San Diego Unified
SCHOOL DISTRICT

i21 Interactive Classroom Year 3 – 2nd Quarter

Proposition S Update

February 2, 2012

i21 Interactive Classroom
Prop S Update

- SDUSD is the 2nd largest district in California.

  - Approximately 132,000 students in pre-school through grade 12.

  - 107 elementary schools, 11 K-8 schools, 24 traditional middle schools, 28 high schools, 45 charter schools, and 13 atypical/ alternative schools.

  - Diverse student population - more than 15 different ethnic groups speaking over 60 languages and dialects.

  - Free / Reduced lunch - 59.1%

The voter-approved bond mandates that we

…create 21st century learning environments…
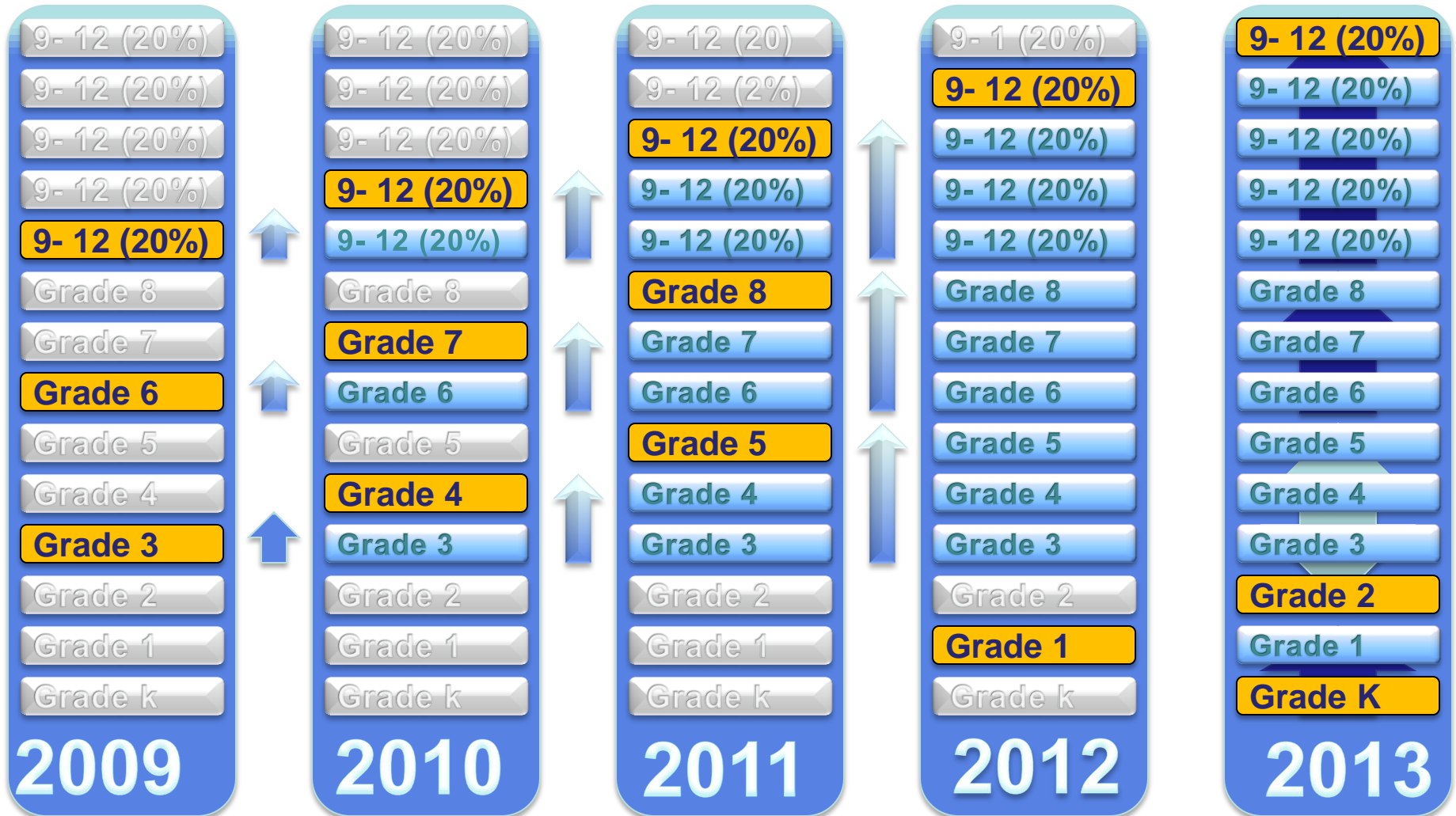
Bond Initiative
Prop S Update

