Cyber & Education Connections
Regional Cyber Industry Workforce Forum

Hull McKnight Georgia Cyber Innovation & Training Center
1 11ᵗʰ Street, Augusta, GA
Tuesday, July 24, 2018

Event Notes

Welcome Remarks

Dr. Tom Hallman – Facilitator & Distinguished Chancellor Emeritus, University of South Carolina Aiken
David Jameson - SRS Community Reuse Organization Chair & President/CEO Aiken Chamber of Commerce
Dr. Brooks Keel – President, Augusta University
Major General John B. Morrison, Jr. – Commander, U.S. Army Cyber Center of Excellence

Welcome Highlights:

- Cyber & Education Connections is hosted by the Savannah River Site Community Reuse Organization in partnership with Augusta University and the CSRA Alliance for Fort Gordon to focus on the cyber workforce needs of the Georgia/South Carolina region.
- Event attendees include Educators (K-12, Technical College & University leaders), Cyber Industry Leaders, Fort Gordon Representatives, Savannah River Site Representatives and Economic Development Leaders.
- A cyber tsunami is coming in our region - in 2017, Georgia Governor Nathan Deal announced the state would invest $100 million in a new cyber facility in downtown Augusta — Georgia's largest investment of this kind to date – and the venue for the subject event, Cyber & Education Connections. Upon completion, the new facility, named the Hull McKnight Georgia Cyber Center, will have two buildings that total 332,000 square feet.
- Augusta University is a partner in the Cyber Center that will focus on training the cyber workforce, cutting edge cyber research and fostering innovation. The Center also will support law enforcement and the military.
- The current headquarters of the U.S. Army Cyber Command is located at Fort Belvoir, Virginia; the Command is moving to Fort Gordon in 2020. Fort Gordon, Georgia is already home to the U.S. Army Cyber Center of Excellence and host to a multi-service community of Army, Navy, Air Force, Marines and multinational forces. Fort Gordon has become a center for joint forces activities, training and operations.
- Senior leadership of the U.S. Army has tremendous faith in the region to attract the right workforce – the very best the nation has to offer.
- Attracting this critical workforce requires essential characteristics:
  - Educational Opportunities
  - Quality of Life
  - Opportunities for Families

Panel: Regional Cyber Economics - Myths vs. Facts
How is Cyber Sector Growth influencing regional economic development?

Robert Bennett - Executive Director, Development Authority of Columbia County, GA
Todd Glover - City Administrator, North Augusta, SC
Calvin Rhodes - Chief Information Officer, State of GA & Executive Director, Georgia Technology Authority
Will Williams - President & CEO, Economic Development Partnership Aiken, Edgefield, Saluda & McCormick Counties
Cal Wray - President, Augusta GA Economic Development Authority

Panel Discussion Highlights:
- The new Georgia Cyber Center facilities are intended to support the region's growing cyber ecosystem including:
    - Cyber workforce training and development
    - Cyber innovation and its supporting technology
    - Cyber research and development
    - Government-related cybersecurity work
    - Private sector cybersecurity work
- Information about the new $100 million Georgia Cyber Center is available at: https://cybercenter.georgia.gov/
- While new missions at Fort Gordon, Georgia serve as a catalyst for the region's cyber industry growth, other industry sectors are also actively addressing cyber challenges including manufacturing, healthcare and nuclear sectors.
- Not all regional growth is directly correlated to cyber sector growth. Communities in the region were already addressing quality of place with new and expanding developments (such as Riverside Village at Hammonds Ferry, Downtown Augusta Revitalization, the Plaza at Evans Towne Center and City of Aiken projects). Now, that quality of place preparation is combined with new growth opportunities in the cyber industry sector.
- Community leaders are highly focused on regional economic opportunities that accompany expanded missions at Fort Gordon and other industries, including the need to attract the workforce to support growing industries.
- Attracting, developing and retaining the cyber workforce includes having communities where people want to live, work, play and educate their children – some call this quality of place.
- It is up to the community, as a region, to create quality of place and an environment that supports the developing cyber-ecosystem.
- Competition for the cyber workforce extends far beyond the local region, making quality of place particularly significant, especially quality educational opportunities for children.
- Fort Meade, MD and Fort Belvoir, VA communities serve as a guide to the cyber workforce needs and expectations.

Inside the Gate – Cyber Workforce Perspectives at Fort Gordon & SRS
How do the two largest federally funded facilities in the region view cyber workforce demand?

Colonel Samuel Anderson - Chief of Staff, US Army Cyber Center of Excellence
Lewann Belton - Director, Department of Energy-Savannah River Cyber & Information Technology Division
Dr. Tom Clark - Executive Director, CSRA Alliance for Fort Gordon
Dr. Vahid Majidi - Director, Savannah River National Laboratory
Christopher Sniffen - Technical Director, National Security Agency, Fort Gordon, GA

