Good afternoon everyone. Thank you so much for joining us today at the National Research Centers for ATE and the Association for Career and Technical Education. I'm representing ACTE. My name is Catherine. We're happy to be providing technical support to you for this session today focused on community colleges and employer partnerships. We have – it looks about 172 attendees so far, and I believe there will be more of you as some of you may be joining from conference rooms together with your colleagues and partners.

Before we jump into the content, I just want to go quickly over the technical specifications. You should be seeing an introductory slide on the left side of your screen. If not, if you're having any trouble with the display and you have another web browser on your system, you might want to try switching to a different browser. We are streaming the audio today online. We encourage you to access it that way. Should you have any problems hearing the stream, first thing to do is to check the volume on your computer. If that still doesn't work, then please click on the phone and question mark icon. It's in the participant panel on the right side. This will provide you the information to call in and listen over the phone.

Because of the large number of people we have online with us today, we will be taking questions electronically throughout the session. About the second half of our time today has been devoted to questions. Please feel free to queue up your questions as we proceed, but we will not be answering them until later in the event. You can also use the Q&A to enter any technical questions or problems. I'll try to help you with those. Type in the bottom of the Q&A box, click send to all panelists.

Thank you so much. Now I'm going to turn it over to Sue Liu from the Department of Education to kick off this webinar.

Great. Good afternoon and good morning to the folks on the West Coast, and thank you so much, Catherine, and also to the OVAE staff for all the help you've provided in sort of setting up this webinar for us. Thank you to all the audience members, to the presenters we have on the webinar today, and also to the Administration officials who will be speaking later for joining our webinar today, focused on community colleges and employer partnerships. In addition to having this webinar on Leap Day, actually we think it's an amazingly good sign that there are so much of you - there are so many of you joining us today. So my name is Sue Liu and I will be moderating the session and to keep us on track so that we have enough time at the very end for audience questions to the actual presenters. And so during this time you'll have a chance to ask the questions that, you know, come up and, of course, during the presentations you will also have the chance to submit your questions. So before jumping into the program, just wanted to say that we are very fortunate to have Administration officials who will be joining us for a portion of the webinar. They will be providing remarks thank you to Georgia and Brenda and Roberto Rodriguez who will be joining us a little later. We know that your schedule is very full, so we're going to jump to Georgia Yuan, who is the Deputy Undersecretary of the Department of Education first. Georgia will provide remarks to convey the importance of these partnerships and also to signal the support that we have for you in your work with employers. And we will then have Dr. Brenda Dann-Messier, who's the Assistant Secretary in the Office of Vocational and Adult Education at Department of Education. Brenda will provide an overview of OVAE and also introduce Jim Stone of the National Research Center for Career and Technical Education and provide contacts to this webinar and also introduce the presenters. And as Roberto comes in, you know, we'll also introduce him and have him give remarks as well.

So right now I'm going to turn it over to Georgia.

Thank you so much Sue. And on behalf of Secretary Duncan and Undersecretary Martha Kanter, I want to welcome you and thank each of you for joining us today for this important webinar. We at the Department are thrilled with the engagement of the community colleges in supporting the important goal of providing career and skills-based training. We know that you are being challenged with increased enrollment, and we're here to support and invest in your success. The Administration is very proud to focus on community colleges as drivers of a robust economy and job market. We believe that strategically engaging employers in partnership with community colleges helps us promote the dual goal of academic and on-the-job preparedness for the next generation of American workers. By partnering

with employers, we're insuring that the education and the skills obtained are relevant to the job openings that are – that we need to fill.

I know that you're here to learn from our presenters about how you can implement meaningful opportunities in your local community. I want to turn this over now to Brenda Dann-Messier, our Assistant Secretary.

Thank you very much, Georgia, I really appreciate your being here with us today and your support. And I also want to acknowledge Roberto Rodriguez, who is coming – will be joining us shortly. He's coming from the White House. He's actually meeting with our boss, Secretary Duncan, so if he's a little late we'll give him a pass on that. Really I want to thank you for your interest to all of you and welcome you. As you heard, I am very proud to be the Assistant Secretary for the Office of Vocational Adult Education, and I do want to thank my colleagues Roberto, Georgia, and certainly the outstanding OVAE staff who are assembled in this room and who are working so hard on all of our behalf and especially our Policy Research and Evaluation Staff. And I want to thank you, Sue Liu, for agreeing to moderate today's webinar. But really, most importantly we want to thank our audience for your interest. And for all the tremendous work you're doing on the ground to expand educational opportunities for our students.

Before I begin my formal remarks, I want to also thank Jim Stone, National Research Center for Career Technical Education, for hosting this webinar with OVAE. We're appreciative of your partnership with us, Jim, and I'm going to turn you over for a brief introduction – turn the mic over to you for a brief introduction.

Thank you. We are happy to continue this productive relationship – partnership – with the OVAE and also with ACTE, one of our consortium partners. I'm also delighted to share the time today with some of my Kentucky colleagues who are part of an exciting, NSF-funded AMTEC project that you will learn a lot more about today. Just a quick word from the sponsor, as it were, the NRC is a consortium of many of the CTE leaders and researchers who came together to focus on improving career and technical education policy and practice. Partners are reflected here. They include the ACTE, which is also working with us to put this on today, the state directors association, four research universities, and other organizations that provide the staff and the faculty who do the work at the Center. Our framework for research dissemination and professional development relies on scientifically-based research and evaluation that addresses important issues of high school and post-secondary CTE. Within this framework, a substantial portion of our work focuses on linking secondary and post-secondary CTE through programs of study that rely on the kinds of partnerships being addressed today.

Finally, I invite you to visit our website. The address will be provided at the end of today's session. We will be posting this webinar alongside our many other webinars, podcasts, and other materials related to this important topic, as well as upcoming related webinars. So again, we appreciate being part of this effort, and I'll turn it back to Dr. Dann-Messier.

Jim, thank you very much. And I also want to thank our ACTE partners for all of their help in putting this webinar together.

For those of you who are not familiar with the Office of Vocational Adult Education, we focus on adult education, community colleges, career technical education, and correctional education. Our vision is that all youth and adults have multiple opportunities to obtain lifelong education and training in order to achieve rewarding careers and family lives, participate in their communities and obtain their personal goals. As part of OVAE's work insuring everyone has access to high-quality educational opportunities, and to insure that low-skilled adults are not left behind as we grow our economy, we believe it's important to open up pathways to credentialing for individuals who have been traditionally not been part of the post-secondary and work force system, including low-skilled adults who need to increase their basic skills acquisition, out-of-school youth, limited English proficient students, and individuals in correctional institutions.