… Provide up-to-date classroom and instructional technology required for 21st century student learning and teaching…

- *Equip Classrooms*

- *Upgrade Technology*

- *Campus-Wide Wireless*

- *Network Upgrades*

Changing the Learning Landscape
i21 Initiative 5-Year Plan

2009
- 9- 12 (20%)
- 9- 12 (20%)
- 9- 12 (20%)
- 9- 12 (20%)
- **9- 12 (20%)**
- Grade 8
- Grade 7
- **Grade 6**
- Grade 5
- Grade 4
- **Grade 3**
- Grade 2
- Grade 1
- Grade k

2009

2010
- 9- 12 (20%)
- 9- 12 (20%)
- 9- 12 (20%)
- **9- 12 (20%)**
- 9- 12 (20%)
- Grade 8
- **Grade 7**
- Grade 6
- Grade 5
- **Grade 4**
- Grade 3
- Grade 2
- Grade 1
- Grade k

2010

2011
- 9- 12 (20)
- 9- 12 (2%)
- **9- 12 (20%)**
- 9- 12 (20%)
- 9- 12 (20%)
- **Grade 8**
- Grade 7
- Grade 6
- **Grade 5**
- Grade 4
- Grade 3
- Grade 2
- Grade 1
- Grade k

2011

2012
- 9- 1 (20%)
- **9- 12 (20%)**
- 9- 12 (20%)
- 9- 12 (20%)
- 9- 12 (20%)
- Grade 8
- Grade 7
- Grade 6
- Grade 5
- Grade 4
- Grade 3
- Grade 2
- **Grade 1**
- Grade k

2012

2013
- **9- 12 (20%)**
- 9- 12 (20%)
- 9- 12 (20%)
- 9- 12 (20%)
- 9- 12 (20%)
- Grade 8
- Grade 7
- Grade 6
- Grade 5
- Grade 4
- Grade 3
- **Grade 2**
- Grade 1
- **Grade K**

2013

- Transformation of the learning environment

  - Quality technology-based teaching and learning tools

- Shift in the model for delivering instruction

  - Engaging, student-centered classrooms

- Equitable learning opportunities for all students

  - Allow all students to become expert learners

…It's an opportunity to change the way we do things based on new tools, resources, and focusing on 21st-century skills that students need to be able to survive in today's world…

i21 classroom initiative aligns with…

- U. S. Department of Ed. Technology Goals

- District 2020 Vision

- Goals for Students Achievement GSA2

- Board Goals

- LEA Plans Component

Goals for Student Achievement
Prop S Update

- English Language Arts   2.3.1

- Math   2.3.2

- Science   2.3.3

- Social Studies   2.3.4

- Student will communicate in at least two languages   2.4

- Student explore, understand, and value fine arts 2.5

- Students will effectively use technology to access, communicate and apply knowledge and to foster creativity   2.6

Year 2 Update

Year 3 Implementation Totals
Prop S Update

Promethean boards installed   **872**

Teacher tablets distributed   **872**

Student Netbooks to be distributed   **30,520**
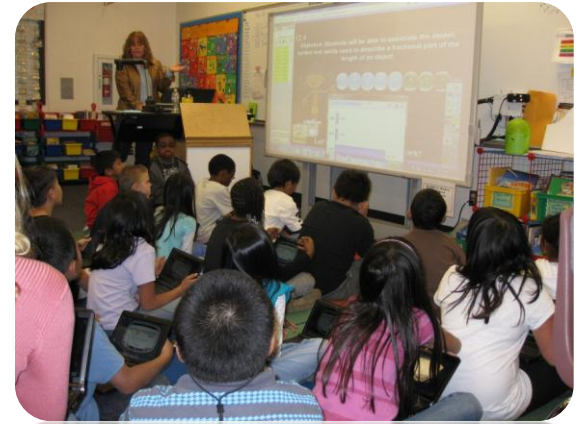
Teachers trained:

    classroom teachers plus   **925**

       Special Ed support

    Promethean Levels 1, 2 and 3

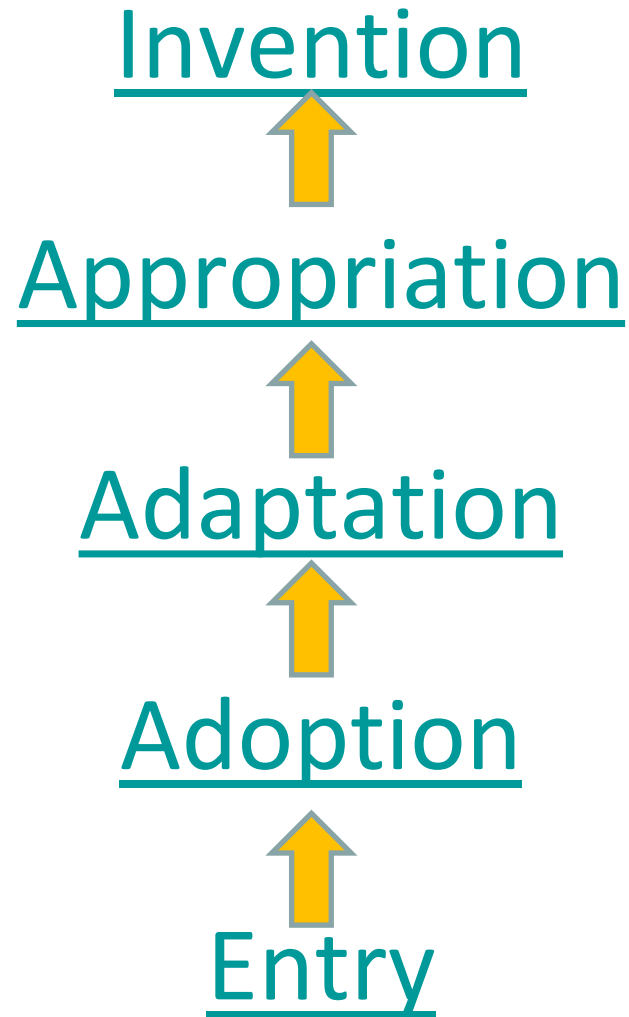Approximately 60% of core curriculum classrooms
in Y1, Y2 and Y3
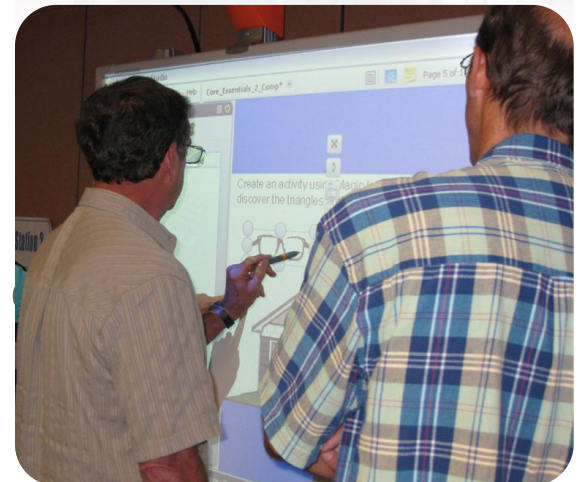
Changing the Learning Landscape
i21 Professional Development

Invention

↑

Appropriation

↑

Adaptation

↑

Adoption

↑

Entry

Technology Implementation

Level of Implementation (vertical axis)

- Invention: Fall 2010 = 9, Spring 2011 = 14.1
- Appropriation: Fall 2010 = 9.9, Spring 2011 = 25.5
- Adaptation: Fall 2010 = 19.7, Spring 2011 = 28.5
- Adoption: Fall 2010 = 31.2, Spring 2011 = 27.6
- Entry: Fall 2010 = 30, Spring 2011 = 4.1

