Title: Internship and Mentoring Program - Pilot Project

Category 6: Enterprise IT Management Initiative

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Executive Summary

The technology industry is one of the fastest-growing industries in the Unites States. Computing professions are growing more than twice as fast as the average for all occupations, and significantly faster than most other science, technology, engineering and math (STEM) career fields. The United States Department of Labor estimates that by 2018 there will be more than 1.4 million total new computing-related job openings. It is predicted with the technology job growth and Baby Boomers departure from the workforce, there will be less than half of the technology workers available to fill the job needs by 2018.

The empirical data stretches over decades and is consistently clear that the IT talent crisis will impact business and industry in the United States unlike any other time in history. A shortage of workers will stretch across all industries, but technology jobs are growing at a rate faster than any other industry.

The State of Maine, like all other states, is facing the "Silver Tsunami": over 24% of our total IT workforce will be eligible to retire in the next 2 - 3 years. This "baby boomer" impact will mean that we must replace hundreds of years of IT experience quickly.

In 2013, The Office of Information Technology (OIT) placed a priority on workforce development to support the State's long term strategic plan to feed the pipeline of skilled workers in Maine, and promote State government jobs.

OIT implemented a new "pilot project" an Internship and Mentoring program (over 50% of OIT interns became full time employees in 2013-2014), built a strong mentoring component to address retention, and worked with state universities and veteran resources to create partnerships to help us attract IT talent.

Additionally, workforce development initiatives such as our "Internship and Mentoring Program" directly addresses number six (human resources/talent management) of the NASCIO State CIO's Top Ten Priorities for 2015. This supports the NASCIO State CIO's Top Ten Priorities for 2014, as we shared talented IT interns to work on several State Agency's projects to address needs.

By sharing resources and ideas we are strengthening our IT enterprise management initiatives to provide excellent IT services and be more effective partners.

Business Problem and Solution

According to a United States Department of Labor report (2009), the Baby Boomers will be between 50 and 68 years of age by 2014, and the Bureau of Labor Statistics reports that 31% of those 55 and older were in the workforce in 1984. That number rose to 36% in 2004, and the figure will jump to 41% in 2014. Since 2011, the Baby Boomer cohort has been reaching age 65 at the rate of approximately 10,000 a day. This is a "State-wide" and national IT workforce crisis and those with creative workforce solutions will win the war on attracting and retaining talent.

For the public sector, changing the approach to "competitively and aggressively" searching for new talent will be essential to closing the gap. The sector needs to use its strengths to encourage young people, veterans, and near-retirement workers to join the public sector – to both give back and use their talents to move public organizations forward. Multiple approaches and strategies will be needed to address the IT workforce crisis.

Given our pending Baby Boomer crises (24% of the IT workforce is eligible to retire in the next 2-3 years); we decided that we had to take a fresh look at where to find and how to recruit IT talent. The chart represents our workforce age demographics in Spring 2013.
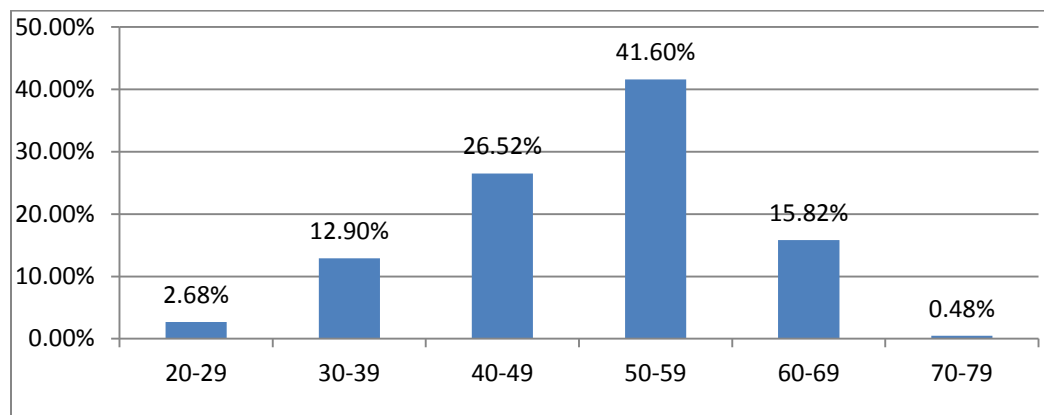
The Significance

In Maine, the Office of Information Technology Workforce Development designed an Internship and Mentoring Program as a pilot project. We created the program with emphasis not only on recruiting new talent but also on the existing workforce needs: Recruiting, On-boarding, Mentoring and Succession. We focused on:

- Gaining new talent with innovative new technology skills
- Developing and training the existing workforce by offering mentorship opportunities to strengthen leadership skills

- Developing strong partnerships with universities and veteran outreach
- Delivering quality service to business partners/clients with IT talent
- Building a new approach to diversity in the workforce – valuing generational differences

This is not a traditional Internship Program that is focused on helping promising college students learn about government. We expanded by recruiting IT interns the same as we would other IT employees (group interviews, some IT experience, critical thinking skills, and soft skills such as teamwork), which enlarged the pool of candidates. The pool included college students, returning veterans, people reentering the workforce and non-traditional students. Paid internships may last between 3-6 months, and often students gain college credit for their work.

