

# Regional Collaboration Steering Committee Minutes

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4000 Gateway Centre Blvd., Suite 100, Pinellas Park, FL 33782

May 12, 2014 10:00 a.m.

Phone: 727-570-5151 Fax: 727-570-5118

# **Committee Members Present:**

Commissioner Victor Crist, Chair Mayor Bob Minning, Vice Chair

Vice Mayor Woody Brown

Mr. Angeleah Kinsler

Commissioner Janet Long

Commissioner Jack Mariano

Mr. Andy Núňez

Mr. Tim Schock

Ms. Barbara Sheen Todd

# Committee Members Absent:

Commissioner Scott Black Commissioner Larry Bustle Commissioner Gail Neidinger Councilman Patrick Roff

# Others Present:

Eric Roe, Ph.D., Manufacturing TDI Ryan Kinskey, AirSage, Inc. Jordan McCullers, AirSage, Inc.

# Staff:

Mr. Manny Pumariega

Ms. Maya Burke

Ms. Wren Krahl

Mr. John Meyer

Mr. Patrick O'Neil

Mr. Brady Smith

Mr. Avera Wynne

Mr. Don Conn, Legal Counsel

Call to Order: Chair Crist

The meeting was called to order at 10:04 a.m. A quorum was present.

# 1. Investing in Manufacturing Communities Partnership

TBRPC in its capacity as an Economic Development District (EDD) partnered with SWFRPC and SFRPC to submit the I-75 Medical Corridor Initiative for regional designation under the U.S. Economic Development Administration's (EDA) Investing in Manufacturing Communities Partnership (IMCP). Staff provided a brief presentation on this recent EDD activity and briefly discussed other EDD activities.

One particular industry showed we were in the top 1/3 in the country. We had to pick one that covered all 13 counties. Medical Manufacturing did that. We recently did a medical devices study for Pinellas County and the Medical Manufacturing Association. It's complicated because, for example, a plasma bag would be considered a medical device. The person across the street that rolls out the plastic and sends it over to be stamped into that bag, and the person that makes that plastic cap may not be categorized as a medical device company, only the one that does the final product of the bag would be categorized. Mr. O'Neil did an in-depth look at the linkages that feed into that. The focus is to see the areas in which the Planning Council as an EDD can add value to manufacturing. Community development/good planning is economic development. When you start thinking about manufacturing it's all from the schools, the community, and transportation. We need to come up with a model for Tampa Bay. Dr. Roe is here to talk to us about the resurgence of manufacturing. We used to talk about off-shoring but now there is resurgence of onshoring and particularly for medical devices where you have a high value to weight ratio. That's why airports are important – we can manufacture here and send them out via FedEx or UPS, with just-in-time delivery. It doesn't involve rail or seaports as they typically go by air or freight. Staff introduced speaker Dr. Eric A. Roe.

Dr. Eric A. Roe, Director of Applied Technology at Polk State College, leads the Manufacturing Talent Development Institute (Manufacturing TDI). Manufacturing TDI is a statewide resource that develops industry-driven training strategies, educational programs, and certifications for advanced manufacturing's entry-level and incumbent workers. He is a mechanical engineer by training and started his career at Tropicana in Bradenton doing research and development in the food and beverage industry and crossed over to education about eight years ago to work on this issue – that there is not a skilled workforce for manufacturing. Dr. Roe discussed efforts to develop manufacturing talent.

Some of you may have heard of the initiative that Work Force Florida did several years ago which was an effort originally started by Governor Bush to diversify Florida's economy. Work Force Florida invested seed funding in statewide resource centers and after that initiative came to an end the centers were expected to become self-sustaining. The Manufacturing Talent Development Institute is based at Polk State College. It is the outcome of that effort. What we try to do is be the bridge between manufacturers and the talent development system.

There is a call for 400,000 new graduates in STEM fields by 2015. You hear a lot about STEM manufacturing (Science Technology Engineering Mathematics). Unfortunately when you look at some of the studies from the National Association of Manufacturers only 20% of parents said they would encourage their students to have a career in manufacturing. That's after they say that there is a strong need for manufacturing in the U.S., just not for their child. This perception of what modern manufacturing is, is really hindering the next generation of students to move to manufacturing careers.

Manufacturers contributed \$2.03 trillion to the U.S. economy. For every \$1.00 spent in manufacturing, another \$1.32 is added to the economy. It supports an estimated 17.4 million jobs in the U.S., 2/3 of research and development comes out of manufacturing and the National Association of Manufactures says there are currently 600,000 jobs open in the U.S. unfilled because of the lack of a skilled workforce. 21% of global manufactured goods are made by American manufacturing companies. We are still the #1 leading manufacturing economies in the world. You will hear China, Mexico, the Pacific Rim in manufacturing, but the U.S. is still #1. Our workforce is twice as productive as the next ten leading manufacturing economies. That dynamic of the productive workforce and the change in the number of employees that we need to do the job is what has driven some of the misperception about manufacturing careers in the U.S.

We are a very diverse manufacturing state, we don't have a strong core of any one particular item, and we aren't focused on semi-conductors like Silicon Valley. We aren't doing automotive manufacturing but we are home to over 18,000 manufacturers employing 311,000 workers, which

equates to 4.9% of the workforce and about 5% of the state's gross domestic product (GDP). If you look at the surrounding states, I think the challenge is Alabama, Georgia, Mississippi you are looking at 10% of their state's GDP. We have a real opportunity to grow. There's no reason why we can't have a strong economic base here if you look at some of our economic conditions that are attractive to manufacturers. Just this session sales tax on manufacturing equipment and machinery was eliminated so there is a real incentive for manufacturing. The talent is still a challenge. When manufacturers are asked what the number one driver is on where to locate a facility, talent is their number one answer.

If you look at a study from Chmura and you take all manufacturing employees back in 2003 and you track over time you will see high skill jobs are gaining in manufacturing and low scale jobs are going away. Medium skill jobs are holding steady. That change is forcing a change in the way we create a skilled manufacturing workforce. We work closely with a lot of manufacturers in Florida. Mosaic has pending layoffs, but even with that they are looking at 63% loss of their skilled production workforce in the next 3-5 years. That's outstanding – 63% of that skilled workforce is going to retire. How can we replace those people?

