NORTH CAROLINA

DIGITAL
LEARNING PLAN

**Presentation to House Education Innovation Study Committee
Glenn Kleiman & Jeni Corn**

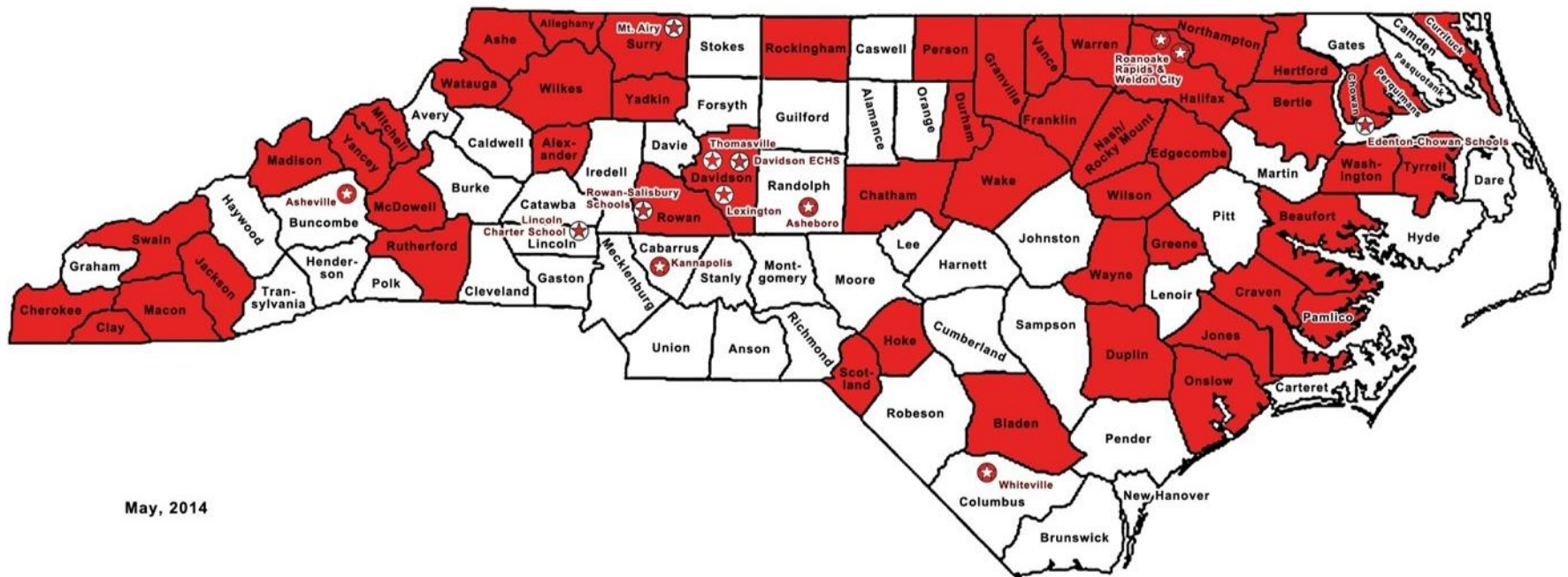*Prepared by the Friday Institute for Educational Innovation*

THE WILLIAM & IDA
FRIDAY INSTITUTE
FOR EDUCATIONAL INNOVATION

NC STATE College of Education

A Plan to Implement Legislative Actions

S.L. 2013-12
Transition from funding textbooks to funding digital materials

S.L. 2013-11 &
S.L. 2013-226
Develop and implement digital teaching and learning standards for teachers and schools

Builds on Existing Statewide Innovations

Builds on Local Initiatives

May, 2014

The Friday Institute has worked directly with the districts shown in red to support their digital learning initiatives. Many of the other districts also have digital learning programs.

Four Main Points

1. Digital learning involves significant changes in where, when and how learning occurs.

2. These changes require a modern technology infrastructure, digital resources, and updating the education workforce.

3. Supporting local innovations and engaging all stakeholders is central to the Plan.

4. The NC Digital Learning Plan will provide policy, funding and implementation recommendations to enable NC to be a national leader in the transition to digital learning.

Elements of the Digital-Age Learning Model

Advancement based on demonstrated **mastery** of the content and **competency** in applying what has been learned.

Anywhere and anytime learning, inside and outside of schools, 24/7, with most learning blending face-to-face and online activities.

Personalized learning and flexible resources optimized for each student.

Student-centered instruction, combining large group, small group and individualized learning, with teachers serving as facilitators and coaches.

Digital content providing interactive, flexible and easily updated educational resources.

