GOVERNOR'S
EMPOWER RURAL IOWA
INITIATIVE

Connecting Rural Iowa Task Force Meeting Minutes
National Advanced Driving Simulator
2401 Oakdale Blvd.
Coralville, IA 52241
Friday, September 13, 2019   1:00 PM

1. **Roll Call:**

   Members Present: Lt. Governor Gregg   Sandy Ehrig   Ryan Boone
                          Dennis Fraise   Stacey Steward   Kevin Cabbage
                          Patty Manuel   Katie LaBree   Dave Duncan
                          Deb Lucht   Tom Petersen   Barb Baker

2. **Approval of Minutes:**

   Draft minutes from the August 12 meeting had been distributed for review. Edits had been made to reflect the correct individuals who made motions to approve the minutes and adjourn. Dave made a motion to approve the edited minutes, seconded by Kevin. Carried unanimously

3. **Welcoming Remarks from Lt. Gov. Gregg:**

   Lt. Governor thanked NADS for hosting the meeting, and South Slope Communications for sponsoring lunch. Appreciated the demonstration of the driving simulator prior to meeting. Reviewed the overall meeting agenda and challenged members to think about how they can help build conversation on connectivity in Iowa. Use what you learn today and share on social media or write an op-ed, as did Michael Ott, presenter at the August meeting did.

   Also provided an update on what other task forces are working on and reminded members they are invited to all meetings. The Investing task force met in Vinton on September 9th and reviewed state programs for dilapidated and deteriorating housing and how to improve usability and awareness, as well as toured the former Iowa Braille & Sight Saving School. Wednesday the 18th, the Growing task force meets in Manning for a hands-on meeting on leadership.

4. **Remarks by Sandy Ehrig:**

   The partnership between ERI and the IRDC has helped expand opportunities to provide information on both groups through several recent and upcoming events.   Updated members on several upcoming rural opportunities. Presented along with Liesl at the Iowa Finance Authority Housing Conference earlier this month and will be at the Idea Summit in October. Exe. Director, Bill Menner provides members a weekly update which included the link to the op-ed the Lt. Governor mentioned if interested in seeing it. Also informed that the 2020 Rural Summit will be held at the

Kirkwood Hotel at Kirkwood Community College on April 29-May 1. Looking to have at least 80 communities represented

5. **Rural Innovation Grants Update:**

Liesl updated members on progress. The policies and procedures have been drafted and will be distributed for review. No major changes from what was discussed at the August meeting. There is still a 1:1/2 match and a minimum request amount but removed the maximum. There will be three separate review committees consisting of task force and IEDA staff. Rural population is under 20,000 to qualify. Please read and provide input. Excited to look for projects that can be replicated.

6. **Panel Discussion on Broadband in Manufacturing & Automation**

Dave Duncan facilitated the panel of the following, and asked for information on their organizations and reliance on broadband:

Dr. Dan McGehee, National Advanced Driving Simulator: The data they have to transfer is huge. It's not only necessary for driverless operation, but for rider expectations. People expect they should get service.

Joel Althoff, Cascade Lumber Company: They have four locations including Pleasantville, Cascade, Monticello, and a manufacturing plant in Texas. Important to keep all sites connected. They have a small data center in Monticello.

Danielle O'Brien, DKM Manufacturing, Inc.: Family business located in rural Victor. Have struggled with connectivity but they are finally getting fiber.

Colin Hurd, Smart Ag: Company makes driverless technology for tractors which farmers can install in their tractor. Broadband is necessary for initial setup. Once initially setup is done, they don't need broadband, but still have reliance on connectivity to transfer field data.

Q) Explain how the data is installed in tractors? A) Traditionally they used a computer with USB drives. Recently changed, as new tractors have cellular connectivity so can now be cloud based. SmartAg is all wireless cloud based. A farm with no connectivity would be challenged to use the new technology. The more connectivity, the better. Consistency. Q) Is there functionality if the farm to has a system with fiber and wifi? A) Yes, they could pull down the data. They collect half a million images per month which need to get to them. As often as there is connectivity, they are uploading data so upload speeds can be more important than download speeds.

Q) What blend of data sources do you use?

Dan: They are using 4G LTE now. Location information is simple, but they need to increase pipeline. Redundancy requires triangulation of many different sources, and all three sources must agree.

Danielle: They are hardwired within company. Every machine is connected real-time. They are looking forward to fiber as wireless coverage in a 50,000 square foot building isn't great.

Joel: All types. They started automating a few years ago. The have DSL in Pleasantville with cellular backup, use fixed wireless and fiber in Cascade, and their mobile workforce uses cellular.

Colin: No wired connectivity outside of the vehicle. They have three forms of wireless: cellular, radio and wifi. Safety is an issue if the combine and tractor can't communicate. They can set up hub at farm, put info on radio and at least communicate basic info that way.

Q) Joel and Danielle – What other types of services do you use broadband for?

Joel: The sales use cellular and apps for their network for quotes, etc. Retail customers can log in.

Danielle: They must access their customer's data to pull. Lt. Governor asked how they were accessing their fiber line? They are a large user for NetINS, who had already built out to surrounding towns, so they are bringing fiber out to them.

Q) to Colin – Is software opensource or tied to a carrier? A) Thinks it is dependent on the carrier to certify the software, so they have to get certified on multiple providers. It's hard to find tech that will work with multiple carriers.

