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CCAM
COMMONWEALTH CENTER FOR ADVANCED MANUFACTURING

Curriculum Committee Meeting

Thursday, November 21, 2013

10:00 o'clock a.m.

Abingdon, Virginia

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1 **APPEARANCES:**

2 Mr. Bruce Sobczak

3 Director of Workforce Development

4 Dr. John Cavan

5 President, Southside Virginia Community College

6 Dr. Rachel Fowlkes

7 Southwest Virginia Higher Education Center

8 Mr. Gill Graham

9 Plant Manager, Shelly Corporation

10 Mr. Craig Herndon

11 Virginia Community College System

12 Workforce Development

13 Mr. Kevin Mumpower

14 Vice President, Bristol Compressors

15 Mr. Ron Proffitt

16 President, Virginia Highlands Community College

17 Mr. Larry Souverielle

18 General Dynamics

19 Mr. William Wampler, Jr.

20 Director, New College Institute

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1 COMMISSION STAFF:

2 Mr. Timothy S. Pfohl

3 Interim Executive Director and Grants Program Manager

4 Mr. Neal Noyes, Senior Advisor

5 Ms. Stacey Richardson, Executive Assistant

6 Ms. Sara G. Williams

7 Grants Program Administrator - Southwest Virginia

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1 November 21, 2013

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3 MR. NOYES: All right. Let's go ahead and get the
4 meeting started. And I might add there'll be a tour of this facility
5 once we're finished, and it is a potential location for the Center of
6 Excellence. The Resources Committee will be taking care of that,
7 and for those of you that want to see it, there's an opportunity to
8 do it, and we'll be doing it again this afternoon when we meet
9 with the Resources Committee. Happily for all of you, I have the
10 shortest piece of today's meeting.

11 I now have the pleasure of introduce Bruce Sobczak,
12 and I'll give you a little background. He's just come on board at
13 CCAM. The Tobacco Commission three years ago provided funds
14 to CCAM for an Economic Development position and a Workforce
15 Development position to focus on the footprint. Bruce will be
16 leading us through today's agenda and will be taking over the
17 leadership of the three ad hoc committees that we have, and we
18 are getting close to making a decision, or actually the Education
19 Committee will make the decision on how this program is going
20 to be rolled out. So I'm going to turn this over, and I believe you
21 have a copy of Bruce's resume in the packet that you've
22 received.

23 So, first of all, let's go around the table and do some
24 introductions.

25 MR. HERNDON: I'm Craig Herndon.

1 DR. CAVAN: I'm John Cavan, President of Southside
2 Community College.

3 MR. PROFFITT: Ron Proffitt, President of Virginia
4 Highlands Community College.

5 MR. WAMPLER: William Wampler, the Director of the
6 New College Institute in Martinsville.

7 MR. MUMPOWER: I'm Kevin Mumpower, Vice President
8 of Bristol Compressors.

9 MR. GRAHAM: I'm Gill Graham, Shelly Corporation,
10 Plant Manager.

11 MR. SOBCZAK: Thank you folks. I really appreciate
12 your time and your efforts in being here this morning for this
13 committee meeting. You do have some handouts there,
14 including my resume, and the background. I started as a
15 licensed tool and die maker. I'm a product of a trade school.
16 Through my apprenticeship program, I got into the tool and die
17 making and got a battlefield promotion, and I rose to the
18 manager of a manufacturing and engineering for a world class
19 company. Realizing as my kids got older, I didn't have the
20 resume to get near you for the job I held, I went back to school
21 and got my Bachelor's and Master's degree in '04 and '08.

22 For many years, I've been working as an adjunct in
23 Southern California part-time teaching at the Institute for
24 Advanced Manufacturing. About five years ago, I went to work
25 for the South Orange Community College in Southern California

1 as Director of Economic and Workforce Development.

2 I've only been a Virginian since October 1st. I really
3 love it, and it's great here. I saw this opportunity. I see what
4 Virginia has and the potential of this project and CCAM, which I
5 also represent in these travels. I think it's really something
6 special because I've seen just the opposite in California. You've
7 got a lot of opportunities to be very successful here.

8 I promise I won't do this by PowerPoint, and I'll go
9 through this very quickly, because I just want to set the stage for
10 some of the background of this project.

11 This is the Tobacco Commission here, Tim and Neal
12 are heading it up on this side, and I'm going to talk about all the
13 different roles and the different players.

14 The next slide, please. This is an advanced
15 manufacturing project that we need to attract businesses here
16 and we need people that can deliver the kind of skills and work
17 that companies are looking for, including Rolls-Royce. So, this is
18 the Tobacco Commission, and it's in partnership, and it's based
19 on what was delivered by the Boston Consulting Group's report.
20 The highest level or objective and there are actually two major
21 objectives. Increasing the capacity and capability of the
22 community colleges and other training programs to develop skills
23 the employers require and attracting individuals to pursue
24 careers and advanced manufacturing. That's the highest level of
25 these goals.

1 Next slide. With that in mind, the Boston Consulting
2 Group came up with some major objectives here. One of them is
3 to establish three Centers of Excellence, or COEs, to provide
4 hands-on training in the priority areas and to increase funding to
5 develop distance learning, and you do have some geographical
6 challenges here. I drove out at 4:00 o'clock this morning and it
7 was beautiful, a long one, to get that first 200, the last 50 is
8 easy. So we have to consider reaching out across this vast
9 region. So I want to give you some framework. The priority skill
10 areas are machinists and machine professionals. Ninety-nine
11 percent of these are computer American-controlled machines,
12 CNC machines.

13 There are some specialties involved. Fifty percent of
14 this workforce shortage at the mid-skill level are machinists,
15 approximately 28 percent are in welding, approximately 22
16 percent industrial machinery mechanics. These are the skills
17 needed to fill this gap for a five-year period, as you've seen in
18 the Boston Consulting Group's report.

19 Now, there are some cost budgets in there, and it's a
20 guideline, and I don't want to beat this to death, There are three
21 facilities, 3 to 4.5 million each. We've got a breakdown of
22 equipment costs, mobile labs, and these are suggestions. Now,
23 on the structure of this, the leadership and governance model,
24 we're going to have a Steering Committee obviously, and that's
25 the GIGRC. Obviously, the Tobacco Commission is going to be in

1 charge of these allocations and have the final word on where
2 everything goes. The CCAM Board will be giving some guidance
3 if we're going in the right technical direction. The overall budget,
4 these boards will have oversight and key implementation work
5 streams to insure quality. And CCAM will also provide ongoing
6 guidance.

7 Now, my role as director of the Workforce
8 Development at CCAM, I'm going to help facilitate meetings and
9 I'm going to serve as the conduit between the Curriculum
10 meetings and the Resource meetings and Marketing meetings. I
11 picture as a result of all this some other subcommittees and
12 working groups coming out of this, and I'm also hoping to get
13 some of this here today. I will also facilitate those and report
14 back and I'm going to make sure we achieve consensus on
15 everything, and that's what I want to make sure we try to do
16 today. And I'd like to remind everyone that the consensus is not
17 anyone's idea, but it's the best situation that we achieve and we
18 all live with, so I'll drive for that. I want to create working
19 groups, and I want to form project plans for work breakdowns
20 and structures for these different projects, and I'm going to drive
21 implementation. And that is my role.

22 I can offer expertise, and I have a long background in
23 manufacturing and I've set up operations worldwide, so I do have
24 a taste of this. We're going to have to make some high level
25 decisions as we go.

1 The role of the Curriculum Committee that's here, and
2 we're going to ask you to do your active participation here and
3 you're going to provide technical expertise and you have a
4 wealth of knowledge. We need to recommend some standards
5 for the curriculum, and we need to get to that, and we have to
6 have some standards within. There's a lot of curriculum out
7 there, and it's not going to probably be identical curriculum here,
8 but we have to come up with some standards within this. We're
9 going to have to recognize industry certification, and we have
10 some of the handouts here. We have the NIMS certification,
11 American Welding, those are kind of obvious. What we're going
12 to have to be clever and creative probably in the factory
13 maintenance area, so there's no one size fits all.