When I started at Tropicana we probably had 5 people running the line: the operator, the quality control technician, maintenance technician. The Manufacturing Talent Development Institute (MTDI) serves as the statewide resource for talent development and promotes and supports economic development. We are the bridge between industry and academia. What are their talent needs and how do we solve that?

Employers need qualified, skilled workers. In the case of Mosaic 25% are 55+. High Schools, Technical Centers, and College programs can close the gap. We found that there needs to be stronger alignment between what is happening in the non-credit training pool and in the academic side. The technology used in modern manufacturing demands higher skills and knowledge. Workforce development and economic development are inextricably linked and talent is what fuels Florida's innovation economy. The reality is that the Banner Centers unify workforce, education and industry/economic development around a shared mission of developing talent to propel high-value Florida sectors that diversify the state economy. Ten of the state's 11 Banner Centers target high-skills, high-wage industries such as biotechnology, aviation/aerospace, health sciences, logistics and distribution, and manufacturing. The Banner Centers initiative was unique from a state-funded perspective in that there was seed funding to create a statewide resource center that went away so it isn't a government funded program.

We are creating this integrated academic and technical learning path with on and off ramps. Somebody who is going to come in and go through an entire middle school/high school, technical center college job path just doesn't exist. We have to create those on and off ramps where somebody can move out, get a career and then move up and re-enter the system when they are ready. Unlike the IT sector we have all the Cisco certifications for healthcare or even automobile with the ASE certifications for mechanics. Manufacturing has never braced national industry certifications. That's a relatively modern trend and it's a challenge for us to get manufacturers to change their culture. It starts with credentials and their hiring and promotion practices, but it's also been a challenge to get the educators to give up some of the perceived academic freedom to align their curriculum with national industry certifications. That alignment is exactly what's happened at the high school level initially through legislation for the career academies and now with the incentivized funding for technical centers and colleges. In order to make that whole system work we had to bring players to the table. It is a complex system involving Department of Labor funding, Department of Education Rules & Regulations, the school districts, community colleges, universities and state colleges. The two that are key are the external benchmarks and the key players. That alignment of employer needs with national standards for showing competency in a discipline is where you are seeing the entire system move.

We have created industry certification alignment across the entire talent spectrum in manufacturing. We've created statewide industry certification articulation. That means it used to be that a college would look at a high school program and say, who is teaching that program? Do they have a Master's Degree? What competencies are in there? What are we teaching in college? We'll give your high school students 3 credit hours for articulation, a pathway to college. What we do is, we said, let's instead validate competencies with a national standard and national certification. If someone earned a national industry certification, it didn't matter where. They earned it in training, corporate training in a college, they've been on the job long enough that they can pass the credential, they're in a high school or technical center that then validated competencies and you can articulate college credit. So in the manufacturing sector we articulate 15 credit hours for the entire semester to get you an engineering technology degree for obtainment of a national certification, in our case the manufacturing skill standards council's certification. That had not been done anywhere in the country. The state of Florida now has 106 of those statewide articulation agreements across all sectors. Indiana is the only other state in the country that has industry certification placed articulation. It's a real feather in our cap and a real incentive for manufacturers to come that we can show this pathway for talent development. In the toolkit we've created new programs for high schools, and colleges based on industry feedback. This pathway which is on our website shows all of that encapsulated into one diagram. We now know from manufacturers what those proper certifications are and we have mapped them to the educational programs and we are building pathways to careers.

Data from Price Waterhouse Cooper shows a summary of manufacturing attractiveness trends. In view of the factors on making manufacturing attractive to a community or region, currency, transportation energy are one of our advantages in the U.S. Labor cost, demand, talent and availability of capital were at the middle of the spectrum. Tax and regulatory environment is still a negative. Why is that? If you look at transportation and energy, transportation costs have gone up dramatically so it's no longer as efficient to build your product overseas and then ship it back to the U.S. Labor costs are going up in the Far East. The talent gap is closing. You have a need for a higher skilled workforce and our systems are responding to that. If you look at the wage gap between the U.S. and China you will see that the Chinese labor since 2004 has more than quadrupled in costs. In 2004 the cost was 66 cents an hour. That's projected to go up to \$4.42 in 2016. If you are looking at your economic model to run your business that more than quadrupling the cost of your labor and that's dramatic. Our labor costs are significantly higher but we are twice as productive and our labor costs are not increasing as dramatically. The other point made about research and development – if you look at our graduates in engineering disciplines in 1979 it was down to around 2,400 and in 2009 we had 7,600 graduates in engineering PhDs. We have the skilled workforce, we have a stable labor market from a cost perspective.

Investing in Manufacturing Communities Partnership (IMCP). If we get this designation it will help our region. We had to define the technology and in this case it was medical device manufacturing. It is very diverse and very strong among the I-275 corridor. We have this opportunity to receive the designation as a manufacturing community partnership. This manufacturing community's designation will give us preferential status for future funding opportunities with funds up to \$1.3 billion from the federal government. The diversity in that is: if you are looking at funding from the Department of Agriculture, Housing and Urban Development, Department of Labor, Department of Transportation, the EPA, National Science Foundation, and Small Business Administration, The Department of Commerce, Department of Defense, Department of Education, and Department of Energy. If there's a DOD solicitation around manufacturing and your manufacturing community you will receive preferential status for your region on application. Florida has a lot of Department of Labor funding right now to support manufacturing – the Florida Trade Brand out of St. Pete College is working on short-term training educational programs which was a \$15 million grant from the Department of Labor. It serves 12 regions in the state of Florida. We are partnered in another Department of Labor grant. There's always the National Science Foundation funding that the college is receiving but having that

designation, if you receive it, to be a manufacturing community will help those entities bring that money forward.

I hope that stirs a conversation on the strength of manufacturing. As an antidotal note I was at a manufacturer in Clearwater 2 weeks ago. They build the bolts that are used for plastic injection molds. That can be medical devices to consumer packaging. Their business is up 40%, they estimate, from one thing and that's the Walmart Made in America campaign. Walmart is saying they are investing \$250 billion for Made in America. Because of that push from Walmart this manufacturer who builds the molds for other manufacturers has seen the increase because American manufacturers are shifting business back to the U.S. I was on a phone call with their Director of Governmental Affairs and they are releasing RFPs for suppliers to provide goods to Walmart and the example they gave was they looked at their patio furniture business. They had no American made patio furniture in the Walmart system. They put an RFP out that said we are interested in buying American and now they are shifting that production and their products to American made patio furniture. I know that affects manufacturers we have here on the Gulf coast. Keep your eyes peeled for RFPs from Walmart and see if you can link them out to your regional manufacturing associations and your regional manufacturer councils because there are great opportunities there for employers. Not just Walmart but you are seeing this return to manufacturing in the U.S.