Assessments integrated into learning activities to provide ongoing information about students' achievement that can be used to improve teaching and learning.
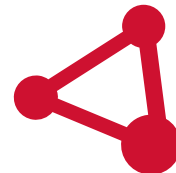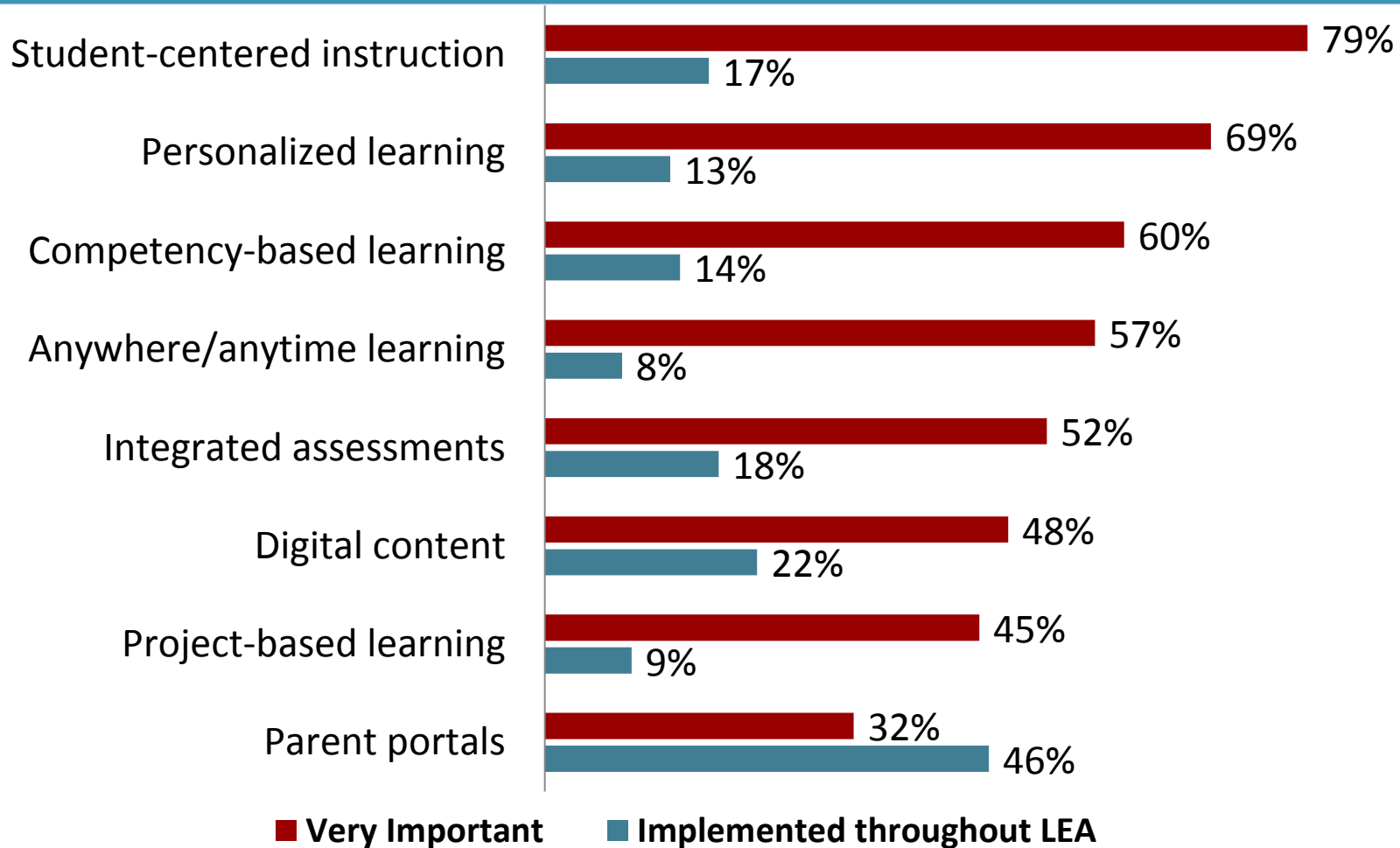
Parent portals provide 24/7 access to their children's assignments, grades, and records, as well as a means to communicate with teachers and administrators.

Project-based and community-based learning activities connecting to students' lives outside of school.

Elements of Digital-Age Learning

Element	Very Important	Implemented throughout LEA
Student-centered instruction	79%	17%
Personalized learning	69%	13%
Competency-based learning	60%	14%
Anywhere/anytime learning	57%	8%
Integrated assessments	52%	18%
Digital content	48%	22%
Project-based learning	45%	9%
Parent portals	32%	46%

