

2019

NORTHERN VIRGINIA IT SUCCESSION PLANNING BEST PRACTICES



Acknowledgments



Since 1964, **Northern Virginia Community College (NOVA)** has offered a quality and convenient educational experience at an affordable price. NOVA is the largest public institution of higher education in the Commonwealth of Virginia and one of America's largest community colleges. NOVA enrolls more than 75,000 students at its six campuses in Alexandria, Annandale, Loudoun, Manassas, Springfield, and Woodbridge, along with the Reston Technology Center and NOVA Online.

NOVA's Office of Corporate Engagement conducts research on economic conditions and the labor market in Northern Virginia to build a data driven talent development system that adapts to macro and micro economic trends and works for the region's economy. We use this research to develop publications, innovate our curriculum and training programs, and highlight the region's talent potential and job opportunities to attract companies and guide the community's decision making on education and careers.

Data for good. Data for business. Data for learning.

Visit NOVA at www.nvcc.edu



The Northern Virginia Technology Council (NVTC) is the membership and trade association for the technology community in Northern Virginia. As the largest technology council in the nation, NVTC serves about 1,000 companies and organizations, including businesses from all sectors of the technology industry, service providers, universities, foreign embassies, nonprofit organizations and government agencies. Through its member companies, NVTC represents about 300,000 employees in the region.

NVTC is recognized as the nation's leader in providing its technology community with networking and educational events; specialized services and benefits; public policy advocacy; branding of its region as a major global technology center; initiatives in targeted business sectors and in the international, entrepreneurship, workforce and education arenas; and the NVTC Foundation, a 501(c)(3) nonprofit charity that supports the NVTC Veterans Employment Initiative and other priorities within Virginia's technology community.

Visit NVTC at www.nvtc.org

Executive Summary

Following completion of the 2018 Greater Washington IT Workforce Needs Assessment report, NOVA and NVTC identified pending retirements of the baby boomer generation, those born between 1946 to 1964, which represent approximately 10,000 retirements each day,¹ as a topic to research in order to ascertain the potential impact on the region's IT companies.

Following a survey of NVTC's 1,000-plus members to identify general trends in IT workforce succession planning, in-depth interviews were conducted with 13 C-suite executives with knowledge of their company's human resources (HR) practices. This report examines the best practices in talent attraction and retention strategies among the region's IT employers that were revealed through the interview process.

The principal findings from this research are:

- ▶ Employers are not very concerned with potential IT worker retirements, viewing attrition through retirement as a skills loss issue rather than a generational divide issue
- ▶ Employers have a difficult time obtaining and retaining IT talent
- ▶ Employers are providing innovative benefits to acquire and retain IT talent
- ▶ Employers are offering robust professional development and mentorship opportunities to entice and retain IT talent
- ▶ Employers want education to innovate

¹ www.investopedia.com/articles/personal-finance/032216/are-we-baby-boomer-retirement-crisis.asp

Introduction

NOVA and NVTC conducted a joint research project between January and July of 2019 to examine talent management and acquisition concerns among technology employers in Northern Virginia. The research team created a survey to gauge employer interest, and followed up with 13 employer respondents with direct insight into their company's HR practices to conduct in-depth interviews. The qualitative data gathered from these interviews form the basis of the findings in this report and highlight opportunities for future research.

Background and Research Question

Building on the Greater Washington IT Workforce Needs Assessment reports published by NOVA and NVTC in 2016² and 2018,³ the research team was interested in examining the impending retirements of the baby boomer generation and the impact that these retirements could have on information technology (IT) companies in Northern Virginia. Research from *SmartAsset*⁴ indicates approximately 10,000 Americans reach retirement age each day, and the population of U.S. adults over the age of 65 will nearly double between 2008 and 2031. Given this data, the team wanted to determine what these demographic shifts would mean for Northern Virginia IT employers, and what steps these companies were taking to ensure their workforce possessed the skills and knowledge necessary for the company to remain competitive in the future. Additionally, the team wanted to examine best practices for IT talent attraction and retention, and asked questions about hard-to-source skills and job roles, recruiting and talent development strategies, and suggestions on how educational systems and institutions can improve the development of the IT talent pipeline. This report can serve as a useful guide for other IT employers in Northern Virginia.

