Workforce

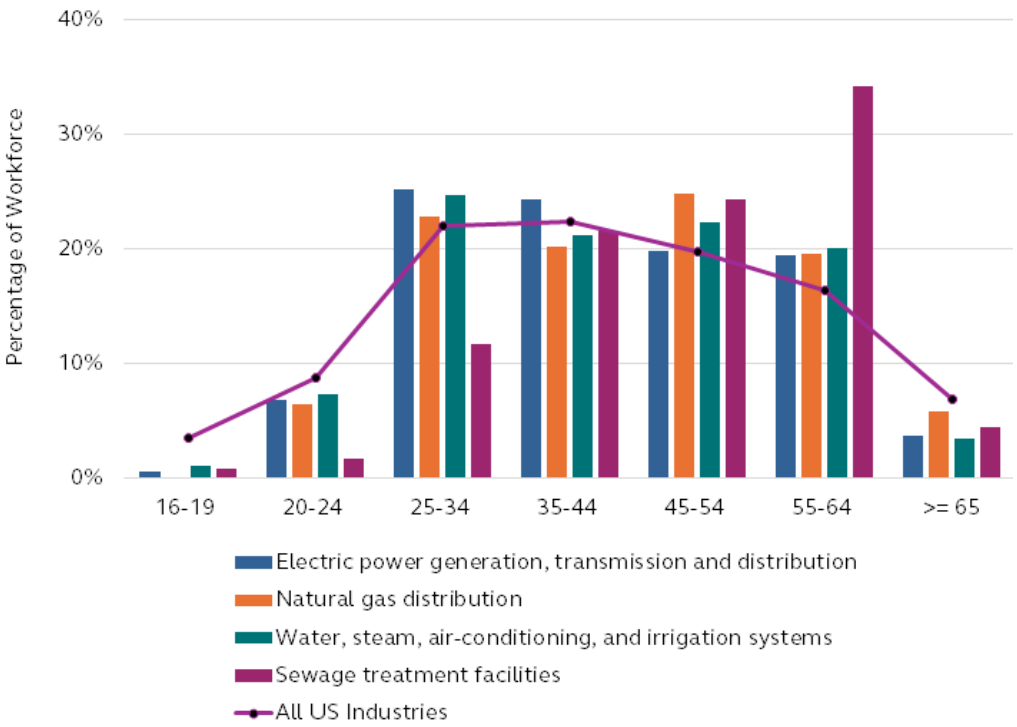
Utilities across the U.S. face an urgent workforce crisis that threatens operational excellence and long-term resilience. An aging staff, high turnover, and insufficient talent pipelines are creating gaps in institutional knowledge and putting immense pressure on existing teams. Addressing these challenges is critical to ensuring your utility's success in the face of increasing complexity and demand.

Current Landscape & Trends

The water utility workforce is at a crossroads. With an aging workforce and limited influx of new, trained talent, utilities risk losing institutional knowledge and facing operational disruptions.

- The **median age** of the water workforce is **48 years old**, slightly older than the national median across all industries (Kane 2022).
- **One-third of water utility operators** will be eligible for retirement within the next 10 years (Kane 2022).
- Only **10% of the workforce** is under the age of 24 (Kane & Tomer 2018).
- Without proactive strategies to attract and retain talent, utilities face several risks.

FIGURE 1. AGE DISTRIBUTION ACROSS SELECT INDUSTRIES



Source: Bureau of Labor Statistics, 2024

What Happens If You Can’t Attract and Retain Talent?

- **Loss of expertise:** Institutional knowledge disappears with retiring staff
- **Operational inefficiencies:** Gaps in workflows and suboptimal performance
- **Leadership gaps:** Struggles to build a strong leadership pipeline and plan for succession
- **Burnout:** Overburdened employees experiencing fatigue and disengagement
- **High costs:** Excessive recruitment and onboarding expenses
- **Cultural disruption:** Workplace culture suffers, leading to disengagement and turnover
- **Difficulty adapting to change:** Innovation and creativity are stifled

These challenges are not just obstacles, they are urgent calls to action.

