Practical Approaches and Proposed Strategies for Measuring Selected Aspects of Community Based Broadband Deployment and Use

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The paper presented today is a draft of our work in progress. We look forward to today's discussions and making revisions to the paper.

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Background

- The background work we have done with FRBA, NFBA, and other papers are available for your review at:

    – The Rural Public Library as Leader in Community Broadband Services (Alemanne et al., 2011) http://mcclure.ii.fsu.edu/publications/2011/Alemanne_etal_in_LTR_v47n6_AugSep2011.pdf.
    – The North Florida Broadband Authority (NFBA) Ubiquitous Middle Mile Project: Broadband Needs Assessment, Diagnostics, and Benchmarking of Selected Anchor Institutions http://nfba.ii.fsu.edu/reports
    – The Florida Rural Broadband Alliance, LLC (FRBA) Florida Rural Middle Mile Networks Project: Broadband Needs Assessment, Diagnostics, and Benchmarking of Selected Anchor Institutions http://frba.ii.fsu.edu/reports.
    – The RACECs are depicted at: http://www.eflorida.com/FloridasFuture.aspx?id=2108.

Findings from Our Work Thus Far

- Existing broadband deployment measures are confusing, difficult to use, and ambiguous;

- Existing measures are poorly understood or known by local community leaders – limiting effective broadband planning;

- There is a need to engage local community leaders and other stakeholders to support broadband deployment and adoption through planning, education, measurement, and collaboration.

- Local community leaders need PRACTICAL tools to successfully expand, deploy, and use broadband technologies; tools include broadband readiness assessment, clear measurement metrics, community-wide planning, and commitment from the community.

- A community awareness effort is necessary to explain to people *what* broadband is, *why* it is important, and *how* it matters to their daily lives in order to get them interested in and to use broadband.

Strategies at the Local Level
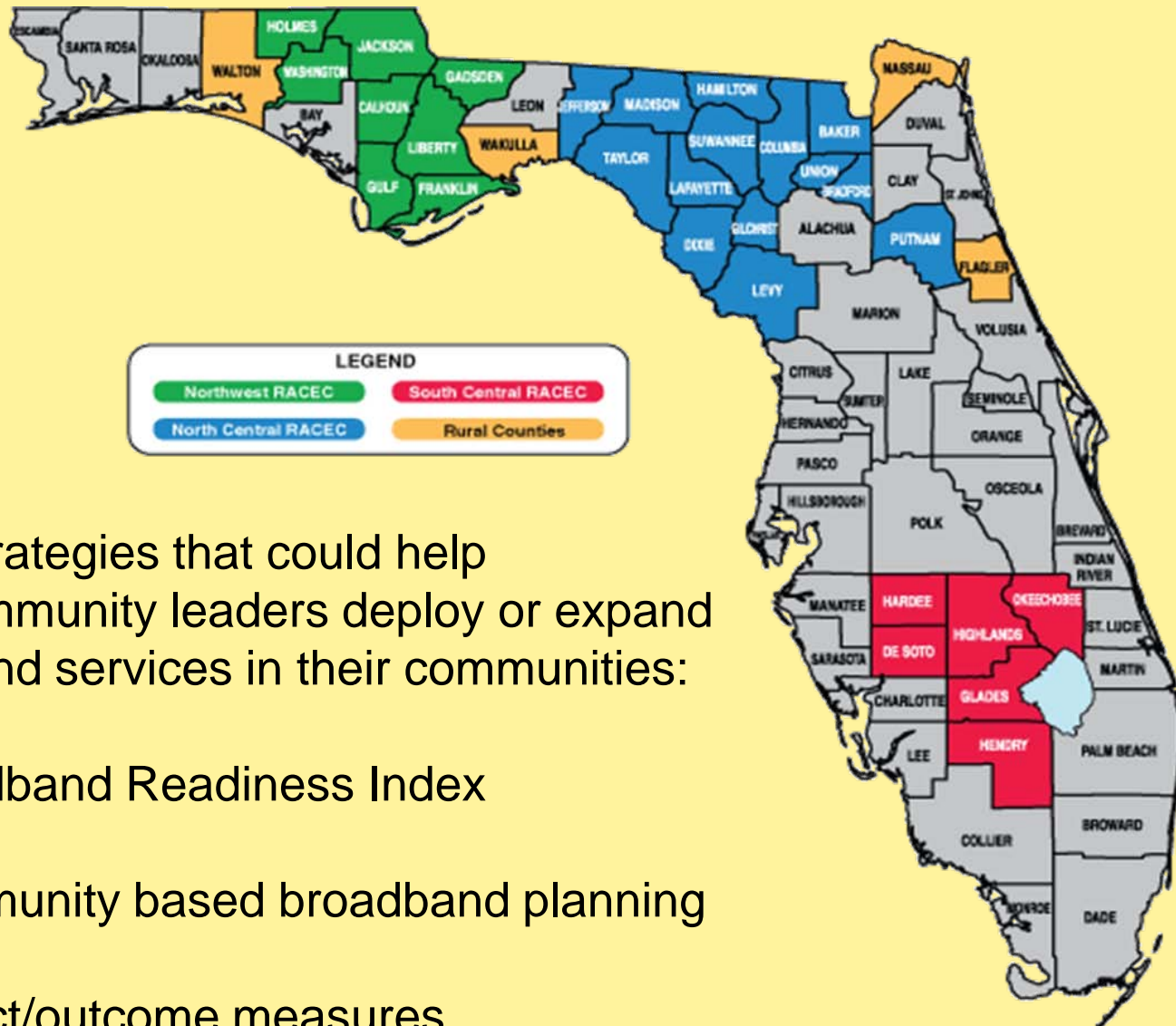
Three strategies that could help
local community leaders deploy or expand
broadband services in their communities:

