

# NEVADA READY 21

IGNITING ECONOMIC DEVELOPMENT THROUGH STUDENTS' 21ST CENTURY SKILLS

A PLAN FOR ONE-TO-ONE IN NEVADA SCHOOLS



NEVADA COMMISSION ON EDUCATIONAL TECHNOLOGY

[http://www.doe.nv.gov/Boards Commissions Councils/Commission on EdTech/](http://www.doe.nv.gov/Boards%20Commissions%20Councils/Commission%20on%20EdTech/)

# OVERVIEW

- Vision/Mission/Definition
- Creation of NR21
- Why NR21?
- One-to-one in other states
- One-to-one in Nevada
- The NR21 Plan
- Next steps
- Q&A

VISION/MISSION/DEFINITION

# VISION

Nevada Ready 21 ignites economic development by delivering a 21st century workforce, and by ensuring student equity through personalized access to a connected, 21st century education.

# MISSION

To provide all Nevada students an equitable, technology-rich education that supports high standards, an engaging learning environment, and the development of the 21st century skills students will need to fuel the economic growth of the state. Furthermore, Nevada Ready 21 will support educators in their efforts to create more engaging and personalized instruction by providing the essential tools and the ongoing professional development to guide their transformation.

# NEVADA'S DEFINITION OF ONE-TO-ONE STUDENT COMPUTING

One-to-one computing provides students and teachers with 24-hour access to their own personal, portable, technology device connected wirelessly to the Internet.

# NR21 CREATION

## NEVADA COMMISSION ON EDUCATIONAL TECHNOLOGY

- Body appointed by legislature and the governor that operates under the Department
- 11 voting members
- 2 non-voting members
- Approved creation of plan
- Approved final document as official state plan for implementing statewide one-to-one
- [http://www.doe.nv.gov/Boards Commissions Councils/Commission on EdTech/](http://www.doe.nv.gov/Boards%20Commissions%20Councils/Commission%20on%20EdTech/)

# PLANNING COMMITTEE

- Stakeholders representing many facets of the Nevada and national ed tech community
- Facilitate by One-to-One Institute, world leaders in one-to-one research and implementation
- Planning process led by NDE
- Sponsored by private sector partners Cisco, NWN, Intel
- 1<sup>st</sup> meeting in February 2014
  - 3 workgroups formed to devise plan
    - Infrastructure
    - Professional Development, Instruction, Assessment
    - Leadership, Communication, Finance, Evaluation
- 2<sup>nd</sup> meeting in May 2014
- Final plan approved by Commission in September 2014

**WHY NR21?**

# WHY NR21?

- **Brookings Report (2011)**
  - “...spotty and weak innovation and technology.”
  - “...substantial workforce skills shortfalls.”
- **Ed Week Report (2013)**
  - Nevada second to last in “Overall Grades and Scores”
  - Nevada last in students’ “Chance for Success”

***“Nevada stands at a crossroads, yet it appears ready to remap its future.”*** Mark Muro, Senior Fellow/Policy Director, Brookings Institute

# WHY NR21?

- Achievement Gap
  - 20+ point difference between black and white students in 4<sup>th</sup> and 8<sup>th</sup> grade math and reading scores
- Milken of States (Klowden & Wolfe, 2013)
  - Ranked 47<sup>th</sup> in technology
- National Educational Technology Plan of 2010 (US DOE, 2010)
  - “...we need revolutionary transformation, not evolutionary tinkering, and we know that transformation cannot be achieved through outdated reform strategies that take decades to unfold.”

# THE PURPOSE OF NR21

- Stimulating Nevada's economic development by building a technologically literate workforce
- Supporting student development of 21<sup>st</sup> century skills
  - Collaboration
  - Knowledge Construction
  - Real-World Problem Solving and Innovation
  - Use of Technology for Learning
  - Self-Regulation
  - Skilled Communication
- Promoting individualized learning so students are engaged learners who have tools to take charge of their personal learning goals
- Bridging the digital divide by promoting equity

ONE-TO-ONE IN OTHER STATES

# MAINE

- Maine Department of Education
  - Maine Learning Technology Initiative (MLTI)
  - Nation's only state-run one-to-one program started in 2001
  - Started in middle school, expanded to high school
  - Increases in students':
    - Writing assessment scores
    - 21<sup>st</sup> century skills
    - Geographic spatial awareness
    - Engagement