14 So what we need to do is determine what standards,
15 not these industry certifications and third party verification of
16 skills. They don't provide you with a list here as the curriculum,
17 we're going to have to match it up and make sure that we're
18 preparing students at all these different levels.

19 NIMS, for instance, has four different levels, and we're
20 going to have to decide when these levels are tested out and
21 what we're going to do and which one we are going to adopt.

22 I think this committee has a part in recommending
23 equipment because it'll have to go with the training. Resources
24 Committee will be taking care of the budget area, but I think
25 since this is focused on CCAM training, we've got make sure

1 we've got equipment that covers advanced manufacturing needs.
2 With that being said, and I've often said throughout
3 my career in different training centers, you do not need the
4 Ferrari to deliver pizza. And the other thing I've always said was
5 if you learn to drive the Toyota Corolla, when you get a chance to
6 drive the Ferrari, you will do all right, you'll have to be shown
7 where everything is and a little different, but we have to be
8 realistic and spend our money like it's our own and there are
9 ways to do this. With three Centers, and I'm telling you guys,
10 you've got some buying power, and we need to be very wise
11 about our purchases.

12 What I'd like this to be is a standard for training
13 centers throughout the state and beyond. We've got a chance
14 here and we'll do all the hard work and we'll put all this together
15 and put these lists together and we'll compile all this information,
16 but we're not reinventing the wheel all over Virginia. This is a
17 wonderful area for Workforce Development, and there are so
18 many great programs going on here. And I will say this, that it's
19 program rich, the system is poor.

20 What I want to do with our role in CCAM by grading
21 this together and get some consistency so it's not a scattered
22 effort throughout the region.

23 Now, I'll touch quickly on the Resource Committee.
24 They're going to review committee budgets and request and
25 review quotes for equipment, and they're going to get into the

1 nuts and bolts of the facility, so I won't go into too much detail
2 on that right now.

3 One of the things I want to get into today is that we
4 need to talk about requests for proposals, and I think that's a
5 good way to go, and I recommend it. And the Tobacco
6 Commission is backing that. The thing I like about it is that all of
7 the different institutions and what you can offer.

8 Marketing, we do have some marketing challenges,
9 and the Centers have to be aware of that and it has to be active
10 in this. You cannot just be a training center, you're going to
11 have to go out and promote this, and not only the young high
12 school kids and grade school kids and displaced workers, but
13 you're going to have to convince parents and other adults that
14 careers and manufacturing are good, and we do have some great
15 things planned for the future. We've got the Virginia
16 Manufacturing Association. Also, keep in mind that these Centers
17 will have to be active in marketing, as well.

18 MR. NOYES: Go back to the request for proposals,
19 and say a proposal for a Center of Excellence, it's not
20 predetermined at this point. We talk about population density as
21 one factor and talking about not re-inventing programs that are
22 up and operational and we need to build upon them. I also want
23 to say that there is some material in the package you got today
24 is really for the Resources Committee rather than for your
25 committee, the Curriculum Committee, but everybody needs to

1 be on the same page as to how this works and the same
2 information. We have ideas from the Curriculum decisions and
3 from this group on what needs to go into that RFP. The
4 consensus is that's the route you're going to go with the RFP.

5 Tim, do you want to speak to the timing on that.

6 MR. PFOHL: I think we need to get some input from
7 everybody today, but we've got to give people adequate time to
8 put together proposals because there's operational fundraising
9 involved and commitments from educational providers, a
10 commitment of matching funds for establishing a site and
11 equipment. We're collectively thinking that if we write a very
12 tightly worded RFP, that frankly will weed out the pretenders, the
13 ones that just have a vacant building in their town and they'd like
14 to think they're capable of hosting something like this, but we
15 have to set the bar in a way that makes it, this is going to take a
16 very substantial commitment, and that way we can take a look at
17 the best candidate.

18 Once those candidates have been given time to put
19 together the regional proposals, that will be one thing. As I said
20 to some folks, we're initially asking some of the same people that
21 have come together to establish the higher education facility, the
22 R&D centers, and come together and create a new facility that is
23 ideally sustainable and very focused on this task, but we've got
24 to give adequate time to take a look at this. Then the question
25 of how you put it together and put it in writing for us so we can

1 consider it.

2 MR. NOYES: What do you think in terms of timing as
3 far as issuing the RFP?

4 MR. PFOHL: Of the top of my head, if the committees
5 can come together and report when the Commission meets in
6 January, we potentially issue proposals in the late January
7 timeframe and give people maybe until sometime in March or
8 early April to respond, and then we can make some decisions at
9 Commission meetings in May.

10 MR. NOYES: Then that will give everybody an
11 adequate, hopefully an adequate timeframe, and the decision on
12 the Center of Excellence will be made. We need to get that piece
13 that says what the curriculum must be. Bruce and I have had an
14 opportunity to meet with some folks and we were down about
15 two weeks ago, and met with the Southwest Virginia
16 Manufacturers Alliance. One of the questions that seems to be
17 coming up all the time, is this an existing industry or is this a
18 forward-looking effort? The answer, according to Senator Frank
19 Ruff, is that it can be both. It can and should be both. At the
20 end of the day, 50 percent will be machinists, that's what we
21 have to have out of this. We can have other things in addition
22 and other equipment that's not necessarily related to it.

23 The other thing in talking particularly with the
24 Southwest group, they take the machinists and operate different
25 types of equipment and how flexible. The answer Bruce and I

1 gave and that seemed to satisfy that group. We are interested in
2 the credential, how you get to that credential, and what the
3 specialty, whether it's tool and die, whether it's molding. That
4 really needs to be a reflection of what the interest is locally. At
5 the end of the day there's going to be, or at least 20 percent are
6 going to be holding certification, American Welding Society
7 testing at whatever level it is that you all recommend and the
8 Education Committee agrees to.

9 There's a lot of flexibility within this, but there's not a
10 lot of flexibility in terms of ratio of the credential. If there's any
11 questions on that, then we need to deal with that at this point.
12 There is some material in this packet, and there's a draft budget
13 for operations. It may be that all three are different, all three of
14 these Centers of Excellence are different. So there can be a
15 difference, but that was just an idea, and I requested it from the
16 organization and that's what they came up with. It's a template
17 designed by one outfit that might fit the one Center of
18 Excellence, but may not fit the other two.

19 MR. SOBCZAK: Each of the three need to put out
20 somewhere between 70 and 80 certified professionals in that
21 ratio. Fifty percent, 28 percent, or 20 percent. And in these
22 proposals, maybe they want to just focus on one area. Maybe
23 they'll focus on all of the areas, do specialties. That's one of the
24 advantages in tapping into all of the resources that are available
25 and asking for a proposal.

1 SENATOR WAMPLER: You want 225 to come out on
2 an annual basis in terms of the production, tell us what the
3 secret sauce is and how many went into that to turn out the 225?

4 MR. SOBCZAK: Well, the secret sauce is you're going
5 to have to get this in place and you're going to have to determine
6 and you're going to have to train trainers. But this is a marathon
7 and it's to scale.

8 SENATOR WAMPLER: How many do you think we
9 have to put in?

10 MR. NOYES: Four hundred. It's as good an answer as
11 anybody has.

12 MR. SOBCZAK: One thing that goes in the RFP is that
13 ratio, 28/20.

14 MR. NOYES: When the application is made, it's going
15 to show how you're going to do that.

16 SENATOR WAMPLER: One of our biggest questions is
17 how do you allocate costs per student to warrant 75, that's what
18 we're all a little concerned about. We're going to produce 75 or
19 40 in a given year now.