The research team focused on the IT sector for two primary reasons. First, the team wanted to build on research already completed in the prior two IT Workforce Needs Assessment research projects, and second because of the IT workforce's significant economic impact in Northern Virginia. With IT jobs comprising more than nine percent of total employment,⁵ the region employs nearly three times the number of IT workers as a share of its workforce than the national average, and employment growth in IT-related occupations is projected to grow at an annual rate of 1.7 percent over the next 10 years in the region. For comparison, the projected job growth rate for all occupations in the region is one percent annually over the next 10 years, and the national growth rate for IT-related employment is projected

2 Greater Washington Workforce Needs Assessment
www.nvtc.org/NVTC/NVTC_GreaterWashTech_Needs_Assessment/Needs_Assessment_2016.aspx

3 2018 Greater Washington Technology Workforce Needs Assessment
www.nvtc.org/documents/NVTC_2018_Greater_Washington_IT_Workforce_Needs_Assessment_2018_12.pdf

4 What Retiring Baby Boomers Mean for the Economy
smartasset.com/retirement/baby-boomers-retiring

5 Region definition: Counties of Arlington, Fairfax, Loudoun, and Prince William; and Independent Cities of Alexandria, Falls Church, Fairfax City, Manassas City, and Manassas Park City

to be 1.4 percent annually.⁶ Furthermore, more than 107,000 IT-related positions were posted online in the region in 2018—more than 29 percent of all advertised job postings.⁷

Methods

Between January and February 2019, NVTC surveyed their membership of more than 1,000 technology companies in Northern Virginia to identify potential employer members to participate in this research. The primary goals of this survey were to gain a rough understanding of IT employer workforce succession planning efforts and to identify employers reflecting a range of business sizes, IT specializations, and market orientations, as well as to identify sources for follow-up interviews. Based on the results of this survey, NVTC and NOVA identified 13 employers to include in our interview process. Interviews with the 13 selected IT employers occurred with C-suite HR executives between March and July 2019, based on scheduling availability of the company participants and the researchers.

The criteria for selecting the interview participants was as follows: the company has a primary office location in Northern Virginia, the company employs at least 50 workers in a technology role, and the respondent is a company decision-maker or C-suite employee with knowledge of their company's HR strategic plan and day-to-day operations. The research team also took care to ensure diversity in the pool of companies interviewed. The 13 companies included public sector, commercial, and hybrid market orientations with workforce sizes ranging from 100 total employees to large Fortune 500 companies with tens of thousands of IT workers. The companies are also diverse in their geographic footprint, with primary local offices in Arlington, Fairfax County, Loudoun County, and Prince William County. Many of the companies have more than one office location in the region.

Company Size	# Interviewed
Less than 100 IT Workers	2
101 - 999 IT Workers	5
1,000 or more IT Workers	6

Respondents were provided with a list of initial questions⁸ prior to the interviews. While the core list of initial questions were asked of every interview participant, the researchers asked additional follow-up questions unique to each employer, driven by the needs and strategies the core question answers revealed. For example, one employer may have focused more heavily on recruiting IT talent, while another focused more on employee engagement and IT talent retention.

⁶ JobsEQ by Chmura Economics; Bureau of Labor Statistics Occupational Projections for 2016-2026 and the Occupational Employment Statistics for 2018.

⁷ JobsEQ by Chmura Economics; Bureau of Labor Statistics Occupational Projections for 2016-2026 and the Occupational Employment Statistics for 2018.

⁸ [See Appendix A](#)

For each interview, one researcher led the conversation while the other observed, and the roles were the same for all of the interviews conducted to maintain uniformity. Both researchers took typewritten notes for each interview and compared notes afterwards. The interviews produced more than one hundred pages of respondent testimony, with interviews lasting from 45 to 75 minutes. Respondent names and companies were kept confidential to facilitate greater detail and more robust discussion. The data collected from the interviews were compiled, and the research team identified five common themes and trends detailed below.

Findings

1. Employers are not very concerned with potential IT worker retirements

The initial research question was to determine how local employers feel about the potential impacts of retirements on their IT workforce, and what strategies they are implementing to address this issue. One question asked of every employer was “Do you anticipate losing critical components of your workforce due to retirements over the next 10 years?” Of the 13 respondents, nine indicated that retirements were not a concern, three indicated that it was a slight concern but not a major one, and one indicated it was a concern, but for other reasons.