Q) to Dan from Kevin – Are you controlling the equipment going into your vehicles? A) Yes. They have an app used by first responders to take photos of crash patterns and the photos can't always get to the trauma center with no connectivity.

Q) from Tom – We are challenged to be advocates, so can you talk about how lack of connectivity hurts you and what you could you do with more?

Danielle: We can't quote jobs if we can't get large enough files.

Joel: Affects where we can do business and our expansion. Importing to be able to connect on the road. IT – lot of security systems in rural Iowa and a lack of connectivity. The data center hosts accounting systems for others an is impacted.

Dan: Sometimes less connectivity is better for them. The rest of the world doesn't have great bandwidth so they are developing technology that relies on less connectivity. Need to be efficient with what they have.

Colin: They would have huge opportunity with unlimited bandwidth. Could capitalize on the ability to use machine learning which is very bandwidth intensive. Features in a field that can teach tractor yield estimates, etc. Can't do it yet. Question for the TF - what is the initiative for cellular? What amount of the state is lacking 4Glte? Stacy – looking to build 5G across state. He thinks we should be concerned about LTE and 5G coverage first, not traditional broadband. There is a big need. There is a patchwork of providers and it has worked well, but looking to future need we need to do something different.

Kevin: If you think a carrier will cover every acre, it won't happen. Networks today are based on traffic patterns, not every acre. The provider needs to be responsible for the fiber to transport data, then it goes down to others for a choice. So how do we get to every acre when it is too costly for a single provider. The answer is in technology put in consumers hands to control. Get connectivity to farmer and if he wants to invest, he can. We need to look at how we get broadband to the farm. We can't wait on the state or a carrier. System must be in place for entrepreneurs to choose.

Joel: Carriers build out networks. There are sensors and IP that are already out there, deer cams etc. Sensors take up frequencies.

Ryan: Routers that can detect frequencies that are available, so if for example a baby monitor starts it will choose a different frequency for connectivity.

Chuck (South Slope): Regarding cell coverage for rural, the towers need to be closer for 5G. In rural 5G only covers a couple of blocks not 8 miles like 4G. This will be a big challenge.

Deb: The more users and traffic, the coverage gets less.

Lt. Governor: On 5G, is there hope over time that there will be a broader reach from towers? Stacy: The technology is there. These are shorter towers, they have mapped and will need 900 set two to three miles apart, but you get total coverage model without switching carriers. Outside of metro not being done. Dave: The higher the frequency the lower the distance.

Q) Looking forward, what impact would increased connectivity have on revitalization to rural?

Dan: Have two kinds of info, some for humans to let you know what is coming (crash, construction, etc.), the other is info for machines which requires higher bandwidth and reliable signal. We haven't talked about reliability. Ryan: 5G must be reliable. They have a backup generator; what do you have? Do you have minimum specifications? Dan: They won't use a single source, have to have multiple sources to pull from.

Joel: Low latency. For data hosting, 40 ms or lower, phones are lower.

Colin: Their business exists due to downturn in rural, it's hard to find labor. Better connectivity can help revitalize. Can provide higher quality of jobs.

Joel: It's a quality of life aspect, young employees choose to live elsewhere where there is connectivity. Availability of high-speed connectivity provides rural living options and can help keep youth in rural communities.

Dan: There is a big labor shortage. The trucking industry has a 70,000-driver shortage. Companies can't grow. Can't find manual labor so have to automate. Must look at actual task that is being automated.

Kevin: Can add to safety and productivity. More automation could take advantage of weather data.

7. **Task Force Discussion and Q & A**

Dave gave an update on the Broadband Grant Program. Much of what we did last year centered around making sure funds went to the best uses, and updating procedures like the scoring mechanism, and increases speed thresholds as necessary. The speed threshold now stands at 25/5, but upload speeds are also important. At some point should we should look at synchronizing. Now OCIO office can do changes without going through legislature.

In 2018 $1.3 million was appropriated for the grant program and 17 companies filed applications. In April the OCIO awarded funds to seven providers for fiber and fixed wireless projects. Last year we requested $20 million over two years and received $5 million. The OCIO is currently finalizing the broadband availability map and revising the NOFA for the next round of grants. There has been a public input period for validation or objections to help target areas of need. The program will be opening in mid-September.

Ryan: If the match is still be at 15% the task force might need to look at this to increase. The grant application process is difficult and for only 15% of total project funds from the grant, providers may not think it is worth the effort.

Lt. Governor: Hopes we can use this round to show there is need for more funds in the future.

8. **Public comment:**

None.

9. **Wrap up and next steps**

Lt. Governor encouraged providers in attendance to apply for the grant and for others to encourage our providers to apply. Challenge members to think on how you can leverage your own networks to spread the word. Think about how to drive the message beyond social media, such as a letter to editor in local media, etc. Want to be able to engage as many Iowans as possible.

Sandy: Empower Rural Iowa is on the agenda at the Iowa Idea's Conference, and the IFA Housing Conference. September 7th was the opening of the Forge in Jefferson, a good example of everything about the three task forces coming together.

The next meeting will be held October 9th noon to 3:30 at the Iowa Specialty Hospital in Clarion.

10. **Adjourn**