20 MR. SOBCZAK: With manufacturing engineering, we
21 have to have hours available to instruct, have the right amount
22 of equipment. You're talking to cost per students, that's
23 something that the resources will have to come up with. We've
24 got to come up with budgets, suggested budgets.

25 SENATOR WAMPLER: Before we get a firm grasp on

1 this, would you tell us how much money the Center of Excellence
2 will have and we'll tell you how much we can allocate to students
3 to give you your 75 and hopefully we can recruit the right kind of
4 students and top load into the system.

5 MR. SOBCZAK: There's some suggested budgets in
6 the Boston Consulting Group report and the operating budget for
7 instructors and technicians, 1.3 million, administrative support,
8 600,000, 800,000, material management, 0.6 to 1.2 million. I
9 agree it'll have to be broken down in detail.

10 MR. NOYES: Resources will begin with that this
11 afternoon, a decision I would hope that we'd be able to reach this
12 afternoon, a not-to-exceed figure that would go into the RFP.
13 You must remember this is a matching program. It's not a
14 hundred percent commission financed. There will be differences
15 depending on where it's located and arrangements, such as a
16 lease arrangement could make a difference. The Resources
17 Committee can say this afternoon 1.3 million is the cap for
18 instructor costs, and that would go into the RFP.

19 MR. WAMPLER: Well, there's different ones that know
20 how much it cost to certify somebody paying welding, and that's
21 pretty simple math. How many students will have to be enrolled
22 to meet your costs. The question with NIMS and NAMS becomes
23 a little bit more difficult to predict. With a top-down approach of
24 this is what you have per student will help us in helping to
25 determine --

1 MR. NOYES: Get in touch with the NIMS and the
2 NAMs folks and ask that specific question when allocating
3 resources, how much should a Center of Excellence plan for per
4 student?

5 MR. SOBCZAK: These are third party certifications.

6 DR. CAVAN: You're not re-inventing the wheel, are
7 you? In Southside, we have welding, and we're going to partner
8 with John Tyler in machining. Craig can tell you the Southwest
9 colleges are set up like that, and some of these things are
10 already in place.

11 MR. SOBCZAK: Absolutely, I've seen it.

12 MR. NOYES: They're not doing Level 3 welding, and
13 they're not doing underwater nuclear -- If Level 2 is where you
14 want, estimate, get an estimate for the equipment. We can't get
15 to the equipment until we decide this group makes the
16 recommendations on what level we're going to produce, and I
17 believe you said there were four in NIMS. I think there's some of
18 that information in here that we talked about.

19 MR. HERNDON: Well, you mentioned, I'm just
20 wondering if there's anyone outside of Virginia, and one of the
21 concerns is are we cranking out 58 folks per three Centers, and
22 in the early stages, if there are not, or if there is information to
23 inform him, and the folks coming in and haven't yet seen the
24 math or the math requirements. I think that's got to be taken
25 into consideration.

1 MR. SOBCZAK: There are some disclosures with the,
2 through the Carolinas, there's facilities, and Bill Powers was just
3 talking about. So what I'm saying is if you're asking, and I know
4 what you're saying, where are these people going to go get
5 employed, and there is a legal thing. And, Neal, you were talking
6 about the chicken or the egg, but one of the themes is we will
7 not come if we do not -- I think that's why we're stretching here
8 a little bit and the verification. In the end, we can brag about
9 our workforce and these are some great programs that would
10 help out. I know I plan to get out to every single community
11 college I can in the region. I have visited many of the facilities
12 and try to visit the rest. There is great program potential out
13 here. I think John Tyler is great.

14 DR. CAVAN: Here's a problem that we've had. All
15 this is not new to us. You can't solve these problems overnight.

16 MR. SOBCZAK: We've asked folks to commit to this
17 training program on the hope that our economic development will
18 be successful in what's in the supply chain. What we heard is
19 why do these positions exist currently in the Tobacco Region, and
20 what we've learned since then is that the workforce is aging and
21 eligible for the retirement already, and HR offices, like at
22 Goodyear and Owens Illinois and other folks that are represented
23 on the Committee. I can tell HR offices are running scared,
24 entire departments that are eligible to retire now.

25 MR. NOYES: There's an opportunity for a substantial

1 number of these folks that come out, and we did talk to Kevin,
2 and you have that same issue.

3 MR. MUMPOWER: Yes, my best recommendation is
4 you need to do some due diligence and talk with each of the
5 large manufacturers because there is a time period between now
6 and like 15 years for all the people that will be retiring, like
7 machinists, welders, but there's a set number of people
8 statistically, and if you know how many that is, you'll know what
9 the backfill range is and will need to be for the existing
10 employers, because those positions will have to be filled. Then
11 that's going to be your only model for sustaining the front end of
12 this program and we'll be training those immediate needs. And
13 then the follow-on company that would come in would be your
14 next customer.

15 MR. SOBCZAK: That's correct.

16 UNIDENTIFIED: And then we'll be kind of a megasite
17 and we'll be the test platform, so you need to engage us in more
18 detail about what our needs are. Now, and almost a five to eight
19 year time arising to see what this looks like and then add it up,
20 and I think it'll answer your question. I also think you'll be
21 surprised because it might fall outside of some of the curriculum,
22 you'll have to be flexible on that depending on what that picture
23 shows you. There'll be some machine people and welders, but
24 there'll be some other critical needs, as well.

25 MR. NOYES: The Tobacco Commission has the

1 education program, a competitive education program for the
2 community colleges that have done a marvelous job with that
3 program. The resources are going to be available to expand
4 beyond the template that the Boston Consulting Group gave us.
5 We've got to get that done in order to get to the next stage. So,
6 yes, existing industry will get some percentage of these
7 graduates as they come out hopefully.

8 MR. SOBCZAK: I can guarantee you that they will. In
9 Southern California, even with 12 percent unemployment, and
10 when I got a phone call from companies and they were looking
11 for that advanced manufacturing professional, which I call the
12 digital manufacturer, and that person that can take the solid
13 model and import it into a machine and incorporate this design
14 and that data can change everything. You can't find those
15 people. It's like a perfect storm if you think about it.

16 For years, all this training has been neglected because
17 they said we're not going to be doing manufacturing anymore
18 and that's not reality. China just overtook us a few months ago
19 in leading in manufacturing. Up until that point, we're still the
20 biggest manufacturer in the world, but training has been
21 neglected and the technology has changed. T and T has been
22 around since 1980, and that's what I cut my teeth on. So that
23 baby boomer demographics is hitting us hard, even in Southern
24 California, and I'm trying to answer your question, the most calls
25 now to the directors of Economic Development are people looking

1 for advanced manufacturing personnel.

2 So I invite you all as part of CCAM, I just see big
3 efforts in this all the way around. I know Milwaukee is doing a
4 big effort and a good job during this time with advanced
5 manufacturing and all over the country. I think this has
6 degraded so much that I, my family all the way coast to coast to
7 be part of this, and this is something special and this has the
8 potential to be a model for the entire nation.

9 MR. MUMPOWER: I think to answer William's
10 question, military model on training is probably one of the better
11 in the world. The way they're successful with that high rate of
12 graduation is the pre-screening that's done on the front end of
13 those programs to make sure that people going into those
14 pipelines are the right people and people with the right basic
15 analytical skills and even the right behavior and mentality
16 persona about them, and that's why they have 25-plus
17 graduation rates. In the absence of that, it can drop below your
18 75. It depends on how well you do that front-end screening for
19 the people that you're after. It's really hard if you do a good job
20 at it.