When Roberto comes, he's going to talk to you about \$8 billion in community college and career training funds that's part of the Administration's budget proposal. But in addition to this, I want to draw your attention to the \$1 billion in mandatory funding that the President has proposed to support career academies. Career academies are programs that include rigorous education and career technical curriculum in small learning community environment. They have strong industry partnerships which provide students the ability to prepare for college and career. The President's budget also requests \$1.1 billion for career and technical education, which will include our Perkins Reauthorization Proposal.

This event today builds on the community college virtual symposium held in April 2011 to get input on critical issues facing community colleges. It was a capstone event held after four of our regional community college summits. The regional summits and virtual symposium extended critical discussions that began – that began at the first ever White House summit on community colleges held in October of the previous year. This webinar is the first in a series of webinars based on four briefs prepared for the virtual symposium in collaboration with the Community College Research Center Teachers College at Columbia University. Similar programs are prepared monthly through May. The full text of the briefs, along with the reports from each of the mentioned events, can be found on OVAE's website at www.ed.gov/ovae.

We know that industry engagement is essential for community colleges to ensure that the programs that they are developing focus on the skills and competencies sought by employers for the jobs they want to fill today and the jobs of the future. One of the briefs from the symposium, entitled "Integrating Industry Driven Competencies In Education and Training Through Employer Engagement," focused on employer engagement and today you will hear from some of the partners how they did it. And we hope that what you hear from this presentation will allow you to apply many of the ideas to your community.

So speaking for today, I'm going to go ahead and continue to introduce our panelists. So with us speaking with us today are leaders from the Automotive Manufacturing Technical and Education Collaborative, or AMTEC. We believe a closer look at AMTEC will shed insight on what it's possible to accomplish when groups of employers work systematically with a group of community colleges. We expect to learn how they've overcome the many challenges that pioneers inevitably face. First we'll hear from Annette Parker, the Executive Director of AMTEC, one of the 39 centers funded by the National Science Foundation's Advanced Technology Education grant program. She will tell us how all this came together, the history and how an intermediary organization can help resolve the problems or issues that community colleges may face engaging the employer community, and frankly, vice versa.

Next we'll hear from Caren Caton, General Manager of Toyota Motor Engineering and Manufacturing North America. With a perspective from one of the leading firms working with AMTEC. Then we'll turn the program over to Mark Manuel, Vice President for Work Force and Institutional Development at Bluegrass Community and Technical College. Bluegrass is part of the Kentucky Community and Technical College. Bluegrass is part of the Kentucky Community and Technical College, Mark will talk about the critical path followed by Bluegrass enabling them to build the many bridges, internal and external, that helped this partnership become a functional, and frankly transformative, force for colleges and their students. We've set aside a lot of time for questions and answers with our presenters. We'll select among the questions you type into the chat window on your WebEx page. I'll have some questions of my own if you're slow to ask a question.

So now, let me turn it over to Annette.

Thank you Assistant Secretary. Good morning or good afternoon everyone. I'm going to talk to you about the role of the intermediary within the AMTEC organization and really how we got started from the beginning through the National Science Foundation.

The agenda that we're going to cover today is I'm going to do a brief overview of AMTEC, our vision, our mission, and our goals. Our organizational structure. And the collaboration and innovation of our center. And then you'll take a look at an industry point of view from Toyota and then how we look at local implementation from Bluegrass Community and Technical College.

What AMTEC is is an organization that is funded by the National Science Foundation that consists of community colleges and automotive industry partners with a common vision, mission and goals that were inaugurated in April of 2005. Initially this group was brought together in northern Kentucky with lead from the Kentucky Community and Technical College System wondering if automotive manufacturers and colleges around the country could come together to support the advancement of education and training around automotive advanced manufacturing and automotive manufacturing throughout North America. And so we – our vision was to be a recognized collaboration of colleges and companies working to strengthen our global competitiveness of our workforce. And to create and sustain this innovative, responsive, and standards-based development system that would meet our industry partners' skill requirements.

And so once we became a national center, we set four goals for the center, and that is to create industry partnerships in delivering core technical education that met the high-priority needs of our automotive manufacturers and their suppliers. Secondly we wanted to increase secondary to post-secondary, and from post-secondary to employment transitions to meet our industry partners' needs. And then to implement a collaborative support system to sustain and replicate the AMTEC model. And finally goal four was to create and sustain the program with assessments credentialing and continuing improvement.

And let me just expand on three – goal three and goal four for just a moment. One of the real energies around the AMTEC program and being able to bring together a diverse group of automotive manufacturers and colleges was all around our support system or our AMTEC academies. And I'm sure you'll have some questions about that as we move on. How you could get everyone to play in the same sandbox together. And that was all built through goal three, and how we've learned what our needs were and how we can move forward together through AMTEC academy.

And then goal four is really assessments aligned to curriculum and how we look at continuous improvement of the work that we do.

My leadership team is really set up with me as the Executive Director and Principal Investigator of the National Science Foundation ATE Center of Excellence. And then I have what you call a strategy board that's made up of leaders, high-level leaders, within the automotive industry. Caren Caton, from Toyota Motor Manufacturing and Engineering, will be speaking to you today from Georgetown, Kentucky. Willy Kaulfersch is at Ford Motor Company in Dearborn, Michigan, and JoAnne Pritchard at General Motors in Warren, Michigan. This group meets every two weeks for probably two or two-and-a-half hours to go over all of the work of the Center and how we support our college partners in our local plants throughout North America.

And then we have an AMTEC leadership team set up. These are the local plants and their industry partner throughout our partner colleges and states. One of the requirements to be on the leadership team is that everyone comes together, the college with their industry partner, the industry partner with their college partner. And these people lead the work of the four goals as we implement our strategy. And so everyone works together to support the – the goals of the AMTEC center.

So how do we gain consensus? We have a curriculum that's made up of 63 modules or 12 courses that can be broken into individual modules. And so how do we gain consensus on what was a common standard for the AMTEC curriculum? We started out with a DACUM. And I'll just explain that that is an acronym for Developing a Curriculum Using a Structured Group Interview. And so that takes the industry experts, because they are the ones that know best what needs to happen on the job, and we go through this structured interview asking them what it is that you do every day on the job. And so we want – we don't want the HR folks, necessarily, at that point, we want the specialists that are working those jobs every day to tell us what they need from – what they do on their jobs every day. We did one DACUM first at Toyota Motor Manufacturing Kentucky. All of the partners decided to do that together because that is such a large facility with so many different operations going on in one facility. We gathered a list, a very extensive list of 147 pages, 170 tasks, and we broke them into task duties, steps and elements. We looked at frequencies, difficulties, levels, so we could determine who did those tasks from day to day,

determine what is entry level and what is more advanced. Once we gathered that list, we reached out to the – all of the manufacturers throughout North America to let them Delphi rate them, so we did an online Delphi survey, which is basically a \INAUDIBLE\ scale that lets them rate importance. And we thought that this would be a North American Delphi that turned out to be an international Delphi because the employers also had ratings come in from countries like Brazil and Germany.