# RICHLAND SCHOOL DISTRICT, SOUTH CAROLINA

- 27,000 students, diverse enrollment
- Driving factors behind initiative
  - Increase equity, student engagement, 21<sup>st</sup> century skills development
- Outcomes
  - Increases in student engagement measured by perseverance, aspirations, study habits, and desire to learn

# SUNNYSIDE UNIFIED SCHOOL DISTRICT, ARIZONA

- Student enrollment 17,000, 85% low SES, diverse
  - Labeled a “dropout factory” in Johns Hopkins study
- Initial focus on increasing graduation rates
- Outcomes
  - Graduation rate increase from 71% to 82% in 3 years
  - Decrease in student discipline instances
  - Parent engagement soared due to increase in electronic communication with parents

# HUNTSVILLE SCHOOL DISTRICT, ALABAMA

- Covered 23,000 students, nearly half low SES
- Started 2011
- Outcomes:
  - Increased communication and collaboration between students and teachers
  - Increased between-teacher collaboration
  - 20% increase in students' math and reading scores
  - 14% increase in graduation rate
  - 29% decrease in student in-school suspensions
  - 27% decrease in student out-or-school suspensions
  - Closed digital divide

# ONE-TO-ONE IN NEVADA

# CARSON CITY SCHOOL DISTRICT

- *Empower Carson City Plan* launched 2012 (5-year plan)
  - Developed in partnership with community stakeholders
  - Mission to empower students with skills, knowledge, values and opportunities to thrive
  - One goal of plan, provide every student with 1:1 mobile technology
- Launched one-to-one in 2013 in middle schools
- Added elementary schools in 2014
- [Channel 2 coverage](#)
- [Teacher YouTube Channel](#)

# LINCOLN COUNTY SCHOOL DISTRICT

- Won a Nevada Commission on Ed Tech grant in 2009 to pilot one-to-one
- Started in one middle school
- Now covers all grades 4-12
- Evaluation report revealed substantial student gains:
  - increased student engagement in classroom activities
  - increased motivation of low-achieving students
  - increased use of technology
  - increased anytime-anywhere learning
- 79% of students find netbook integration beneficial to learning

# CLARK COUNTY SCHOOL DISTRICT

- e3: Engage, Empower, Explore Project started in 2012
- One-to-one iPad project
- Goals target student achievement, parental involvement, resource efficiencies
  - Made positive movement toward reaching goals
- Lessons Learned
  - Wifi enhancements
  - Increase professional development
  - School administrators as critical to leading change

# NEVADA READY 21: A STORY OF CONNECTED LEARNING

- Story about Selena, a middle school student
- Describes in real terms what NR21 could look like
- [Link to Selena's story](#)

# THE PLAN

# KEY ELEMENTS OF *NEVADA READY 21*

- Infrastructure
- Instruction
- Professional Development
- Communication
- Leadership
- Evaluation and Assessment
- Finance

# INFRASTRUCTURE

- Foundation of NR21
- Plan provides for internal infrastructure (table below)
- Additional, separate funding for external infrastructure

<b>Internal Infrastructure, Devices, and Software</b>		
Routers	Servers	Switches
Wireless LAN Controllers	Wireless Access Points	Storage
Blade Servers	Data Center Equipment	UPSs
Student Devices with Warranties and Insurance	Laptop Carts for Charging	Protective Backpacks
Teacher Devices with Warranties and Insurance	Batteries	Battery Chargers
Learning Management System	Implementation Services	Productivity Software

# INSTRUCTION

- Instructional goals of NR21
  - create a personalized, learner-centered educational experience for all students
  - equip students with 21st century skills: communication, collaboration, creativity, and critical thinking
  - concentrate classroom instruction on the Nevada Academic Content Standards (NVACS)
- NR21 facilitates:
  - digital classroom instruction that is aligned to NVACS
  - Instructional shift in teacher's role from disseminator-of-knowledge to facilitator, communicator, collaborator

# PROFESSIONAL DEVELOPMENT

- Cornerstone of project
- Online, on-demand for teachers and administrators targeted to specific needs, regardless of skill level
- Ongoing, sustained, high-quality PD
- Creates cadre of coaches who support 25-30 teachers in a face-to-face, online, or blended environment
- Coaches receive PD from State team
- Schools and districts tailor PD to their specific needs