21 MR. NOYES: I would agree. And that's going to be a
22 rule for the Centers of Excellence.

23 MR. PROFFITT: There's something else there that we
24 talked about a lot. When you talk about these numbers and this
25 screening and how we get there, it also comes back to

1 recruitment. For me to recruit X number of people for these
2 programs, it's a hard recruitment today because students aren't
3 looking for these manufacturing jobs and careers. To say to a
4 student who is pre-screened and that particular student for this
5 particular program because they're thinking of something else
6 and thinking that they're going into, thinking big dollars in
7 another career. We're making a lot of sense here on the front
8 end, but how we jump-start this and how we get there is more
9 than here's a curriculum and here's what we need, I see it is
10 about recruitment. Getting the right number of students to
11 qualify is a big job.

12 MR. MUMPOWER: I agree with you, and the front end
13 of that, the high school level. After the high school level, it's too
14 late, and that's the reason you see military recruiters in there at
15 the sophomore level doing the marketing. They're promoting the
16 skills sets, promoting the jobs, promoting the career path.
17 They're telling them all the whys and the answers, and they're
18 selling it. If you do a good job at that, that's why it's got to be a
19 real collaborative effort between industry, community colleges,
20 and CCAM to make sure we sell it properly because it's on the
21 front end. That's where you sell it, on the front end of the high
22 school. And then I think the pipeline will naturally fill itself
23 because they just don't know. What I'm saying, it's going to be
24 tough, and that's going to be the hardest part.

25 MR. NOYES: The Commission and its partners will

1 devote resources to try to get it right, but you can't guarantee
2 that.

3 MR. SOBCZAK: Let me share a couple of resources
4 with you that I've seen work across the country. Is anyone
5 familiar with the *Edge Factor*? I encourage you to go see that.
6 Marketing to these youth is going to be an absolute priority.
7 These mobile labs we're talking about are not just about training.
8 These mobile labs, and I would absolutely with success of this
9 project, I would have one of these labs filled with CAD and 3D
10 printers, very inexpensive, can buy one with 3 grand, although I
11 wouldn't recommend that because it's not industrial quality. If
12 you spend thirty to fifty thousand dollars, you've got a pretty
13 good 3D printer. With CAD software and computers, you can fill
14 a semi-trailer full of these and go out today and kids can get on
15 these systems, get the 3D printer and let them have it for a day.
16 And that'll get kids excited and I've seen that happen. These
17 labs that are out there, I think that's something we need to do.
18 That can be used not only as a training resource but hopefully in
19 these proposals people will step up to have these mobile labs.

20 The other opportunity is in electronics. I don't know if
21 you've seen the Festo Labs, air cylinders, factory automation. If
22 you can put together a training like that and they can go out and
23 kids can put together these electronic devices. SMC makes a
24 product that's in a case and you open it up, you plug it in the
25 wall, and the air compressor is about this big, and use your

1 mouse, and these kids can do several different configurations
2 with solenoid sensors, PLC controls, and it's that portable. We
3 went out in Southern California and taught engineers these
4 things so you can use them on almost any level.

5 What's going to get the kids excited is this hands-on.
6 They're going to have to feel it and touch it and know what these
7 careers are. It's not an old guy like me up there telling them
8 how good manufacturing jobs are, it's going to be somebody like
9 Jeremy Bout from the *Edge Factor*. They take these things and
10 they make movies. They're not manufacturing experts, and they
11 make quality movies. It's not these corporate films that you're
12 used to seeing. There's one called *Metal and Flesh*, where they
13 take two people, and one had his leg destroyed racing
14 automobiles, and the other one is an Iraqi soldier who got his leg
15 blown off. They competed in extreme sports and came back to
16 the states and couldn't find a prosthesis that they wanted, and
17 they started talking to the manufacturers. The whole episode is
18 about making a prosthesis and machining the parts and putting it
19 together. It's dramatic and it's exciting. And that's real, and
20 that's what manufacturing is all about.

21 I will say that I can share your concerns, and as a
22 Marketing Committee, you cannot forget about the parents here,
23 and that's another syndrome that I've experienced. When you
24 get a group of young kids together, you've got to really get into
25 this and explain to them the advantages of this.

1 We're going to have to get together and have a lot of
2 subcommittees, but what I'd like to get done today is to come
3 back to the curriculum and how are we going to get there from
4 here? We have to come up with some standards. What I'd like
5 to do now and I don't think we should reinvent the wheel,
6 because I think there are some great programs out there. I
7 think what we should do is what I've done through all my career
8 in engineering and go out there and do best practices and bench
9 marks. Now, no offense to anyone on this committee, we need
10 to go to the experts, go to the instructors that are doing these
11 programs, and in my opinion, we have to get working
12 committees together, and I'm putting it out to the committee.
13 Do you know people we can enlist as a working group to put
14 together recommendations for all of these different levels of
15 certification? We have to find the best programs. And I think
16 John Tyler is great, and I'm very impressed with what they've
17 got going on out there, but we really have to get these
18 instructors together.

19 There's also another thing that we're not addressing,
20 and it keeps me up at night. I thought about it during my five-
21 hour drive all the way down here. We've got to train these
22 instructors, also. We're going to have to share instructors and
23 we're going to have to play well together to make this happen.
24 Our instructors are going to have to get together and we're going
25 to have to have sessions where we're training instructors.

1 MR. HERNDON: Bruce, I think you'll find my
2 colleagues are very enthusiastic. And this curriculum and
3 certifications, whether it's AWS, and we need to talk more about
4 the workers and the working group. Would the question be the
5 levels of certification or would the working group --

6 MR. NOYES: This group will decide what the levels
7 are at the Centers of Excellence.

8 MR. HERNDON: With an expert faculty?

9 MR. NOYES: They will tell us what equipment is
10 needed --

11 MR. SOBCZAK: If we feel we don't need it.

12 MR. HERNDON: No, what I'm saying is that there's
13 curriculum out there.

14 MR. SOBCZAK: There's a lot of curriculum available,
15 there's one example in your handouts, there's a lot of it out
16 there. If we feel that we're good to go, I think at least we have
17 to benchmark, if there's places like John Tyler and a few others
18 and they are awarded some certification with NIMS, and I knew
19 you have instructors there doing the American Welding
20 certification. Not only do we need to tap those type of people
21 with the next level, because if you're producing them, who needs
22 the Centers of Excellence to take them to the next level? But we
23 have to engage those people to go to one level and then go to
24 the next, look at what it's going to take to go to the next level.

25 MR. NOYES: I was hoping we'd hear from some of our

1 industry members, what is the equipment you want folks trained
2 on?

3 MR. MUMPOWER: The others don't want to answer to
4 that. As you know there's lots of different pieces of equipment,
5 and you have to start with the basic training so they understand
6 how to do these various programs. And then at some level,
7 you've got to decide what that real expertise is, is it the solid
8 works and going to the next level and knowing how to download
9 programs and do the solid modeling? Most typical machinists
10 don't do that work, the programmer does. They'll monitor the
11 machine and run the part, produce the part. So if we can take
12 them to that level. And then we decide, because the next level is
13 the level above what a typical machinist does. If it's programing
14 solid work, you have to get the machine set up, and that's a
15 whole programming class of design to manufacture. There's a
16 long discussion for this.

17 MR. NOYES: You have to have that for advanced
18 manufacturers, and we know that right now.

19 MR. MUMPOWER: But we go out and get that
20 training. We pay the manufacturer of the equipment, we pay
21 HASS to come in and do that. We pay them to come in-house or
22 we go to their facility and do factory training, and that's how we
23 get that specialized training.

24 MR. SOBCZAK: I'm glad you brought that up,
25 because one thing that is neglected on a lot of these models is

1 where you have an academic setting, it's the customized contract
2 training. At the training center I had in Southern California, we
3 did customized contract training for 52 different companies, and
4 they're glad to pay \$150 an hour for that type of training. That
5 could be another model.