So once we did that we brought off everyone together and we determined what was core to the entire industry, not specific to one manufacturer or one plant, but what could be the foundational curriculum that all – would support all of automotive manufacturing throughout North America. And through that we realized that education and training was good for everyone. That we didn't necessarily need to compete in that area, that if we could work together we would strengthen automotive manufacturing, and manufacturing in general throughout the United States. Companies compete with their products, but the AMTEC curriculum, they could all say was common core that was trans – could be a transportable credential for the industry.

And so from that work, the innovation turned out to be the 12 courses with 63 modules that are linked to the DACUM Delphi standards. We show those links of the standards throughout the modules, and the companies are very, very specific that we do that so that they understand that we're teaching exactly what they identified as important for their future workforce.

Those modules can be delivered in a traditional classroom, but they're also hybrid and online. And each one is competency based with pre-impulse assessments that allow a student to test out and get credit for prior knowledge. So there's opportunities for accelerated instruction. The course work is built around virtual labs and a systems simulator that actually all of the manufacturers spec'd out that's aligned to the curriculum, so Bluegrass might could talk to you a little bit more about the systems simulator that they have in their lab for the instruction of the AMTEC curriculum.

And then the curriculum can be offered as an Associate of Applied Science. It also can be used for incumbent training or short term certificates, and it's endorsed by our industry partners.

Then we have assessments that are aligned to those DACUM Delphi standards. So what we're experiencing is some of the manufacturers having some of the incumbent workers take those assessments and then align to the AMTEC modules for incumbent training.

The other thing that are committed to is our career pathway. And it's research based. We started out with \INAUDIBLE\ reviews, case studies to determine what the factors of a successful career pathway for young people in advanced automotive manufacturing or advanced manufacturing. And we're now asking all of our partners to set up at their local level these career pathways and different – and they all have different approaches, but they make sure that they touch on the six key factors that we identified. And I just want to point out that one of them is that the industry partner is involved in all phases of the student's experience.

This page here shows you the AMTEC simulator that the manufacturers designed. It – they wanted it to be more real life in size and more realistic of what was seen in the manufacturing plant. They all worked together on this. It was an amazing job. Ford Motor Company really kind of took a lead in identifying the specifications and working with all other manufacturers in making sure that it would be core and not specific to any of the manufacturers but something they could all embrace.

And so now I'm going to turn over the presentation to my colleague, Ms. Caren Caton at Toyota Motor Manufacturing and Engineering North America.

Brenda-- If I could just jump in, Annette, and just say thank you very much for your presentation, but really, again, I want to thank you for the tremendous leadership you're providing in our community. And Caren, if you don't mind, if I could just ask you to pause for a moment. Our special guest from the White House has arrived and we want to allow him an opportunity to speak to all of you, so it's really my

privilege to introduce to you Roberto Rodriguez, the Special Assistant to the White House Domestic Policy Council in the Executive Office of the President. Roberto will talk about the 2020 completion goal, our FY13 budget proposal, specifically the Community College Career Training Fund, and other priority initiatives in this area. So Roberto, thank you again very much for coming and for sharing your expertise with us.

Thank you so much. I'm very happy to – to be joining you, and I thank you. I bring greetings from the White House, from my colleagues and from President Obama, who was really proud to lay out in his 2013 budget requests new and critical investments in America's community colleges. We really believe as an administration that there has never been a more important time to invest in education as a bridge to a strong economy. And the President reminds us continually of our shared challenges as Americans and about the grand contests that we face globally to rebuild our economy so that it's competitive, so that it's growing and so that it's working for all Americans.

We're reminded of our inextricable link here between the guality of our educational opportunities, and training opportunities, and our nation's economic success because we know that achieving a postsecondary degree, credential or training is no longer just a pathway for a select few in today's economy, it really is a prerequisite for all in order to fulfill the American dream. And we know that - we know the statistics that over this next decade nearly eight in ten new jobs will require some post-secondary education or training beyond just high school. And of the 30 fastest growing occupations, half require a college degree. You know at the same time we know that our post-secondary education graduates earn an average of 77% more per hour than a high school graduate. So we really believe that as the largest sector of our - America's higher education system, our community colleges are an ideal place to raise the knowledge and skills of our workforce and to meet the needs of a diverse population of learners. Expanded skills are what we need as an economy to be able to succeed on the individual level and on the national level. It's really what is going to help up build an economy built to last. And at the heart of the American promise, and at that – and at the heart of that economic growth is the President's 2020 goal. That's to again lead the world with the highest proportion of graduates of our colleges, of training programs and credentials. This is what the President has called on Americans to commit to at least one year or more of higher education or career training. It's going to require an all hands on deck approach, and a key strategy in our Administration to plan to meet that challenge is to focus on developing, reinventing and strengthening partnerships between our community college sector and business. These partnerships are really at the heart of meeting the ongoing demands of our economy, of building a competitive workforce for tomorrow, and most of you on the line here are engaged in those partnerships day in and day out in your work. You - I know very much all of the work that goes to building those strong partnerships. Our Administration wants to play a central role in helping you to deepen and expand those partnerships and that work. That's really why the President visited three years ago McComb Community College, to launch the American Graduation Initiative and to highlight the great prospects of deepening partnerships that result in good-paying jobs, with solid earnings and great career prospects for graduates. It's why he took the important step of investing \$2 billion in this new Community College Career Training Grant Program, to promote reforms like these and to enable these partnerships between community colleges, industry and the workforce.

We were very pleased to announce the winners of that first round of funding just last year and pleased to launch the second round of that competition. And with those, through this program, through TAACCCT, we're seeking to have a significant impact on the quality of community college programs by helping our institutions develop, reshape and expand education and career training programs and to really have an impact on young adults and workers who have been dislocated or disconnected from the workforce to return to an educational pathway and earn certificates and degrees.

And just last month President Obama proposed a renewed national strategy to meet the new goal of training two million workers with skills that will lead directly to a job. He said we can meet this goal by providing America's community colleges new resources to expand and redesign their courses, to better provide the education and training that businesses are looking for right now. And he recently outlined the contours of that plan, this Community College Career Fund. With the help of all of you on the line, we

really hope to press Congress for an additional \$8 billion investment for community colleges and states to partner with businesses to train workers in a range of high growth and demand areas, such as health care, logistics, transportation and advanced manufacturing. Securing this investment will give more community colleges the resources they need to become community career centers, where people learn crucial skills that local businesses are looking for right now. And insure that employers have the skilled workforce that they need, and that workers are gaining industry-recognized credentials to really bring – bring and build strong careers.