# Questions & Comments:

You've outlined the pathway – how do you get young people interested in that career path?

There are two resources that we are trying to bring to Florida. One is the national campaign from the National Association of Manufacturers and the other is Made in Florida based out of Hillsborough Community College. They have a National Science Foundation grant. If I were in PR I would never use that phrase and only talk about manufacturing positively to show what modern manufacturing is. I think manufacturers have made the mistake of putting up a fence when they build a new manufacturing plant. Unfortunately, our manufacturers have not been taking that fence down so we don't know, as a community, that we have manufacturing here. I think Floridians are unaware that there are 18,000 manufacturers in the state. Getting that message out that manufacturing is in our communities and how diverse it is and its high tech is the first step. That message not only goes to the youth, but the gatekeepers – the parents – who are saying my child isn't going to go into manufacturing. We need to get that message to the high schools and middle schools and encourage students to go into those manufacturing careers. I wouldn't say we are there yet but we are working on it.

Your presentation is very timely, especially for the Tampa Bay Regional Planning Council. About 10 years ago I had the pleasure of working for the Florida Manufacturing Technology Centers and it was a huge eye-opener to travel around the state and even here in Pinellas County and realize that behind all those little industrial parks that we see all over our county, there is huge manufacturing going on that most of us don't even have an idea about, much less what they are doing behind those big aluminum buildings. Secondly, on Friday, I was at the International Town Hall meeting that was held at the Hyatt in Tampa and it was a group of partners that have come together from Hillsborough and Pinellas' Economic Development Departments as well as the different Chambers of Commerce and the focus was on the remodeling of Tampa International Airport. The new things they are doing at the Tampa Bay Port – it is an awesome time to be even more than ever thinking about our region, and not just about Tampa, Hillsborough, St. Petersburg, Pinellas because with the opening of the export industry it was mindboggling to hear about the number of high tech jobs and billions of dollars that are soon to be available for export. The two counties (Pinellas and Hillsborough) have in their focus for the next year on trade missions to Cuba, Panama, Brazil and Canada. It's interesting that just a couple of weeks ago at our county commission meeting we authorized a movement to go forward with the new German

manufacturing technology that is coming to Pasco and we committed \$200,000 and I think Pasco has committed and I believe there was \$1 million asked in the budget in Tallahassee and we hope the Governor doesn't veto it. All these things are percolating everywhere and it's an opportunity to revitalize our labor market.

Port Tampa is a great opportunity for us. If you look at free trade zone opportunities in our region it's because of the Port extending to manufacturers the opportunity to bring goods in, manipulate them and move them without having tax liability. If the fast track process we have for Hillsborough is going to Polk County and there are great regional opportunities around Port Manatee and Port Tampa.

Looking back to the research triangle, they came together to focus on an area out of nowhere to off-set all their manufacturing losses they had and to create something that's been a model for what we are trying to go after in a different way. Hernando County is part of the grant as well. We originally had Hillsborough in the mix and I like the fact tying in Mosaic with what was going to be a tri-county area. I'm delighted to see what your college is doing because I think it's something where not only do I think we should talk in the future about trying to get Hillsborough back in with us as well and even reach out to Polk. The data that you've just shown us makes it more clear and I would like to have you come before my county commission (Pasco) as well. I will be proposing to my board that we look at Penny for Pasco money for our local manufacturers to provide training with partial or full funding for the executives and try to help them become more productive.

If you look at labor sheds, manufacturers don't care about geographic boundaries. They don't care if their workforce comes from Polk into Hillsborough or from Hernando down to Pasco. From a labor shed regional perspective pooling our assets to getting a line between the educational systems and getting the resources to the manufacturers they need is the strategy we need to find.

I think there are some opportunities for us in manufacturing in Florida, particularly because we are trying to keep our youth here in Florida. There was some statistics you gave for Mosaic. There's a big gap you said, 5 years.

The next 3-5 years you are looking at 63% of their skilled production workforce retiring.

That's huge. I'm sure that if they are having that kind of gap then many other manufacturing companies are having the same kind of gaps. I find it interesting in terms of a partnership – how do you achieve these? You need to work with colleges, absolutely, and then you have to also look at incentives to ensure students are interested in these fields. I don't know where the focus is and what the age gap is that you are looking at, but to me, being a visionary we start young. Right now we have a huge gap. We also need to look at those young people who are transitioning out of college right now who are in fields that may not give them those opportunities and you have these certifications shifting those young people into these fields where there is a need, and keeping them here. What we are finding here is that our kids don't stay. I have a 23 year old and trying to get her to stay in Florida is a challenge. We are looking at three to five years, what can we do now to help fill those gaps? Those manufacturing companies will look outside of Florida and outside of the U.S. to bring people in to fill those gaps which we've seen happen in the past. So how do we do that? I thought China and India were growing vastly fast in terms of their manufacturing industry and being more competitive when I'm finding that we are still ahead, that's rewarding. How are we going to work with those industries in other countries?

Once you are engaging regionally to build talent that Florida trade provides an opportunity. Hillsborough and St. Petersburg have funds right now to take dislocated workers, under skilled, incumbent workers as well as returning veterans and get them the jobs, certifications, internships and job placements for manufacturing.

Medical manufacturing is one primary source. I like the fact that we are a source manufacturer for some of the components that go into those. We've got the transportation needs, but it starts with education and being able to develop the talent. I know this because I have tried to hire people recently for software engineering jobs that I've had to go out of state. I could find OK talent, I couldn't find great talent. The great talent that is here is already tied up. My question is, as far as education goes, where we are short, what's needed, and what's missing, and how can we help?