- Broadband Readiness Index

- Community based broadband planning
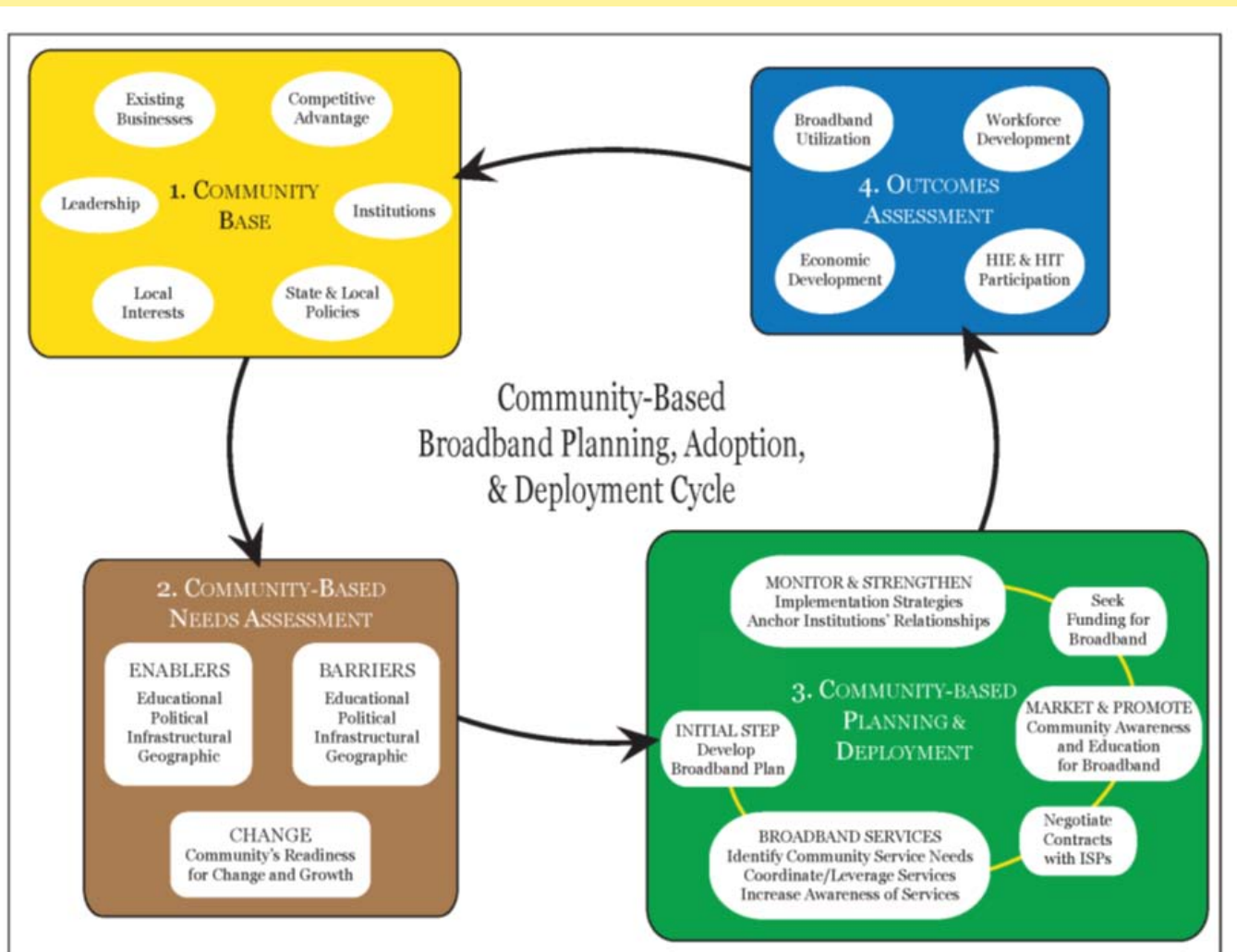
- Impact/outcome measures

Broadband Readiness Index

The index measures the readiness of community anchor institutions (CAIs) to adopt and utilize broadband and has nine criteria that consider different situational and local factors under which CAIs operate.