So, make no mistake. The work that each of you is engaged in, educationally and economically, will really restore our leadership across the – across the country and across the globe. We need to focus not only on greater access to these pathways for our workers, and for more individuals, but also focus on the quality of the experience that millions of our students will be able to receive, with all of your help. So we want to thank you for the work you're engaged in each and every day to open up these doors of higher education and training for more students and to ignite in each of them the spark of opportunity that will really help them succeed. Thanks for all you're doing so well.

Great. Thank you so much, Roberto, for joining us, and that was a great interruption. So we're going to turn back into the presenters and focus in on Caren Caton, who is the General Manager for Toyota Motor Engineering and Manufacturing of North America. So I'm turning over to you, Caren.

Good afternoon and thank you. Again, my name is Caren Caton. I'm with Toyota's Regional Headquarters, and I lead the operations of our North American Production Support Center, which is a regional training and development center that supports our operations in North America.

So before we became engaged in AMTEC, we had to look at our overall operation and figure out what our business need was. We operate 14 plants in North America. Six that build automobiles, eight that build parts. All plants use multi-skilled maintenance technicians who maintain and repair the equipment that's used in the manufacturing process. That multi-skilled maintenance technician requires a foundation of fundamental skills that is not unique to Toyota. Those include things like basic electricity, mechanical systems and fluid power.

So how do we achieve consistent results at 14 plants that have common needs for this technical training? First we have to look at how to establish common processes that provide for the needs of all 14 of those operations. We have to provide consistent programs based on a common image of the necessary skills. And we have to centralize the leadership for skills requirements, methods and assessments, and then use the local resources for education and training delivery.

Caren, can I interrupt you for just a second? We've had a request for you to speak up just a little bit.

Let me turn my speaker up. Is that better?

Not sure. But just try to speak up a little bit and we'll proceed.

Okay. Okay, I'll try. So for us it's a matter of how to get the best use of our own resources. Our business approach, we call it the Toyota Production System, but many of you probably know it as lean manufacturing. It's based on using minimal resources and eliminating all sources of waste. So any resource that we don't have to use is something that we can put back in to a different part of our business. So eliminating waste can be as simple as not duplicating work that can be performed elsewhere. We always apply this thinking in our production operations, but when we asked ourselves how can we use this approach in training our members, what we discovered is that we already used community colleges with some of our operations to provide that multi-skilled maintenance training, but we really needed to expand that model across all of our operations to deliver that fundamental skills training. Then we could use our resources to do things that are unique to Toyota.

What appealed to Toyota about AMTEC is the customer-first approach. So on a more traditional model we might use our own expertise to determine what's best for our customer, but the AMTEC collaborative engaged the customer and asked the customer to identify the needs. So engaging the customer in this way from the very beginning establishes ownership and builds a foundation for trust. So with that foundation of trust, we could very easily share what we were struggling with in terms of our technical training, and our struggles with our individual approaches as members of the automotive industry. So through our many discussions as we started up the AMTEC organization, we discovered a shared problem across the North American automotive industry. This common problem awareness that we shared reinforced the value of collaboration among competitors.

So I want to talk about some challenges that we faced as we started the AMTEC collaborative. The very first one, of course, is trust among partners, both industry and education. So as industry, we anticipated a struggle to establish trust. We don't usually interact with one another, so we're not aware of our common problems. Discovering the common problem, though, created a bond for us. So we're always portrayed as competitors anytime you hear about us in the media. What maybe we didn't know was that you don't really read in the media that community colleges are competitors, but they are. They compete for monies and they compete for students. So we had relationships to build across all of our partners as we started AMTEC.

So maintaining the engagement and achieving a consensus are difficult to do in a practical world that requires results to sustain the investment. Sometimes when you work with consensus it seems like you're not accomplishing anything. So one question we had to continue to ask ourselves was what's in this for me, for my company, for my industry. So I've already shared our common problem awareness. We could gain more by working together than we could by pursuing our separate methods.

Manufacturing, though, is about immediate results and tangible products. So we learned early on that the benefits of this collaborative would be longer term. For us as Toyota, that's consistent with the way we manage our business. We're always looking for the long-term impact, not necessarily the short-term game.

A third challenge that we faced is changing the status quo. So what risks were we really willing to take? As competitors we protect what makes us competitive. Those are usually our production methods or our products. But how we train our maintenance technicians is not a competitive advantage for us as an industry. So being collaborative competitors gives us benefits that we cannot easily attain by ourselves.

A second, maybe, challenge then was applying a bold transformational method to a problem that wasn't really viewed as a problem by very many. So engaging support in our companies at that time was very difficult because maintenance training was not viewed as a critical component of our operation.

So if I move to our current day, there are really four elements of our collaborative that continue to pose challenges for us as the industry. So first, sustaining relationships. AMTEC began in late 2004, early 2005, so we're now seven years into this project. We've experienced many changes in the people we represent our partners. With each new member, we restart the relationship and restart the consensus.

The second challenge is broadening the circle of trust. Our small circle of automotive partners is very engaged, very committed to the long-term benefits, but we continue to struggle with the broad awareness in our individual companies because that problem awareness is just still not very widespread.

The next challenge we face is really just demonstrating the results. So seven years into the project we are progressing with curriculum and assessment development. Even though we're committed to that longer term impact of using the community college to deliver these common skills training programs for us, there's always pressure on us to show achievement and tangible results. Often the pressure to achieve tangible results takes our focus away from the problem to be solved. In this case, if we don't remember that common problem is our reason for being a collaborative, we can easily divert our energies and resources to other activities that won't support the needs of the collaborative. So keeping that

alignment requires a balance. For example, how do we keep ourselves focused on developing curriculum when one of our partners needs to use their resources for assessments for a new plant startup? Or for some specific training focus during an economic decline that reduces our production volume? Being a part of the collaborative, we can find and sustain the best path for us as a – as a common organization.

That concludes the challenges that I would like to share with you. I would now like to introduce my colleague Mark Manual from Bluegrass Community and Technical College.

Good day everyone. My name's Mark Manual, and I'm with Bluegrass Community and Technical College in Lexington, Kentucky. We're one of 16 community and technical colleges in the state Kentucky system, and I thought what I would do is talk a little bit about what's been different in our partnership and some of the challenges that has presented from the community college perspective. And I'm going to go through this fairly quickly so that we can get to the question and answer portion so that we can address what you need. You will see a few things that are a little bit shifted on the slides, and we will certainly get those fixed before we get those out to you, but -.