6 MR. MUMPOWER: It needs to be part of the model
7 and a third party contract out and when you get to that level,
8 you're going to have to bring HASS in for the power company or
9 someone else and it'll be specific to what you're trying to
10 achieve.

11 MR. SOBCZAK: I'd like to see these Centers of
12 Excellence reach that point to be able to deliver that kind of
13 training.

14 DR. CAVAN: Maybe that's the model we should look
15 at. We have a heavy equipment program where we train heavy
16 equipment operators and when they get on the job, they will get
17 particulars of that job. And then the Centers of Excellence could
18 pick up what the industry is doing and bring it to a different level.

19 MR. NOYES: That is the model and that's why we
20 have also been so enthusiastic about working with the
21 community colleges to get that initial training. We still have to
22 decide in this group what to recommend in terms of that level for
23 Centers of Excellence. That's our job, and then we'll know and
24 we're going to depend on community colleges. We talk to them
25 about where is the stream of folks that'll go to the Centers of

1 Excellence, and a good part of that is not from the high schools
2 but from the community colleges. We're going to depend on the
3 community colleges to get some number of folks trained,
4 foundational skills for machinists. Once they get to the Center of
5 Excellence is when you get to the next level. Bringing in the
6 industry and the suppliers of the equipment, and that's how we
7 do it. And we need to say so. We can say it in an RFP, you have
8 to address this issue of how you're going to do it.

9 DR. CAVAN: No duplication of effort. Resources are
10 already in place and going a step further.

11 MR. NOYES: Which is exactly what this group said in
12 the first meeting, reinvent the wheel, and nobody wants to do
13 that.

14 SENATOR WAMPLER: Hopefully, my comments are
15 complimentary to everything that's been said. The New College,
16 1.75 million for advanced manufacturing equipment that we had
17 to spec out by vendor, and it is what it is. We can always go
18 back and ask the BA for the ability to buy something else, but
19 the point is when we negotiate the contract purchase, we will
20 also ask for industry support from that vendor to help us train
21 the trainer. I would offer this up to anybody for the good of the
22 cause within the next, that when you reach the state agency, and
23 let us be the first ones in with more purchasing power. If we put
24 in aggregate 1.75 million out there, and not only ask for the
25 latest occurrence, relevant machines relevant to the skill sets,

1 and have folks come in and train on them and make it available.
2 That's kind of my theory.

3 I think, Kevin, what you were saying is that to be
4 relevant and let's not only add prospective employees training,
5 let's use our existing employees and our current manufacturing
6 base to come in and train on it, and I think that model benefits
7 all of us and is a good investment.

8 MR. MUMPOWER: Part of the business model has to
9 be, I don't see the community colleges in the absence of the
10 manufacturing skill sets can do all of that necessary training. We
11 need the solid work modelers and machinists, probably will have
12 to do that training and to come in and teach those folks how to
13 run that machine. It's just going to have to be a collaborative
14 effort. Once that's established in the model and you have the
15 instructors identified, it'll have to be our folks and manufacturers
16 of the equipment, community colleges, all doing their piece of the
17 puzzle, because there are several pieces.

18 MR. NOYES: This is the model, that if industry says it
19 works, we need to adopt it and make that recommendation, and
20 especially if it's a requirement.

21 MR. SOBCZAK: We need to get instructors together
22 with expert practitioners in industry, and that's where they are.

23 DR. CAVAN: Ask the industry for instructors.

24 MR. MUMPOWER: There's nothing wrong with that,
25 and I think we're here to support it, because it'll be a win-win,

1 and we'll benefit from industry providing instructors doing the
2 training so they'll be trained properly to what we do and that's
3 more real to the job and the nuances of the job will come to
4 light.

5 I think in a lot of this we miss the importance of this
6 in the basic foundation. The reading, writing, and arithmetic,
7 and the best machinists we have and so good at mathematics,
8 and we're talking about people that are on the verge of being a
9 college mathematics degreed person. Those are the real
10 machinists and they know geometry like the back of their hand
11 and know trigonometry and know how to do advanced algebra.
12 The rest of it is pretty easy. If you don't have that background
13 and then you try to sit down with the solid works model and look
14 at a detailed print that's got data points, it becomes this big fog
15 that they can't get past. We struggle with that, and we can't find
16 those folks with that really strong math background to take that
17 to the next level. That's the front end I'm talking about that's
18 got to be there. If those folks are missing something, you've got
19 to fill that gap. If they're missing the geometry or the trig,
20 you've got to fill that gap, and that's part of the model. If that's
21 all that's missing, then we need to train that person. And I can't
22 emphasize how important that is.

23 SENATOR WAMPLER: As we talk to industry, you
24 heard what Kevin says, and that is you want somebody that
25 knows the difference between an eighth and a quarter

1 instinctively, and how do you apply that to the program set up on
2 the production board, whether it's in South Boston, Martinsville,
3 or wherever? That's a common thread whether you're in the film
4 processing business or chemical processing business, it's just a
5 common thread. If you find somebody that has the
6 mathematical background, and I think that's complimentary to
7 what we're discussing, and the person trying to capture and
8 analyze data.

9 MR. SOBCZAK: Critical thinking.

10 MR. MUMPOWER: The military modeling is one of the
11 best examples in the world. The first thing they do, they
12 extensively cast the individual that's going into that skill set from
13 the mathematic foundation. And if they find there's a huge gap,
14 they will back up and that's where that person will be fed first,
15 and they won't proceed on until they fill that gap and where they
16 know that person will be successful. If that's not done, your rate
17 of movement upward will be off.

18 MR. NOYES: In terms of a recommendation, could
19 you have the capacity to do that going back to the Centers of
20 Excellence?

21 MR. MUMPOWER: You're asking who would do that?
22 The gap filling?

23 MR. NOYES: I'm asking if the Center of Excellence
24 should be required to have capacity to do that?

25 MR. MUMPOWER: Only if the expertise is not already

1 in place. In the business model, if there is adequate expertise to
2 teach that gap training, whether it's at the community college or
3 the higher ed. center, you first do that so you don't have to
4 duplicate the curriculum potentially. If that doesn't exist --

5 MR. NOYES: You said previously you had trouble
6 finding those people that have the math skills?

7 MR. MUMPOWER: Correct.

8 MR. NOYES: The place to provide training in the math
9 skills, should that be incorporated into the business plan in the
10 Center of Excellence? If it's not happening now, do we then
11 provide resources to the community colleges to do that?

12 SENATOR WAMPLER: I would say that the strong
13 motivation is VCCS does a very good job, and if you listen to
14 Eastman, probably one of the best front-loaded events to give
15 them the employee they're looking for, but unless there is a
16 financial contribution to allow them to go in and perform the
17 detailed assessment of that student, you get what you pay for.
18 I'm not sure you could crank that into a budget, and that might
19 be something for another committee to look at. I would say get
20 a good return on that if you can close that gap.

21 MR. MUMPOWER: At the very least, you'd have to be,
22 foundational requirement through the curriculum to be
23 accomplished in the program, and whether it's funded through
24 this money or, you have to have that before you move forward.

25 MR. SOBCZAK: Have you had the opportunity to

1 review the curriculum coming out of some these programs like
2 John Tyler or Danville?

3 MR. MUMPOWER: I wouldn't say, no, not in detail.

4 MR. SOBCZAK: Would you be comfortable or is it
5 possible to satisfy and evaluate those kind of requirements to
6 review the curriculum that we bring forward as best practices?

7 MR. MUMPOWER: I think that's the right due
8 diligence.

9 MR. SOBCZAK: What I'm picturing this group to do,
10 bringing forth from the colleges existing programs that are
11 successful and the best practices and put them before this
12 committee and industry and maybe even take it broader out
13 there and survey beyond the committee and more private
14 industries to review this.