We wanted the right people who were going to succeed as interns, and possibly be future employees. The process included the following:

- Interviewing and testing to find the right candidates
- Ensuring that they have meaningful work
- Providing dedicated mentors
- Providing ways for the Interns to learn about what we do – lunch and learn sessions, sessions with agency leaders
- Helping the colleges and other organizations understand what makes a successful intern/employee

Benefits of Internship and Mentoring Program

Successful recruitment of new IT talent and the mentorship experience are benefits to the program. We have hired over 50% of our interns as full-time State of Maine IT employees. In 2013-2014, sixteen (16) interns completed the program and ten (10) of the interns are full-time in the Office of Information Technology. Of the ten (10) interns hired directly into an entry level position from the internship, 50% have already been promoted to a higher level position. Chart: intern numbers for 2013-2014.
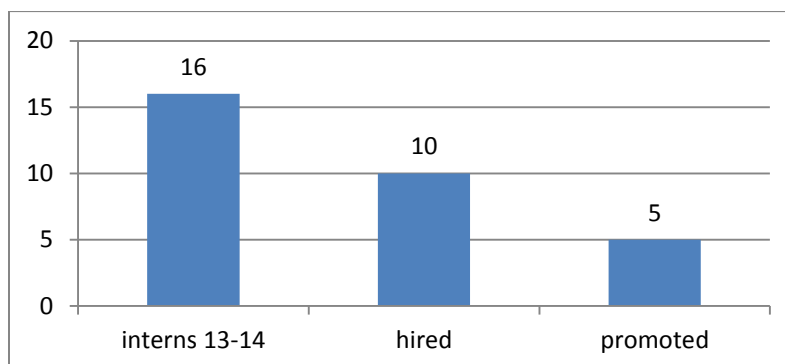
Benefits to the OIT workforce, our IT strategic plan, and the State of Maine are endless. Here are a few:

- Continuous resources feeding the IT pipeline with new talent
- Hiring as employees - over 50% of the interns
- Workforce is developing skills and grow up in the organization
- Able to support the agency's work projects and enterprise projects
- Able to promote State government IT jobs in a new way
- Attend community events to promote Internship and Mentoring exist in IT

Benefits to Interns

- Able to quickly apply their IT skills
- Gain a mentor for one-on-one skills building and
- Gain full-time employment in public sector
- Experience meaningful work projects that impact the citizens of Maine
- Experience community involvement - interns are highly interactive in assisting with High School Technology Night (description and video below)
- Learn about work in a large organization

Benefits to Mentors

- Interact on a daily basis with the interns
- Apply and strengthen their knowledge and leadership skills
- Gain workforce talent on their team
- Attend meetings and community events with interns
- Complete progress reports and provide meaningful feedback

Benefits to Agency Projects

Partnerships have included the use of interns on project work for Maine Revenue Service, Department of Education, Department of Environmental Protections, and Department of Health and Human Services.

Benefit to Community

OIT created partnerships with local 4-year universities and colleges, community colleges, DOL Career Centers and Veteran resources. We have been able to employee adult learns re-entering the workforce, returning veterans and those with disabilities seeking IT careers.

Interns are visible in the community and complete outreach by attending career fairs, working with other organizations such as a veteran project, or participating in Tech Night.

Sample: High School Technology Night (Tech Night)

What is Tech Night? Groups of high school students are brought together to learn how IT professionals use technology to support their customers.   It is our chance to tell our technology story. The students have an opportunity to practice team-building through exercises using agile methodology, code to create viable solutions to business requirements, and also learn that there is no such thing as deleting files!

Educators from colleges and universities attended and provided information about the various IT professional degrees. In addition, we had over 20 Technology displays, including Robotics, 3D Printing, Technology Antiques (who still has a TRS-80?), drones, and more.

We plan this event about 9 months in advance. The interns and mentors are very instrumental in the success of the event. Creating the videos is part of the intern's assignment. And, they keep raising the bar!

Video
Tech Night Link- 2015 (work began on this project in 2014)
https://www.youtube.com/watch?v=nJmFXORlpDk&feature=youtu.be

We believe that the program provides benefits for both the interns, and our organization. The interns get to see technology being used to solve business problems, and they get to see what it is like to work in a large organization.   We are able to observe the interns in real-life situations, and to assess their critical thinking and problem solving skills.

We strive to give our interns an experience that is rich and diverse. They will learn from the OIT leadership what is expected in a professional setting; they will leave the program ready to contribute in a meaningful way.

At the end of 2014, based on the benefits and results of the Internship and Mentoring Program we decided to make it an official program. It is no longer a "pilot project" and the program has become one effective way to address the IT talent crisis.