One of the things that – and Caren has touched on this – one of the things that's a little bit different, for those of you that are in community colleges, you know you have a workforce division that typically has a lot of client relationships with industries, with business and industry in your – in your particular region. And the partnership is a little bit different where it's not a client relationship necessarily providing a service for payment, but it's actually working together and understanding each other's needs. And that – that – that's more of a challenge of developing that relationship than it is sitting down and working out a training agreement with some measurable outcomes at the end. The relationship is central to that.

The other thing that's been a little different in AMTEC is that the industry was very much a part of developing the competencies. And of course, for those of you that are in community colleges, you know that faculty tend to think of themselves as the subject matter experts, and being able to sit down with an industry and – and integrate those things is – is a little bit of a challenge. In our particular case, with our Kentucky plant here in Toyota that we've been working with since its inception in 1987, the industry actually goes out and recruits students into the program. And into a particular program that is an interim program with Toyota. And one of the challenges we have is making sure that we continue to have open access. That other students that aren't necessarily – meet the requirements for that program still have access to the education they need. And we can feed other industries as well as automotive.

We work our schedules around the production needs of the plant. That's a little bit different than most academia follows with 16 week schedules and block scheduling, so we have different block schedules than the college does for – for those particular students. And sometimes getting the college on board to do certain things like that is a little more difficult and certainly a challenge.

We actually evaluate our students in the intern program, both on their academic and their work performance. And that is much different than what most college programs do, and it's also very different for the student. Most of these students come in and aren't – they don't have a background in any other college, so they're – they don't have anything to base that on, so this is kind of what they're used to, but – but that does present challenges of those college folks out there know about sharing information and \INAUDIBLE\ and the challenge really is communication with the student, with the industry, and with the community college partner.

Just a few others. Integrating industry-specific needs. In this case we're dealing with the automotive industry. But we, as a college, we – we try to provide that as well as we can to that industry and to our partner, but then also be able to be flexible enough to provide the things that other industries in our region need as well. Now in the case of industrial maintenance, or skilled trades as we've called it, a lot of those things are very transferable from one industry to the other, and there's not a lot of differences, which made this a lot easier to demonstrate a success pretty quickly.

In this case we've done some integration of company-specific training into the program, and we actually have Toyota employees doing some of that training, which is not for college credit necessarily but it's stuff that we wanted students to do. And one of our challenges was how do we – how do we deal with students that aren't necessarily in the program in automotive or – or in the Toyota intern program or in the AMTEC program, and how do we make sure that they get the benefit of those things but may not be – that may not be in their course of study. And in many cases we open that up to them and let them attend those things even though that isn't a requirement of their graduation. And most of them see the benefit and do that anyway.

And then the last one I have listed here is probably the most interesting challenge, is we're really running an academic program on site at a – at an production facility through a workforce division at a community college, and that challenge has been making sure that the academic leadership and workforce leadership, and all the college leadership actually, are on the same page and understand what's going on and agree with what's going on. And we're actually in the process of moving that workforce to academics so that we can spread that – some of the things that we've learned through, not just IMT, but through some of the other programs that we have here at the college.

So with that I'm going to end, and we can get into questions and answers and hopefully we can answer some of the questions that have been building up out there.

Thank you so much, to Annette, Caren and Mark for sharing all your insights and experiences as you're working towards this partnership. So as we are receiving incoming questions, I would like to turn to Brenda to see if she has a question she would like to throw out to the presenters.

Sure, I really would. Thank you – thank you, Sue. I also want to thank our presenters, and I hope all of the folks that are listening in found their presentation as informative as I did. It's just very impressive work that you're all doing, and so thank you for sharing your successes with us.

So you know, you highlighted a partnership this afternoon, and even in our brief we highlight some that use intermediaries, and so what I want to ask our presenters, if there aren't intermediaries and it's really just the community college and the employers working to build this partnership, what lessons can you share with us, Mark and Caren, and Annette, that you could share with the audience if there aren't folks that are intermediaries available to assist in building these very important partnerships?

Mark, maybe you could answer that first because I really serve as an intermediary I believe.

And I was just sitting here thinking that our partnership is probably a little different than others because we already had a partnership, or at least we had the beginnings of a partnership, before the intermediary, so we actually are doing both at the same time which is even a little trickier to handle some days because we're not - we - if we don't over communicate we tend to get in each other's way, and sometimes the only people that really are communicating are the folks that are out there doing the work and not Caren and Annette and I. Sometimes we have to – we have to make sure that we're on the same page as the folks that are actually doing the work. In our particular case we have - we have community college employees, both staff and faculty, who reside at the production facility of Toyota, NAPSC, which is their training facility there, and I would hazard a guess that if you - if someone that didn't know us walked in there, they would not be able to tell the Toyota employees from the community college employees. They pretty much coexist and they speak with each other every day. They participate - our community college employees participate in their weekly safety meetings, which is not something that typically a community college would do. We have Toyota employees that come here on our other campuses to help us with things, so we've developed that partnership over the years and it - it seems to be a little more second nature to us because it's - it's been going on so long. But I - I think that the - and I think Caren mentioned this earlier - that it - it really goes back to developing trust and developing those relationships because that's what makes the partnership work. And understanding what each of us - each of our problems are and what our outcome - our desired outcomes are in working together to make - make that - and I know it's overused, but a win-win situation instead of just that client relationship.

Great. Oh, was that Caren?

I would like to add something. I think in terms of an intermediary, because the Toyota Kentucky plant has this longstanding relationship with Bluegrass Community and Technical College, and because we do have their college on our factory site, we also served as sort of an intermediary for our other partners because we had a working model that we developed pre-AMTEC that then merged with AMTEC because it made sense for the scale that we needed. We actually brought our competitors into our facility and brought the other colleges in to our facility to show them, here – here's what you can do. So small models that are working can also be used to help people see the possibilities.

And if I could just add to that, Caren, and I think that one of the – as an intermediary I believe that some of the synergy around that is the learning that has transpired from one partner to the other or one company to another or one college to another, that we really don't talk about in measuring as – as it relates to our goals as much, but that has been huge, and I think that that has been really the thing that has really moved us forward in so many things.

Thank you. We're going to move on to a question specifically for Caren, which is, what metrics to you use to judge the quality of the workforce entrants that emerge from community colleges?

Well, at present we have a number of different tools that we use, so all of our plants do not use the same tools, so in some cases we use NOCTI, as that's known to everyone. Our intention is to use the AMTEC assessment, so that would both as a completion of their program. If they didn't go through the program we might still use that as a means to check the incoming skill level to determine what – what additional training is needed.

Great. Thank you. We have another question. This is – this is for – it's focused on community colleges so I think, you know, all the presenters can probably join in on answering this one. The question is, what is the most important step for community colleges to take to initiate a partnership process?