■ **Very Important**　■ **Implemented throughout LEA**

Note: Percentage of respondents selecting "very important" and "every school" on 2 Likert-scaled survey items (*n*=229).
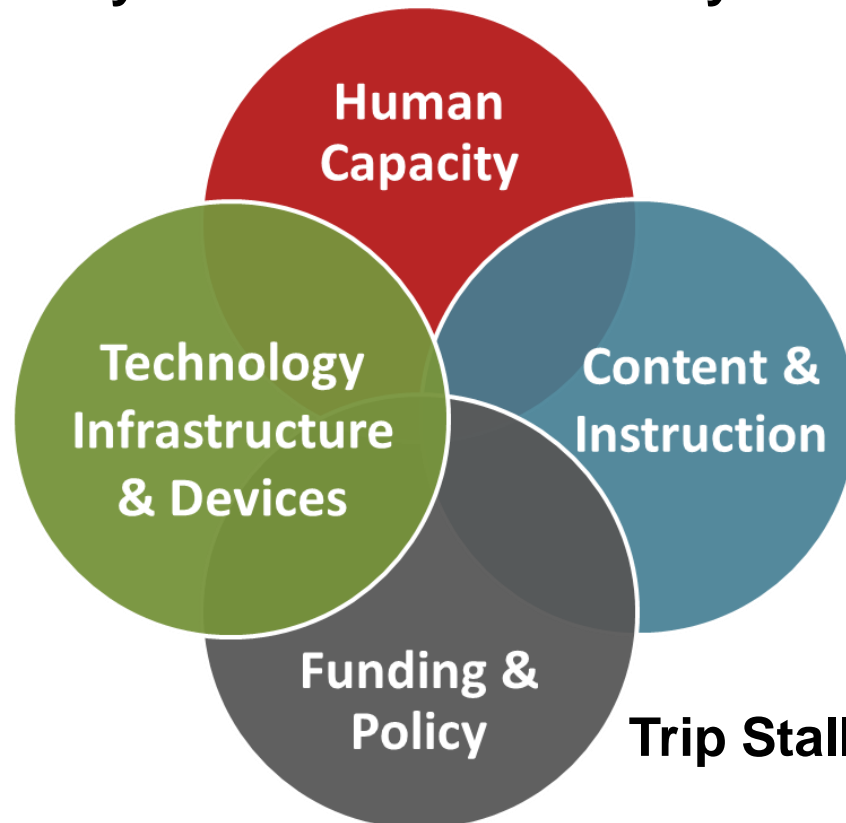
Digital Learning Plan Work Teams

Glenn Kleiman – Project Director   **Jeni Corn –** Project Director

Mary Ann Wolf & Lauren Bryant

Phil Emer & Ray Zeisz

Mark Samberg

Trip Stallings

Content & Instruction: Background

- Digital resources should provide:

  - Personalized, student-centered and project-based experiences

  - Collaboration and communication throughout activities

  - Interactive, multimedia learning experiences

  - Assessments embedded in learning activities

- **Not** just textbooks and drills put on the screen.

Content & Instruction: More Background

- Sources of digital education resources range from commercial packages to open education resources to state and locally developed curriculum.

- Evaluating, selecting and purchasing digital resources is much more complex than doing so for printed textbooks.

- Many districts are having teacher teams develop curriculum incorporating a variety of digital resources.

- The Learning Object Repository, and the Schoolnet and Open Class components of Home Base, are intended to facilitate educators developing, using and sharing digital resources.

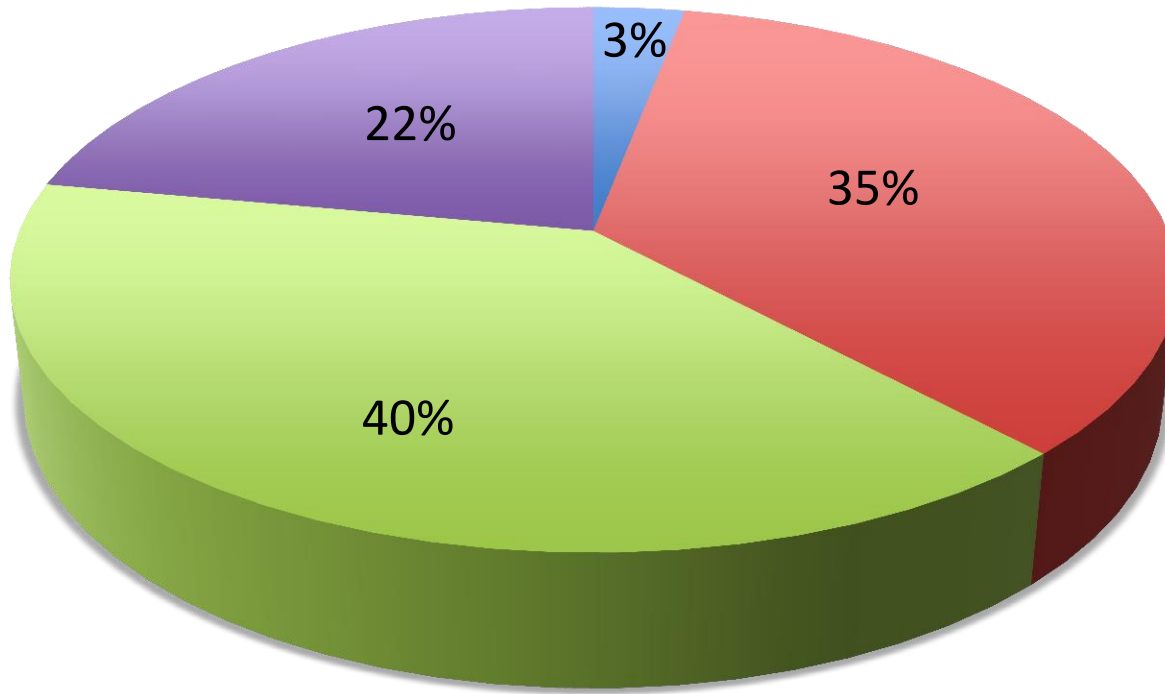# Content and Instruction Recommendations Will Address