FIGURE 2. WHAT ARE THE TOP THREE WORKFORCE-RELATED CHALLENGES YOUR ORGANIZATION IS CURRENTLY FACING? (N=25)

Source: Water Research Foundation Project 5300

Enablers & Solutions

To combat these challenges, utilities are establishing workforce development programs, or initiatives within or across organizations designed to support the attraction, training or professional development of water professionals.

The **Water Research Foundation (WRF) Project 5300: Recognizing Institutional and Organizational Capacity for Effective Workforce Development Programs** has assembled leaders from over 20 utilities and industry associations including AWWA, WEF, The Water Tower, and the US Water Alliance to develop guidance for managing and sustaining workforce development in the public sector.

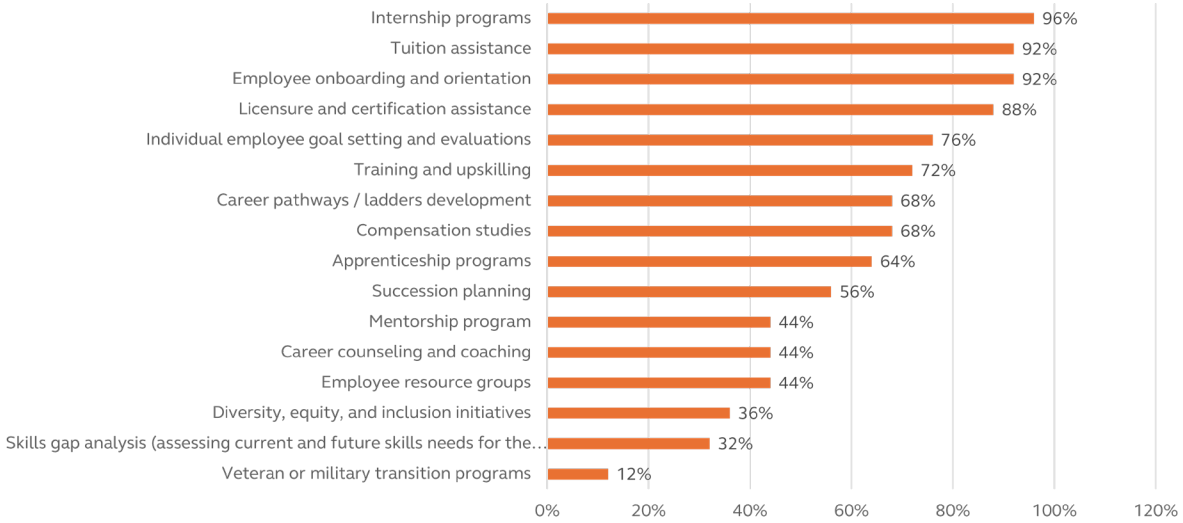
Effective workforce development programs combine internal talent development with external strategic partnerships to build required technical, leadership, and professional skills, create clear career pathways, and open access to water sector careers. These programs support utilities in meeting evolving operational, regulatory, and technological demands while also strengthening workforce continuity, organizational resilience, and community outcomes.

Research indicates that the most common workforce development initiatives at utilities include employee onboarding and orientation, internship and early career programs, and tuition or licensure assistance, which are initiatives that support both employee readiness and long-term talent pipelines.

Workforce development is:

"The alignment of people, skills and systems to ensure a capable, inclusive and sustainable workforce - combining internal talent growth with external partnerships that open pathways into careers and strengthen community resilience"

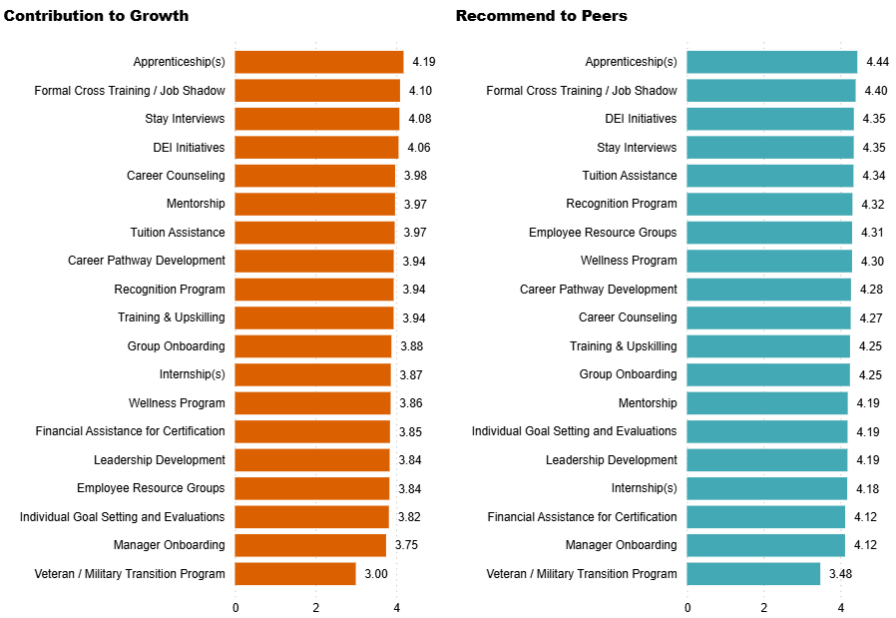
FIGURE 3. WORKFORCE DEVELOPMENT INITIATIVES



