4-H Tech Changemakers Project
Building a Plan of Action for Our Project

Our Community Now

Where We Are Now

Who Can Help

Assessing Needs

Who Needs Help?

What Skills Are Needed?

How Will We Learn More?

Engaging the Local ISP

Our Community of the Future

Steps to Accomplish

Where We Are Headed

Our Community Now

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Steps to Accomplish

Where We Are Headed
Community Visioning, Part One

Our Community Now

Where We Are Now

When I think about my community’s broadband access and digital skills:
• Where is my community now?
• What are good things going on in the community that will help our project be successful?
• What are some challenges our community faces in this area?
Welcome & Introductions

AGENDA, HOUSEKEEPING, SUPPLIES
Agenda – Day 1

Welcome
Overview of Project
Resources
Exploring the Content
Community Engagement
Partnerships
Lesson Sampling
Let’s Get Acquainted!

• What is your name? Where are you from?
• What are you excited about with the 4-H Tech Changemakers training?
• What are you unsure about with the 4-H Tech Changemakers training?
• How do you think 4-H Tech Changemakers can impact your community?
Project Overview: What is Tech Changemakers?
Our Goal

The Microsoft and 4-H Tech Changemakers partnership empowers youth to help close the broadband internet gap.

Our Objective

Through the course of their work 4-H teen leaders will work with 4-H educators, broadband service providers, community members, civic leaders and Microsoft to help people thrive in a digital economy and benefit from high-speed connectivity.
Participating States

WA
IL
WA
IA
MI
NY
VA
WV
TX
OH
ME
WI
MD
Timeline

2019

Jan.
- Project Launch
- SNAPSHOTS & STORY

Feb.
- SNAPSHOTS & STORY

Mar.
- REGIONAL TRAININGS
- COMMUNITY SESSION PLANS
- SNAPSHOTS & STORY

Apr.
- PROJECT ENDS
- FINAL REPORT

May
- SNAPSHOTS & STORY
- COMMON MEASURES
- SNAPSHOTS & STORY

July
- COMMON MEASURES

Aug.
- MID-TERM REPORT
- SNAPSHOTs & STORY

Sept.
- SNAPSHOTs & STORY

Nov.
- SNAPSHOTs & STORY

2020
- COMMON MEASURES
- SNAPSHOTS & STORY
4-H is the youth development organization of our nation’s Cooperative Extension System and USDA.

Roles & Responsibilities

- National 4-H Council
- Southern Rural Development Center
- University of Georgia
- National Digital Education Extension Team

State Efforts
Oversee the Project
Donor Relationship

UNIVERSITY OF GEORGIA
EXTENSION

Lead Regional Trainings
Develop the Guidebook with SRDC
Webinars & Coaching Calls
Individualized Assistance

Lead National Training
Provide Technical Assistance on Digital Literacy Skills
Assist with Community Engagement Principles

SRDC
National Digital Education
EXTENSION TEAM

Microsoft

4-H GROWS HERE
Community Roles

• Teens will be leading digital skills trainings and starting a local dialogue about the ways digital tools can be used as a force for good—from online safety to computer basics to device training.

• Through the course of their work 4-H teen leaders will work with 4-H educators, broadband service providers, community members, civic leaders and Microsoft to help people thrive in a digital economy and benefit from high-speed connectivity.
Deliverables & Expectations

• Develop a Plan of Action that includes at least 6-10 Learning Sessions in Selected Communities

• Develop local partnerships with ISP and other partners such as the library

• Contribute to Snapshots and Stories- (5/15/19, 8/15/19, 11/15/19, 2/14/20 and 5/15/20)

• Use evaluation survey for the Teen Leaders and also a short survey for the participants.
Deliverables & Expectations Cont.

- Virtual Trainings
- On-going Coaching
- Learning Session Plan – April 1, 2019
- Mid-Term Reports – September 2019
- Survey & Evaluations – July 31, 2020
- Final Report – July 31, 2020
Resources & Support

- Website:
  - Georgia4h.org/digitalambassadors
  - Marketing Toolkit
- Guidebook
  - Still in draft format
  - Welcome lesson plans
- Monthly Check-In
- Webinars – working with ISPs, implementation techniques, lesson plans, evaluation, etc.
- Individualized Assistance, if needed
What does a 4-H Tech Changemaker project look like?
Questions & Discussion
Microsoft Video Discussion

• What are the two Americas Brad Smith describes?
• How can technology divide people?
• How can technology unite people?
• What did you learn from the video that affects how you think about your role as a 4-H Tech Changemaker?
Microsoft Overview

AND WORKING WITH ISPS
Project Resources

EXPLORE THE GUIDEBOOK
www.georgia4h.org/digitalambassadors
Exploring the Context

BROADBAND & RURAL 101
Overview

• What is rural?
  ◦ Census geographies
  ◦ Different categories/typologies

• What is broadband?
  ◦ Brief history
  ◦ Key terms
  ◦ Technologies
  ◦ Deployment models
Census Geographies

- Nation
- States
- Counties
- Place
- Census Tracts
- Block Groups
- Blocks
What is Rural?