- Criteria and processes for reviewing, evaluating and procuring digital education resources.

- Processes and incentives to encourage the development and sharing of locally-created digital resources across the State.

- Requirements for next generation technology tools to support the creation, reviewing, indexing and sharing of digital resources.

- And other relevant areas.

Infrastructure & Devices Background

- School Connectivity Initiative (SCI) 1.0 connected all public school buildings to the NCREN broadband network.

- Federal E-Rate program helped fund SCI 1.0, with remaining costs covered by the State.

- SCI 1.0 was very successful in meeting its goal of providing all K-12 public schools with broadband access that expands to meet growing needs.

- However, many schools do not have adequate internal Wi-Fi networks to support digital learning.

- The modernized E-Rate program provides support for internal Wi-Fi networking for all schools.

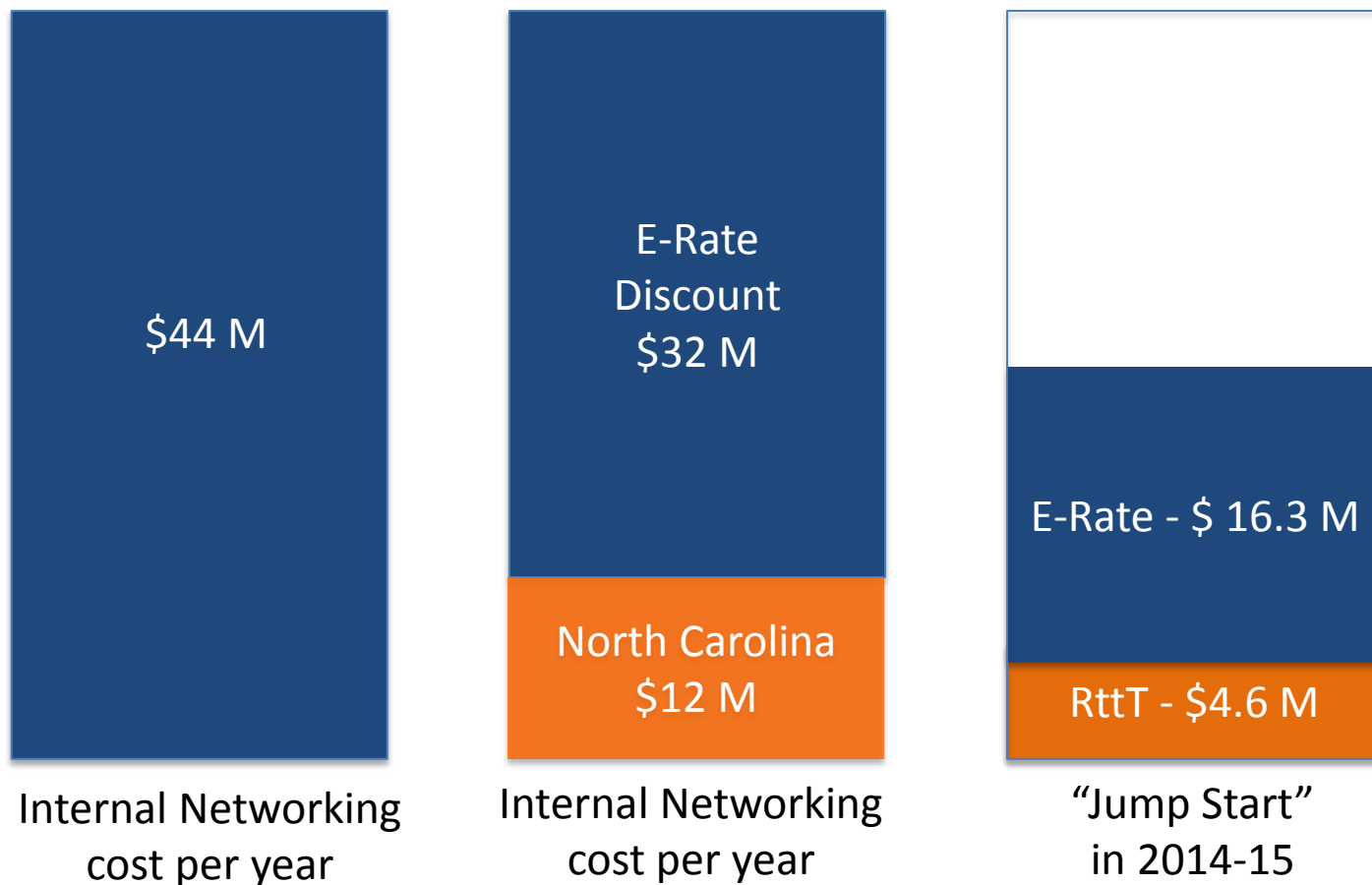# Current Status of Wireless Infrastructure in NC Schools