15 MR. NOYES: The next step then go out to the
16 community colleges that serve the Tobacco Commission footprint
17 and say show us what this foundational curriculum you have
18 includes and bring it here and then we decide from here what the
19 next step is.

20 MR. PROFFITT: I think if you're looking at best
21 practices and you're talking about the region you were talking
22 about earlier and look at what we're doing in our region. We
23 need to look just as closely at some of our programs that are
24 doing good things in the Southwest. When you talk about
25 welding, we have an outstanding welding program and many of

1 the students end up working at Eastman and some of those
2 corporations that are hiring in our region. I think best practices
3 has to fit the region. Does that make sense?

4 MR. MUMPOWER: I would agree. I think once you've
5 got arms around the foundational curriculum, you have it laid
6 out, you have to have a collaborative effort between the colleges
7 and industries and look at it and you say A through Z looks good,
8 but you're missing big gaps here. We need that added to the
9 curriculum or we're not missing any of the basics.

10 MR. NOYES: That's the next step for Bruce to put that
11 together.

12 MR. SOBCZAK: That's what I would propose to this
13 group right now. I'd like to assemble from every college experts
14 in all three areas. I want every community college in this area
15 and outside of it to bring forth an expert as a machinist, welding,
16 and factory maintenance. I know that'll be a little bit trickier. A
17 lot of the programs like at John Tyler, some great automation
18 training. That's going to be another trick for certification. I think
19 we may end up with two, but NIMS in your handout here, you've
20 got all these different certifications.

21 Another thing to consider is you're going to run into a
22 capacity issue for testing. I propose we consider a testing
23 center, which should be certified. One of the colleges in my
24 district in Southern California had it, it's a great thing to have.

25 MR. NOYES: We're going to be meeting with some

1 folks on that point.

2 DR. FOWLKES: There is a testing center, and that
3 should be included in the RFP, I would think.

4 MR. SOBCZAK: Yes.

5 DR. FOWLKES: The computer can be used for that.

6 MR. SOBCZAK: John Tyler.

7 MR. HERNDON: You're testing for different --

8 MR. SOBCZAK: Yes. There's going to be a tapestry
9 that we've got to weave together. This curriculum, we've got to
10 get some working committees together. There's a lot of work to
11 be done here, a lot of different things need to be developed. I
12 want to keep this out of the weave to making decisions on a high
13 level. I want this group here to look at these different aspects.

14 MR. NOYES: The testing center, or the nearest one
15 that I know of --

16 MR. SOBCZAK: Yes, you've got to go west and the
17 Proctor, and those hands-on situations, and then you talk about
18 machine parts. In this information, it has all the different goals
19 of the Proctor and there are certain sets involved, and it's very
20 clearly laid out and we have to get to that. But I think Baltimore
21 is the closest. You have to have the inspector, and that's got to
22 be certified as far as parts, and there's a whole tapestry of things
23 that we have to do and get together. That's why I think the big
24 thing is to bring all these instructors together and start
25 connecting. Industry needs to be reviewing all this stuff.

1 MR. NOYES: When you consider the different
2 disciplines.

3 MR. MUMPOWER: That can be very different though
4 with the different disciplines.

5 MR. NOYES: Apples and oranges.

6 MR. SOBCZAK: Let's kind of wrap this up and
7 summarize this.

8 MR. PFOHL: Recognizing that part of what the RFP
9 will be and proposals for the COEs should include is a statement
10 for summary of the foundational training that's in place in your
11 region. That'll be the entry level on the pipeline. Then on to
12 Kevin's point, pre-screening processes that you'll plan to have in
13 place to identify the folks that are prepared to move to mid-skills
14 level. Then, secondly, that gap for remediation support structure
15 can take those folks that are meeting, that are missing one or
16 two pieces that would otherwise make them ready for the mid-
17 skills level, and then what your infrastructure has in place to help
18 those people and get them back on track and get them in the
19 mid-skills level training. I say that to give you some thought
20 about it, so that you can start putting together to build your
21 case. That's obviously one piece of the RFP.

22 MR. GRAHAM: One thing I think would help with this,
23 advanced manufacturing, is looking at the skills that these
24 individuals could possess. If they were trained in the Six Sigma
25 process and being able to look at that data and be able to take it

1 from there to their discipline and create a solution for that and
2 that type of thing, and I think that should be looked at as part of
3 the curriculum. It would make those individuals a little more
4 attractive to prospective employers or being from that type of
5 environment and being able to look at typical data to understand
6 the CPK and what all that stuff is, and take that in there, welding
7 or industrial maintenance and apply it and create the solutions
8 for whatever that problem is.

9 MR. SOBCZAK: That's an excellent point and
10 neglected so often. Lean and Six Sigma is transferable whether
11 you work at a convenience store, a retail store, or administration,
12 whatever waste is waste and efficiency. It not only adds value to
13 the manufacturing operation, but it adds value to the individual.
14 I would encourage us to design this curriculum or find a
15 curriculum that's in a stackable design, that first stack to include
16 Lean Six Sigma, would prepare them to be efficient operators no
17 matter where they end up.

18 MR. MUMPOWER: I would agree that manufacturing is
19 going to be looking for that. The thing that will keep us
20 competitive and add jobs more than anything is the employee
21 that has the critical thinking and understands continuous
22 improvement. He can take Lean and apply it to skill sets. Once
23 you've got a machine that's really good out of a machining center
24 and the last level is how can I analyze my setup and the time it
25 takes me to set up and time my material and the time it takes

1 me to load my program, how can I cut that time in half? And
2 now you're taking it all to a different level. That's what we're
3 asking all of our employees, take it to that level. You've got to
4 be a processing improvement technician, as well as your basic
5 skill set.

6 MR. SOBCZAK: It's really a way of thinking. If you
7 had an employee come in out of the community college and
8 could tell you the seven forms of waste in production, you'd be
9 pretty impressed.

10 MR. MUMPOWER: Just so they understand the basics
11 of Lean. The seven forms of Lean are applicable in any
12 organization. We establish those basic understandings of Leans.
13 We take our welders and we know we've got good certified
14 welders when we teach them Lean, and now we're expecting
15 them to go back out in that welding process and study that
16 welding process in the Lean perspective. How can we load the
17 welding wire faster? How can we do maintenance more
18 efficiently, do we need to clean the nozzle center, and all that
19 relates to downtime, cost improvement, quality improvement, it
20 all has to be part of the answer. And in the absence of that, you
21 just get something.

22 MR. NOYES: As a recommendation, do we add Six
23 Sigma and Lean instruction at the Centers of Excellence?

24 MR. SOBCZAK: We should review the curriculum with
25 that in mind.

1 MR. MUMPOWER: I recommend you do.

2 MR. NOYES: Is it going to be required at the Centers
3 of Excellence? We're not going to dissipate the money all over.

4 MR. HERNDON: I heard first that potential, we should
5 support this step by step. You say we're seeking credential and
6 interest in various areas, but I think regionally there are many
7 folks already, I think looking at all this might be beneficial.

8 MR. SOBCZAK: We have different levels, as well. It
9 follows the same model that Neal talked about earlier where the
10 community colleges will provide a foundation and the more
11 advanced application, more learning will happen at the Center of
12 Excellence. We have the Committee decide. It would be various
13 steps just like in your black belt. As we review the curriculum,
14 we should be looking for that, and it's going to be part of the
15 tapestry to follow that same model because you're giving them a
16 little bit and increasing that and when it gets to a point, it
17 transitions to, the Center of Excellence gets more advanced.
18 When you mentioned the screening that the military does, they
19 do have a captive audience, and their screenings are a little bit
20 easier to do with their organizational structure. When you think
21 about it, this is a screening process, as well. These people
22 getting up to this level now and moving to the Centers of
23 Excellence and do the curriculum successfully that we're
24 recommending are going to be the people you like.