Percent of Teachers

Legend: Fall 2010, Spring 2011

How often do you use the Promethean board as a teaching tool?
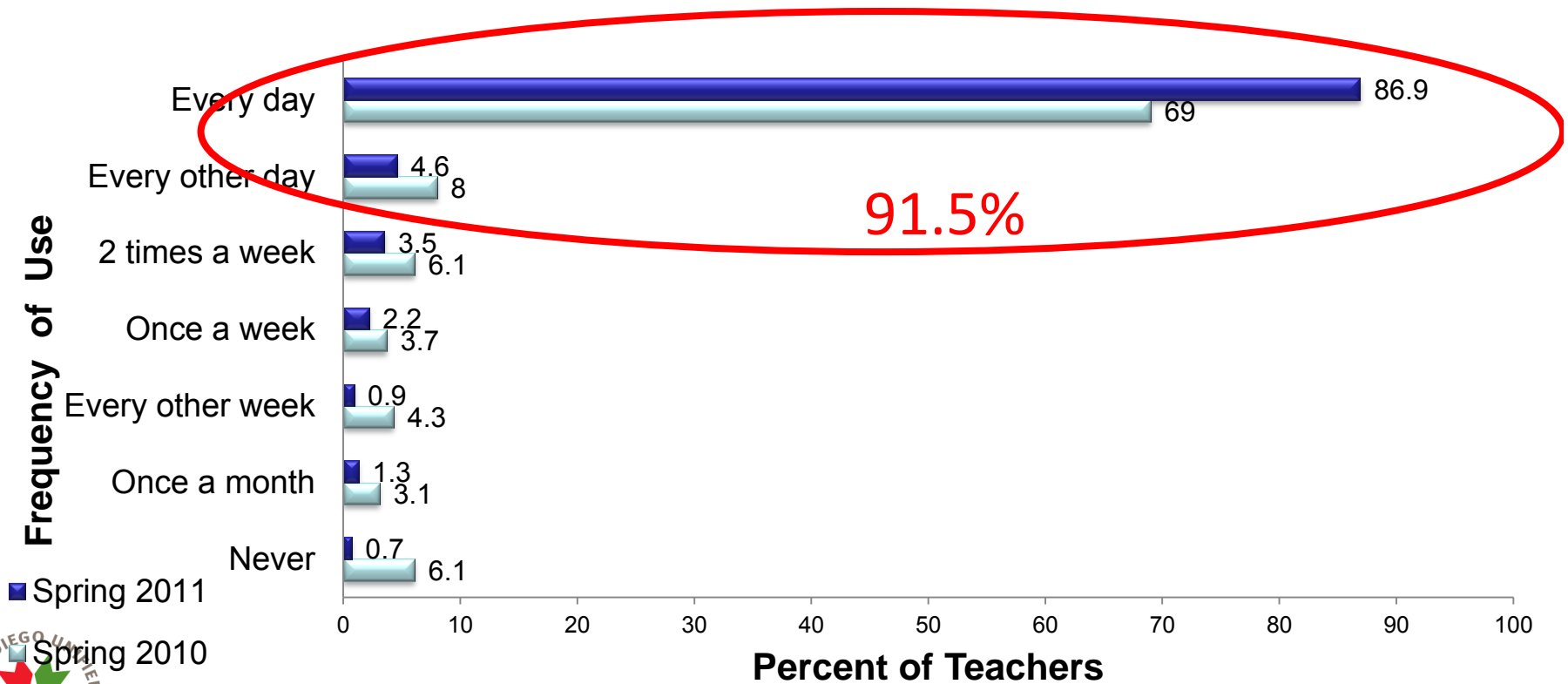
Frequency of Use:
- Every day: 79
- Every other day: 8.9
- 2 times a week: 2.9
- Once a week: 2.9
- Every other week: 1.9
- Once a month: 1
- Never: 3.4

87.9%

Spring 2011

Percent of Teachers

How often do you use the Promethean board as a teaching tool?

