Presentation to: 
Region 3 Instructional Technology Meeting 
Feb 8, 2011

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

Professional Development

Communication & Change Management

Standards

Assessment

Accountability

Instructional Technology and Infrastructure Initiatives

Instructional Improvement System (IIS)

A user-friendly online platform to house and deliver tools, particularly formative instructional and assessment tools. In addition, provide consultation to schools and LEAs on professional development and implementation.

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 schools and LEAs on implementing these tools and evaluation of their progress towards doing so.

A2

B3 & C3

B3

D5

C3 & B3

D5 & B3

A2
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
School Connectivity Initiative - Highlights

- The School Connectivity Initiative has delivered to LEAs:
  - Over $56M in new tech funding...so far
  - Substantially increased network capacity
  - Connectivity to world class NCREN
  - Access to network engineering experts
  - Future-ready Internet access
  - Equity of access
  - A foundation for shared services and Cloud

Next is SHARED SERVICES, building on SCI

Attributes:
- Aggregate demand and procure/statewide license
- Buy services versus build infrastructure
- Pay for use infrastructure model(s); sustainable/shared

Results in:
- Equity of access to resources
- Scale based on aggregate demand
- Consistent high performance, reliability
- Infrastructure & platforms to support all goals
- Reduced, sustainable operating costs
### A Platform for 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>
<th>Transformation Support System</th>
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<tbody>
<tr>
<td>Learning Management System</td>
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<tr>
<td>Learning Objects Repository</td>
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### 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
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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<tbody>
<tr>
<td>Wireless Networks</td>
<td>$48.54M</td>
<td>66</td>
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<td>1:1 Initiatives</td>
<td>$25.53M</td>
<td>57</td>
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<tr>
<td>Interactive Classrooms</td>
<td>$6.26M</td>
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These amounts are in addition to the $34.6M allotted for the NC Education Cloud.
Relationship of Projects

- Cloud Infrastr. $16.1M
- Devices $25.5M
- Cloud Platform $18.1M
- Wireless $48.5M
- IIS $24M
- NCWPS $2M
- PD $2
- CEDARS/NCWISE $2

Standard District Model

- Mobile Devices
- Desktops & Lab PC’s
- Network Appliances

Directory Structure (if present) determines some level of access

LEA “Datacenter”

Other Schools
Administrative Sites

SECS
Other SECS

LEA Access to Schools

Services Utilized TODAY Through The Cloud

Web Services
VoIP Call Manager
LMS
Cloud-Enabled LEA

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
Technology Costs
Over time

A District Deploying an Infrastructure and Platform to meet its strategic goals on their own

A District With No Change In IT Spending or Operating Model

Infrastructure Systems
Costs over time

District With Extensive Infrastructure

District With Basic Infrastructure

Cloud

Build/Migrate  Operation

Build/Migrate  Operation
Financials

- Budgets
  - RttT Cloud and LEA allocations
  - Additional funding
- TCO analysis
  - Collection of detailed information
  - Coordinated Implementation plans
  - Cloud benefits migrated and implemented
  - LEA strategic plans
- Sustainability
  - Technology deployed as a business decision

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
  - RttT Education Cloud Advisory Committee

LEA Working Groups
  - Infrastructure Working Group
  - Platform Working Group
  - Service/Project Specific Working Groups
  - DPI Leadership Team advises Program Director
NC Education Cloud Advisory Process

- **Strategic level advisory committee**
  - Membership=16, 2 per Region
  - Reflects cross section in Regions by LEA size, function and position
  - Longer term strategic role envisioned

- **Project specific working groups**
  - Membership size will vary
  - Shorter term
  - Infrastructure blueprint, platform, consortium buying, identity management
Timelines & Calendar

- Gather resources..................1/15/2011
- Initial Site interviews.........4/18/2011
- DRAFT plan.....................5/1/2011
- Approved Plan..................6/1/2011
  (Dependent on other Pillar schedules)
- Complete site interviews..7/1/2011
- RFPs................................2nd half 2011
- Deploy services...................4Q2011-1Q2012
- Migrate and operate..........4Q2011-4thQ2014

Methodology

- Build the team
  - Assign functional areas of early investigation
    - Identity management
    - Systems architecture & infrastructure blueprint
    - Platforms for instruction & administration

- Gather information
  - Internal
    - LEA site interviews
    - Other Pillar Plans
  - External
    - Interview & inform vendors & providers
    - Identify & inform partners
Methodology cont’d

• Plan development
  • Draft and review
  • Community vetting
  • Plan approval
• Community collaboration
  • Ongoing messaging evolution
  • Consistent to:
    – LEAs
    – DPI & other RttT teams
    – External as required
• LEA Advisory Committee & Working Teams

Messaging

• Community Meetings—Consistent and frequent updates at: webinars, Quarterly RESA and IT region meetings, organization meetings, leadership meetings, coordinated Pillar initiative teams and plans
• 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
• LEA site interviews
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, and CFO
    - Ed Chase, Neill Kimrey, and/or Phil Emer likely to participate in largest (top 5-10) LEA site interviews

Site Interviews

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

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