Thank you!

Funding from the North Central Regional Center for Rural Development made this study possible.

What’s ahead:
- Digital Age
- ICEP
- Study
- Results
Reaching 100 million users worldwide

- Telephone 75 years
- Mobile phone 16 years
- World Wide Web 7 years
- Facebook 4 years
- Instagram 2 years
- Pokemon Go 1 month

Source: Twitter user @ValaAfshar; ITU; Statista; BCG Research

---

2017 Digital Economy in the U.S.

- 5.1 million jobs
- $132,223 average compensation
- 6.9% of GDP
- $1.35 trillion

Source: Bureau of Economic Analysis
Unlocking Rural’s Digital Potential

- $47 billion per year to the U.S. GDP
- 360,000 jobs in the next 3 years

Great ROI when investing in rural broadband

- Cost/benefit analysis of 7 co-operatives in Indiana
- $2.97 - $4.09 for every $1 invested
- $1 billion/yr. (annuitized) over 20 years
  - 27 percent in government revenue and health care cost savings
- Telemedicine & adult education (K-12, farm income and consumer savings benefitted as well)

Source: C_Tec; Amazon

Source: Purdue Center for Regional Development
Distance and Innovation

Average distance between all inventors listed on a patent has tripled between 1975 and 2015.

Source: Matt Clancy

Houston, we have a problem …

60% of farmers have slow internet speeds
60% of farmers don’t have enough connectivity to run their business
78% of farmers don’t have a choice in office internet service providers
33% of farmers say lack of internet has affected their equipment purchases
$13 billion in annual farm equipment purchases are impacted by lack of rural internet
Only 49% of farmers believe their fixed office connections are adequate to manage their business

“Farms that contribute $80 billion to the U.S. GDP run on limited internet connections.”

Source: United Soybean Board
Workforce Development

Up to 54 million workers in the US or one-third of workers in 2030 may need to switch occupational categories


Digital Readiness (2016)

52%

Source: Pew Research Internet
What is Digital Inclusion?

Refers to the adoption of broadband technologies and its meaningful use for social and economic benefits.

Source: Community Developments Investments Magazine, November 2018

First-level divide: access yes/no
Second-level divide: differences in internet use
Third-level divide: economic, cultural, social, & personal outcomes

Digital Inclusion Dimensions

1. Affordable & robust broadband
2. Internet-enabled devices that meet needs of user
3. Digital Literacy training
4. Quality technical support
5. Applications & online content that encourage self-sufficiency, participation, & collaboration

Source: National Digital Inclusion Alliance
Intelligent Community Program

“An intelligent community is one that – whether through crisis or foresight – understands the enormous challenges of the digital age and has taken conscious steps to prosper in it.”

Source: Bell et al (2014). Brain Gain

ICEP Study

- Implement intelligent community action items in four communities (two in Nebraska; two in Indiana)
- Analyze funding requests; document funding impacts
- Fine-tune program by incorporating funding patterns and implementation feedback
- Train extension educators
Results: Seed Funding

- Worked with four communities that had completed a checklist during IN pilot and a NE Rural Futures Institute project
- Budgeted up to $4,000 each to implement checklist action items
- Ravenna NE received $3,995
- Richmond IN partnered with Union City IN and received $12,000
- One community in Nebraska dropped out

Results: Seed Funding (cont’d)

- Majority of selected items fell under knowledge workforce
- Advocacy was also selected

- Ravenna NE implemented an IC conveyor belt approach: entrepreneurship curriculum + makerspace equipment + shop local online platform

- Eastern Indiana launched a regional robotics program
Results: Eastern Indiana

- Purchased 30 VeX robots
- 10 schools
- 5 new robotics programs
- 5 robotics programs expanded
- Approximately 120 students
- 1st regional competition May 2020
- Secured $2,000 from private sector

Results: Ravenna, Nebraska

- 11 students completed entrepreneurship curriculum
- 3 makerspace equipment purchased plus start up supplies; initially placed in school; currently in library
- Additional $16,809 leveraged for laser cutter
- 11 businesses/organizations utilize the shop where I live online platform
Results: Program Tweaking

- Not only awareness; local capacity matters too!
- Provides bigger picture; potential for demand
- Collaboration & partners!
- Workforce development / entrepreneurship
- Online community

Results: Expanding the ICEP

- Developed training materials
- Conducted and recorded five one-hour webinars
- 10 extension educators trained (six in NE; four in IN)
- 2 external organizations trained (NE Information Technology Commission; Nebraska Library Commission)
Results: Expanding the ICEP (cont’d)

- One ICEP checklist report completed in IN
- ICEP process started in two communities; potential for additional two
- Components of ICEP utilized at Central Development District meeting in NE

Moving forward …

- ICEP is flexible
- Secure more buy-in from extension personnel
- Strategically recruit other community stakeholders to take the lead
- Additional extension programming (e.g. 4-H robotics, precision agriculture) that further supports the ICEP is needed
- Program is useful despite lack of adequate internet connectivity