■ None (70) ■ Marginal (818) ■ Intermediate (928) ■ High Density (515)
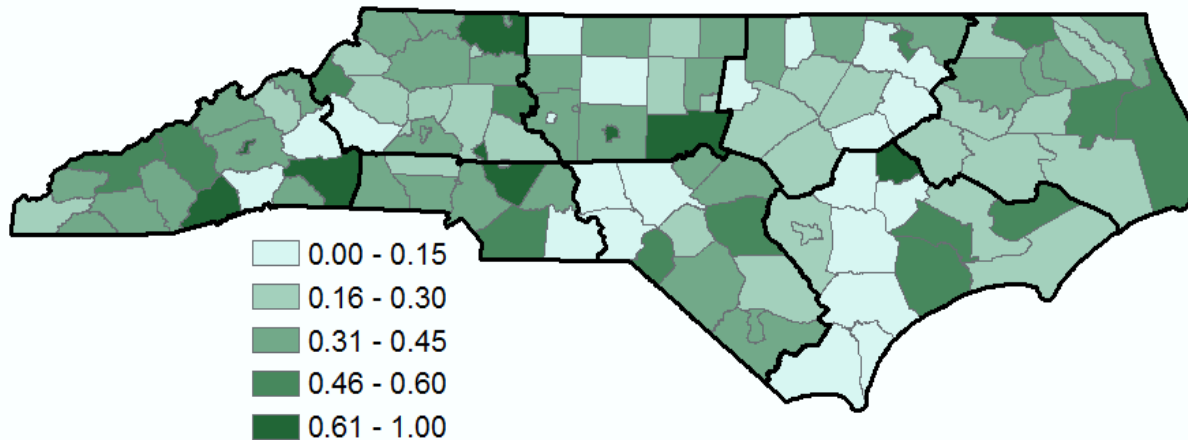
3%

22%

35%

40%

Annual Costs to Build and Maintain the Network Infrastructure for All NC Public Schools

- External NCREN connectivity (already in place):
  - $20 million from NC, $30 million from E-Rate

- Internal Wi-Fi infrastructure:
  - $12 million from NC, $32 million from E-Rate

- Total: $32 million from NC, $62 million from E-Rate to provide robust, reliable access to support digital learning for:
  - 1.4+ million students
  - 180,000+ teachers, administrators and other personnel
  - 2,500+ public schools
  - Annual cost to NC = $20 per student/educator
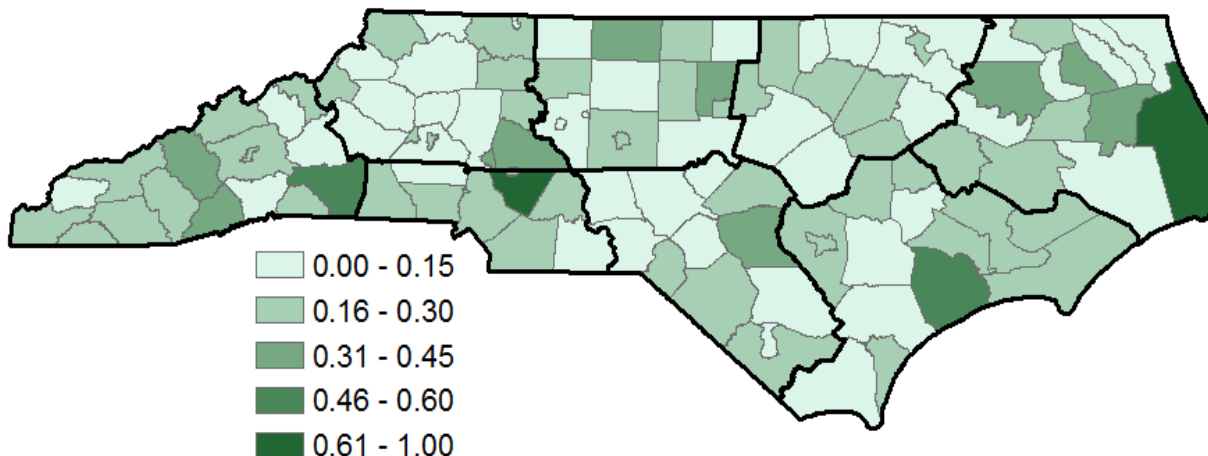
- This does *not* include digital devices

