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Keynote Address at Drone Conference

These pre-recorded remarks were recorded via Zoom and delivered virtually on June 17, 2020.

Good afternoon, friends. I regret that this pandemic took from us the chance to enjoy this conference in person, but I'm happy to have a chance to briefly share with you some thoughts about this exciting, growing technology and the role community colleges will play in that evolution. However, before we look forward, let me look just a little backwards for a moment.

Introduction

Virginia's Community Colleges made history in 2016. That was the year, with the help of the Virginia General Assembly and the McAuliffe Administration, that we first garnered public funding for our workforce training programs that lead to high demand credentials.

What is now known as our FastForward program was a huge win for individuals seeking a career that could support their family with a middle-class lifestyle. It was a huge win for businesses across the commonwealth that complained about finding trained, skilled people for jobs that are available today. And, ultimately, it was a win for Virginia's General Fund because connecting those people

with available jobs leads to higher income tax withholdings.



FastForward produced big results that first year, just as it has ever since. We decided to celebrate that by holding a public event with the governor. The event began with a drone delivering to the Governor some ceremonial credentials that he would sign and give to some of our FastForward graduates. The drone was piloted by one of those graduates, a deputy sheriff from Culpeper who had earned his license through Piedmont Virginia Community College.

The pilot did his job well, and the drone performed flawlessly. It made a big impression on the Governor – and this guy doesn't impress easily. I know it made a big impression because a short while later, he tried to replicate the drone delivery at a meeting of the National Governor's Association. He tried to have a microphone flown in and dropped to him on a stage.

It failed badly – badly enough to earn some brief media attention. The governor shared his version of all of that with me later. Glenn, he said, I don't know what went wrong. Well, governor, I said, drones are a promising technology. But

without that community college-trained technician, you're never gonna' make 'em fly the way they can.

Thank you for the chance to talk with you today about preparing the drone workforce and the critical role community colleges are going to play in that as we move forward. Mind you, I'm not a technical expert when it comes to this evolving technology. I would point you to Chris Carter, who is leading our collaboration with Old Dominion University and developing our drone training curriculum. He, and the people working with him, would be happy to help you geek-out if you care to explore the specifics of today's machines and their capabilities.

Instead, I want to talk to you about the role I see community colleges playing in the future of unmanned aerial vehicles.

Community colleges were created for this

The truth is community colleges were created to help us get the most out of these machines. I know what you're thinking: how can I say that? How can I claim that institutions founded in the 1960s – make that 1966 in Virginia – were created for a technology that only came into its current form in the 21st century.

Community colleges were created, you see, to do what no one else would: to address the unmet needs of a community for access to higher education and workforce training. Yes, our colleges were created to serve a growing generation of baby boomers. Yes, we were created to promote diversity and inclusion in higher education, serving students of color and women who had largely been shut out at universities. But the politics needed to create us would have never happened without the support of the business community who saw a growing need for trained talent and no other way to meet it.

In the mid-1960s that meant skills like punch card operators, as big computers began finding their way into more and more industries. Today, that means drone pilots and technicians. The details change over time but the application of our mission and the value it brings to individuals, businesses, and communities is a constant.

Evolving technology

Unmanned aerial vehicles, of course, aren't really that new. Historians trace their beginnings to start of the 20th century, not long after the Wright Brothers achieved manned flight just down the road from here in Kitty Hawk.

In 1907, the quadcopter caused excitement when it flew without a pilot. Mind you, it took four men to operate, and it got only two feet off the floor. But, hey, you gotta start somewhere, right? A decade later, the Ruston Proctor Aerial Target became the first pilotless winged aircraft in history. It was a radio-controlled vehicle, based on technology invented by Nikola Tesla. It was never used in combat but became the model for others that were.

Modern drones are traveling a familiar path from my perspective. Like the microchip, like the smartphone, even like cloud computing, drones are important not simply for what the vehicles can do but for everything they can help us do better.

When a drone is used by a group of soldiers to see what's over the next hill, it becomes part of the national defense industry. When a farmer uses one to monitor her vineyards for pests, or even soil hydration levels, it becomes part of the agriculture industry. When a sworn officer uses a drone to locate a missing child in remote areas, it becomes part of our public safety industry. And when Amazon uses it to deliver a CD copy of the Rolling Stones' greatest hits to your doorstep, it becomes part of our commerce and service sector industry.