This is Annette. I believe that the first step is – is to basically bring all of your stakeholders together, and listen. To lay out what the issues are, and then to listen. And that takes time. We talked – Caren talked a little bit about the time around gathering consensus. You – and you have to do that often because you have to being to understand – they have to understand the issues that we as educators face. The industry partners have to understand that. And we have to understand all of their issues, and that – and that's – I don't think that that's something that happens quickly. We did that through our academies, and I pointed to that earlier as a really important step, was to bring everyone together through the academies and talk about the issues. And I don't know that all the manufacturers, for example, really understood the shortage of skilled workers we were facing. What it meant to them a year, five years or ten years down the road. And it took time for that realization to occur. It took time for us to understand each other's acronyms, and that type of thing, and so you really do need to bring all the stakeholders together and you need time to listen, and – and you need to make sure that you purposely set that time aside to listen. Some of my colleagues – and I know JoAnne's on the – listening in to the session – I could see when JoAnne had a puzzled look on her face. And I would wait and give her opportunity to – to express herself, and we would move forward together. So it's not easy, but it's just through that communication.

One of the things that community colleges have that are probably underutilized are advisory boards for each of the programs. The programs typically have Indus – industry folks that come in and advise about what a program's about, about what the curriculum ought to be doing, and should be giving input of what those changes ought to be. And some programs use those very well, and they – they use that key word Annette stressed was listen. Ask them the questions and then listen to what they really need. And then, as we all know, some programs make that – it's pretty much just one time a year they bring them in and have dinner with them. Or have lunch with them. And if it's just a lunch that's making people feel good, that's not – that's not worthwhile doing. But if you bring them in, you have to open up and say, what do you really want, and then you have to be willing to listen to that and respond to it.

And Mark, if I could just add, you also have to understand that if you bring them in, to the level that we're – we're talking about and they say, no, this is not what I need, you need to go back to the drawing board. You need to be ready to listen and respond to that. The AMTEC industry partners are empowered, and feel empowered, in that respect because they know that – that they have a say and they're very committed to that.

Thank you. So one question, this is something we – we also have lots of inquiries about, is related to community colleges. And specifically at community colleges, the workforce side and also the academic credit-bearing side of the house, sometimes they're very separate, and so we're wondering, Bluegrass, how have you been able to reconcile the credit bearing aspect against the non-credit bearing aspects?

Well, in Kentucky, and this happened actually before my tenure here, we do most of our workforce training for credit. Now that requires a lot more paperwork and a lot of – a lot more work on the community college side, but in the long term we thought that that was a better thing to do so people have at least portions of credit to bring – and hopefully bring that back and get a certificate or a diploma, or a degree down the road. So we've addressed that by doing workforce training for credit. Now we don't do all of our workforce training for credit, but we do the lion's share, I would say probably 85% of it is done for credit. Which brings those two sides of the house together, which in a lot of places are very, very segregated between workforce and academia, or academics.

I'm sorry. And here's a – a pretty big, high-level question about your partnership. Generally, how has the partnership changed over time, and really specifically, how have you been able to maintain the high level of partnership involvement and engagement throughout this process?

This is Annette. I'll address that question. I really believe – Caren alluded to this earlier – we have seen some changes in leadership within the AMTEC organization, and we've been fortunate that there's enough of a commitment at each one of the partner sites that there's someone that quickly comes in and replaces that individual. And it takes a little bit of time to get, maybe to get them up to speed on all of the things that we're doing. But I believe just the energy of all of the colleges and more – probably more importantly, all of the companies working together has been able to keep everyone at the table. And through that they've developed relationships that are very powerful where maybe one company will call another company as it relates to their pathway and say, how are you doing this, as they look at solutions of how they are going to work with their local college. And so it's through the AMTEC academy. We try to have a big event where we highlight one of our schools and one of our industry partners. Have to be a joint academy. We do those twice a year. And we have one coming up, by the way, if you check out our website in Spartanburg, South Carolina with Spartanburg Community College and BMW. And we learn from each other. And we develop those relationships and expand on those relationships through those events.

Okay, we're going to go into more of the very deep, more detailed question, and this is for Mark. The question is more of a clarifying question, which is, does your program offer a credential and also who validates the credential, whether it's employers or other stakeholders?

Yes, the – currently the – well, there's a variety of things going on, and we do some short term workforce training for current Toyota employees. But for the internship program which – which I spoke about, that is a full associate's degree program, and it's granted by the college and we are SACS accredited, so it – it is a full degree. Imbedded in that degree are a variety of credentials and the students earn those along the way, but at the end of, in this case it's five semesters, and they do go through the summer, which makes up a fifth semester, but they – they receive their associate's degree in Industrial Maintenance Technology from Bluegrass.

Thank you. So this question is – is probably mostly for Caren but also for Mark. How are you all modeling this relationship between Toyota and community colleges with the Toyota plant?

This is Caren. One of the ways that we've done that is through the AMTEC academies, so early on, I believe it was 2000 – I want to say seven or eight, it's been a while, we were struggling maybe with some connection across all of the partners. In our early days it wasn't really clear maybe how quickly we were going to get to a deliverable. So we brought people into the North American Production Support Center to see the Bluegrass Community and Technical College training area and to see how we actually used this, not just for Toyota employees, but for the local community. So this college is actually open to anyone. So we brought in our own college partners for our other operations as well as college partners for GM and Ford and BMW and showed them how we really made that work and how closely we worked together. Also during that academy, each of those partner sets was given time to work on their own partnership plan. So a community college and a manufacturer had their own meeting room to – to start on their own plan as part of that academy.

Okay. So we have one question which Annette or Caren could probably answer which is, how did you deal with or how did you work with proprietary information and nondisclosure agreements?

Well maybe from the automotive perspective, what we had to break through when we started the collaborative is the technical training is not proprietary at all. And as a matter of fact, something that we had, even though we'd worked with Bluegrass Community and Technical College for a long time, we had developed a lot of our own curriculum as Toyota. So when we joined AMTEC and knew that we were going to try to make a common curriculum to be used nationally, we provided our curriculum as a starting point. None of us wanted to start over, but that was a – kind of a way of signifying our commitment, but also giving something to the collaborative that we could start working with. And part of the consensus building is everybody being open to discussing what they need, so when a partner says, but we should be doing this, if this is not something that's common and non-proprietary, we have to discuss that right away. So if the training is about a unique piece of equipment, we do not address that in AMTEC. So it's only common – common training to the entire industry.

I don't believe I have anything to add to that question.

Okay. Thanks. So this is a question for Mark. So it's related to the discussion about creating career pathways, and the question is, is there any work being done to work with career technical education programs at the high schools to create the pathways from the high schools and onward?