# COMMUNICATION

- Communication strategy
  - Stakeholder involvement throughout
  - Sufficient dissemination of information to stakeholders
  - Targets parents and caregivers
    - Schools hold meetings with parents/caregivers
    - Schools offer computer skills classes to parents/caregivers that also includes instruction on safe and appropriate use

# LEADERSHIP - DISTRICT

- School Administrators
  - Commit to monthly, online PD
  - Commit to becoming a mentor to incoming NR21 administrators in following year
- District Administrators
  - Each district assigns a district lead
  - Participate in quarterly meetings with State Program Team
  - Responsible for ensuring NR21 meets the individualized goals of the district

# LEADERSHIP - STATE

## State Program Team

- PROGRAM DIRECTOR (1 Position) - oversees all operations of the program and ensures its success; directs all Nevada Ready 21 program staff
- PROGRAM MANAGER (1 Position) – Oversees the daily operations of the program to ensure that all benchmarks and goals are met
- COMMUNICATIONS OFFICER (1 Position) – Oversees, produces, and ensures feedback loops through communications with stakeholders; ensures consistent messaging is reaching stakeholders with opportunities for input
- INTERNAL EVALUATOR (1 Position) – Provides ongoing formative and summative evaluation of the Nevada Ready 21 program to ensure program goals are met. Incumbent is integrally involved in the initial planning and roll-out phases of the Nevada Ready 21 program.
- IT ANALYST (2 Positions) - Oversees the analysis of and solutions to IT needs in participating schools specific to the demands of Nevada Ready 21. This analysis may include but is not limited to school fiber-optic cabling needs, device needs, and internal infrastructure needs.
- PROFESSIONAL DEVELOPMENT EXPERTS (4 Positions) –Work as a collaborative unit in field positions located across Nevada to create and administer professional development that focuses on the Nevada Academic Content Standards and 21st century skills in alignment with the Nevada Ready 21 Professional Development Model. Incumbents also utilize existing professional development resources such as those offered by Regional Professional Development Programs and existing online professional development programs such as e-Learning for Educators (e4e).
- INSTRUCTIONAL INTEGRATION EXPERTS (2 Positions) – Work closely with the PD experts to design and assemble digital classroom content that is aligned with the Nevada Academic Content Standards and is made available to all Nevada educators online.

# EVALUATION AND ASSESSMENT

- Internal Evaluator as part of state program staff
  - Effects on students (summative)
    - Engagement and motivation
    - Discipline/behavior
    - Attitudes toward learning
    - Academic achievement
    - Graduation Rates
    - Course Completion Rates
  - Effects on teachers (summative)
    - Attitudes towards teaching with technology
    - Self-efficacy
    - Shift in pedagogy from teacher-centered to student-centered
  - Effects on Parents and Caregivers (summative)
    - Involvement and engagement
  - Planning and support: identify educational goals; specify implementation goals (formative)
  - High quality, sustained professional development (formative)
  - Integration of Nevada Ready 21 goals into curricular framework (formative)
  - Return on investment (summative)

# EVALUATION

- All NR21 teachers and administrators will
  - Set written, individualized goals
  - Results will be analyzed and included in annual, summative evaluation reports
  - School districts will be responsible for ensuring these data are collected and reported to the state evaluator

# FINANCE

- Project Red Research showed shift toward cost-savings (Greaves, Hayes, Wilson, Gielniak, & Peterson, 2012)
  - Move toward paperless
  - Saved travel expenses through online PD
  - Teacher attendance increases
  - Decrease in disciplinary problems

# SEAT PRICE

Key Elements Included in Seat Price	Seat Price
Internal Infrastructure Devices Software Professional Development State Program Team	\$610

# Y1 AND Y2 ADDITIONAL EXPENSES

## ADDITIONAL YEAR 1 AND YEAR 2 EXPENSES

Elements	Year 1	Year 2	Total Cost
Program Director Salary – NDE Employee	\$120,000	\$120,000	\$240,000
Consultant Fees for Assistance with Contract Negotiations	\$10,000	\$0	\$10,000
Consultant Fees for Year 1 and Year 2 Program Mentoring	\$50,000	\$50,000	\$100,000
Program Operating Expenses (Travel, Meetings, Supplies, Program Director’s Office Setup)	\$15,000	\$10,000	\$20,000
Incentives for WAN Upgrades (see <i>Infrastructure Improvements</i> on the next page)	\$1,000,000	\$1,000,000	\$2,000,000
<b>Total</b>	<b>\$1,195,000</b>	<b>\$1,180,000</b>	<b>\$10,370,000</b>