Criteria

1. Ability to Change ISP
2. Available and Trained IT staff
3. Existence and Quality of Internal Network
4. Age of Network and Desktop Equipment
5. Sufficient Funding
6. Administrative Leadership in and Knowledge of Broadband
7. Existence, Quality, and Currency of IT Plan
8. Administrative and Staff Interest in New Technology Applications
9. Demand from Service Population for "Better" Broadband

Community Based Broadband Planning

Community-Based Broadband Planning, Adoption, & Deployment Cycle

1. COMMUNITY BASE
- Existing Businesses
- Competitive Advantage
- Leadership
- Institutions
- Local Interests
- State & Local Policies

2. COMMUNITY-BASED NEEDS ASSESSMENT
- ENABLERS: Educational, Political, Infrastructural, Geographic
- BARRIERS: Educational, Political, Infrastructural, Geographic
- CHANGE: Community's Readiness for Change and Growth

3. COMMUNITY-BASED PLANNING & DEPLOYMENT
- INITIAL STEP Develop Broadband Plan
- MONITOR & STRENGTHEN Implementation Strategies Anchor Institutions' Relationships
- Seek Funding for Broadband
- MARKET & PROMOTE Community Awareness and Education for Broadband
- Negotiate Contracts with ISPs
- BROADBAND SERVICES Identify Community Service Needs Coordinate/Leverage Services Increase Awareness of Services

4. OUTCOMES ASSESSMENT
- Broadband Utilization
- Workforce Development
- Economic Development
- HIE & HIT Participation

Community Broadband Impact/Outcome Measures

For Residences:

- Number of ISPs offering broadband connections;
- Percentage of community residents subscribing to broadband connections;
- Percentage of community residents who upgraded existing broadband connection;
- Change in cost of residential broadband connection;
- Percentage of residents attending technology training classes or webinars;
- Percentage of residents engaged in online educational programs and courses;
- Number of residents (including children) engaged in out-of-school virtual learning; and
- Awareness of broadband importance, use, and applications.

Community Broadband Impact/Outcome Measures

For Anchor Institutions and Other Organizations:

- Revisions or updates in a technology plan specifically related to broadband deployment and use;

- Percentage of anchor (or other) institutions upgrading their broadband connection, deploying GIS, telemedicine, interactive high speed video or related "bandwidth hungry" applications;

- Number of trained information technology professionals per organization and amount of broadband-related equipment and software purchased;

- Readiness of teachers and school librarians to use broadband in their work;

- Existence of or plans for digital textbook and/or one-to-one laptop initiatives;

- Jobs retained or created that require broadband skills and knowledge; and

- If providing public access workstations or services, degree to which the workstations and services meet clientele broadband needs, or number of public "hotspots."

Next Steps: Field Testing

- Three key components that resulted from the original studies. The BRI, CBBP model, and selected community-based impact/outcomes measures will be field tested in selected rural counties/communities.

- The following research questions will direct the field test:
  - How can the nine criteria that currently comprise the BRI be better refined, expanded, and operationalized?
  - How can the components and steps proposed as part of the CBBP best accommodate the needs for local community broadband deployment and use?
  - What are the most useful community broadband impact/outcome measures to measure a community's success in broadband deployment and use and how can these measures be best operationalized?
  - What community-based situational factors are "barriers" and "enablers" to broadband deployment and use and how can the barriers be minimized and the enablers maximized in light of these situational factors?

Focus at Community Level

- We need to focus broadband readiness, planning, and measurement at the local community level… "trickle-down" broadband deployment and use has limited effectiveness.

- Our focus is to assist local communities to understand how to measure broadband for them to make informed decisions with regard to broadband adoption, deployment, and use.

- The use of such strategies is absolutely essential to determine how successful communities have been in deploying and utilizing broadband.

- Broadband expansion can result in increased: economic development, educational attainment, civic engagement, and quality of life.

A representative at a hospital's rural health clinic outpost points out that their "*ability to provide patient care is really dependent on the connection with our central office and records. With everything going paperless, if you don't have a good enough speed you're dead in the water.*" (FRBA Final Report)

Thank You!

Questions or Comments?

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