It depends …

• Urbanized areas, urban clusters, rural (UA/UC/R)
• Level of Rurality (LR)
• Rural Urban Continuum Codes (RUCC)
• Urban Influence Codes (UIC)
• Rural Urban Commuting Areas (RUCA)
2013 Rural-Urban Continuum Codes

Metro counties: population size of metro area
- 1 million or more
- 250,000 to 1 million
- Fewer than 250,000

Nonmetro counties:
size of urban population, adjacency
- 20,000 or more, adjacent
- 20,000 or more, nonadjacent
- 2,500 to 19,999, adjacent
- 2,500 to 19,999, nonadjacent
- < 2,500 or completely rural, adjacent
- < 2,500 or completely rural, nonadjacent

Source: USDA, Economic Research Service using data from the U.S. Census Bureau.
What is Rural?

<table>
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<th>2017</th>
<th>Total</th>
<th>Urban/Metro</th>
<th>Rural/Nonmetro</th>
<th>% Rural/Nonmetro</th>
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<td>308 million</td>
<td>249 million</td>
<td>59 million</td>
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<tr>
<td>LR</td>
<td>321 million</td>
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<td>RUCA</td>
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<td>RUCC</td>
<td>325 million</td>
<td>279 million</td>
<td>46 million</td>
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<tr>
<td>UIC</td>
<td>325 million</td>
<td>279 million</td>
<td>46 million</td>
<td>14.1</td>
</tr>
</tbody>
</table>
What is Rural?

- Geographic granularity has pros and cons
- Aggregate from county or tract level
- Be consistent
- No measure is perfect
- Urban & rural contexts, different!
History of the Internet

The ARPANET in December 1969
History of the Internet

- **1960s**: ARPANET is launched
- **1970s**: Ethernet; TCP/IP → transferring data over phone lines
- **1980s**: Local Area Networks → Domain Name System
- **1990s**: World Wide Web (WWW) → HTML → URL
- **2000s**: Sophisticated cloud-based applications
Broadband: Key Terms

• **Bits**: 1s & 0s; basic unit of information
  - Kilobit (Kbps): 1,000 bits per second
  - Megabit (Mbps): 1,000,000 bits per second
  - Gigabit (Gbps): 1,000,000,000 bits per second

• **Download**: speed measured in bits that your computer receives data

• **Upload**: speed measured in bits that your computer sends data

• **Symmetric**: comparable upload/download speeds
Broadband: Key Terms (cont’d)

- **Middle mile**: network section that connects last mile networks to the backbone of the internet
- **Last mile**: connection between network and home subscriber
- **FTTH**: fiber-to-the-home
- **WISPs**: wireless internet service providers
- **Open access**: separates physical network from the services
  - Two-layer: municipality builds/owns/operates; ISPs provide service
  - Three-layer: municipality builds/owns; independent party operates; ISPs provide service
- **Dark fiber**: laid but not “lit”; left as unused until needed or desired
Broadband: Key Terms (cont’d)

Access & Affordability

Digital Inclusion

Adoption & Use

Community Economic Development

4-H is the youth development organization of our nation’s Cooperative Extension System and USDA.
Broadband: Definition

• Internet access that is always on and faster than dial-up

• Defined by speed
  ◦ Download: 25 Mbps
  ◦ Upload: 3 Mbps
  ◦ 25/3 for short

• Different technologies, different speeds

• Advertised versus actual
Broadband Technologies

- Digital Subscriber Line (DSL)
- Cable Modem
- Fiber-optic
- Fixed Wireless
- Satellite
- Broadband over Power Line (BPL)
- Fixed Versus Mobile
Broadband Deployment Models

Private sector
• Large providers; WISPs; Telephone/Cable

Public-private partnership (P3)
• Ammon, Idaho
• South Bend, Indiana

Municipal
• Nashville, Tennessee

Co-operatives
• Minnesota
Broadband: Open Access

**Owner**
- OWNS THE NETWORK
- Funds construction. Responsible for payment of bond or loan. Contracts with and pays operator. No direct contact with Retailers or End Users.