# GOVERNOR'S PROPOSED BUDGET

## FY16 & FY17 COST SUMMARY OF NEVADA READY

Elements	Total Cost
<b>Year 1/FY16</b> One-Third of Middle Schools: (~36,000 students X \$610 seat price) + Program Administration Expenses	\$23,200,000
WAN Upgrade Matching Incentive Grants	\$ 1,000,000
<b>Year 2/FY17</b> One-Third of Middle Schools: (~36,000 students X \$610 seat price) + Program Administration Expenses	\$23,200,000
WAN Upgrade Matching Incentive Grants	\$ 1,000,000
<b>Total</b>	<b>\$48,800,000</b>

# NR21 SELECTION CRITERIA

1. School WAN connections must meet or exceed 100 kbps per student
2. The school principal must commit to participation in Nevada Ready 21 PD
3. Nevada Ready 21 will target entire schools. All the teachers in the school must commit to participating in all PD and promoting students' personalized access to a connected, 21st century education.
4. Preference for schools with high enrollments of ELL, SpEd, FRL
5. Rounds 1-3 open only to middle school
6. Rounds 4-6 open only to high school

# SELECTION

- Readiness to implement NR21 is imperative
- Connectivity
  - Schools must meet the threshold of 100 kbps/student
  - Additional funding to assist schools that are otherwise ready
- Other readiness factors
  - Principal commitment
  - Teacher commitment
  - Parent commitment

# NR21 APPLICATION PROCESS

- Districts supply implementation plans on behalf of schools
- District may include only those schools that meet requirements
- Plans address 7 Key Elements (infrastructure, instruction, PD, communication, evaluation, assessment, leadership, finance)
- Plans address how state and district resources will be utilized
- Plans include measurable objectives and attainment steps
- RFA created and approved by Commission
- No late applications

# 7-MEMBER REVIEW COMMITTEE

- Committee members appointed by the Commission
  - Recommended by the Program Director
  - Approved by Commission
  - Committee Composition
    - NDE
    - Commission
    - Private sector
    - Program Mentors
    - Non-applicant schools and school districts
    - Any other entity the Program Director and Commission see fit
- Meet privately to review applications
- Make a funding recommendation to the Commission
- The Commission must approve the recommendations of the review committee for the funds to be approved for distribution.

# FY16 TIMELINE

	Timing	Description
Year 1	July 1	Funds are released and the program begins
	July	Begin search for Program Director
	August	Program Director selected
	September	RFA is released to find a vendor that will provide the NR21 package (LAN infrastructure, student and teacher devices, teacher and administrator professional development, 11 State Program Team members, and possibly instructional content)
	October	NDE begins search to fill state program team positions
	November	State program team begins working toward roll-out of NR21
	November	Program Director begins working toward statewide broadband improvements
	February	Commission-approved RFA to select the first-round middle schools is released to school districts
	April	First-round schools are selected for the program by the review committee and approved by the Commission
	April	Devices and infrastructure are ordered for first-round schools
	June	Teachers receive their devices. Infrastructure and student devices are delivered to districts.
	June	First-round teacher and administrators begin NR21 professional development programs
	June	Year 1 summative evaluation report is submitted to the Commission by the Program Director
	June 30	Year 1 Ends

# FY17 TIMELINE

Year 2	July 1	Year 2 Begins
	Summer	Devices are delivered to districts and infrastructure installed
	September	<i>Nevada Ready 21</i> first-round schools start program
	January	Commission-approved RFA to select the second-round middle schools is released to school districts
	February	Second-round schools are selected for the program by the review committee and approved by the Commission
	February	Devices and infrastructure are ordered for second-round schools
	March	First-round administrators are selected to become mentors for the second round administrators
	June	Second-round teacher and administrators begin NR21 professional development programs
	June	Year 2 summative evaluation report is submitted to the Commission by the Program Director
	June 30	Year 2 Ends

**NEXT STEPS**

# NEXT STEPS

- Get funded
  - [Digital Learning Day News Coverage](#)
- NDE work on RFPs to get contractors hired

QUESTIONS

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