

Global Institute for the Study of the Intelligent Community in Dublin, Ohio, USA October 21, 2015

General Notes:

The Global Institutes of the Intelligent Community Forum (ICF) are local research institutions established in partnership with ICF by universities, local governments and other organizations to expand the world's knowledge about the creation of Intelligent Communities. The ICF, its Foundation, and the City of Dublin, Ohio have entered into agreement for the formation of such an institute in Dublin, Ohio, USA. On Wednesday, October 21, 2015, over 40 thought leaders from government, higher education, private industry and not-for-profit met to begin the creation of the Global Institute for the Study of the Intelligent Community in Dublin, Ohio, USA.

The one day conference/workshop hosted at the Ohio University Dublin Integrated Education Center included key note presentations, three breakout facilitation discussions and concluded with the ICF Smart 21 announcement. The following are the notes from each of these breakout discussions along with notes on what the “next steps” will be for the institution.

Breakout Discussion Format:

Small Group Process Outline and Questions for Facilitators:

Key frameworks from the Intelligent Community Forum: (need thumbnail descriptors for each of these indicators to aid participants in the discussion)

- Broadband Connectivity
- Knowledge Workforce
- Innovation
- Digital Inclusion
- Marketing and Advocacy
- Sustainability

Geopopulation Perspectives for Consideration:

- Urban communities
- Suburban communities
- Rural communities

Regarding broadband community infrastructure and capacity, please consider the following critical elements of the Institute's work and consider the important questions pertinent to each element.

Breakout 1: Broadband Deployment

Facilitation Question/Prompt

1. What are the **minimum requirements** for broadband service in a community and who is/should be **responsible** for assuring that it's in place and covering the costs?

Minimum requirements and responsibility

- What are our residents and businesses getting from the industry
 - Is it what they need (speed and capacity)?
 - 25 meg down, 3 meg up – per household
 - Choice of providers and / or blend
- Need market analysis, economic model/structure
 - B2B – need to look at Co-Op Model (with bond caps) – Cable providers blow-up
- 1 Gig should be the minimum standard
 - Upload speed becoming more important
 - Reliability & availability 24/7
- Driving Force
 - It's everyone's responsibility, but whoever is responsible for the infrastructure should take the lead
 - Need Leadership – via City Councils' support, awareness, action
 - So far, this is last mile
 - Middle and First mile needs attention
 - City Councils' face constitutional issues with businesses and competition ~ what's our role?
- At what level do municipalities see broadband as a necessary utility?
 - Who pays for the last mile
 - When does broadband become a utility
 - Public utility = Enabler
 - Does the utility model fit
 - Importance to schools, businesses and residents (different payment models)
- What are the competitive factors to bring down telecom costs
 - Capital constraints and ability to recover costs
- Marysville
 - We found we were deficient but that schools had capacity
 - Formed a Council of Governments for collaboration – shared resources
 - Resulted in innovation grant
 - The role of big business (Honda) helps drive growth and need
- Pay attention to Rural Electric Co-ops for answers / models
- Commercial – Scalability
 - Fiber infrastructure to be able to do this
- ICF Institute can help re-think location of responsibility e.g. OARnet & Board of Regents

Breakout 1: Broadband Deployment (Continued)

- Corporate & Economic Development Results will help drive residential and consumer adoption and culture of adoption and collaboration
 - Cost savings / avoidance of businesses

Facilitation Question/Prompt

2. *What policy, legal or logistical **hurdles must be overcome** to assure successful broadband deployment?*