**Operator**
- RUNS THE NETWORK
- Hired by Owner to oversee construction, maintain network and, on the part of owners, sell and support network service on a wholesale basis with Retailers. All revenues are turned in to Owner. Operator works with Retailers and does not have direct contact with end users.

**Retailer**
- PROVIDES CONSUMER SERVICES
- The Retailer purchases raw transit on the network from Operator and sells consumer services like Internet, telephone or TV to End Users. Retailers market and brand. They do consumer sales and provide customer service.

**End User**
- GETS ONLINE
- The End User is the customer at the retail level, who buys services for their home or office. The end user gets bills and service from the Retailer and may not be wholly aware of the Owner or the Operator.

Residential customers are served on month-to-month terms. Business and Enterprise customers may have longer contracts, up to 3 years.
Broadband: Barriers

- Lack of leadership
- Lack of density
- ROI inexistent
- Right-of-ways
- Easements
- Topography
- Lack of adoption/use
Funding Options

- Private providers
- USDA – Community Connect Grants
- USDA – Distance Learning and Telemedicine Grants
- USDA – Rural Broadband Access Loan and Loan Guarantees
- USDA – Telecommunications Infrastructure Loans and Guarantees
- USDA – ReConnect
- State Funding (Minnesota, Indiana, etc.)
- Local banks (Community Reinvestment Act)
Questions & Discussion
When I think where this project can take our community:

• What do I think will be different?
• What challenges will we have helped to address?
• How will people’s lives be better?
• How will our community be better?
Teens Teaching Adults

Adapted from Teach SD Curriculum from SDSU Extension
Introduction

- Learning Styles
- Needs
- Skills
- Learning Styles
Our Objectives

- Learn ways to enhance the learning experience of Adult Learners
- Learn strategies to teach technology
- Practice adapting teaching techniques to meet audience needs
- Understand how aging and disability impacts learning
Getting Started with New Learners

- Motivating factors
- Barriers to adoption

Introduction to Teaching Technology: https://youtu.be/kyMtINvwKro
• Describe what you learned.
• What is the most important thing you learned from the videos?
• Age is sometimes a barrier to technology use, what are other barriers you may find in audiences?
Experiential Learning

• Low Vision Simulation
• Hearing Loss Simulation
• Loss of Dexterity and Touch Sensation
• Technology Jargon/Vocabulary Activity
Low Vision Simulation

Experiencing technology through:

- Cataracts
- Glaucoma
- Macular degeneration
- Diabetic retinopathy

• Read Eye Chart
• Use Phone or Tablet to take a picture
• Navigate on a browser to the 4-H Website
How old are your ears?

https://youtu.be/VxcbppCX6Rk
Loss of Dexterity

Challenges to technology usage

• Type message while wearing gloves
• Take picture with phone or tablet using non-dominant hand.
• Pinch to enlarge the photo using non-dominant hand.
Technology Jargon/Vocabulary Activity

- Brainstorm technology words
- Find words with double meaning
- Illustrate those meanings
Adaptions & Applications

HTTPS://YOUTU.BE/ZUHIJMHMBBK
Reflect

• What are the most important learning moments you take away from this experience?
• What are the benefits of participating in this learning activity?
• Did anything surprise you? If so, what?
• What are some other audiences adaptations that you may need to consider?
• How will this help you teach technology?
Community Engagement & Partnership Development

GETTING PEOPLE ON BOARD TO SUPPORT THE WORK
ORGANIZING SIMULATION
Finding Our Partners

Our Community Now

Who Can Help

Thinking about our partners
• Who might be interested in participating?
• Who might help?
• How do I reach out to them?

Engaging the Local ISP

Important

Steps to Accomplish Our Community of the Future

Finding Our Partners

Who Needs Help?

Assessing Needs

Where We Are Now
Creating a Win-Win Partnership

Community Organizations and Individuals

How will they benefit?

How will we benefit?

4-H Tech Changemakers
Debrief

- What did you learn from this?

- Who are unusual or unexpected partners you discovered?

- How is the community organizing exercise like or different from your community?
Sampling Activity Sessions

SPLIT INTO GREEN GROUP & YELLOW GROUP
Plan Teach-Back Activity
Debrief & Reflections
Please Complete!

http://tinyurl.com/y4mqw8en
Agenda – Day 2

Welcome & Reflections
Grab & Go Practice Teaching
Marketing Toolkit
Community Action Plan
Next Steps
Welcome & Day 1 Reflections
Grab & Go Practice Teaching
What went well?