We were surprised to learn that none of the 13 interviewees was strongly concerned about the impact of increasing retirements. While nearly every person we spoke with acknowledged that generational retirements would in fact take place, none of the respondents noted any concerns about the impacts of these retirements on their own IT workforce. One respondent specifically mentioned they were concerned about the impact retirements in other fields would have on their business model, but were not concerned about the retirements of their own employees. Three respondents acknowledged that their company was cognizant of retirements, but it was not a primary concern or focus of their HR departments.

Respondents had a variety of reasons for their lack of concern about retirements, including: their IT workforce is primarily composed of workers who are not nearing retirement age; their primary challenge is finding mid-level talent; or that they were confident in their ability to recruit new talent or develop existing talent. A few of the respondents also indicated that they were more concerned about poaching—or losing existing talent to local competitors—and one respondent noted that the quick rate of change in technical skills generally means their retiring IT employees would create a loss in the company’s historical knowledge base but not in technical skill capacities.

“A small percentage of our technical workforce is retirement age. We are more concerned about losing them to a competitor.”

2. Employers have a difficult time acquiring IT talent

Overall difficulty in hiring IT talent was a common theme: all of our interviewees mentioned the difficulty of staffing for IT roles. When asked the question “Is your organization concerned about hiring new talent?” three companies indicated “no” and the remaining ten indicated “yes.” Of the three companies that indicated “no,” all of them were large employers with greater than 1,000 employees in the Northern Virginia region. However, the three companies who indicated a “no” response still highlighted challenges in recruiting, such as difficulty sourcing talent with an active security clearance, the large number of job openings requiring specific advanced skill sets in areas such as data analytics and cybersecurity, and the cultural challenge of increasing the number of women in their IT workforce.

“IT talent acquisition is the one thing that keeps me up at night.”

The 10 respondents who indicated talent recruitment was a concern echoed the challenges mentioned by the three who gave a “no” response, and mentioned additional challenges in recruiting for their companies. A few interviewees indicated they often find it difficult to meet specific government contracting requirements, such as U.S. citizenship, industry credential attainment, and years-of-experience requirements. Some of the technical skillsets identified by the interviewees as difficult to source were:



Cybersecurity



**Data analytics
and data science**



Programming languages
(like Java, Python, and C++)

Several respondents also mentioned a lack of robust soft skill competencies among candidates, particularly recent college graduates. These findings align with our previous research that included IT employers ranking communication and problem solving/critical thinking as the first- and second-highest ranked skills IT recruiters are basing their hiring decisions on.

Generally, respondents also mentioned difficulty in finding mid- and senior-level talent, and more than half of the respondents indicated their recruiting efforts gave greater emphasis to recruiting entry-level positions through programs like internships and on-campus college recruiting. One respondent felt it was easy to find experienced talent, but acknowledged that the level of specialization for their positions would naturally attract this experienced talent. In the study sample, larger companies were more likely to indicate a focus on hiring entry-level talent than smaller companies were.

Respondents were also asked about any formalized internship or on-campus recruiting programs; larger companies were more likely to have these types of programs. Interestingly, many of the companies that had formalized internship programs indicated a relatively lackluster success rate with converting interns

to full-time employees. A few of the reasons given for low conversion rates were: limited number of entry-level opportunities (this respondent represented a mid-sized company), interns not being interested in the work being done, interns not being able to obtain a security clearance, and the internship program being designed for student exposure to the company instead of a career opportunity. However, one company indicated that approximately one-third of their new hires come from their internship program and another company's program had an 80 percent conversion rate, although with a smaller number of interns being hired. The nine respondents that use a formal on-campus recruiting model described this initiative as a successful talent acquisition method, and two of those nine indicated they had recruited for candidates at the associate's degree level.

3. Employers are providing innovative benefits to acquire and retain IT talent

To help identify innovative ways in which companies are attracting workers, respondents were asked, "Why do people want to work for you?" Responses highlighted benefits and aspects about the company mission or culture as top reasons why candidates want to work there.