I think the weakest piece right now is the lower end of the large part of the funnel which is the middle schools. There are high schools that have the programs and are filling that gap and you are getting graduates from high schools with credentials. Middle schools are the largest gap. Let's get them interested younger and start to broaden the number of people moving towards this pathway. I think there is an opportunity to look strategically within the region, even if you want to look at it from a county level, of where your educational programs are. If you have manufacturing career academies or pre-engineering, are they in the right place? Are they being effective? The linkage from a high school career academy to colleges, the colleges have the programs in place now. There are pathways to 4 year or a 2 year degree and the technical centers in our region are run by the school districts. They are revitalizing their manufacturing programs but they're probably not as aligned to the system as the rest. I would say middle schools and technical centers need attention. Then look at your region as a whole – where you have those programs located and are they located in the right place in your region.

That's the what and how – what's missing as far as making that happen? Obviously there is a funding source issue potentially, or a misallocation of funding issues. What gets us from point A?

You have to have a champion in your region. I don't think that's what is lacking in most places. Someone who will step up and say they will do that work and look at the asset map in the region and say they need to create programs. Then carry it up to the school district. For example, the German model that will be piloted in Pinellas, Pasco and Hernando, the current model is not working so let's try a pilot program and they received some funding to make it happen. This is what we work on but we need to be invited into a community to work on it. If somebody wants our help we would be happy to come by and work on it.

As far as the types of manufacturing and attracting the manufacturers here, we've talked about export destinations and it sounds like for medical manufacturing, most are domestic, we're not exporting outside of the U.S. Most is not going by sea, it's going by freight, train and that indicates to me that it's domestic. Am I wrong on that? If not, what are some other potential export destinations for this type of manufacturing product?

Actually Mike Meidel from Pinellas County has a pretty good handle on the medical devices so I will defer to him. Mr. Meidel stated they are wonderful because they are so respected everywhere in the world. It's one place where a Made in America label, if you're going to have an implantable medical device you don't want it made in China. It's an easy market, they are light-weight goods that are of high value so generally they go by air freight and they go by UPS and FedEx so it's an easy distribution market. It's also an easy market for small manufacturers to produce components. We have a few large players in Pinellas County but most of them are pretty small, with 20-30 employees, and they do pieces of stuff that become a part of a bigger module. Anywhere in the world is a good opportunity. The Latin American market is easy for us because it's close and we are a gateway area to that. That's why we've been working to try and bring more flights to Latin America with Copa Airlines to Panama. It's huge and we want to continue to grow that and make sure they are successful so we have those business connections because that's up for all Latin America. Copa flies everywhere so if you can get to Panama City

you can get anywhere in Latin America and that connection build those business relationships. The worse thing that can happen is the way the economy is recovering medical manufacturers are saying they don't have to go overseas anymore, the domestic market is building again. We need to show them examples of companies that made it through the down time who actually increased their sales because of foreign exports. We are trying to tie those manufacturers who were successful during the recession to give them the impedance to go out there and build those markets. Dr. Roe added that other companies we have are the aviation, aerospace and defense.

That's one reason why TBRPC chose medical because it links in with South Florida who is very strong in that and they already have that established with Latin American exports and import. That was a part of the strategy.

As far as funding and as far as attracting a large-scale corporate headquarters, to me the reason why Medtronic is based in Minnesota I couldn't really tell you other than they were set up 30 years ago as an attractive place and they had the right people come together to start it up. But for something like that is there a way that we can establish an environment that's attractive to actually set up that type of corporate headquarters that builds beyond the 20-30 employee to the 2,000 local employee and with subsidiaries that branch out from there? Is that something we need funding sources for? If that's the case I've heard from numerous friends and colleagues overseas that they are anticipating a re-investing of America, that they are seeing this as that there are investment dollars waiting to come in. We've seen some of it start to come in to Florida in the hospitality industry with the EB5 program which was used to build the Epicurean Hotel amongst other things in the local region. There are EB5 Regional Centers in Sarasota and in Central Florida that are established and already certified for manufacturing. I think the funding sources are there if we create the environment. We talked about regulatory environments being on the low end of the scale. The question is what are the blockers? What do we need to knock down? I think that's something this committee can help with by going back to our various constituencies and helping to knock those down. What are the blockers to bringing in an organization like that, to be corporately attractive?

I was hoping you would bring up the issue about regulatory reform and what kind of hindrances have you come across in the U.S. regulatory side because what I've heard over the years is that what has chased a lot of manufacturing off our coast isn't just the cost of labor but regulatory reform. What have you discovered in your research and what areas do we still need to make some reform in order to create an environment that's conducive to growing manufacturing?

A couple of things have come up recently and they are in the works to solve those problems and I don't know if we have time to see if they work or not. One is the reduction of sales tax on manufactured equipment just passed in Florida. The other was a bill that Associated Industries of Florida worked on last year for a fast track permitting process for manufacturing and that regulatory burden has been one manufacturers pushed back repeatedly is if I want to expand my business or put a business here it's going to take me years to move through the permitting process. The bill that passed last year allows the community to say we are going to adopt standards in permitting that will let a manufacturer create a Master Plan document and that fast track permitting using that document. Present us your plan and then as you grow according to your plan, we're not going to put roadblocks in the way. That's something that passed but I don't know if many communities are taking advantage of it. Lastly, it's not regulatory but I think making some noise about the talent issue that we have a skilled workforce is the number one driver. I would look at the sale tax and I would look at the fast track permitting.

Based on your comments, Mr. Wynne and Mr. Pumariega, if it would be possible to do an assessment and maybe a report with a future presentation on the recent legislation that passed over the last couple of years and what potential impact it could have in a positive way if we were to

take advantage of it because I'm not sure that those of us who sit on our various boards and committees back at our counties and cities are fully aware of the potential tools that we may have at our disposal and what we could do to help fast track some of these new businesses.

Several years ago the Pinellas County business group that Mike heads up did an assessment. It was a survey with all the different businesses to determine where they found the weaknesses to be. They specified a request for the kinds of skills that they needed. I'm wondering if that type of assessment has been updated and furthermore you may have the knowledge, experts may have the knowledge, but oftentimes the decision makers are those who could implement those are totally in the dark. I'm wondering if that could be done and secondly, you touched on the fact that you're dealing with retraining people. Do you know if there's been much effort with the higher education facilities – I know you mentioned Hillsborough College – but actually the universities and colleges that have the specified skills training, not just for newbies but for updating the skills of existing workers and expanding continuing education opportunities? Could there be more communication in that area?

