Newer ACRE work streams connecting directly with teachers, leaders, parents and students

Ongoing central work to revise standards, assessment and accountability

Newer work to deliver new standards, assessments and teaching tools

Newer work to build LEA capacity to implement online tools

**Standards**

A set of academic standards benchmarked against the best national and international expectations. The goal is to set clear, higher and higher standards for local education, measures curriculum knowledge and skills and success in school, college and life. Curriculum support resources will be developed to support the standards.

**Assessment**

A comprehensive assessment system with a focus on using assessment to improve instruction and fairly assess learning and instructional effectiveness. Plan includes updated EOG and EOCs, a tool to build common benchmark assessments and a variety of formative assessment tools including progress monitoring tools, writing assessments, in-class formative assessment training, portfolio assessments and data tools to improve instruction.

**Accountability**

A model that includes measures of post-secondary readiness, robust, fair growth measures, revised reporting functions and motivates behavior that improves student outcomes.

**Professional Development**

Tools and training to help educators improve effectiveness and transition to important new tools. Focus on collaboration, technology solutions, customization and professional development. LEA teams and teachers are developing student-centered data tools to transfer data to drive instruction and perform a variety of tasks.

**Communication & Change Management**

Diverse communication strategies that memorably inform all stakeholders (esp. students, parents, teachers, principals) and build understanding and investment in ACRE. Communication strategies include website, webinar series, listserves, internal newsletter and LEA concierge service.

**Instructional Technology and Infrastructure Initiatives**

*Instructional Improvement System (IIS)*

User-friendly online platform to house and deliver teacher tools, particularly formative benchmark and summative assessments, data analysis tools, professional development and instructional resources.

*Instructional Technology and Infrastructure Initiatives*

Provide assistance to LEAs to ensure the technology infrastructure is in place to support implementation of technology-enhanced instruction and assessment tools. In addition, provide consultation to educators and LEAs in implementing these tools and evaluation of their progress towards goals.

Presentation to:
Region 2 Instructional Technology Meeting
January 26, 2011
RttT Pillars

- Data Systems to Support Instruction
  - IIS: Angela Quick
  - State Data use, Adam Levinson
- Standards and Assessments, Angela Quick
- Great Teachers and Leaders
  - PD: Lynne Johnson
  - NCVPS expansion, Bryan Setser
- Low performing schools: Pat Ashley
  - Transformation support system
- State Success Factors
  - Technology Infrastructures and Resources, Phil Emer
    - Cloud infrastructure, tools, and resources to support all RttT initiatives
  - Evaluation and policy analysis, Martez Hill

Technology Infrastructures and Resources

“The NC Education Cloud is a service delivery platform for modern instructional and administration support systems”

It will:
- Establish PK-12 education technology “cloud” infrastructure to provide cost-effective and robust networking infrastructure for LEAs
- Provide digital tools and resources to support all RttT initiatives

Coordinated by PHIL EMER, Friday Institute
### Technology Intersects All RttT Initiatives

<table>
<thead>
<tr>
<th></th>
<th>IIS</th>
<th>State Data Use</th>
<th>Standards &amp; Assessment</th>
<th>PD</th>
<th>NCVPS</th>
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</table>

### NC Education Cloud

- **Middleware**
  - Identity
  - Cloud GW/broker
  - Cost share

- **Infrastructure**
  - Compute
  - Storage
  - Management
  - Monitoring

- **Platforms**
  - LMS
  - Enterprise Apps
  - Admin Apps
**RttT Technology Areas**

Users (Students, Teachers, Staff)

- NCVPS $6M
- IIS $24M
- Admin Apps

System Admin & Configuration

- User Devices $25.5M
- LEA Network $48.5M

LMS/CMS $10.8M
- Learning Objects Repository $1.7M
- Collaborative Tools $4.4M
- Identity Management $1.2M

Shared Infrastructure $11.2M

Hosting Provider Data Centers

- Cloud Infrastructure
- Cloud Platform
- LEA Spending

**Statewide SW/content Budget**

[Numbers in millions of US dollars]

<table>
<thead>
<tr>
<th>Solution</th>
<th>Year 1</th>
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<th>Year 3</th>
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**LEA Technology Spending**

**Technology Budgeted in LEA Detailed Scopes of Work**

<table>
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<tr>
<th>Initiative</th>
<th>Total Budgeted</th>
<th>LEA’s Participating</th>
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<td>Wireless Networks</td>
<td>$48.54M</td>
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<td>1:1 Initiatives</td>
<td>$25.53M</td>
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<td>Interactive Classrooms</td>
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These amounts are in addition to the $34.6M allotted for the NC Education Cloud.

**LEAs Spending Funds on Wireless**
LEAs Spending Funds on Devices

LEAs Spending Funds on Classrooms
LEA Participation Levels

Relationship of Projects

Cloud Infrastr. $16.1M
 Devices $25.5M
 Cloud Platform $18.1M
 Wireless $48.5M
 NCVPS $6M
 PD $7
 CEDARS/NCWISE $7
 IIS $24M
Enhancing All Initiatives Through Technology

• The goal of all community discussions is to achieve strategic alignment and coordinated plans.

• To be strategic, we must...
  