Well, in the spirit of a true partnership, I think all three of us have a comment about that because career pathways is one of the goals of AMTEC, and I'll – I'll speak just from Bluegrass's local experience that we are working with some of our community – or some of our career and tech ed schools in and around the plant. In fact we are doing some early college classes with some of those. We recruit heavily out of them, and Toyota actually does quite a bit of that for us, going to visit, because we found and they found as part of this partnership that when Toyota goes in and talks to a student about going to college, it's a lot different than me going because they know I'm a college person and sure, he's going to tell me I need to go to college. But when they hear it from somebody out in the industry and part of the community, it's a little bit different, and they can talk about what it's really like in their industry and why it's important to go to college and what kind of things they ought to be studying. But yes, we have, in fact we have folks that are involved in AMTEC – and Annette may want to address this – that have worked on career pathways all the way back before middle school, so -.

Yes. In our research around career pathways that we wanted our automotive manufacturers to help us support, really we – we pulled some of our data from the Pathways to Prosperity report that identified the fact that the manufacturers needed to be involved with all phases of the pathway. And so you could hear Mark talk about the fact that Toyota supports their recruitment of the students in the – in the K-12 system, and that's what we ask all of our partners to be active in supporting their community college and their intermediate school district, their advanced technology centers, and even into lower levels of K-12 to make sure that we have the talent pipeline that we're going to need to be competitive. And so, each one – there's six key factors that we have identified through AMTEC that we ask the partners to address. And

each one of them are a little bit different, but they all make sure that they address the six factors, with one being to me the most unique and most rewarding is to have the manufacturers involved.

# Caren, did you have anything you would like to add?

I don't know that I have a lot to add. I mean, I think we're learning about what our role is as a manufacturer in working with other educational institutions. And maybe one of the things that – that we struggle with is interest in manufacturing jobs. So our interest maybe in career pathways is to get the right information to students and to parents and to people who serve as counselors in the schools about the – what's good about working in – in manufacturing. And the earlier students can be exposed to some of the skills that are used in manufacturing, the math, the more technical part of the education, it may enable us to broaden the pipeline of incoming – incoming applicants.

Thank you. So we have one question I think all three of you probably have a very strong stake in answering which is, I understand that the standards for the training are benchmarked globally so wanted every one of the presenters to explain from your perspective why that's really important.

One of the reasons why we benchmark globally, and I saw in - that there was also a little bit of question about the Delphi study, and that's really where we started benchmarking globally. We asked the - the industry once we did the DACUM, and I'll just re-clarify what that is, that's asking industry what it is that you do and documenting those things, and not HR people but the people that are actually on the floor doing the job, what is it that you do every day. And then you go out with a Delphi study, which is basically just a survey, and ask them to rate how important each one of those things that were identified are from not important at all to extremely important. Okay? So once we finished that - we finished the DACUM and we had the list from Toyota, we needed broader input from all manufacturers. And so we asked them to identify their best workforce to rate the competency, from extremely important to not important at all. Well, some of those people that were identified were in Germany. Some were in Brazil and other places. And that's when we, just by accident so to speak, we ended up with an international study. And then we were working with, actually, OVAE. We attended a meeting. It was me and General Motors in Bonn working with the German Ministry, and we found that our European colleagues as they were looking at the European states, they were looking at what they called VETAS, Vocational and Educational Training in the Automotive Sector. And they were looking at the same thing that AMTEC was. And we had a lot of synergy around those standards. And what we heard from the manufacturers are - is that their plants and their – and their training needs are – are not unique to the United States. There were things that we could learn about the German apprenticeship model, the European apprenticeship model, that we imbedded into the AMTEC curriculum, and so understanding how we stack up and how we compete globally is important. And how we're preparing these manufacturers' workforce because they're global companies, and we have to show that the American workforce can do – given the right tools – can do just as well as anyone else.

Great. Mark and Caren, do you have thoughts on this?

No, I think Annette hit the nail on the head there that all of our – all of our automotive partners are global companies, and if we only look at what we're doing here in the United States, we need – we could end up shooting short and we want to make sure that we're – we're at the top level across the world, not just – not just here in the United States.

# Great. Very true.

Okay. So we have another question. This one is relating to improving the basic skills at the community college. So really specifically, what's the instruction – what's the instructional model that you use at Bluegrass and how are contents – or course contents based – or are course contents based and also related to that, how are the needs of language learners addressed?

I'm assuming that's – when we talked about basic skills earlier, we were talking about basic industrial maintenance skills, basic electricity, mechanics, fluid power, pneumatics, those kinds of things. Welding. But I'm assuming the question is more about developmental skills. At Bluegrass we're an open access institution and we certainly have a lot of students that come to us that score low in one or more areas and need some developmental work. We also work with adult ed. To do some of that work we have developmental classes that are in class type atmospheres. And we have just started looking at, and this is across the system actually, not just at Bluegrass but across the Kentucky system, the ITBS model integrating adult – some basic skills learning, adult ed type learning, with technical skill training, and doing that side by side. In fact, we're one of the pilot schools for that right now, and that's – that effort's really just gotten started in the last couple months, so – and I see that – I see great things for that down the road. I know that they're doing that out on the West Coast and doing a really good job of it, so -.

Thank you. So this is for Mark but also Caren and Annette, if you're, you know, interested in also jumping in, so the question also connected to this is related to incumbent workers and making sure they're also skilling up into the pipeline, so are there, you know, initiatives that are sort of helping incumbent workers move into this industry as well? And what are you doing in this area for incumbent workers?

We still do the typical workforce-type classes for incumbent workers, but the beauty, and one of the – one of the real strengths of AMTEC, is that being modularized and being online allows incumbent workers access that they wouldn't have otherwise. One of the issues we run into is – especially with smaller plants, smaller manufacturing plants where they may only have two mechanics on shift at a time, or two electricians on shift if they're not multi-skilled, they can't really cut people lose to send them to a class, and even if they do, they don't have enough for a class, so then you have to get into consortia and those types of things to make that work. With the AMTEC curriculum and being – having an online delivery system, they'll be able to sit at their plant or at home and take those classes in modules, and take the lecture portion of that online, and then get with us and come in and do the labs in blocks or smaller – smaller blocks as well. So that's one of the ways AMTEC really is – is key and that delivery model is key to up scaling our current workforce. As you know, we really do live in advanced manufacturing and some of the individuals that have been out there have been in – in industry for 20 years and the – the technology keeps changing, and to keep them skilled to the level they need to be to be competitive is difficult, especially when it's a lean operation and there's not a lot of – not a lot of folks standing around just to relieve somebody for training. So the AMTEC model is – is really going to address that very well.