One thing that we do is a needs assessment of a community. We will do the surveys and focus groups and ask what the talent needs are. Then we will provide that to the educational institutions, the high schools, and the school district with recommendations for what they can implement. We've done that in Pinellas two years ago. We haven't done one in Hillsborough recently but we do it statewide. That information is on our website. Unfortunately I would say the universities and the colleges in our region have not been doing a stellar job on providing incumbent worker training. There are pockets of excellence. One reason we are based at Polk State College is they do that very well. We've formed an initiative called CAAM (College Alliance for Advanced Manufacturing) to assist the other colleges in the greater Tampa Bay region with their corporate training to help skill the current workforce. It takes someone who knows the language who has been in a manufacturing environment and develops a talent pathway for their workforce and tap into those state and local workforce funds to offset the cost. It's been a weak link at the university level and the community & state colleges. Frankly there is still territorialism that is stopping regional collaboration. A college may not want someone from another college to come into their territory and work with their customers. Our vision for the College Alliance was, let's say we are all a part of the alliance and now your customer doesn't have to think another college is crossing a border to help them. That territorialism has been a real stumbling block for building the workforce.

The second part of that is there is a preconception among the general population that unless you go through college and you get a degree in "ABC" that you're not going to get the kind of job you want and while there may be some truth to that, there are a lot of people graduating from universities who are skilled in research and they can't get a job. I'm just wondering if there isn't some way to address that issue and get more into the continuing education and expansion of skills.

I think continuing education is a great opportunity but it does require these institutions to start looking at how to collaborate across county boundaries which has been very difficult.

#### How can we help?

Tell them you don't live in a silo that is defined by geographic boundaries and look for best practices when you speak to your college and university presidents. It's not about the walls that go around the edges of our counties but how we can bring best practices across.

Are there any questions from staff on this important issue? Our staff plays a very significant role in our policy development.

I just want to make you aware the Career Source of Pinellas and Tampa Bay co-sponsored a study of the skills gap and surveyed the local manufacturers and asked what specific skills and certifications do you need? We assembled that information and we spoke to the tech schools and the colleges to try to get the programs lined up to do that. The Trade Bay is also a great opportunity to try and break down some of those because it's a consensus group of universities and state colleges working together. St. Pete College is setting that up so we've got a good opportunity in Pinellas. They all have manufacturing programs but finding the right one and finding the things that the manufacturers want. The big thing with manufacturers is they want somebody who is certified in multiple disciplines because these are small companies and if they have a contract coming in and they need a C&C operator one day and a welder the next they would rather have the same person doing both jobs. It is interesting how demanding these manufacturers are being on their employees and often how little they are willing to pay to get them trained. Or to give them overtime to be able to go to a night class to get the training they need. It needs to be more of a culture change in the manufacturer community to see the importance of building that asset within the organization. There are a lot of different fronts here. Ms. Todd was exactly right on the parents and the guidance counselors and the students themselves to feel that careers in manufacturing are not glamorous enough, not technical enough, not modern enough and of the awareness of the kinds of manufacturing in the Tampa Bay area with electronics, very high tech alloys, and in defense and high security, high skills, high knowledge tech industries. It's pretty exciting when you're in the story. Each of those companies also has very low skilled, very low entry level jobs that are the ones people are afraid of. You have to be careful on how you lead them through that and also get the companies to be able to take their best workers and invest in them so they can get higher up within the organization. There are success stories. Almost every manufacturer's "c" level team is people who started in that entry level jobs. That's the story to tell. Yes, we had a minimum wage job to start with but we will see you through. We are a good company where all of our workers will help you through the process and if you do well you will move up.

With the growing use and demand of anxiety and pain reduction food supplements and pharmaceuticals and with the legalization of marijuana in the state of Florida which is going to be evident after the next election based on all the polls, and the growth of that in the U.S. as you are beginning to see with discussions that are beginning to take place in other states, up until this point that's been manufactured primarily off our shores and Florida has been the leading illegal entry of that product. Has there been any research or study or ideas of what that impact would be on the state and the manufacturing of these food supplements and legal pharmaceutical products?

I have not seen any. I know that culture is a challenge for manufacturers on hiring a workforce. We bring that up to an employee that there is an expectation they are going to be drug free in a manufacturing environment, and if you cannot be then they need to select out because we're not going to waste the time training you to get you to your credentials and then you aren't employable. In terms of economic impact of the legalization of a lot of those products I have not seen any study. I would consider reaching out to Colorado and tell them we have a drug free workforce and see if you can get some of those manufacturers.

I serve on the airport board and we're facing issues with how do we handle tourists and visitors coming into the state and leaving the state and the federal government not being in favor of legalization and how do we handle it, crossing the checkpoints. I know having served at the state level and people knowing that I've served there and am now at the local level – over the last six months I've had probably ½ dozen phone calls from business entrepreneurs and venture capitalists asking me where do we go? If we want to be up front and early in this industry, who do we talk to? All of the polls show this is going to pass whether we like it or not and we're going to have to deal with it.

More info: <a href="http://www.eda.gov/challenges/imcp/">http://www.eda.gov/challenges/imcp/</a> <a href="http://www.tbrpc.org/edd/">http://www.tbrpc.org/edd/</a> <a href="http://www.polk.edu/people/eric-roe/">http://www.tbrpc.org/edd/</a>

# 2. Economic Analysis Program

Staff will provide an overview of the Council's economic analysis program. TBRPC maintains several econometric models to conduct detailed economic and policy analysis. The Council's geographic information system (GIS) is utilized to add geospatial robustness to the program. TBRPC has conducted several hundred analyses over the last 15 years. More info: <a href="http://www.tbrpc.org/eap/">http://www.tbrpc.org/eap/</a>

The Economic Analysis Program has been on-going. We provide economic analyses, especially the tools we use to conduct these different analyses for everyone. It supports the Comprehensive Economic Development Strategy (CEDS), updated every 5 years as a part of being an Economic Development District. The most recent one aligns with DEO's Strategies-Six Pillars. The different models we have are REMI Policy Insight, IMPLAN, Economic Development Module, and Fiscal Analysis Planning Tool. The last two we developed in-house. REMI is the one that most people are aware of. The important thing to remember with REMI is if you change an element of one of the five blocks, all the other elements change. We have a baseline forecast to 2050 and the way it works is you change something in there and everything else changes and you can see the difference. You would take the new forecast minus the baseline forecast to find the impact on the change. We have 70 different industries that we can define down to from manufacturing all the way to a farm. REMI detail produces different elements and by county so you can tell which county is most affected by changes.