25 MR. MUMPOWER: I do recommend you include and if

1 you're smart about how you include the process of getting a
2 machinist or a welder walking up the ladder of certification, you
3 intertwine it properly, there'll be a much better machinist or
4 welder at the end of the day because it teaches them the critical
5 thinking so they really understand the process and they don't
6 just don't turn the machine on and load it and watch it. It really
7 has to go through it, think through what they're doing and it
8 makes them a much better skilled technician.

9 SENATOR WAMPLER: I would caution on the RFP you
10 have two variables, time and money. Dr. Proffitt's point about
11 recruiting students. If you set that as a criteria, you intentionally
12 eliminate part of the applicant group for this 75 per year. Time
13 in the classroom is also added when you make this part of the
14 curriculum. No pushback, I would want that as a, that I would
15 say it is a goal to make sure we can produce the 75 before we
16 unnecessarily eliminate otherwise qualified applicants. Time and
17 money.

18 MR. MUMPOWER: My recommendation would be don't
19 overdo it, but there needs to be enough built into the curriculum
20 to where when they come out of that, they're at a different level
21 and the thought process, and then the industry can take it to the
22 next level, but to come out in the absence of any of that training
23 makes it harder for them to be in the next level.

24 SENATOR WAMPLER: Introduction to SAP would be a
25 desirable skill set, also, to know what it is that makes the clock

1 work at an introductory level.

2 MR. NOYES: At some point we have to say what is in
3 the RFP and what's not in the RFP.

4 SENATOR WAMPLER: There's a cost associated with
5 doing it.

6 MR. SOBCZAK: I want to share an example, and this
7 is a very simplified illustration of what we'd like in a certificate
8 program, and it starts off with things like blueprint reading and
9 inspection techniques and others. That's one level of certificate.
10 They get that one and move on or they add in designer
11 visualization, 3D model and basics, and then the intermediate.
12 That becomes another certificate. You can add an advanced
13 section to that, but these snap together like Lego blocks for a
14 visual. Then you add Lean Six Sigma in the application and
15 project management, and maybe you call that another thing
16 where we've got three certificates. I'm not saying this is a model
17 or anything, but that type of design to where when they finish
18 certificates in your college, they're at a certain level, and we've
19 got to look for that. Would these stack up to advancement?

20 This first one would go for an industrial drafter, a
21 machine operator, and it would build up to an associate process
22 or a manufacturing technician. If we take the right curriculum,
23 we might have to trim the sale on some of these existing
24 certificates, we might get it there. Trust me, this is just an
25 example.

1 DR. CAVAN: I understand that's an example, but I
2 don't see how the high schools can really, will have the
3 wherewithal, the resources. In the community colleges, we start
4 with dual enrollment, and then we go to the community college,
5 and step three, the Center of Excellence. Along the way, this
6 screening process is taking place. Students that are not fitting
7 in, in the dual enrollment, are falling out. And the ones
8 progressing will go to the second level, the community college.
9 There are centers at the different community colleges that could
10 do this, John Tyler is an example, Southside, and Mountain
11 Empire. I think that's the process. You want to get to them
12 while they're still in high school, but I believe the question is the
13 resources, and I think maybe that's why some have gotten out of
14 it, occupational technical education, because they don't have the
15 resources.

16 MR. SOBCZAK: That's an effort that's going to take
17 some time. With our projects here with the Centers of
18 Excellence, we need to work with the community colleges, get
19 that progression right. The mobile units can spark some interest,
20 but we've got to get them interested in your programs and then
21 the ones that can do it go on.

22 MR. NOYES: That's a marketing issue.

23 MR. SOBCZAK: That is.

24 MR. NOYES: At some point we're going to have to say
25 this is where we'll be at, at the Center of Excellence, that third

1 certification.

2 MR. SOBCZAK: Where the transitions are. So I would
3 propose to the group that we start with best practices exercised
4 when you look at the current state evaluated, how does the
5 group feel about that.

6 The next action item, we should gather experts from
7 each of the colleges, we can do --

8 MR. NOYES: Let's do all of them in the area. I'd like
9 to have representatives from the businesses that are part of the
10 region.

11 MR. MUMPOWER: I think there has to be some kind of
12 forward or when we pull together our representatives, the
13 community colleges, the curriculum committee, look at it on a
14 regular basis and make sure everything is on track because if it's
15 done right, it'll be successful. In the absence of any of that, I
16 think it's going to be a problem and you won't get the end
17 product you're after.

18 MR. SOBCZAK: I think as a requirement for the
19 Centers of Excellence, it's going to have to be the active Advisory
20 Committee. We've got three locations and three different
21 Advisory Committees from the industry reporting in regularly.

22 Now, the RFP I'm picturing will have these categories
23 and will provide the framework and your curriculum will speak to
24 it. Transitioning from the college to the Centers of Excellence
25 and we'll decide, have to pass third party certification. If this

1 Curriculum Committee decides that NIMS, AWS, whatever we
2 decide for the maintenance mechanics, will have to say that
3 curriculum needs to be verifiable by getting those credentials.
4 So, those are the different categories that we're going to talk
5 about, regional impact, matching funds, sustainability of your
6 program. Advisory Committee, partnerships, we'll ask about
7 partnerships in that. What high schools are you connected with,
8 what businesses are you connected with. Each of the categories
9 will be spelled out, and we'll tell you what weight for each one.

10 MR. NOYES: And run the RFP by this group before it's
11 issued.

12 MR. MUMPOWER: The right visibility and the logistics.
13 Southwest Virginia is a huge region and you have to reach out
14 and grab --

15 MR. NOYES: There's no solution for topography and
16 no solution for the logistics issue. I can say we need 75. The
17 Advanced Manufacturing Program is not now and never will be,
18 never intended to be perfect across 41 political subdivisions.

19 MR. MUMPOWER: To have the curriculum model with
20 a mobile aspect to it. If you had it where it's just here and
21 people have to travel would be even more difficult. If you have a
22 mobile portion of this where you could have this mobile training
23 platform and drive it to Wise or, and transport it throughout the
24 region will help solve it. That's why it's difficult because of the
25 travel distance.

1 MR. SOBCZAK: I know the hands-on training, they
2 want as much of that as they can get, and sometimes it's tough
3 to do. One thing we did in California and in densely populated
4 areas, it was an automation program. In the middle of
5 Bakersville, there's a lot of food processing plants, highly
6 automated, and high speed packaging processes. We had SMC
7 put together on-line learning, and you did all your theory, and
8 then you came for the weekend or week, what we called boot
9 camp. You did all your classes and labs. I know there's got to
10 be some on-line learning going on out here, and we'll look into
11 that. It's a little tougher for machinists.

12 MR. MUMPOWER: If you're creative in your thought
13 process and you build in a model that says people in the
14 Abingdon area put in so many miles, this is the place they go for
15 training, on-hand CMC machine training, but if it's over in the
16 Wise area, we identify a place there. There are resources out
17 there and try to accommodate students no matter where they
18 happen to be.

19 MR. SOBCZAK: Yes, at the highest level and specially
20 trained, gather all the resources, that individual is willing to
21 travel to CCAM. If it's just the Proctor and certifications.

22 MR. MUMPOWER: The last thing I would add would be
23 if you have someone come into the region, no matter where
24 they're coming from, is there a way in this curriculum to
25 basically, where you can verify they're already at a Level 2.

1 Nothing more frustrating for a student to have to go through
2 1201 and basic when they're already a Level 2. And colleges do
3 a lot of that, and that frustrates people. Come in and show that
4 you've got the training and the skill set and you're at Level 2.
5 They can take that test, maybe the test is a little higher
6 standard. Some people may not enter the program if they find
7 out looking a year ahead of them and they know they're already
8 at that skill set and they don't need to go through that year. And
9 that could be a road block.

