Harvard Business Review

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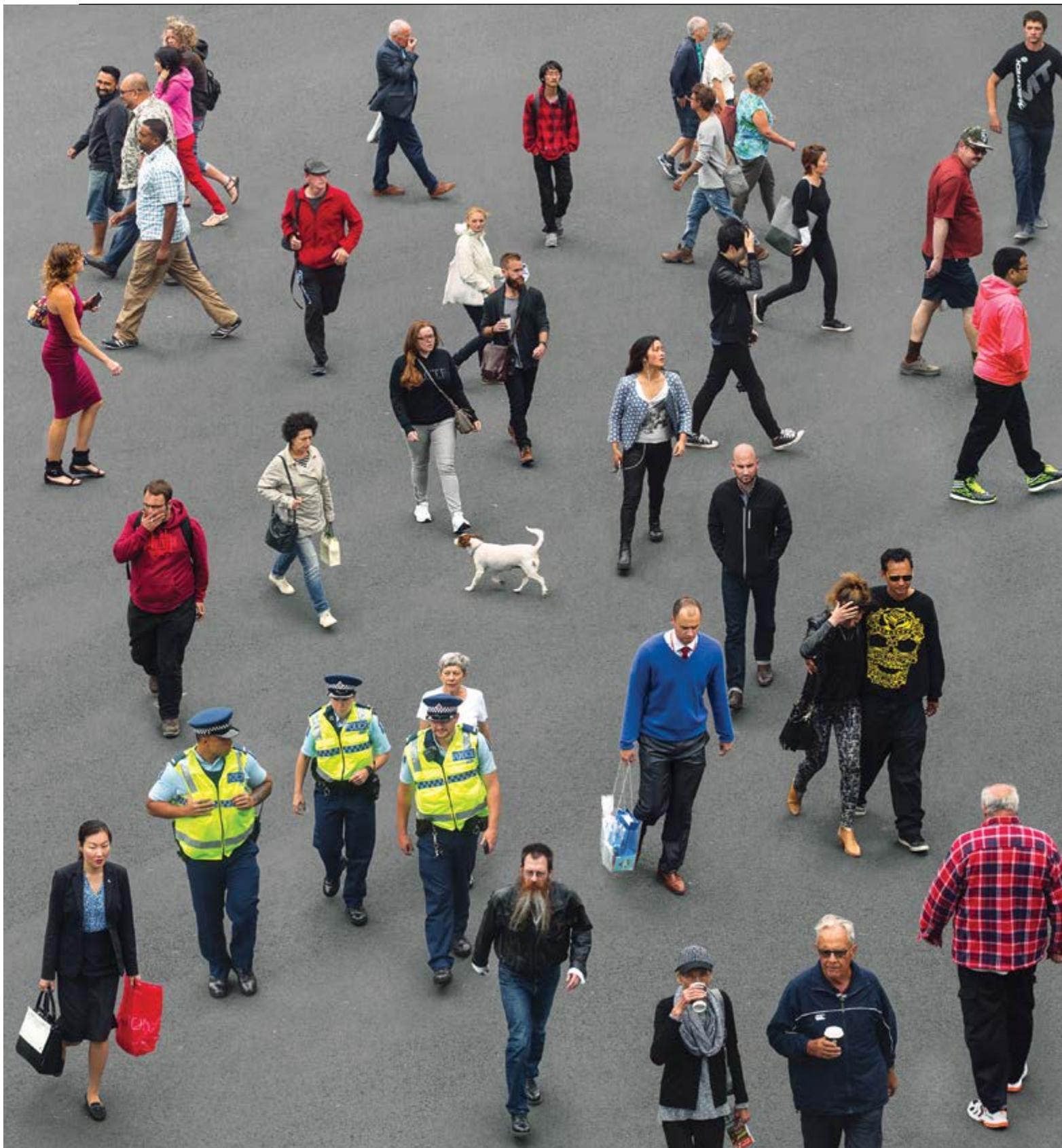## SPOTLIGHT ON BUILDING THE WORKFORCE OF THE FUTURE

AT&T's Talent Overhaul

Can the firm really retrain hundreds of thousands of employees?
by John Donovan and Cathy Benko

SPOTLIGHT

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Going Nowhere, Untitled 6
Giclée on paper, 2015

John Donovan, chief strategy officer and group president at AT&T responsible for technology and operations, is based in Dallas.

Cathy Benko, a vice chairman and managing principal of Deloitte LLP and author of several best-selling books, is based in San Francisco.

AT&T's Talent Overhaul

Can the firm really retrain hundreds of thousands of employees?