Our economic analysis program activity has grown over the past decade. In 2002 we had 12 analyses for the year and in 2013 over 60. Some of our most extensive ones are: Disaster Resiliency Study, Targeted Industry Cluster and Workforce Competency Study, Westshore Economic Profile, Medical Products Cluster Study, Energy Resiliency Strategy, and the Evaluation of the Tampa Bay.

Technical assistance projects are partially funded with the Economic Development District. The Tampa/Hillsborough EDC analysis is looking at the impact they provide each year. There were 17 different firms they were able to talk into relocating to the area. With the 17 firms they had 2200 employees. Those 2200 employees created another 1700 jobs throughout the county and \$373 million in activity to the county. That's important because they received \$2 million for funding from Tampa and Hillsborough. For every dollar that the city and county contributed the EDC was able to create \$310 in GCP. Annual retail sales by five categories are shown in a pie chart. It is important when the EDC is going to car dealers and saying they would like them to be members of the EDC by funding this level and they are able to showcase how much is created by attracting more employment to the area. Tax Watch uses our REMI model and our analyses to create a lot of their reports. They did a retiree attraction program to attract retirees to move to the state. Tax Watch felt that they should instead invest that money to attract manufacturing and logistics to get a lot more bang for your buck. Sure enough the 10,000 retirees would only add about 3,000 employees total whereas logistics or manufacturing would be around 20,000 employees.

One of our larger studies is the Disaster Resiliency Study. After the BP Oil Spill we looked at if there was a disaster that hit the region, what would happen? Employment is lost for a certain amount of time and slowly recovers; we could also get federal assistance. We were able to geolocate all of the employment so we could take employment out of each evacuation zone and see which employment is missing. The study won the economic analysis of the year award in 2012 at the REMI Users Convention

The Targeted Industry and Workforce Competency Study was performed by TBRPC and TBP as co-applicants to EDA as well as every EDC in the eight county regions. We were able to look at

the industries that we benefit with currently, but also in the future. Which ones are growing, which ones does the region have a competitive edge. We were able to transform that, if we have those industries we need a workforce to supply them. We went through all of the colleges to see which programs they have training or will have training in the future. We selected Health & Human Performance, High-Tech Electronics & Instruments, Data Management, Analytics, & Services, Marine & Environmental Activities. Each one of these industries has a lot of subindustries and a lot of these sub-industries are across a couple of the main targeted industries.

The Westshore Economic Profile was looked at as a region, not a city. They came to us because we can geo-locate all of the employment. The Westshore area is dense as well as downtown Tampa. We were able to identify the importance of Westshore. The profile shows the percentages of Hillsborough County employment. Downtown is at 5% employment, the City of Tampa is 45%, and the Westshore area is 12% with 14% total wages and 118% higher than the average wage even though they have the two largest malls in the area.

The Medical Products Industry Cluster Study – we worked with the Florida Medical Manufacturing Consortium and Pinellas County. We identified all of the different medical manufacturing. We split out to four categories: medical product distribution, biotech, medical devices, and pharmaceutical. Hillsborough and Pinellas have a considerable amount of manufacturing. Pinellas has more medical devices and pharmaceutical whereas Hillsborough County concentrates more on biotech and medical product distribution.

The Energy Resilience Strategy looked at different needs of Florida and how to solve those needs. We also looked at the willingness of residents and businesses to invest in energy. We did this by splitting the state into five planning energy areas. Some of the energy solutions would work with wind in the Panhandle but it wouldn't work in Miami or the Tampa Bay area. From there we surveyed all businesses and residents to see a willingness to spend their concerns about energy costs or increase. From there we performed our economic analysis scenarios to figure out what would happen if gas was to rise to \$5.00 or \$10.00 a gallon. From there we held 12 workshops throughout the state. We then held Confabs and from there we created Florida Energy Assurance. We showed if natural gas were to go from \$2.00 to \$6.00 what would happen to employment in Florida. We had different categories and had to work with level implementations: federal, state, regional, and local with ease in implementation whether it is easy, moderate, and difficult. This one is moderate to difficult.

The Evaluation of the Tampa Bay is looking at Tampa Bay and what percent of employment is associated or dependent upon the actual bay itself. We are splitting that between the regular bay and a healthy and clean bay. Some of these industries need a clean bay such as real estate whereas shipping, or mining don't need a clean bay. They just need waters to move things. The average wage by industry chart was presented. The largest is education, healthcare and social industry. Their wage is around \$42,000. Management of companies is not a big industry but their wages are considerable at \$90,000. Accommodation and food services is a large industry but the average wage is around \$20,000 a year.

#### Ouestions & Comments:

On your Energy Resiliency Study did you do any research on if Florida gets into the solar market and actually increased the demand what the affects would be on jobs?

We didn't take it that far. We did do an analysis if they were to allow solar to be sold from party to party. For example if you are Westfield Mall and you have space for solar and sell the energy to your tenants. We looked at a solar sales and development of that but we didn't go as far as introducing the demand for energy.

So you wouldn't have looked at if you took the reimbursable rates from an electric company if it went from a wholesale to a retail rate, what that would do to the economy?

We did not. We looked at long term. Energy companies could raise their rates if they were suddenly losing money on that.

What would it take to look at that type of study?

If you put solar on top of your house and you are using that to generate electricity, if you're yet to have net-metering when you sell it back to the grid you get maybe 4 cents per KWH whereas you are paying them 12 cents per KWH. In most cases the solar energy you generate that's going back on the grid, that differential only becomes a factor at the end of the year if you generated more electricity than you've used. A lot of people are concerned about that issue if you get paid less.

There's a new product out by Dow. That solar shingle, when they devise how much to put on your roof, a lot of time you get shrunk because when they factor in the nature benefit economically for a citizen is to actually build enough roof to break even. In the future with the net metering it's going to stay the way it is now. If you increase that number up what you would find is the economic benefit to actually put more solar up there would be a huge benefit and you would see more of it. There would be an impact. Economically it is a huge thing. Maybe the answer is not 12 cents per KWH for retail, but something between the 4 cents and the 12 cents, I'd like to look at what those numbers will be and maybe you could talk to a manufacturer and the people who are selling it to find out what they think their affects would be on their own products.