10 MR. SOBCZAK: One of the beauties of having the
11 certification and if that student truly is ready for a Level 3
12 certification, he or she can test to the Level 2. So what I would
13 ask the group as we go forward with best practices, and, Craig,
14 maybe you can get in touch with the right people and bring forth
15 some curriculum for us to review.

16 MR. HERNDON: The best practices and the threshold
17 at which, maybe an introductory or something else. Foundation
18 might be more appropriate for a Level 1 and Level 2 certification,
19 so we want to identify the level.

20 MR. SOBCZAK: Craig, do you think that could be in
21 early December?

22 MR. HERNDON: I'm sure I can get back in time.

23 MR. SOBCZAK: We can do this first by email and
24 everybody please email me and I'll leave a stack of cards here.
25 Curriculum will be emailed to me.

1 MR. HERNDON: In three areas.

2 MR. SOBCZAK: In the machine program, and welding
3 is a little trickier, show us what you've got.

4 MR. HERNDON: The right questions would be helpful.

5 MS. SOBCZAK: I'll draft that.

6 MR. NOYES: But at some time we'll have to sit down.

7 MR. SOBCZAK: Absolutely.

8 MR. NOYES: That needs to be before January. We
9 also need to get this RFP out so we can meet that timeframe and
10 the business plan.

11 MR. SOBCZAK: Craig, if you could supply a list of
12 people, programs, key contact and programs, and get an email
13 to us as quickly as possible. I'll gather all that information. I'll
14 compile that information and I'll create a spreadsheet on what's
15 available and try to come up with a matrix that would say are
16 these ready now, and I'll put that all together. I'll do that ahead
17 of time before we meet.

18 MR. HERNDON: The college president's list, and
19 there's two college presidents here. Even though the importance
20 of your role may say and then with your guidance, this is what
21 we're looking for, to make sure how we support this.

22 DR. PROFFITT: I'm sitting here thinking how do we
23 bring in the industry folks, and we need to do that.

24 MR. NOYES: That has to be done as part of this
25 process.

1 MR. MUMPOWER: To say we're having a curriculum
2 meeting to these various folks on this particular day and get all
3 the businesses in the region to send a representative and help
4 facilitate that and say these folks will be attending the meeting.

5 MR. SOBCZAK: I'm going to think out loud here. Is
6 this the best practices review of curriculum in these areas?
7 We're doing the best practices review of existing curriculum,
8 welding, and industrial maintenance. So what do you think about
9 the next step? There's a lot of good stuff out there, and we'll
10 include John Tyler.

11 MR. PFOHL: Are there any comments from the folks
12 that are sitting here and observing and we appreciate your
13 efforts to make it here, so we'll give you an opportunity to say
14 anything or ask questions.

15 MR. BENNETT: I'm Ted Bennett from Halifax. Over
16 the years, Southern Virginia Higher Education. You guys have
17 something very special, and I want to compliment the
18 Commission for not shotgunning and, quote, all sectors of the
19 economy, focusing as you have in this specific area because it's
20 tough enough otherwise. With the discipline you're showing, I
21 think that you're doing doggone good. I just want to say we
22 should do this stuff, and we started off with no education center
23 or higher ed. and 36,000 people. We started off with a 600
24 square foot mobile home trailer for a high school class. With
25 your help and our partner's help, community colleges, and other

1 colleges, from a 600 square foot trailer, we have now 130,000
2 some square feet, nearly 5,000 students. Part of that is due to
3 our success with the partners. We rely on our partnerships.

4 We know how to serve our counties and branch out
5 and we have proved to ourselves here, we've got, and you see
6 what it is. I'm thinking off the top of my head the number of
7 students that have participated. And we've also got industry that
8 has participated with us, like Kawasaki, Honda, ABB, and right
9 now, Siemens, because of what we are doing with the Motivation
10 Center, and allocated \$93 million worth of software for what they
11 call their PLM software. A data agency landed its entire
12 enterprise, that includes CAD and CAM. With your help, you can
13 do this, all this can be accomplished across these two regions to
14 help reach out to that curriculum piece, you might give
15 consideration for programming for coding. We've got a coding
16 competition going on in Halifax and Danville and Prince William
17 County. Coding instruction and modeling simulation do super
18 well online where you can reach out across the population that
19 are on computers. You can reach out very well in this scattered
20 population across these areas.

21 Once you do that, and this is sort of a marketing
22 piece, when you do this online and do some marketing online and
23 show these kids where these pieces fit together and in advanced
24 manufacturing show opportunities and job salaries, and that's
25 going to really improve things.

1 MR. SOBCZAK: Could we enlist your help in gathering
2 industry people together and maybe your group to bring together
3 employers maybe in two or three locations and let them know
4 what we're doing, and I propose that to Neal and Tim. I think
5 groups like yours could help us bring Kawasaki and local
6 manufacturers, and we've got Goodyear down here anyway.

7 MR. BENNETT: Another thought for that is leverage
8 and the money that the Tobacco Commission has put out and
9 there are some Federal grants ongoing in Southside and they're
10 looking for the need to contact parents and educate parents and
11 go to industries that are actually doing this in determining what
12 the basic competencies are and those industries need and then
13 work with the high school courses to see what's missing. Once
14 you guys decide what the top competencies are for the Center of
15 Excellence, maybe you need somebody like an educator who's
16 good in academics and understanding industry to see what
17 disciplines that are going to be needed for this foundational level
18 of K through 12.

19 I cannot emphasize enough how we're going to reach
20 these K through 12 kids. You do that, and I think that's where
21 your pool will come from. At the same time, don't forget the
22 adults, because Siemens is reaching out to adults already in the
23 trade that need that further sophistication.

24 MR. SOBCZAK: I would suggest one thing we were
25 involved in previously. Kids will get involved, and they come out

1 and give a presentation and they have to have a business plan
2 and they have to put this model together, and they do a great
3 job. And those kind of programs really help. I've talked about
4 those 3D printers, they're an excellent tool, and that causes
5 excitement with youth.

6 VALERIE: I'm Valerie with Danville Community
7 College. I want to go back and talk to our people as far as
8 what levels are you looking for in terms of best practices
9 submittal.

10 MR. SOBCZAK: I'll take the top level description,
11 actually I'll take anything you've got. I'd like just an abbreviated
12 descriptive form, but to answer your question, I'll take anything
13 that you give me so I can start compiling stuff together. I'll work
14 on this information as I get it and put it together and bring the
15 group back together again. I just came onboard on October 1st,
16 and I look at this whole project as a year behind.

17 So to answer your question, I'd like to get this
18 information from you as soon as I can.

19 MR. HERNDON: Draft the ask -- back through the
20 colleges.

21 MR. SOBCZAK: You're right, Craig, we need to be
22 specific. You and I will get together and I'll come up to
23 Richmond and we'll do it. That was a good question and I'm glad
24 you asked it. Thank you.

25 All right, folks, thank you all for coming. And I

1 appreciate any comments, and I think with that we'll adjourn the
2 meeting.

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PROCEEDINGS CONCLUDED.

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CERTIFICATE OF THE COURT REPORTER

I, Medford W. Howard, Registered Professional Reporter and Notary Public for the State of Virginia at Large, do hereby certify that I was the Court Reporter who took down and transcribed the proceedings of the **Virginia Tobacco Indemnification and Community Revitalization Commission, Commonwealth Center for Advanced Manufacturing (CCAM), Curriculum Committee Meeting**, when held on Thursday, November 21, 2013, at 10:00 o'clock a.m., in Abingdon, Virginia.

I further certify this is a true and accurate transcript to the best of my ability to hear and understand the proceedings.

Given under my hand this _____ day of January, 2014.

Medford W. Howard

Registered Professional Reporter

Notary Public for the State of Virginia at Large

MY COMMISSION EXPIRES: October 31, 2014.