You get the idea. These machines don't exist in a vacuum. That's why it's so important to have events like this and explore what community colleges need to do to understand and address the workforce needs that will exist as these tools become more commonplace.

1:2:7 challenge

Drones are simply the latest example of the 1-2-7 challenge that we need to help businesses address. We learned a lot about this when we were creating the FastForward program. The 1-2-7 challenge works like this: The ones are people who hold post-baccalaureate degrees. Think doctor, lawyer, or engineer. The twos are the next layer of folks with bachelor's degree that support the work of the ones. Think accountants, human resources, or public relations.

Businesses say they can search globally for the ones and the twos and they can import them from just about anywhere. But it's a different story with the sevens. The sevens are the front-line employees who really make the work happen. Think technician, medical assistant, CDL-holding truck driver, or even electrician.

Businesses say that to succeed they need to know that they have access to the sevens in the local community for hiring, and if they don't exist today, you must be able to produce them quickly. The labor market analysis of the drone industry reveals that same reality. There may be ones and twos who want or need the skills necessary to operate these vehicles. But most of those jobs will be the sevens. They will need more than a high school diploma but less than a bachelor's degree. They will need the credentials community colleges exist to help people earn.

When it comes to drones, specifically, it may come down to upskilling folks already on the payroll, giving them the skills to maximize these new tools.

Evolving community college mission

That brings me back to that community college mission I mentioned just a moment ago. We exist to address the unmet needs in higher education and workforce training. While I don't think that mission is changing in the 21st century, I believe it is beginning to focus a little more sharply.

To be clear: traditional academic transfer pathways and even community education opportunities will forever be part of what occurs on our campuses. But I see a sharpening focus on our programs that connect people with jobs in high-demand career fields. That's the very reason the FastForward program was created. The success we see there, and the further needs of Virginia's businesses, has us on the verge of implementing a new initiative called G-3 – which expands that ROI focus to for-credit pathway programs beyond FastForward.

G-3 is Virginia's answer to the so-called free college, or promise, programs enacted in other states. G-3 is an innovative financial aid program that can make select program pathways more affordable, and even free, for qualifying students. We've delayed this work while we determine the impact the

pandemic has on Virginia's state budget. However, the support is there to begin the program as soon as we can. Those select programs are being defined by the needs of Virginia businesses.

And that's the point, really. When we know that as many as two-thirds of the jobs Virginia has to fill throughout this decade require more than a high school education but less than a bachelor's degree, policymakers want programs that can offer very specific ROI. I expect the pandemic to only sharpen that focus.

I see that as a correction in our broader higher education philosophy. We have long supported those seeking bachelor's degrees, or higher. We should. We need those people. We need the ones and the twos. But we need the sevens too and we need to support the people working to acquire those skills and credentials.

Investing in our mission

We're seeing that support at the state level. Virginia's initial annual investment in FastForward was about \$4 million dollars. It's more than triple that now. When the G-3 program begins, it will do so with a significant investment.

At the federal level – beyond today's understandable focus on the COVID-19 emergency – they're beginning to notice that state investment, and the success its creating. As Congress works to update the Higher Ed Act, there's bipartisan support for what I call workforce Pell. That is establishing criteria that will allow people to use federal financial aid to pursue these short-term workforce credentials.

And yes, you heard me right: the effort there is bipartisan. In a time and place where members of the two parties can rarely agree on the color of the sky, there is a broad and growing consensus that this policy evolution is a winner for individuals, businesses, and the broader national economy. And that, my friends, is a great sign for those of us looking at an emerging field like drones and wondering where we will find the workforce necessary to unleash the benefits this technology promises to the industries I've mentioned and those we haven't even thought of yet.

And that's where I want to conclude. Community colleges are partners with you in this effort. We understand what's needed to create the sevens that this industry will need. We even know how to help some of those go on to become the ones and the twos who will lead the innovations driving these tools forward. And, we are finding support in the legislative arena to help individuals pursue the programs we build together.

Just do me a favor, please. Keep these things from buzzing over my head when I'm tending to my backyard garden. Deal?

Thank you.