  • Continue state-level strategic planning discussions and dig deeper
  
  • Engage and coordinate with LEAs...all levels of planning and implementation initiatives
  
  • Commit to transparency and input from leadership at the state and LEA levels

We must...continued:

• Effectively enable strategy review and alignment/coordination of pillars/projects for state and LEAs

• Recognize all LEAs are at a different place on the roadmap to meeting goals

• Integrate these specifics into the Cloud requirements and Implementation Plan

• Determine how to create a Plan that provides an early adoption of infrastructure and platforms that adapts to LEA migration and meets effectiveness and financial goals
A Service Delivery Platform

- The NC Education Cloud is a *service delivery platform* for modern instructional and administration support systems
- Initial statewide services
  - Hosted i-series
  - MS Live@edu and Google Enterprise
  - Learning Management System (LMS)
  - Web collaboration
  - Identity management

Shared Services possibilities

- Email migrations into the cloud (Google, MS)
- Central hosting of administrative applications – instead of hosting an AS/400 for instance
- Statewide Directory for services delivery
- Virtual desktops inside a web browser on an old PC or on a new *netbook*
- Unified Learning Management System and Learning Object Repository
Shared Services possibilities

- Managed/shared wireless services
- Network dashboards using statewide directory
- Content filtering as a service provided by the network – controlled in the LEA
- Other Network services... security, firewall
- Backup and disaster recovery

Shared Services end game...

- LEAs pay substantially less as part of a buyers’ consortium
- A shift in emphasis from technology support to instructional support
- Increased IT efficiency – fewer more highly utilized servers and other resources
- Increased service reliability – servers hosted in professional data centers with backup, DR, and service level guarantees
Organization & Collaboration

- DPI Leadership Team
- Program Director
  - Project Management
  - Site surveys and inventory
  - E-rate and CIPA
  - Application workload testing
  - RFP - vendor specifications
  - Planning & Design

SBE/GTEC

RFF Education Cloud Advisory Committee

LEA Working Groups
- Infrastructure Working Group
- Platform Working Group
- Service/Project Specific Working Groups

NC Education Cloud Advisory Process

- Strategic level advisory committee
  - Membership=16
  - Reflects cross section in Regions by LEA size, function and position
  - Longer term role envisioned
- Project specific working groups
  - Infrastructure
  - Platform
  - Other specific topics
The RttT Technology Project Team

Cloud Team
- The Friday Institute: Sammie Carter, Systems Architect; Larry Creglow, Project Facilitator; Lee Sartin, Policy Specialist
- MCNC: Dave Furiness, Director CNE; Steve Thorpe, Systems Analyst
- NCSU ITng Lab
- NC ITS: Bob Giannuzzi, Project Management
- NCVPS: Chanin Rivenbark, CTO; Nathan Thanos, LMS Admin

Timelines & Calendar
- Gather resources.............1/15/2011
- Initial Site interviews........4/18/2011
- DRAFT plan.......................5/1/2011
- Approved Plan.....................6/1/2011
- Complete site interviews..7/1/2011
- RFPs..................................2nd half 2011
- Deploy services..................4Q2011-1Q2012
- Migrate and operate.........4Q2011-4thQ2014
Methodology

• Team and functions
  • Plan development
  • Identity management
  • Systems architecture and infrastructure blueprint
  • Platforms for instruction & admin.
• LEA participation
  • Gathering of data and information
    – All technology spending plans
  • Advisory Committee and Working Groups

Messaging

• Community Meetings—Consistent and frequent updates at: webinars, Qtrly RESA and IT region mtgs, organization mtgs, leadership mtgs,
• Web site—place for FAQ, Guidelines, Presentations, Organization, Team members, news, links to DPI & others: http://cloud.fi.ncsu.edu
• Advisory committee and working groups
• Coordinated Pillar initiative teams and plans
Site Interviews

- **Objectives**
  - Communications/community education
  - Data collection to support Shared Services plan development
  - Community buy-in

- **Process Summary**
  - Develop on-line data collection template
  - DPI Regional Instructional Consultants schedule site interviews
  - Pre-populate template with known information
  - Distribute link to template to LEAs and charter schools
  - LEAs fill in the template prior to the site interview
  - Conduct site interviews
    - Interview team typically - Dave Furiness, DPI Instructional Consultant, Contractor - Systems Consultant
    - LEA participants – CTO/Technology Director and designated staff, Media & Instructional Technology leadership, Instructional Leadership, and CFO
    - Ed Chase, Neill Kimrey, and/or Phil Emer likely to participate in largest (top 5-10) LEA site interviews

- **Data Collection Schedule**
  - **Phase 1** – Interview 5-6 LEAs in each of 8 regions
Financials

- Budgets
- TCO analysis
- Sustainability
- E-rate

Collaborate with us!

- Inform and encourage leadership to help us identify and capitalize on opportunities.
- Coordinate strategic and spending plans
- Support data gathering, work groups, pilots
- Share your comments: cloudhelp@ncsu.edu
- For updated information, FAQ and status visit: http://cloud.fi.ncsu.edu
Contact Us

Ed Chase
echase@dpi.state.nc.us

Neill Kimrey
nkimrey@dpi.state.nc.us