Recommendation: Leverage RttT & E-Rate

$44 M

E-Rate Discount $32 M

North Carolina $12 M

E-Rate - $ 16.3 M

RttT - $4.6 M

Internal Networking cost per year

Internal Networking cost per year

"Jump Start" in 2014-15

Human Capacity Background:
Teacher Working Conditions Data

Teachers have sufficient access to instructional technology, including computers, printers, software and internet access.

Legend:
- 0.00 - 0.15
- 0.16 - 0.30
- 0.31 - 0.45
- 0.46 - 0.60
- 0.61 - 1.00

Teachers have sufficient training to fully utilize instructional technology.

Legend:
- 0.00 - 0.15
- 0.16 - 0.30
- 0.31 - 0.45
- 0.46 - 0.60
- 0.61 - 1.00

Human Capacity: Initial Recommendations

- Support policies to update the education workforce by embedding professional learning in the day-to-day work of all educators.

- Support programs to prepare school and district leaders to serve as change agents who will lead digital learning initiatives.

- Support programs to provide an instructional technology facilitator or coach in every school.

- Shift policies from seat time (CEU) requirements to competency-based requirements for licensure and recertification.

- Establish expectations and incentives for teacher preparation programs to prepare new teachers for digital learning classrooms.

Policy and Funding: Some Focus Areas

- Funding levels, sources and flexibility

- Licensure requirements for staff supporting digital learning

- Virtual learning: funding, quality assurance, equity of access

- Data from embedded assessments used to improve instruction

- Statewide or regional LEA consortia for economies of scale

- Data security, privacy and access

- Selecting and procuring digital resources

- Public-private partnerships

Methodological Approach

1 Phase | Organize and Interpret Existing Data

2 Phase | Collect and Analyze Data
Surveys, Focus Groups, Site Visits, Advisory Committee, Working Teams

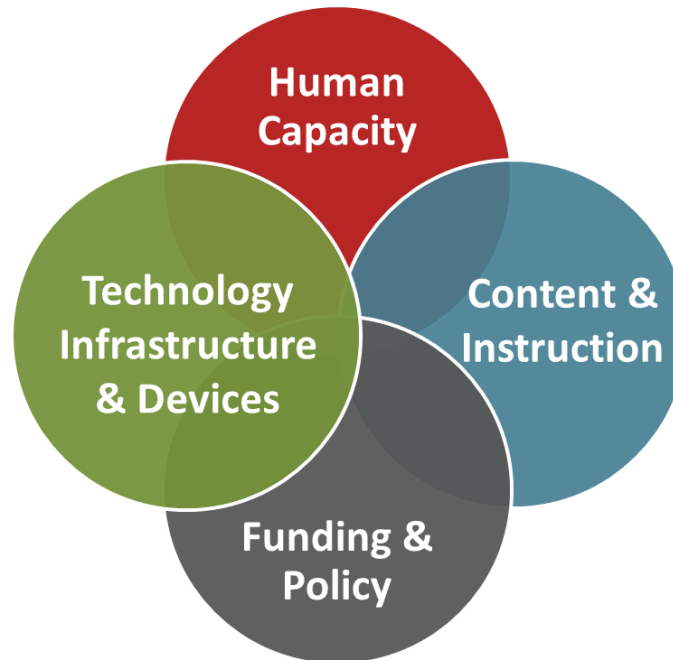**3** Phase | Develop, Specify, Recommend, and Vet the Plan

Phase 1

- Information Gathering Sessions
- Existing Survey Data
- School Network Analysis
- Feedback Meetings with Stakeholders

Phase 2

- Human Capacity
- Content & Instruction
- Funding & Policy
- Technology Infrastructure & Devices

