



## GO Virginia Region One

### Target Industry Working Group Meeting

### Information and Emerging Technology

*May 20, 2019*

In Attendance: Ashvin Raj, Stephen Mullins, Jim Baldwin, Randy Rose, Neva Bryan, Robyn Raines, Angela Costagliola, Keith Perrigan, Shannon Blevins, Esther Bolling, Josh Sawyers, Mary Trigiani, Marketta Horton, Jean Jordan, Robyn Lee

Via Phone: Carla Glass, Rob Beavers, Jonathan Grimes, Chris Chmura, Leslie Peterson, Alex Doherty, Olivia Rollins, Craig Belcher

#### **Region One Overview: Chris Chmura and Alex Doherty**

By July of 2019, the nation will experience the longest post-recession expansion ever. GDP growth is 3.2%, with possible continued growth next year. Federal funds rate target most likely will not increase this year. Employment is slightly down from one year ago. Also, by major industry sectors, manufacturing is creating the most jobs, followed by other services, retail trade, and professional, scientific, and technical services (only 31 positions, but these jobs pay well). Education services (mostly elementary and secondary schools) are down by 287, from one year prior.

This report reflects only one new quarter of data since the last time it was presented. Of 2,041 workers in IT, the region is only down 8 jobs from last quarter. Individuals employed in this industry are making nearly double the average wage. All the top eight IT occupations make over the average wage.

GO VA Region One has the lowest average wage among Regions 1-9 and the state of Virginia, but due to the cost-of-living adjusted wage (buying power), the average wage is nearly \$77,000. For industries employing IT workers, the most jobs are found within Computer Systems Design and Related Services at 428. However, IT workers are in many different industries, such as information services, management of companies and enterprises, and business support services.

When examining IT industry employment, the recent trend over time is slightly negative. This is due to the small sample size overall, as any changes to employment will appear volatile. The number of IT industry jobs in the region is 865. IT establishment growth does lag the state, at 62 for Region One. And although Region One has lower average wages compared to Virginia and the nation, there is strong wage growth.

#### **Overview of IT Focus Group Session (Jan – April 2019)**

Over the past few months, Chmura has facilitated focus group sessions with the IT Working Group to assist in developing strategies to grow the IT sector in Region One. Overall, it has been beneficial to have regional stakeholders in the room for communication as ideas were generated and decisions were

made. Two important questions to consider in generating ideas, were (1) what can be funded by GO Virginia, and (2) what projects can also be funded by other sources?

From the first Working Group meeting, the following was covered:

A baseline data review for the “as-is” state of IT jobs in the region, a confirmation of the status quo (stakeholders and IT Working Group), plow the field to uncover what is working/not working, and an initial SOAR analysis session. This was to define strengths, opportunities, aspirations, and results of Region One. The SOAR analysis generated several topics related to Region One’s IT capacity.

Working Group 1 yielded three positive outcomes from stakeholder engagement. These were (1) CGI, (2) Bristol Virginia Public Schools, and (3) United Way.

Working Group 1 also yielded several outcomes that need improvement/new direction, from stakeholder engagement. These were (1) pipeline of technology workers, (2) workforce/job creation, (3) IT and cybersecurity education, (4) experienced workers coming into the workforce, and (5) regional collaboration (“one voice” from Region One/more unified approach).

From the second Working Group meeting, the following was covered: Big ideas which would build on the SOAR analysis, the Charrette-like process of decision making, and grouping the ideas into families of sites, startups, and workforce—which are part of Region One strategies. There were 14 big ideas generated from this session.

Working Group 3’s job was to review the 14 big ideas and further narrow them. There were then 9 ideas which the group further refined to 3 ideas. The projects that made it to the final cut were (1) K-12 Education Capacity Building, (2) Mobile Labs, and (3) 276 Seed Fund.

The main topics related to the K-12 project are the importance of programming and coding in schools. The process going forward will be to research – pilot – scale.

The next steps will be to review with the IT working group, engage stakeholders, identify lead partners, and develop grant applications. There is no specific timeline and the group will determine the feasibility of the projects including if these projects will be the three finals.

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After the summary, the group revisited the 3 priority projects and determined that out of the 9 ideas discussed, these 3 capture the low hanging fruit and greatest opportunities to build a foundation for the other projects. The group discussed that all three projects are connected and the K-12 education projects will help to build a pipeline of entrepreneurs for the 276 Seed Fund idea. The group also discussed combining the K-12 capacity building project with the Mobile Lab project and perhaps a makerspace. The Mobile Labs should also be made available for entrepreneurs in the region to utilize.