Source: Water Research Foundation Project 5300

Succession planning is a widely cited objective, with approximately 70 percent of participating utilities identifying it as a primary goal of their workforce development efforts; however, only about half currently have a formal succession planning process in place, highlighting a gap between intent and implementation. Despite this, workforce development programs are perceived as impactful by employees. Nearly two thirds (67 percent) of utility staff surveyed indicated that participation in workforce development initiatives contributed positively to their professional growth, and more than three quarters (77 percent) reported they would recommend these initiatives to their peers (n=115). These findings demonstrate that when workforce development programs are intentionally structured, adequately resourced, and aligned with organizational strategy, they are effective tools for attracting, developing, and retaining the talent required to sustain utility operations over time.

FIGURE 4. WORKFORCE DEVELOPMENT INITIATIVES



Source: Water Research Foundation Project 5300

Collaborative Research to Identify Workforce Needs

Through partnerships like **The Water Tower** and **Sydney Water's Innovation Festival**, utilities are gaining valuable insights into workforce challenges and solutions. These collaborations emphasize understanding workforce demographics, skills gaps and the barriers to attracting new talent.

Through this partnership, we brought together diverse stakeholders, including utilities, industry experts and educators to a design sprint focused on identifying skill gaps, developing training programs and creating pathways for future-ready talent. Through fast-paced, interactive sessions, participants co-created strategies to attract, retain and upskill workers while aligning workforce development with emerging trends in technology, sustainability and resilience. This approach identified key solutions to address critical workforce challenges equipping the industry to meet future demands while driving impactful change.

Implementation Strategies

Utilities are increasingly adopting customized workforce strategies and establishing workforce development programs to address their unique operational, workforce, and community challenges. Together, these efforts enable utilities to move from reactive staffing responses to proactive, long-term workforce sustainability.

Developing a Workforce Strategy

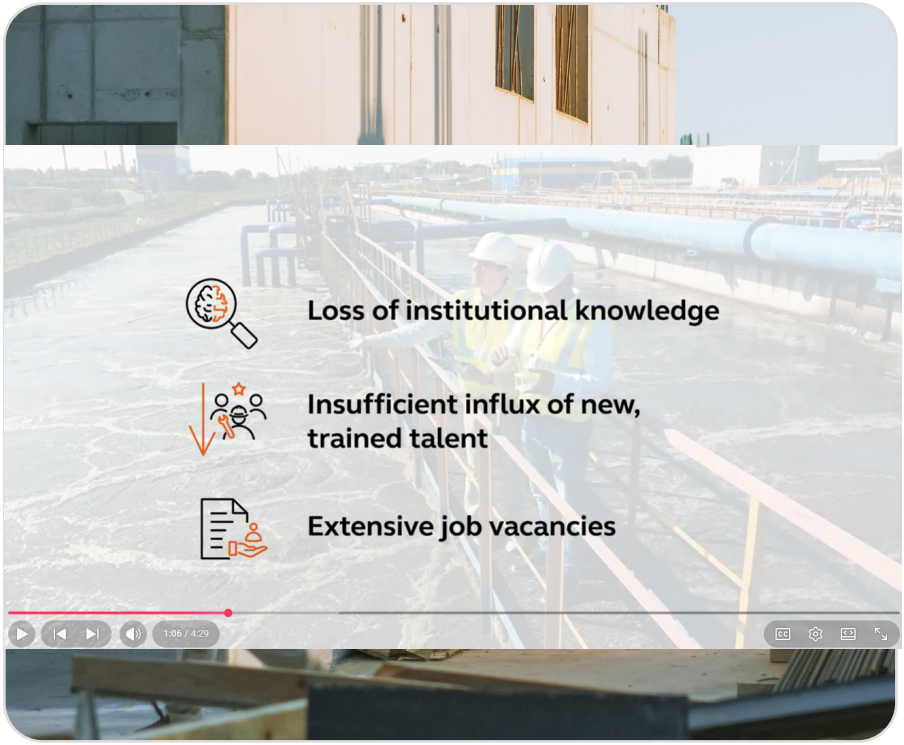
A workforce strategy defines the utility's long-term workforce needs and priorities, aligned with organizational goals, service levels, and future risks. Key implementation strategies include:

Digital integration: Leveraging digital tools and technologies to streamline operations, improve knowledge sharing, enhance training delivery, and strengthen employee engagement—while also ensuring the workforce has the skills needed to support digital transformation efforts.

Leadership development: Strengthening leadership pipelines and succession planning to ensure continuity of institutional knowledge and smooth transitions as experienced staff retire or move into new roles.

Data-driven workforce decision-making: Using workforce analytics to assess current and future skills needs, identify gaps, forecast retirement and turnover risks, and measure the effectiveness of workforce investments.

These strategies help utilities anticipate workforce challenges and define clear priorities for talent attraction, development, and retention.



These issues and solutions are discussed in this episode of Current Briefs. Click on the link to watch.

Building a Workforce Development Program

A workforce development program translates workforce strategy into coordinated, actionable initiatives that support employees across their full career lifecycle. Effective programs are intentionally structured, adequately resourced, and embedded into day-to-day business practices. Key implementation strategies include:

Establishing clear program goals and governance: Defining the purpose, scope, and desired outcomes of the workforce development program such as improving retention, building technical depth, supporting succession planning, or expanding career pathways and assigning clear ownership and accountability for program oversight.

Designing a portfolio of aligned initiatives: Implementing a mix of initiatives that address different career stages and workforce needs, such as onboarding and orientation, internships and early-career programs, mentorship, cross-training, leadership development, tuition and licensure assistance, and targeted upskilling programs.

Formalizing succession and knowledge transfer processes: Moving beyond informal practices by establishing structured approaches to succession planning, replacement planning, and institutional knowledge transfer to reduce risk associated with retirements and hard-to-fill roles.

Leveraging strategic partnerships to extend capacity: Collaborating with schools, universities, community colleges, workforce boards, trade organizations, and neighboring utilities to strengthen talent pipelines, share resources, and broaden access to water sector careers.

Integrating workforce development into core business processes: Embedding workforce development into performance management, individual development planning, budgeting, and strategic planning to ensure initiatives are sustained rather than treated as stand-alone or optional efforts.

Measuring effectiveness and continuously improving: Defining success metrics such as participation, completion, skill attainment, career progression, and employee perceptions and using feedback and data to refine and mature the program over time.

Together, workforce strategies and workforce development programs enable utilities to take proactive steps toward building a capable, resilient, and future-ready workforce. By clearly defining workforce priorities and investing in structured, well-supported development programs, utilities can strengthen employee growth, improve retention, and ensure they have the talent needed to meet current and emerging challenges.

Connect With Us

> Act now to strengthen your workforce, the backbone of your utility's success. Ensuring its resilience is critical to meeting future demands. Invest in strategies that attract, retain and develop talent to position your organization to thrive in a rapidly changing world.

Are you ready to take the next step? Assess your workforce needs, identify opportunities for improvement and build a tailored strategy to ensure long-term success. Follow the latest resilience strategies and stories on LinkedIn and connect with our Subject Matter Experts:

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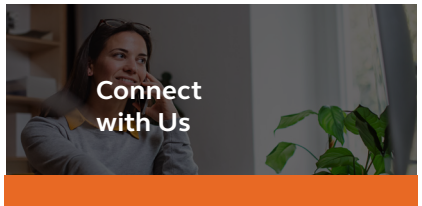
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