Hurdles to overcome

- Funding
 - Who pays for the lines, then who is paying for the carrier (access vs profit)
 - Form clearinghouse for funding / testing
 - Like with transportation and MORPC w/ institute
 - ROI – public / private needed (different for public than private)
 - Build it and they will come (public build, private will follow)
 - Education of local leaders in need for initial investment
 - Shared vision – public / private ~ Economic Development
 - What is the cost if you don't do it?
 - Allocation for operational cost over time – need a model
 - Federal Communications Commission (FCC) – Universal Service Fund
- Aggregation model for the internet?
- Areas without critical mass
 - Multiple providers an issue
- Models from GoogleFiber (Kansas City)
 - Investment Risk
 - More services they provide, the more money they'll get
 - Google sees data as their investment
 - Big companies have their own interest in mind – ROI
- How to measure social impact
 - People who stay in the community
 - Need to put a monetary value behind the study
 - Good economy
 - Social capital
 - Students feeding back into the community through virtual interaction
- Other measurement opportunities
 - Compstat – Has crime increased or decreased
 - Knight Foundation – Soul of a City
 - OSU John Glenn School – Broadband and GDP
- Control
 - Government needs a role in ownership
- County level
 - Redefining infrastructure

Breakout 1: Broadband Deployment (Continued)

- Public Utilities Commission of Ohio (PUCO) should be a player
 - Cell phone tower
- Education of legislators
- Operations – who does it & how?

Breakout 2: Broadband Use

Facilitation Question/Prompt

1. *What do you consider to be the **minimum and essential uses** of broadband for advancing progress toward the 6 ICF Indicators?*

Minimum and essential uses

- Education & Distance Learning
 - Adult Learning
 - Learning to happen in a new way
 - Businesses keeping up with technology (internal education)
 - K-12 access to the broader world & bringing world resources to communities
- Workforce Use/Education
 - Job application becoming online based
 - How do we use these tools for people who are placed in a location that does not have access to broadband?
 - Workplace is much more fluid
 - Knowledge workforce needs to be mobile – “Mobile Workforce”
- Being Connected
 - Social Interaction
- Digital Equality/Inclusion
 - Stay where you want to live
 - How to expand access and options, including speed and capacity
 - Cost and access
 - Broader exposure to importance of “use”
- Medicine/Health (New Delivery)
 - Social connectivity
 - Media care / monitoring patience (Electronic ICU)
- Civic Engagement
 - Use less paper and gas to get services
- Mobility
 - Don’t have to go from A to B to get goods or services
 - Internet of things
- Business uses
 - Need to understand how and for what businesses use broadband
 - Economic Development issue (retention) for Union County

Breakout 2: Broadband Use (Continued)

- Research Platform
 - Essential use is as a research platform. Enablers for a community
- Setting minimum performance standards
 - ICF to convene the dialogue
- City/University as “Test Lab” for use
- What is available capacity?
 - Use will follow
- Define it as a critical infrastructure
- Content creators
 - Demand increase for large data uploads

Facilitation Question/Prompt

2. *How will you know if broadband use is **effective at making progress** on the ICF 6 indicators?*

Effective at making progress

- When we no longer have to spell out the 6 indicators (way of life)
- Diversity
 - More diverse population with age, ethnicity, socioeconomic etc.
- Telecommute
 - The ability to work from home, need to learn how to talk to bosses about telecommuting
- Efficiency
 - Can we still do our jobs with the same quality, timeliness etc.
- Quality
 - What do we mean and how do/will we measure quality in use
 - ICF could develop some yardstick – average cost per megabyte
- Metrics
 - What type of measurements – baselines for access in schools (e.g. info to parents etc.)
- High level of broadband
 - 100 Gig is in the innovation indicator
- Business
 - Start-ups per year or per capita
 - Innovation ecosystem – how do we set the stage and indicators for this
- Cost
 - Reasonable cost for broad access
- Variety of needs/want/applications
 - Not size of pipe but can you get apps you want (capacity and choice)
- Capacity
 - Prepare capacity today for needs of tomorrow

Breakout 2: Broadband Use (Continued)

- Legislation
 - Legislators understand value/need “use cases”
 - Legal system need to catch up
- Urban, Suburban & Rural
 - All needed for equity of service delivery