Panel Discussion Highlights:
- The Hull McKnight Georgia Cyber Center is life-changing for the local community because it provides a visible cyber hub for innovation, partnerships and training at all levels.
- The CSRA Alliance for Fort Gordon has established partnerships to support cyber education and economic development related to the Fort Gordon Cyber District. www.fortgordoncyberdistrict.com
- The population growth trend projected for Fort Gordon, GA shows an increase from 26,797 in 2018 to 31,286 in 2023 and this will impact local school populations.
- Department of Defense definition of cyber workforce professionals includes those involved with information technology (installation, operation and design of technology systems), cybersecurity (active defense to protect and secure systems/networks), data science and intelligence professionals.
- Savannah River Site (SRS) cyber workforce description is broad and includes operations technology for industrial control systems, the ability to modify and protect systems, forensics and more.
- SRS and Fort Gordon have some partnerships evolving related to cyber training and have more opportunities to explore through the Savannah River National Laboratory.
- Local cyber workforce demands are expected to increase in two to five years with respect to Fort Gordon's needs.
- In addition to attracting a cyber workforce to the community, the region still needs to grow its own cyber workforce to meet demands.
- Only around 30% of the new cyber workforce is anticipated to actually move to the region as the U.S. Army Cyber Command relocates from Fort Belvoir, VA and Fort Meade, MD to Fort Gordon, GA.
- Education for K-12 students needs to rapidly move "outside the box" to keep up with technology trends and to expose students to skills needed to support today's ever-changing technology. For example, computer languages could be taught in high schools and satisfy foreign language requirements; Raspberry Pi (a tiny and affordable computer) can be used to teach programming through fun, practical projects.
- CyberPatriot is a nationally recognized youth cyber education program with teams in the region. www.uscyberpatriot.org
- Educators are encouraged to approach government and private sector companies seeking support to grow and promote the workforce needed for our future.
- Skill sets needed in the cyber workforce:
    - Teamwork and working toward a common goal
    - Communication skills
    - Learning to work with people who think differently
    - Critical thinking/problem solving
    - U.S. Citizenship
    - Ability to obtain a security clearance
- The National Security Agency offers resources for students and educators at: www.nsa.gov/resources/students-educators
- Not all cyber-related jobs require 5 years of experience.

Outside the Gate – Cyber Workforce Perspectives from Local Employers
How do cyber workforce needs differ among local employers?

John Dewey - Chief Executive Officer, JANUS Research Group, Inc.
Charles Johnson - Chief Executive Officer, EDTS Cyber
Bill Leigher - Director, DoD Cyber Warfare Programs, Raytheon Intelligence, Information & Services
Tom Patterson - Chief Trust Officer, Unisys Corporation

Panel Discussion Highlights:
- The first waves of the cyber tsunami are evidenced by recent growth in local cyber-related companies including TaxSlayer and ADP.
- Definitions of cyber include:
    - Every piece of software and communication equipment on a battlefield
    - Anyone in a role that assesses, monitors or defends data
    - The domain someone (cyber warrior) works to defend (cyber space)
    - Security that is built into a technical system
    - Everything – every business involves cyber security
- Industries that rely on cyber professionals include every sector with significant focus on:
    - Government/Military
    - Healthcare
    - Financial
    - Energy
    - Manufacturing
    - Non-Profit
- Cyber professionals work in a large number of roles including: auditors, real-time monitoring/analytics, incident response teams, forensics, developers, networking, education and compliance.
- Employers do not expect educators to train students for every industry need. But there are many resources available to aid educators in preparing students for today's workforce. (examples: www.scratch.mit.edu – a free program that teaches animation and basic programing concepts, and Augusta University summer programs that teach students how to program.)
- Employers do need students that:
    - Understand how things work
    - Have good character/values
    - Have solid basic skills (reading, writing and math)
    - Can work as a team member
- Exposing students to the reality of the work world is important. Work is not just about what an employee wants to do, it is also about what work is needed by an employer.
- Mentoring and internships need to expand. One way to start is to involve industry in schools and educators in industry.
- Employers are confident that workforce demands are growing and that the same workforce is needed by multiple industries.
- Now is the time to "slam our foot on the gas" and work as a region to cultivate our workforce.

Educating the Cyber Workforce
What are the challenges you face in educating the Cyber Workforce?

Dr. Sean Alford - Superintendent, Aiken County Public Schools (SC)
Dr. Jeff Carney - Associate Superintendent, Columbia County Schools (GA)
Dr. Melissa Frank-Alston - Executive Vice President, Augusta Technical College (GA)
Dr. Chad Leverette - Interim Dean, College of Sciences & Engineering, University South Carolina Aiken (SC)
Dr. Forest Mahan - President, Aiken Technical College (SC)
Dr. Angela Pringle - Superintendent, Richmond County Schools (GA)
Steven G. Weldon - School of Computer & Cyber Sciences, Augusta University (GA)

Panel Discussion Highlights:
- Local educators are listening and adjusting post-secondary education and training programs to support local cyber workforce needs. Examples include:
    - **Augusta Technical College - www.augustatech.edu/community-and-business/cyber-security-center.cms**
    - **Aiken Technical College - www.atc.edu/About/News/aiken-technical-college-adds-new-cybersecurity-networking-certificate-program**
    - **Augusta University - www.augusta.edu/ccs**
    - **University of South Carolina Aiken - www.usca.edu/academics/majors-minors/majors/math-and-computer-science.dot**
- Some of the challenges to local cyber workforce development:
    - Attracting and retaining faculty (Industry often is more attractive than academia for individuals with cyber-related skill sets.)
    - Maintaining professional development and training in areas of technology that change rapidly
    - Establishing and maintaining industry partners
    - Aligning programs regionally, with consistency of funding across the region
    - Pressure to provide K-12 pathways for many industries
    - Measuring K-12 school systems against one-another is not productive
- Cyber pathways continue to develop in local K-12 school systems through course offerings and student participation in programs such as CyberPatriots. www.uscyberpatriot.org

Regional Cyber Studies

Cybersecurity Workforce Study Highlights (www.cyber.augusta.edu/cybersecurity-workforce-study)
- Dr. William Hatcher, Director of Augusta University's Master of Public Administration Program & Associate Professor of Political Science

Regional Cyber Study Overview (attachment provided)
- Rick McLeod, President & CEO, SRS Community Reuse Organization