BY JOHN DONOVAN AND CATHY BENKO

Having built the United States' telegraph and telephone infrastructure in the last century, AT&T could once claim to be the company "where the future was invented." But now the Dallas-based firm, like many in the technology sector, faces a future in which its legacy businesses are quickly becoming obsolete. With its industry moving from cables and hardware to the internet and the cloud, AT&T is in a sprint to reinvent itself.

The overhaul presents an enormous HR challenge. AT&T employs about 280,000 people, most of whom got their education and foundational job training in a different era. The average tenure at the company is 12 years—22 years if you don't count people working in call centers. But rather than hiring new talent wholesale, AT&T

has chosen to rapidly retrain its current employees while striving to engender a culture of perpetual learning. One of us (Donovan) is championing this effort at the company.

AT&T isn't alone in its need for new skills. In a recent Deloitte survey, 39% of large-company executives said they were either "barely able" or "unable" to find the talent their firms required. But AT&T's gambit to reeducate its enormous workforce is without precedent. Tens of thousands of jobs, billions of dollars in shareholder value, and the future of one of the most iconic brands in corporate history are at stake. If AT&T succeeds, it will provide a blueprint for how legacy technology companies can compete against younger, digitally native firms such as Google and Amazon. If it fails, it may deter other companies from attempting internal transformation, putting further pressure on the global labor market.

Rapidly Shifting Technical Demands

For the past three years, AT&T's CEO, Randall Stephenson, has been making large strategic bets on a diverse range of wireless technologies—most recently the $63 billion acquisition of satellite television company DirecTV. Asked about the decision to venture into new businesses, John Stankey, the head of AT&T's Entertainment Group, says, "We have no choice." Customers are demanding constant connectivity; from 2007 to 2015, for example, data traffic on AT&T's wireless network grew by more than 150,000%. The company forecasts that by 2020, 75% of its network will be controlled by software-defined architecture. That percentage was virtually zero in 2000. This means, says Stankey, that most of AT&T's global employees "signed up for a deal that is entirely different from the environment in which their business operates today."

The new landscape requires skills in cloud-based computing, coding, data science, and other technical capabilities. Many of these fields are advancing so quickly that traditional methods of training and development cannot keep up. As Scott Smith, AT&T's senior vice president of human resources operations, puts it, "You can go out to the street and hire for the skills, but we all know that the supply of technical talent is limited, and everybody is going after it. Or you can do your best to step up and reskill your existing workforce to fill the gap."

Since 2013, when the initiative began, AT&T has spent $250 million on employee education and professional development programs and more than $30 million on tuition assistance annually. AT&T estimates that, all told, 140,000 employees are actively engaged in acquiring skills for newly created roles. (And the expectation is that every four years they'll change roles again.) From January to May 2016, employees who'd been retrained filled half of all technology management jobs at the company and received 47% of promotions in the technology organization.

It's too soon to measure the full results, but one encouraging sign has been an increase in speed and efficiency. In the past 18 months AT&T has reduced its product-development cycle time by 40% and accelerated time to revenue by 32%. Recently, when the company decided to develop an "on demand" capacity that let large business customers expand their bandwidth in real time, it took only six months to scale it up from an idea to a service with more than 450 customers in over 175 markets. Prior to 2014, developing and rolling out that kind of offering would have taken at least a year.

A Long View on Talent Management

The first task of AT&T's program—dubbed Workforce 2020 (or WF2020)—was to identify the skills the firm would need and create a blueprint for sourcing them internally. Managers documented existing gaps and formulated "future role profiles" for themselves and their teams. Every manager in AT&T's network and technology strategy organization, which constitutes roughly half the firm's professional workforce, was assigned a new role and expected to get the training or credentials to fill it.

WF2020 consolidated 250 roles across the company into 80. The goal was to radically simplify and standardize role structures, in order to increase job mobility and foster the development of interchangeable skills. In information technology, for instance, 17 existing roles spanning design, development, and testing evolved into the job of "software engineer." Nine other roles, such as team lead and tech director, became "people leader." No longer do programmers focus solely on writing code. Now they write test scripts as well and test their own code. Reliability engineers, who previously only tested equipment, write software that keeps systems operational. This

Idea in Brief

THE PROBLEM

AT&T, the original architect of the United States' communication infrastructure, now faces a future in which its legacy businesses will become obsolete. It's racing to reinvent itself for the digital marketplace, and to do that, it needs people skilled in new technologies.

THE SOLUTION

Rather than hiring new talent wholesale, AT&T has chosen to rapidly retrain its current workforce of 280,000 employees.

THE PROGRAM

Workforce 2020 consolidates roles, simplifies performance metrics, de-emphasizes seniority, and gives workers tools for career development. A partnership with Udacity and Georgia Tech allows employees to fill skill gaps through education. Every employee is encouraged to seek out new capabilities, roles, and experiences.

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broadening of roles makes AT&T's resources more flexible and the company more agile.