We looked at someone selling to someone else for 10 cents. If you are a big commercial installation it's not a big deal to sell it to your tenants.

It's going to go back to the grid; I'm not going to sell it to my neighbor. If it goes back to the grid why would we get tied up in that whole market? The energy is right there, if it's not used it's lost. It's going to save the electric company something.

We have a project right now – the Rooftop Solar Challenge that Brady Smith is overseeing. The whole thing is about jobs, the idea of installing those panels and that type of thing creates jobs. Domestic energy was domestic jobs and solar is right here. All the other electricity is generated by imports for the most part, natural gas and what not. That's the way we have been looking at it. We've looked at it from a displacement of imports.

# 3. Wireless Network Signaling Data

Ryan Kinskey and Jordan McCullers from AirSage, Inc. provided an overview of the technology and data available from the nation's wireless data stream. This anonymous data has tremendous applicability to transportation, economic development and emergency preparedness planning. More info: <a href="http://www.airsage.com/">http://www.airsage.com/</a>

Mr. Wynne said the Economic Analysis Program (EAP) presentation was a lead-in to this presentation in that we use a lot of data in our EAP and we have access to a lot of different data sets. A lot of the uses of Airsage throughout have been transportation related. Mr. Pumariega has always been interested in trying to figure out a better way to figure out where the transit provider customers are coming from and a couple of years ago some of the transit providers listed license tags and people didn't like that because of privacy issues. Mr. Pumariega even explored the possibility of using the unemployment compensation quarterly report to access work and home aggregate data for potential transit riders. There are a lot of uses for this type of data, particularly in the tourism industry to try and figure out when people visit Tampa Bay and where else do they go? If folks are staying at the Tradewinds do they go to downtown Tampa or downtown St. Pete to visit

museums? What do they do? They can provide data based on permanent residence or visitors. They can provide data for a lot of different uses – transit, economic development analysis, tourism analysis and the like. If the group likes what they see we may try to come up with a consortium and figure out how to purchase this data and figure out an arrangement to make it cost effective to where we can make use of the data on a regular basis for multiple different uses. Their business model has typically been the turn-key solution to someone. What we would rather do is figure out a way to purchase the data set so that we can manipulate it in different ways for different uses as opposed to just one.

Ms. McCullers said among the items Mr. Wynne mentioned there are many other applications that the data can be applied to such as emergency management, and disaster management, as well as others. Airsage is basically a big data company specializing in population analytics. We have exclusive partnerships with two of the top three cellular providers. We go behind their firewall and collect location data.

Airsage has 18 patents right now with a couple pending, and currently are only collecting data in the U.S. Every day they capture close to 20 billion location data points, going back to 2009. Right now they are collecting from over 100 million unique devices every day, over 1/3 of the U.S. population. One of the first things that come up is the consumer privacy protection issue. We have all sorts of security to make sure we are not infringing on privacy information. Airsage's patented privacy architecture provides multiple layers of encryption and is fully compliant with privacy laws and policies that prohibit third party access to personal information. We have our technology behind the carrier firewalls. Carriers use the AirSage WISE Technology Platform to secure, anonymize and aggregate the data using proprietary algorithms. Only anonymous and subscriber authorized data is forwarded to AirSage's WISE Analytics Platform.

We have cellular devices such as a PDA, I-Phone, or a dumb phone and every time that device interacts with the network it is creating what is called an event. An event basically is a text message, or email, or phone call – routine data transfers. Even when you are heading home and aren't actually talking on the phone, you're not texting, but you will still have your routine data transfers like when you see your bars fluctuating as you head away from one cell tower closer to another tower. We still get these events on the network every time your device talks to the network. Every time it creates an event we are collecting estimated latitude to longitude and a time stamp associated with that event. Most devices interact with the network about 300-500 times a day. Those dumb phones still interact close to 100 based on that routine data transfer. Once the cellular device accesses the network and goes behind the carrier firewall that's when it becomes anonymous. We have our own firewall system in place and the cellular partners come in and test it to make sure there is no way to reverse engineer any of the information. Information comes into the network with the cellphone number and before Airsage gets the information that number is completely erased. The cellphone number is the only personal information that's tied to it when the Airsage technology touches it and Airsage can't pull it out on the other side of the firewall until all of that information is completely erased. We have our own unique identifier associated with the information.

Transportation planning is where we started and have been playing with the most and about two years ago we started with the CDC looking at trends and historical movement of population. We looked at two tornadoes in the Joplin area and where people are going in times of emergencies. We are activating all the data for transportation planning, emergency management and economic development.

Q. How far back does your data collection go? She mentioned the tornado event. You don't have to know that you are actually going to need that data when that event happens, you can go back and say, two years ago between these periods of time – we want that data from then.

Exactly. From 2009 is where it goes back to. So if you said you would like to look at June 2012 data and June 2013 data we would go back and pull that data. We certainly can know that you want something for June 2014 and can plan on that data coming in.

Our accuracy rating is 90%. There is a lot of information we can get from a device, even though it is made completely anonymous. When we do studies we look at it for at least 30 days in time and will understand one devices movement over the course of those 30 days. We are able to establish a home location and a work location for each device we are looking at and look at nighttime clusters, from 9pm on the average night of the study period to 7am then the device is at home. On the flip side if the device is in one location from 9am to 4pm on the average weekday then it's at a work location. Then we are able to determine trip types from the home location to the work location and what kind of trips these devices are actually making. You can do a point of interest and then have other locations such as shopping. You build out your study zone however you want. It could be the Tampa Bay area or a smaller spot. From that you can see the visitors that are coming into that study area. We are now able to understand the socio-demographic information. We are layering this information with home locations and then look at household income associated with a device.

- Q. Do you go down to the census block and use census data for income?
- A. Yes. When we are extrapolating we look at out of 100 people maybe 10. Each device represents 10 devices in that area then they can extrapolate to the full population.

An example was provided using a bridge crossing in Niceville, Florida. There are 17 zones so what they wanted to understand was the number of tourists coming across that bridge. This is a study done with HDR. They have a machine counter on the bridge, counting the number of trips coming across the bridge. AirSage's information, once we extrapolated to the pool population fell within 3% of that machine counter itself. That was a good validation for AirSage. The really good information you can't necessarily get from a machine counter unless you have someone out there with clipboards and a license plate recognition survey is the trip purpose, or understanding the origins and the designations associated with all of these trips crossing this bridge.