Lucrative and/or unique benefits were a common strategy among respondents to attract and retain IT talent. Several companies indicated employee referral bonuses were both a recruitment and a retention strategy, with one respondent indicating that paying their employees referral bonuses has a two-fold benefit of both rewarding and motivating current employees while lowering the cost associated with recruitment services. At two companies with formalized referral programs, an employee receives a cash bonus for each hire they refer to the company, and the bonus amount increases for each additional person they refer, while other companies indicated a flat-rate bonus for each employee referral. Other unique benefits mentioned included:

- ▶ Community-based volunteer and social activities and programs
- ▶ Affinity groups
- ▶ Employee celebrations and events
- ▶ Flexible work schedules and telecommuting (although a few respondents acknowledged difficulty in providing this benefit for employees working at client work-sites)
- ▶ Generous parental and caregiver leave for all employees

In addition to employee benefits, the company mission, nature of the work being performed, company brand identity, and company culture were common themes when respondents were asked why employees want to work at their company.

"We are constantly thinking about developing creative benefits to attract and retain talent. Good pay and training are not enough now."

Many of the government contracting respondents indicated that employees align themselves to their critical work missions, which can include national security, space exploration, and solving problems to create a safer world. Two respondents indicated this mission alignment helps them attract and retain Generation Z and Millennial workers. Three respondents mentioned that their employees enjoy working for them because of the diversity of the work being performed; they can use many different technologies across many different projects. One respondent indicated that some of their work is so highly specialized that senior-level employees with that skillset would have few other employer options in the local job market. Three respondents representing larger companies also mentioned brand identity as a key factor in successful talent attraction and retention.

4. Employers are offering robust professional development and mentorship opportunities to retain talent

All 13 respondents indicated they were concerned about retaining their existing workforce, although the degrees of concern and the types of talent most vulnerable to leaving in their organization varied. For example, more than one company mentioned business attraction and expansion activity was a corporate concern from a talent recruitment and retention perspective. Other interviewees were concerned about competing with salary or benefits that would be attractive to the Millennial or Generation Z workers.

Since talent retention was a common concern with respondents, the researchers asked additional questions about each company's strategy for retaining talent, including employee benefits and professional development opportunities.

Each respondent was asked about their company's professional development opportunities, and all of them indicated that professional development and training is provided through either tuition reimbursement, or a combination of tuition reimbursement and in-house training. Seven of the respondents indicated a company policy that allocates a particular dollar figure per year per employee, with a range of \$5,000 to \$8,000 annually among the respondents. The other six respondents indicated that a budget allocation of dollars exists for tuition reimbursement and professional development, but that dollars are spent on an as-needed or employee-requested basis. Of the seven companies with training dollar amounts allocated per employee, only two have formalized internal training programs; both are Fortune 500 companies. Three of the six companies who did not allocate a particular dollar amount for training per employee have their own internal programs. The remaining eight companies rely on external education providers for their employees.

When asked about mentorship programs, seven respondents indicated that a formal program exists, two respondents mentioned informal programs that allow team members to explore different work areas of the company, and four companies did not have a mentoring program. Examples of mentorship opportunities described included:

“Employees are assigned a coach on day 1, who is almost like their own personal life coach to provide career advice and guidance, and their coach is accountable to them.”

- ▶ Job shadowing senior employees
- ▶ The ability for employees to work on projects/teams outside of their primary work unit
- ▶ Specialized leadership development programs targeted to high-performing employees
- ▶ Employee reviews conducted by a non-supervisor
- ▶ Providing junior staff members with a senior-level career coach to assist them with career development

5. Employers want education to innovate

The final question we asked each respondent during the interview was “What can education do to help your company remain competitive in this marketplace in the future?” We received a variety of responses, but three prevalent themes emerged: introduce diverse populations to technology education at younger ages; provide greater emphasis in higher education on concrete skills, credentialing, and industry certifications; and provide students at all levels with additional work-based learning opportunities and experience.

“We need to change the cultural narrative around education and careers.”