What could have made it even better?
Assessing Needs

• Who needs help?
• What would they like to learn?
• What skills do they need?
• Where would they like to learn?
• What would make participating easier for them?
• Elevator Pitch
• Tell Your Community’s Story
How to Make an Elevator Pitch

• **1st Sentence**: Who you are and what Tech Changemakers is.

• **2nd Sentence**: Why national 4-H Council and Microsoft have partnered together.

• **3rd and 4th Sentence**: Short, easy explanation of your community project.

• **5th and optional 6th Sentence**: What action do you want them to take- how they can help.
Practice Your Pitches

• Pair up with someone from a different group as yours. Take turns being the person pitching and person listening.
• At the end pause and give each other feedback

Then Reflect

Get back into your small groups and take time to discuss the following questions:

• What was challenging?
• What is one thing you did well?
• What is one thing you saw someone else do that you would like to try?
• What will help you to feel confident in doing this?
Tell Your Community’s Story
EVERYONE
YOU WILL EVER MEET KNOWS SOMETHING YOU DON'T.
~ Bill Nye
1. Ask open ended questions.

2. Practice Mindful listening – this requires watching body language, listening to tone of voice, and being sensitive to what is left unspoken.

3. Don’t worry about what you will say next focus on what the person is staying.
Pretend you were tasked with writing a story about the Tech Changemaker training. With your team you will complete the following:

1. Gather story content through conversations with your peers. (5 minutes)

2. Regroup with your team and decide on a single story to pursue. (5 minutes)

3. Using the marketing toolkit develop a plan outlining what you’ll do with your story once it’s complete. (hint check out the story plan in the toolkit) (10 minutes)

TOOLKIT HERE: georgia4h.org/digitalambassadors
Open Ended Question Examples

• Tell me about your community.
• Why did you choose to join the Tech Changemakers?
• What are your long-term goals for your project?
• Where do you access the internet most often?
• How has broadband access personally impacted you?
• What were you feeling about the project before the training?
• Now that the training is almost over, what do you think?
Follow-up on Interesting Story Leads

- Share what you learn with your teams
- Tell your 4-H adult leaders
- Plan another conversation with the person you spoke with.
- Make a plan to use the story
- Email National 4-H if you get a great story
Community Action Plan
Developing Your Plan of Action

Things You Will Need:
• Plan of Action Template
• Overview of Project
• Community Visioning
• Community Data Sheets
• Win-Win Partnership
Community Visioning #1 – What do I like about my community now? Where are we now on digital skills and access? What limitations does that create?

Who Can Help? Partnership Wheel

Assessing Needs

How Will We Learn More?

Who Needs Help?

What Skills Are Needed?

Engaging the local ISP

Important

Our Community Now

Our Community of the Future

Community Visioning #2 – Where would we be if all residents had broadband access and digital skills?

Steps to Accomplish

Building a Plan of Action for Our Project

Our Community of the Future
Steps to Accomplish: Five Tasks

- Building the local training team
- Planning the teaching sessions
- Getting local partners on board
- Marketing your efforts
- Connecting to the local ISP
Steps to Accomplish

- What steps do we need to take?
- Who will be responsible for each step?
- When will we need to finish each step?
Debrief

• What was easy about this process?

• What was hard?

• What did you discover about shared leadership?

• How can you use this tool to continue to grow and involve your team at home?
Important Partnership:

Working with Internet Service Providers
Next Steps
Next Steps

- Submit Expense Reports – forms to be emailed
- Recruit Teens in your community
- Partake in ISP introductory calls
- Develop partnerships in your community
- Continue to build out plans – due 4/1/19
- Take photos - 1st Snap Shot due 5/15/19
- Take part in coaching calls and webinars
Expense Reports

• Please submit expenses for the following
  ◦ Transportation to and from training (Miles, Airfare, Trains, Bus, Uber, Taxi)
  ◦ Meal while in route
  ◦ Bags checked

• The name on the expense report is whoever is receiving the check
• You must fill in all the yellow areas on both pages and sign
• You must have receipts for everything over $20
• Email forms and receipts to jdepasquale@4-h.org
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Things to Remember - Expense Forms

• A real signature must be present on the second page

• Please include all receipts and a documentation of mileage (i.e. google maps) if you drove to your destination or airport. We do not reimburse gas, only mileage.

• MAKE SURE ALL THE APPLICABLE YELLOW HIGHLIGHTED FIELDS ARE COMPLETED BEFORE YOU SUBMIT!
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Debrief & Final Reflections