Breakout 2: Broadband and ICF Institute Research

Facilitation Question/Prompt

1. *How can broadband technology be utilized to effectively support and enhance innovation research and development?*

Support & Enhance

- Ability to reach out to all different areas
- Innovation a result of collaboration
- Companies connecting globally on research
- Broadband technology as a platform
 - Business to Business (B2B)
 - Honda supply chain
 - Automotive corridor
 - Entrepreneurial Center, spin offs etc.
- At OSU, people are able to use a high-powered electronic microscope across the network from offsite locations
- Low latency & high capacity – quality of life
- How can others become regional partners
 - How do we expand collaborators
- How do we connect / advocate the benefits and how to connect (business case)
 - Relationship component
- Universities
 - What are benefits
- Need champions with vision and drive

Facilitation Question/Prompt

2. *How can the ICF Institute innovatively distribute and use the research results to assist communities?*

ICF Institute assist communities

- What do communities (less served) need to move forward (road map)
 - What’s the first step (guide for setting up)

Breakout 2: Broadband and ICF Institute Research (Continued)

- Community accelerator (Currently an ICF program)
 - Success stories
- Be able to access this information virtually
- Apples to Apples comparisons
 - Communities that have been successful in similar situations
 - Creating visuals for connectivity
- Big Data
 - How to engage data analytics companies such as IBM
- Intersection of collaboration and competition
 - How to get people to get passed this tension
- Hubs for collaboration
 - Show how to share and prosper
 - Social media
 - Guest editorials
 - Case studies/best practices in each of the 6 indicators
 - Opportunities for grants/funding
 - Policy templates
 - Resource for communities to apply for Smart 21
- Dialogue that is good for all
- Model and structure of agreements in how to get broadband to work
 - Operate at a global and local level
 - Local governments as honest brokers
- Modern free market economy based on collaboration
 - Idea of coming together toward common goals
 - Educating, Empowering, Collaborating, Equipping
- Tracking initiatives, what's going on now
- Conferences / Symposia
 - Networking to hit those that might not otherwise hear messages (ie rural)
 - Regional Collaborators
 - Hackathons / War Rooms
- Lexicon
 - Brining everyone along telling the story around indicators
- Long-term vision of region/state
 - Maintaining identity – leveraging uniqueness (no one size fits all)

Conclusion: Next Steps / Now What?

- Organize around the problem we want to solve
 - How do we make the state of Ohio Intelligent?
 - Be provocative – “Knit together to virtually connect everyone”
 - e.g. Taiwan – Intelligent Country
 - If we are regional/Intelligent state
 - Want B2B to come to the table for the dialogue

Conclusion: Next Steps / Now What? (Continued)

- Compilation of all public/private partnerships (Internationally)
 - Different Models
- Studying different financial mechanisms to get broadband in place
 - Funding models
- Knight Foundation & others that provide support
- Repository for best practices / ideas
 - Mechanics behind the ideas
 - How do they do it?
 - Legislation
 - “Before you dig” steps
 - Policy templates
 - Tech planning documents
- Bring other cities/players into the discussion
- Look at what makes up a community
 - Marysville (City, County, Schools)
 - Framing an asset map of what makes up a community
- Advocate for shaping new legislation, public policies, funding
- Hubs for training other on a regional level
- Set goals for process improvement every year
 - Convene group regularly (Waterloo)
- Use ICF to chronical economic development in real-time
 - Creating a cluster
- Not all communities are the same
 - Help them define what intelligent means for them & roadmap
- Celebrating best practices of members
- Measure quantitatively the different positive aspects of broadband
- Business to Business Component
 - What about the group that can’t afford it?
- Intelligent Ohio Symposium Series
 - Take a look at each of the 6 components
- Tactical & strategic for becoming a smart Ohio
 - e.g. Australia National Broadband Network
- Ohio need Technology investment Funds (Money)

****Pick 2 – 3 things for Institute as primary focus****