronic media, typically accessed via the internet or intranet (via a learning management system within an organization).



Nine Steps to Kick Off a Reimagined Apprenticeship

Step	Roles	Action	Step	Roles	Action
1	CIO	Ensure the program name is attractive and encompassing for the goals, as apprenticeship might have other connotations. For example, it could be called a learning adoption program, practicum, “learningship,” pathway or fellowship.	5	Program Lead	Figure out what study makes sense based on desired skills and competencies.
2	CIO or HR	Find an energetic and motivated person to act as program lead, either full-time or as part of a larger role.	6	CIO Program Lead BU	Look across the business units and IT to find the “masters” based on desired skills and competencies.
3	CIO HR BU*	Determine the skills the apprenticeship should develop. Validate them with the business units and ensure senior sponsorship.	7	CIO BU Leaders	Find the right projects and decide on deliverables.
4	CIO HR BU	Select a manageable number of apprentices who demonstrate a desire to learn and a willingness to try a new approach. Ensure at least one apprentice is from a BU.	8	Program Lead	Create a program with learning opportunities that can be completed in a reasonable amount of time.
			9	CIO Program Lead	Build in milestones and mechanisms to validate the program as it moves along. Ensure success by keeping the program on track.

*Business Unit

Conclusion

CIOs have a challenging roadmap to follow to acquire the right talent to meet CEOs' digital ambitions:

Identify the emerging technologies investments that align with business goals. Decide what roles, skills and competencies are critical to deliver and support those information and technology capabilities. Examine your current IT teams for gaps in those workforce capabilities. Outline a strategy to develop your team members and imbue them with the business acumen required to effectively leverage current and future emerging technologies in support of digital business growth.

Those who are successful will have a workforce that can adapt and change for future technologies and business challenges.



Additional research and articles

[Survey Analysis: CIOs Must Invest in Reskilling and Transforming the IT Workforce to Propel Digital Business](#)
Lily Mok, December 2018

[Reimagine Apprenticeships to Develop Talent to Scale Digital Business](#)
Christie Struckman, March 2018

[Develop the Competencies Your Workforce Needs for the Digital Ecosystem](#)
Diane Berry, December 2018

[Tackle the Talent Problem: Invest in Growing Your Own Employees](#)
De'Onn Griffin, December 2018

[Reinvent Talent Strategies: The Digital-Age Mandate for HR](#)
Brian Kropp

[Analytics-Driven Talent Strategy](#)
Ashley Tatum, April 2019

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