To manage the new realignment of skills, the company redesigned its talent practices in three ways:

1. Performance metrics were simplified to focus more directly on how individuals contributed to business goals and to better recognize the market value of jobs. This has increased the financial rewards for individuals with skills in high demand, including cybersecurity, computer science, data science, IT networking, and software-defined networking.

2. Performance expectations were raised. In AT&T's Technology and Operations unit, for example, the number of managers receiving the two highest performance ratings on a five-point scale declined by 5%, while the bottom two ratings increased by 37%.

3. Redesigned compensation plans de-emphasized seniority, added more variable compensation to motivate high performers, and gave weight to the in-demand skills.

From the outset, AT&T was clear that employees would be required to use their own time for—and in some cases invest their own money in—their re-education. A central challenge early on was how to motivate the company's professional-level employees to embrace doing this. That cohort includes the country's largest full-time union workforce, which represents about half of AT&T's employees. To encourage union members to update their skills, union contracts outline training and development program specifics. Like most employees, the union supports the company's retraining efforts, understanding their necessity and the perils that the alternative holds for the workforce.

Consider network support specialist Jacobie Davis. He's been with AT&T for 19 years in a number of capacities, including sales, software support, provisioning, and even 911-line maintenance. Given the transition to voice-over IP-based technology and the software focus at AT&T, he is repositioning his skills in hopes of earning a spot as a data scientist. "It's really hard to describe the vast difference between the things we're moving toward and the types of legacy technology I've been working on. It's like night and day," he notes.

Davis says that many of his colleagues have been at AT&T for over a quarter century, supporting technologies that will soon be obsolete. "The question for all of us becomes, Do I make this pivot or do I retire when the company retires the technology that I'm an expert on?"

Nevertheless, many employees express apprehension about WF2020. Glenn Lurie, CEO of AT&T Mobility, a subsidiary that provides wireless services, acknowledges that even with a process in place, uncertainty—about jobs, skills, and future qualifications—can worry and distract people who have held the same position for many years and been rewarded well for their efforts.

One principle of AT&T's program is to give every employee who wants it the chance to change with the organization in order to minimize the number of people who leave or lose their jobs. Reductions in staffing are inevitable, though the company believes they can be handled in large part through attrition. But people who are unwilling to shift gears will eventually need to move on, if only because their future opportunities will be extremely limited as older technologies become obsolete.

Tools for Change

To help employees with the transition, in January 2014 human resources launched an online self-service platform, which provides a host of tools and processes for performance management, career development, and talent planning. It also offers

workshops on a wide range of topics, such as virtualization and cloud computing, "technologies in motion," and "the communication transformation." So far the platform has gained good traction with workers, who accessed it 6 million times last year alone.

Some of the more popular tools on the platform include:

A *career profile tool* for assessing competencies, business experience, and credentials. It quantifies each person's skills and generates a single talent-and-development profile that the employee can compare with new-job requirements to identify skills to acquire. The tool also helps workers find open positions across business units and links them to resources for developing proficiency in required competencies. A "click-through" feature allows people to instantly connect to a nearby employee in a similar role.

A *career intelligence tool* for making informed career decisions by analyzing hiring trends within the company and profiles of different jobs (with target salary range and number of incumbents). Employees interested in a U.S.-based network services job, for example, could see that in 2015 AT&T offered nearly twice as many such positions as it had in 2012. Conversely, information technology roles trended down by more than 200 jobs during the same period. This tool also provides links to skills training.

A *job simulation tool* that presents realistic job-related situations and rates how people respond to them to assess their suitability for various jobs.

Once employees have identified skill gaps through the self-service platform and in conversations with their managers, they take it upon themselves to fill them through online courses, certifications, and degree programs developed through a partnership between AT&T, Udacity, and Georgia Tech. Most employees spend five to 10 hours a week on retraining. The options fan out in a number of ways:

Individual courses. Through May 2016, employees had taken more than 1.8 million emerging-technology courses. The majority of these were online. People also earn a badge—essentially a digital certificate of achievement—for completing certain tutorials and assessments. By the end of 2015, the company had handed out 117,000 badges to 53,000 employees.

Nanodegrees. Curated course bundles created by Udacity, "nanodegree" programs deliver training and certification in high-demand technical specialties, such as software engineering, coding, and web development. Transforming a programmer into a software engineer, for example, typically involves 25 courses. Preparing that same programmer for IP networking takes eight courses, and for a security specialty, three courses. Nanodegrees usually take six to 12 months to earn. The cost to students is $200 a month for unlimited courses with no deadlines for completion. AT&T refunds all the tuition when a course is successfully finished.

Online master's degrees. Georgia Tech, Udacity, and AT&T teamed up to offer a fully accredited online master's degree in computer science—the first of its kind delivered through a MOOC platform. The cost is $6,600, versus $45,000 for an equivalent campus-based program.