Phase 3

- findings
- recommendations
- policies
- funding and sustainability

August 2015

TIMELINE

1 Summer 2014 — Advisor and Stakeholder Feedback — **2** Fall 2014–Spring 2015 — Advisor and Stakeholder Feedback — **3** Summer 2015
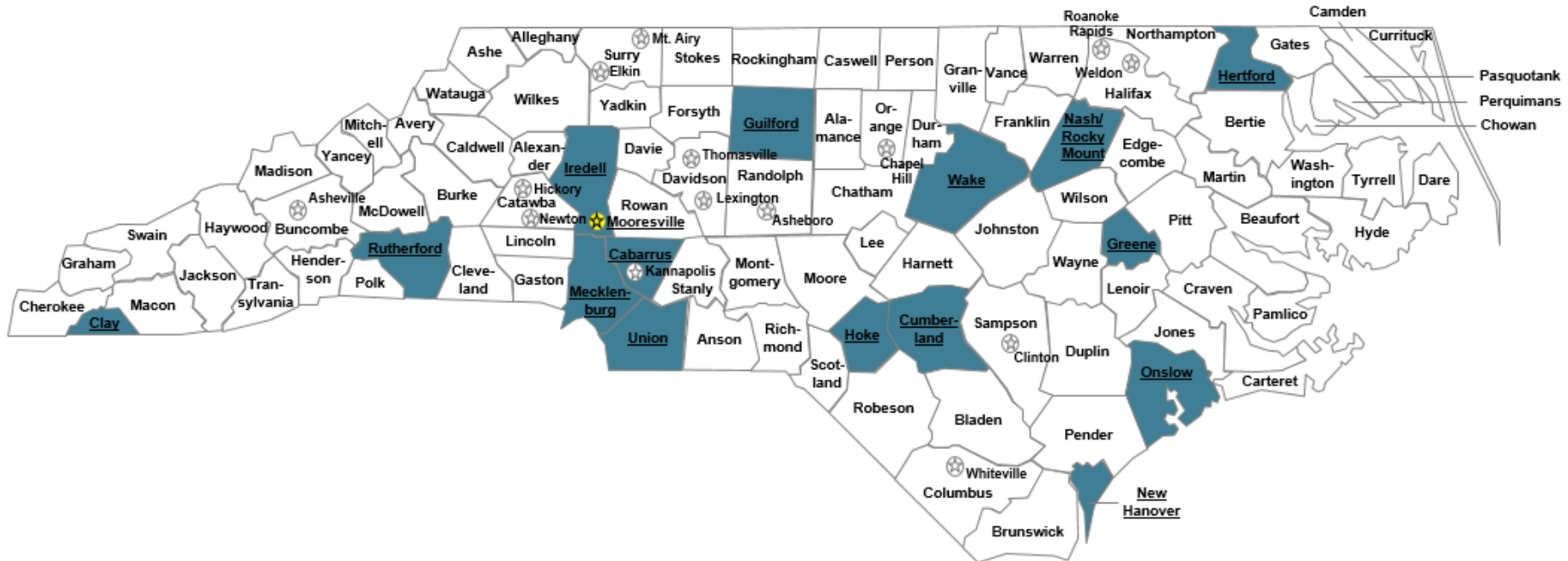
Stakeholder Engagement