Five of the thirteen respondents mentioned a desire to see innovation at the K-12 level. Suggestions included:

- ▶ Getting women and diverse populations interested in STEM fields
- ▶ Nurturing children’s interests in technology at early education stages
- ▶ Keeping classroom technology and curriculum up to date
- ▶ Providing hands-on learning opportunities like summer camps, hackathons, or STEM community events

Ten of the 13 respondents indicated that higher education should concentrate on obtaining skills, industry credentials/certifications, and/or security clearances for students. Many suggestions focused on preparing students for technology roles specific to this region, including:

- ▶ Pursuing industry certifications relevant to labor market demand
- ▶ Working with the federal government or contractors to build a security clearance pipeline in the higher education system

- ▶ Educating students on how to obtain security clearances and what government contracting jobs are like
- ▶ Better alignment of higher education curriculum to industry's needs

Additional suggestions included teaching students social and soft skills related to the world of work, treating programming languages like a foreign language, requiring certification attainment as part of technical degree programs, and building degree programs that combine theory with technical skills.

Six of the thirteen respondents indicated the importance of work-based learning and internship opportunities for students. Suggestions included:

- ▶ Providing paid internship opportunities for students
- ▶ Hiring students at the associate's degree level and developing them with the company to obtain further education;
- ▶ Providing on-campus mentorship opportunities between students and employers
- ▶ Designing an education experience around work-based learning and the nature of work
- ▶ Embedding hands-on skills into curriculum
- ▶ Building stronger relationships between industry and education

Conclusion

Given the demand for IT talent in the local labor market and the projected growth of technology jobs, attracting, retaining, and developing IT talent will continue to be an area of concern for local employers in the future.

In order to remain competitive, companies should pursue innovative HR solutions to combat talent shortages. This research has identified real-world solutions that Northern Virginia employers have implemented to meet this need, including developing new methods of sourcing talent, offering robust benefit packages that appeal to young workers, investing in their employees' professional and career development, and developing new solutions for talent to enter the workforce through internships and collaborations with higher education.

Employers have indicated the need for the education system to innovate, and fast. Business trends have traditionally moved at a quicker pace than our educational institutions, but the rapidly changing world of skill needs and industry credential requirements of local employers means that education needs to adapt even faster

to the quick pace of technology companies. This is particularly true in regions like Northern Virginia, where the technology sector is highly concentrated and a large number of jobs are available.

This report provided an in-depth look at a small sample of IT employers in Northern Virginia, but further research can be done with a greater number of employers to capture a clearer view of IT employer talent needs. Additional employer insight could further help K-12 and higher education institutions innovate in ways that will improve the quality and quantity of technology talent in the region.

If your company would like additional information on forming strategically collaborative opportunities with NOVA or NVTC, please visit our websites:

www.nvcc.edu/corporate-engagement

www.nvtc.org/resources/workforce_development.php

Appendix A: Interview Questions

▶ Introduction of Project

▶ Demographic Questions

- A. Name/Title
- B. Job responsibility as it relates to IT workforce succession planning research project
- C. Total number of employees in Northern Virginia region
- D. Number of IT employees/IT responsibilities in Northern Virginia region (percentage of total workforce)

▶ Project-specific questions

- A. Does your organization have a strategic human resources plan?
- B. If yes, describe
- C. Does your organization have a strategic recruitment plan?
- D. If yes, describe
- E. Does your organization have a strategic retention plan?
- F. If yes, describe
- G. Is your organization concerned about any of the following workforce disruptors?
 - I. New/emerging technology
 - II. Changes implemented by federal government in contracting/spending
 - III. Recruiting new talent
 - IV. Retaining existing talent
 - V. Upskilling current workforce
 - VI. Costs as it relates to upskilling, retaining, or attracting talent
- E. Do you anticipate losing critical components of your workforce due to retirements over the next 10 years?

- F. Which roles/skills are you most concerned about maintaining due to retirements?
 - I. Are these roles/skills difficult to source in the current labor market? Why/why not? (e.g. skill is outdated, proprietary system, requires extensive knowledge)
 - II. How do you plan on coping with these potential skill gaps? (e.g. internal training, upskilling, partnering with higher education)
- G. Any programs in place that you feel are working well for the company as it relates to talent attraction and/or retention?
 - I. Why are they effective?
- H. What can education do to help your company remain competitive in this marketplace in the future?
 - I. Any final thoughts or suggestions?