The company offers up to $8,000 in annual tuition aid per employee for degrees and nanodegrees, with a lifetime cap of $25,000 for undergrad degrees and $30,000 for graduate degrees. At the beginning of 2016, 323 employees had enrolled in the online master's program, and another 1,101 were in the process of earning nanodegrees. AT&T has also opened the courses designed with Udacity and Georgia Tech to individuals outside the company, in an effort to seed the talent market with external candidates who will be qualified to fill future roles.

AT&T is working to instill a mindset in which each individual becomes CEO of his or her own career.

A New Model for Agility

Training is only a part of AT&T's initiative. There has also been a shift from corporate-ladder to corporate-lattice thinking—a new model explored by one of us (Cathy) in the book *The Corporate Lattice: Achieving High Performance in the Changing World of Work.* (Neither she nor her firm, Deloitte, is formally engaged in AT&T's program.) In the industrial era the corporate ladder was the standard metaphor for talent development and career paths. Its one-size-fits-all, only-way-is-up rules were clear, and incentives uniformly supported them. The lattice, in contrast, represents career paths that change continually and adaptively through multidirectional, zigzag movements.

A lattice approach supports lateral, diagonal, and both ascending and descending career moves. It encompasses apprentice opportunities and job sharing for the purpose of training, legitimizing arrangements seldom suited to corporate ladders. Although lattices vary from company to company, they create a range of options for growth and development and foster a more inclusive workplace that makes learning opportunities available and relevant.

Essential to lattice thinking is the principle that individuals actively own their development, which fundamentally changes the social contract between employer and employee. AT&T is working to instill a mindset in which each individual becomes CEO of his or her own career, empowered to seek out new skills, roles, and experiences. The company feels this is in line with the demands of the wider economy—where job tenure today averages just 4.6 years, according to the U.S. Bureau of Labor—and will arm its employees for success even if they leave AT&T. "We're moving from being a company where you learn a technology, become a subject-matter expert, and then you're done," Davis says, "to one where we're going to be learning something new all the time."

What all this means is that AT&T—one of America's largest companies—is attempting to become much more nimble and take advantage of approaches common in start-ups. The firm is already organizing, motivating, and developing people through such techniques as crowdsourcing, marathon process cycles, and small, temporary process teams. Brooks McCorcle, the president of AT&T Partner Solutions, believes that the ingenuity of start-ups will emerge more readily as the company continues to break down old boundaries that prevented collaboration.

Measuring results is a critical component of AT&T's Workforce 2020 retraining effort. The company examines them in four categories—activity, hydraulics, business outcomes, and sentiment—to gain insight into the integrity and momentum of the program.

Activity refers to the development and implementation of initiatives that increase skills the company will need in the future. These include the identification of gaps between current and future competencies and culture; the creation of performance metrics and systems that shift the focus from rewarding seniority to recognizing results and the relative value of roles; the resetting of expectations for roles and responsibilities; and use of the career tool kit by employees. Activity also includes course registrations, course completions, certifications, and degree progress. Through May 2016, for instance, employees had completed some 1.8 million courses.

Hydraulics facilitate employees' movements up, down, laterally, and diagonally across the organization. Success in this category is linked to the number of people taking on new roles. Here a variety of results, such as the robustness of the internal pipeline, are tracked. Internal sourcing of STEM jobs, which increased more than 20% from 2012 to 2015, is a particularly important measure, as are the time taken to fill open jobs and recruiting costs.

Business outcomes include increases in efficiency, the retention of employees with deep institutional knowledge and relationships, and product development cycle times. For example, the time required to take new offerings from idea to customer implementation on a major global scale has been cut in half since 2014.

Sentiment is the internal and external perception of AT&T's reputation. Metrics here include willingness to recommend AT&T as an employer. Media and industry analyst mentions are another barometer for tracking how perceptions are changing. For example, 21% of the 1,600 articles written on the topic of software for applied networking in 2015 featured AT&T as the world leader—twice as many as featured the next closest telecom competitor.

"In time, you won't necessarily have a marketing floor or a finance floor. Instead you'll have marketing and finance and product development working in small project teams," she says. "These joint experiences expose people to different parts of the organization and differing roles that people may want to pivot toward as their careers unfold."

This may be the most ambitious element of AT&T's bid to reinvent itself—its aspiration to create a culture in which newly empowered employees can thrive. AT&T wants to invest in, rather than leave behind, those who helped build its position in the marketplace. But to remain profitable in the future, it has to move beyond the skills that once made it great. As Stephenson recently told the *New York Times,* the company has to look forward and transform; if it doesn't succeed at retraining and reinvention, he said, "mark my words, in three years we'll be managing decline." ☐ **HBR Reprint** R1610E