- Advisory Boards
- Meetings with
  - Educators: superintendents, principals, tech directors, teachers
  - Students and parents
  - Policymakers
  - Business leaders
- Sample LEAs
- Models/exemplars
- Regional town halls
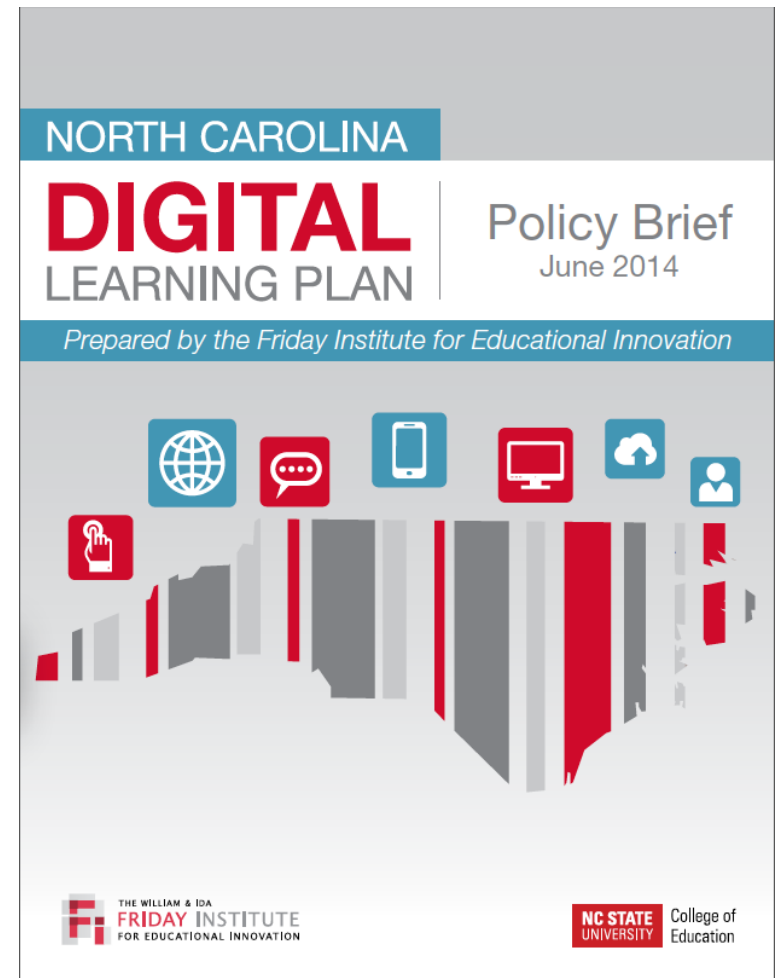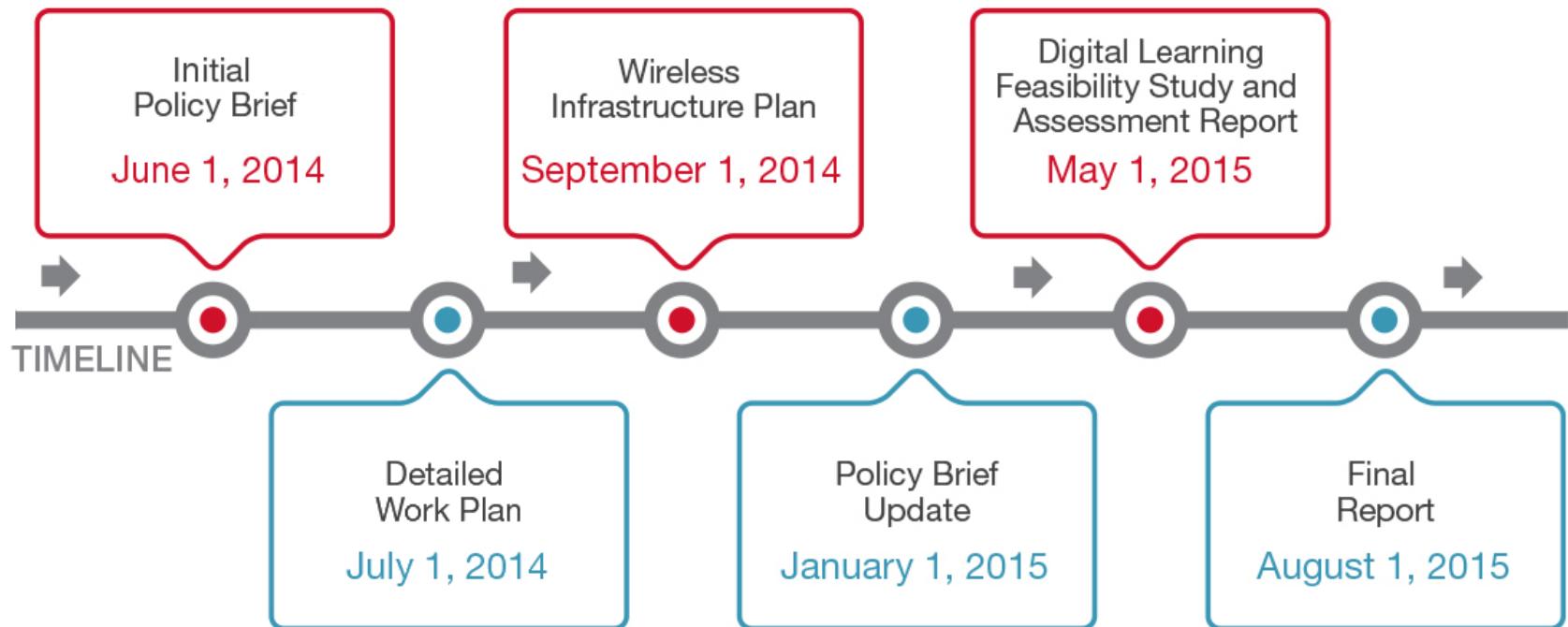- Webinars and online surveys

Proposed Sample Districts

NORTH CAROLINA

DIGITAL
LEARNING PLAN

- For the Policy Brief and additional information: http://ncdlplan.fi.ncsu.edu

- To submit inquires and recommendations: ncdlplan@fi.ncsu.edu

- Digital Learning Plan Information Gathering: http://go.ncsu.edu/n7f4nf

- Working Group Interest Form: http://go.ncsu.edu/ncdl.working.group

Deliverables

Reminder of the Four Main Points

- Digital learning involves significant changes in where, when and how learning occurs.

- These changes require a modern technology infrastructure, digital resources, and updating the education workforce.

- Supporting local innovations and engaging all stakeholders is central to the Plan.

- The NC Digital Learning Plan will provide policy, funding and implementation recommendations to enable NC to be a national leader in the transition to digital learning.

Final Notes

- The NC Digital Learning Plan will move things in the right direction, but the changes will be ongoing, not completed by 2017, 2020, or any other year.

- Investments in infrastructure, digital content, and human capacity development will be required.

- We believe there will be a good long-term return on investment (ROI) in terms of educational outcomes, increased graduation rates, and career and college readiness.

Questions and Comments?