Great. Thank you.

A couple of -

We're getting so many great questions. Oh, I'm sorry. Somebody was jumping on.

Okay, I'm sorry. I just wanted to point out a couple of cases where it's current – our assessment is currently being used. Right now in – in the Smyrna, Tennessee area, Nissan is bringing on a couple of hundred new technicians out of the workforce and they're using the AMTEC assessment to identify skills gaps and getting this – this select – select people that will get jobs at Nissan the right skill sets for – to work effectively at Nissan. Another example is in northern Ohio, where the magnet group in northern Ohio administered several hundred AMTEC assessments and then did wraparound training there for laid off incumbents to get them back into the workforce.

Great. And one question, so this question is about data. We've been getting a couple questions about data we're combining into one. The question is, do industry partners share data with colleges related to the work readiness of their students, and also in your experience, what are the challenges in sharing this information?

Mark, you have a practical example.

When sharing – when someone walks into your office and tells you whether it's working, is that considered sharing data? One of the good things about our partnership is we are actually located there and they see it every day, so we – we have that relationship where we have faculty that walk out on the production floor and talk to maintenance managers. So we – we have that relationship there that we're – we're getting that. I'm not sure we have research data for it, although we have discussed doing some studies like that with some of our four-year institutions here in the area of studying some of the different delivery models and what's working better than others and those kinds of things, but, Annette, you may have had something in mind that I'm not thinking about at the moment.

Well, I mean, as we validated our assessment, I mean, we have data, and there's been talk with some of the manufacturers it would be interesting to look at. We have not shared that data with the manufacturers. The only thing we share with them is the data on the importance of the competencies. We do give them skill reports on the assessments and they – they – their employees agree to that before we give them the results of the assessment. And so we share those results, and then we share outcomes that were identified as important that should be – that is in the curriculum. We don't share each company's individual reports with another company.

And one of the other things that gets shared, and I think I mentioned it earlier, the students that are in the internship program are actually employed by Toyota and work three full days a week. Then they go to school two days a week, all day long. Toyota provides them every – every duration of time, and I can't remember exactly what it is off the top of my head, but they come up for raises. But their raise is not based just on work performance, it's based on their academic performance and it's based on their attendance, both in class and at work. So we share that data with them. And the student – the student has to sign the paperwork to allow that, I mean they have to allow that under FERPA, but – so Toyota is so ingrained in that pro – in that process that they want the student to understand that it's not just that you come out here and work well on the floor and work well in the maintenance shop, but you also have to perform in the classroom and you have to attend every day, because if you're not there, you're not learning, and if you're not here, you're not working, so -.

From an industry perspective, this is Caren. This is something that we're going to have to continue to make some efforts on. For manufacturing it's difficult to maintain an investment unless you can see a real return on it, so we need to make the commitment, though, to be able to track the performance of students that come out of the programs and then be able to feed that back to the AMTEC organization where maybe it meets the mark and where it doesn't, so that we have some – some data that says we should continue the program and how should we continue it or what sort of adjustments should we make to that program. So, Mark's talked a little bit about our internship program. We do track the performance of those interns and also track the hiring percentage. So – and I don't know that we have conclusive data yet, it's a relatively new program. I can tell you that some of them are being very successful and are being hired and others are not as successful.

Thank you. So we have time for one more question, and it's fairly detailed, actually, related to career technical education. So this is a question asking what percentage of career technical education students are recruited by the industry partners?

I think that, you know, I will attempt to answer that one. I think it's difficult to speak for all of them because they're all in different positions in terms of – and some of them are just starting to set up their career pathway. Others are very aggressive and already have started those based on a need. But we have examples, and I'll give you one really good example down in San Antonio, Texas, in the Alamo Community College District, we have a very, very good program that's been running down there for ten years, actually, through Lockheed Martin. And Toyota also just picked up that program. And it – it addresses the key factors that we identified as important as part of our pathway. They have a long tradition of bringing in non-traditional students that have had challenges and taking them all the way through associate degree programs, actually through the high school program, career academies, into the associate degree program, and then on to bachelors and masters degrees. That program has been very successful. Some of the other programs are just getting started. Caren had alluded to the fact I believe

the Bluegrass program is just about a year old, so we don't have any longitudinal data there, but we're – we're just getting started and just completing our research around the key factors that we feel is important in our pathway model. And so it's very difficult to give you exact numbers, they range from place to place. The academy in South Carolina will be highlighting their program with Spartanburg and BMW this – next month.

Okay. So we're – thank you very much for answering all the questions. I thought the questions were great and it was also very insightful to sort of get your perspective on some of the challenges and experiences from the field. So I want to turn it over to Brenda to provide closing remarks.

Sure. I'll be very brief. I'm sorry the presenters can't hear all of us clapping, but it was just a – a really very informative workshop. You were very thorough, and as Sue said, very insightful. And it's just really impressive to hear all the great work that you're doing and I – and I hope that folks who are listening in really are able to continue a dialogue with each of you and to learn from the presentations that you gave all of us. And so thank you very much the presenters. And really thank you to the audience for your thoughtful questions. Unfortunately we ran out of time and couldn't get to all of them, but it shows a tremendous interest in this work. And so I'll just put a plug in that this is the first of four webinars, and we'll look forward to your future participation in the next one in March. And so now I'll just turn it over to Sue and thank her for coordinating it. And I also wanted to again thank Jim Stone and ACTE for hosting the webinar.

Great. Thank you, Brenda. So we really, again, appreciate everybody's interest, and because of the num - numerous questions that we received, if it wasn't answered or if you have a subsequent follow-up question, we encourage you to reach out to your peers featured during the session, and if you need their information, you can email me, personally, and I'm happy to share the information with you. And so my email is sue.liu@ed.gov. The webinar will also be archived and accessible at a future date, so feel free to check back on our website for more details. And as Brenda also alluded to, there's - I also want to give a heads up about the upcoming webinars that are taking place. We have one that's happening on March 26, and that's at 12:30 Eastern Standard, and so during this session we will tackle college completion and really focus on the transition between - from high school to college. And so this session's really looking at the efforts currently taking place in terms of the secondary to post-secondary alignment, and we will have local practitioners who have been able to develop and, you know, look through innovative strategies to really align this work. So stay tuned for more details. We will be sending out more information in the upcoming weeks, and if you're not on the list you can email me or Carol Norris carol.norris@ed.gov if you want to be added to the list. The other webinar that's taking place in the National Center's webinar, and this one is about labor market information within a program of study context. And so there's - there's more information on the nrccte.org website, and so you can also find a way to register there as well. Thank you, everybody, for all the questions and interest and enthusiasm on this issue, and we look forward to hearing more about your great work. . Take care.