The group briefly discussed the 276 Seed Fund project, noting that GO Virginia has funded a similar project out of Region 5 called the 757 Seed Fund. Since GO Virginia funds cannot be awarded directly to entrepreneurs for seed funding, the funds went towards salary and supplies for building a component of the program focused on providing support for IT startups. The group discussed the need for startup capital in the region, noting the work of Opportunity SWVA and that VCEDA has funded many

companies in the region over the last two years with their seed capital program. There was also discussion concerning The Angel Roundtable in Northeast Tennessee. Shannon Blevins informed the group that another group, RainSource Capital, has expressed interest in assisting the region in developing an angel network/fund. Keith Perrigan mentioned that Bristol City Public Schools recently held an Entrepreneurial Fair for students.

### **K-12 Education Capacity Building & Mobile Labs:**

The group spent a significant amount of time discussing the possibilities of an IT Mobile Lab and what this project would look like, including the benefits and barriers. Considering requirements for a positive return on investment (ROI) for GO Virginia projects, there were concerns about the return on investment from the K-12 project and how quickly that would come. The group discussed the ROI looking different for capacity building projects and demonstrating that the project is business driven and will produce deliverables related to participating high schools and credentials earned.

A question to keep in mind while developing the project is, “How will the school systems use the mobile lab?”

Specific ideas discussed included:

- The Mobile Lab should be used during the school base in order to avoid competition with after school activities.
- Partners should include: Region VII Superintendents, Center for Teaching Excellence, UWSWVA Ignite. The group discussed inviting Ashley Lawson from Wise County Public Schools to attend the next meeting to discuss her decision in switching careers working for a large employer to teaching school. The group also agreed that it would be beneficial to have large employers like Ballad Health, KVAT and Eastman Chemical at the next meeting.
- A key issue with supplying faculty for teaching programming/coding is the low wages that teachers earn. With the expertise these teachers have, it is difficult for the schools to compete with tech companies to retain them. This opened up a conversation concerning partnerships with the tech companies and the potential for GO Virginia to assist with compensation for the teachers. Angela shared a model that CGI has been working on with Russell County for a CGI employee to teach a programming class 2x a week with teacher instruction the other 3 days. The class is a college credit spread throughout the school year. Josh shared that Microsoft/Mecklenburg County Schools have a collaboration that includes a teacher in the classroom plus a volunteer from Microsoft to teach their classes. The group confirmed that a partnership with education and employers is vital to success.
- A mobile IT lab might be considered middle-school level. Another group member felt that mobile labs could offer different options, based on the area served.
- There was mention that the mobile lab could be treated like a bookmobile, which raised the questions, “Where would it go? Where would it be needed?” Everyone could be given the same access from town to town, and it could be calibrated to resources each county has.
- Carla Glass asked if the generation of a mobile lab could be a way to teach high schoolers about project management. Students in trades could work on the construction. The labs could cover technology through agriculture, programming, or cyber. Gathering requirements for building could be through the school system.

- It is important to align schools with the mobile lab, and figure out how to integrate.
- The jump into programming can be abstract for some people. The physical layer is important (installation, cables, etc). A hardware-based side of this project might help vocational hands-on students, and then a build-up to software can be integrated which would help students who are not hands-on.
- There are competitions throughout the state, could we push these? The Cyber Range at Virginia Tech is a good starting point. However, the number of teachers with background in IT is low. Partnerships will be mandatory in getting credentialed people in schools to teach IT material.
- Region 8 recently received GO Virginia planning funds to assess the feasibility of a Mobile Hub Lab. Led by the Staunton Innovation League, the Hub-Lab will be a student-entrepreneur makerspace to teach creative and collaborative ways to use innovative equipment and technology such as 3D printers, laser cutters, robotics, and electronics. Robyn will request a copy of the application to share with the group.
- Neva mentioned that it would be helpful to invite computer science majors to the next meeting to learn of their experience and why they chose this career path.

Given the excitement and momentum around the mobile lab, the group agreed to hold a meeting next month focusing on K-12 education and mobile labs, which could lead to support an entrepreneurial aspect.

### **Regional Updates:**

Heart of Appalachia transition project in partnership with GENEDGE will host a regional roundtable meeting on June 20. This will be following up from the regional conversations held over the last year.

Southwest Virginia Technology Council Awards Banquet & Gala - 20<sup>th</sup> Anniversary. This event is on Thursday, June 13 at the Southwest Virginia Higher Education Center. There will be a presentation on graphene by Dr. Steve Hooper, Inventor and CEO of Carbon Research and Discovery Company in Wise, VA. A representative from Amazon in the Northern Virginia location will speak on the impact it will have in Southwest Virginia.

Jim Baldwin mentioned that the Cumberland Plateau Company will announce the roll out of its new economic development funding program on May 22, 2019. The Cumberland Plateau Regional Opportunity Program, or CProp, is a grant program available to local governments in Buchanan, Dickenson, Russell, and Tazewell counties for economic development projects.

### **Next Meeting Date:**

The next meeting will focus on K-12 education and mobile labs specifically. A Doodle Poll determined that **June 19, 2019 at 10:00 AM** will work best for most of the group.