We basically use Trip Matrix, a standard origin/destination study. A lot of zones to a lot of zones. We have a number of MPOs and DOTs and counties. DOTs use these for their modeling purposes. You can use this with a region and see how many trips are coming to this region, going away from this region, or you can do something small with a 500 x 500 meter zone. We can use this for analysis to understand trips coming to and away and where they are coming from. You can look at the origin of that trip and also the home location. Activity density is all the aggravation of all the activity points when devices are in an area for at least 5 minutes of time.

We did a trip matrix in Moore County, NC. The study was done with Parsons Brinckerhoff and collected a month of data with over 11.5 million trips from over 3 million unique mobile devices. They were using this study to update their travel demand model and to help understand traffic because they were considering building a \$300 million bypass in the area and didn't have a lot of good data to validate that project. Some of the results from that study were home locations, work locations, and daytime clusters. They took their traffic analysis zone structure and rolled them into districts and looked at a few key areas to understand trips coming to and from. Their internal zone structures are smaller zones wanting to understand trips going to those zones and away from those zones. They used the eight surrounding counties as their external zone structure to see external/internal trips and internal/external trips. They got some really good information that would be hard to get traditionally when using state household travel surveys.

The US1 corridor study was because of a debate on building a bypass. Over 1/3 of all the trips on this corridor was actually through traffic which may have validated more to the building of this bypass. Our study showed that the internal to external residents traveling within that corridor were

actually a higher percentage. There was a vast difference. They ended up not building that \$300 million bypass.

Another interesting thing was the external to external, through trips. They took those external stations (the eight surrounding counties) and looked at all the trips going through Moore County and where they started and where they ended.

The Select Zone Analysis is one zone going to many. It can be a region or something as small as a 500 x 500 meter zone. Airsage did a study with Fehr & Peers and looked at a Park & Ride to see where trips were coming from and going to. It was a simplified version of a study previously done. Another was done with the Sacramento Kings in the sleep train arena. They were trying to understand whether or not they should move their arena to a more urban area from their suburban area. They wanted to understand trips going to and coming from to the arena to see what is making up these trips, who are coming in – visitors or residents? Looking at activity density, a study was done with Savannah's Better Business Bureau. They wanted to understand who is coming into the area. We looked at Savannah and drew a 30 mile buffer around the city. We looked at July 2013 and saw over 3.7 million activities. We then broke it down to 2.5 million revenue activities and 1.2 million visitor activities.

Another unique thing AirSage can do is show home location at a nationwide level. You can break home locations in as tight as you want. We then use the census data to understand household income, age, automobile ownership.

Mr. Wynne: The table where you showed the ten states that people came from, do you then

have some sort of metadata behind that saying they have an average income – do you put those types of numbers to it or is that something you could do if you had

the database?

Mr. Kinskey: We can. Even though we're saying they came from Georgia or South Carolina,

we will then have the home locations for the out of state visitors and the census

data.

Mr. Wynne: That would be very interesting information for the CVBs (Convention Visitors

Bureaus). We have seasonality in our area; we have more international and in-

state as well as out of state. It's interesting about the demographic.

Ms. McCullers: Everything we're getting is at that census block level nationwide. There is so

much data that we are collecting every day and there are so many ways to aggregate it and make it useful and find the right answer to your questions as they come up. As Mr. Wynne said, trying to find the package to fit your needs is most

important.

#### Questions & Comments:

Mr. Schock: You're able to identify down to the census block which gives you general socio

economic data. Obviously you are identifying individual thumbs or devices based on their ESN or MEI number that's probably proprietary. But you are

identifying individual devices by some unique identifier.

Ms. McCullers: Yes. We basically scrub the telephone number and giving it our own unique

identifier. Even those rotate so we're not holding onto one identifier throughout.

Mr. Schock: Right, but you are still able to identify a home location, a work location, based on

the AirSage identifier.

Ms. McCullers: Yes. We will look at that one identifier for that one device over the course of the

study period.

Mr. Nunez: Real-time, that acquisition – can they all do that?

Ms. McCullers: As of right now we're not. It still takes 4-6 weeks or 6-8 weeks for us to get these

studies out. It certainly is on our roadmap to be able to do that.

Mr. Kinskey: If you want information for traffic management then there are other solutions out

there. The most real-time would be about a 24 hour delay. We aren't seeing these individual subscribers, it comes to us encrypted but we are looking at individual subscribers. The data that we're delivering to clients is aggregated and fully extrapolated so there is a level of processing and we get about 15 billion data points a day. Just the technical limitations to be able to process all of that and write the scripts that produce the type of insights that you may be looking for;

we're just not able to do that real time.

Mr. Nunez: Can anybody buy your services and get whatever information they may want? For

example, if I am Universal Studio and I want to see who is coming in and out of Disney World so I can compete better against them and target their clients. If I'm

Universal can I buy the Disney data status?

Mr. Kinskey: Yes. You wouldn't be seeing actual individuals of course, in fact you would be

getting counts of arrivals and departures and where they are coming from, and how long they are staying. You could get the quantity of subscribers that go to Universal and Disney on the same day versus Orlando SeaWorld and get a type of

pattern analysis that you are looking for.

Ms. McCullers: And you could do duration and frequency and see where they are spending their

time.

Mr. Nunez: Have you had any interface with law enforcement trying to see if you can locate

one device for them and see if this device went from here to there at that time and

try and solve a crime?

Mr. Kinskey: That's information that they would have access to from the carriers. There has

been different use cases where law enforcement has been interested looking at general patterns of activity and seeing if there are any changes in that activity. For instance, if the President is visiting Universal Studios we can show what should be the normal activity over time historically and then show it leading up to that event.

Presentations can be found at: <a href="http://www.tbrpc.org/council members/RCSC">http://www.tbrpc.org/council members/RCSC</a> presentations 2014.shtml

## 4. Potential Collaboratives

Discussion on ways TBRPC can promote regional collaboration. Potential topics include Public Private Partnerships (P3), Six Pillars Community designation, Community Rating System (CRS flood ratings), business continuity planning for disasters and others.

Chair Crist suggested having staff put together the topics for a potential workshop in September.

#### 5. Member Comments or Discussion

Next Meeting: Monday, September 8, 2014 at 10:00 a.m.

**Adjournment:** 12:00 p.m.