91.5%

Frequency of Use

Frequency	Spring 2011	Spring 2010
Every day	86.9	69
Every other day	4.6	8
2 times a week	3.5	6.1
Once a week	2.2	3.7
Every other week	0.9	4.3
Once a month	1.3	3.1
Never	0.7	6.1

Spring 2011
Spring 2010

Percent of Teachers
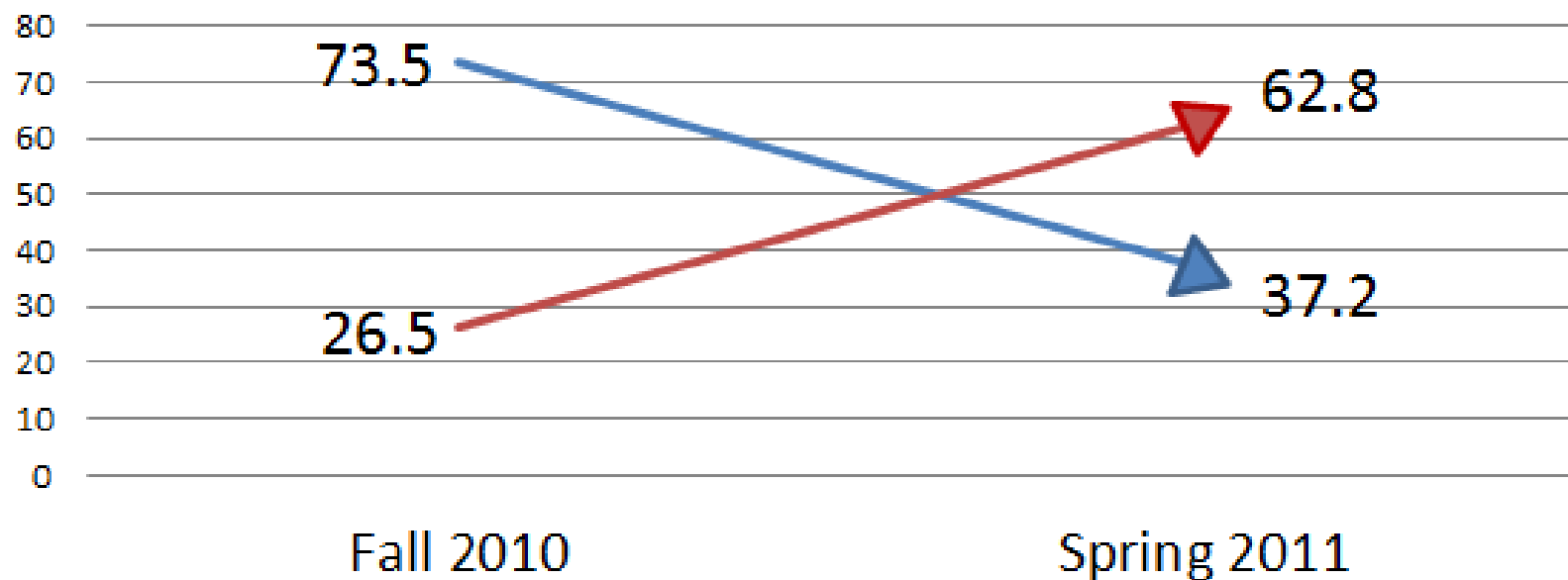
Building Capacity
i21 Digital Teacher Leaders

Key teachers who are academic leaders at their individual schools will serve as i21 Digital Teacher Leaders to build site capacity.

Building Site Capacity
Role of i21 Digital Teacher Leaders

- Collaborate with i21 teachers and Ed Tech Resource Teachers
- Develop strategies to promote instructional use of i21 technology
- Function as an onsite resource for all other i21 teachers in their school.
- Be their site's information conduit for the latest technology updates, training on new software programs and other digital initiatives.
- Develop flipcharts to add to the district's curriculum warehouse.
- Work with the site administrators to identify further needs for training
- Attend monthly meetings/trainings with IT/Ed Tech Teams to receive the latest information or participate in advanced training.
- Serve in this capacity for the 2011-12 school year.
-

San Diego Unified
SCHOOL DISTRICT

Learning On the GO

1:1 Laptop Program

2011- 2012

Taking i21 to the Next Level

…SDUSD's **Learning-on-the-Go** initiative, education doesn't stop at the schoolyard gate or the library door. Through the LOGO pilot's off-campus wireless Internet connectivity, students now have **access** to digital textbooks and other **innovative** resources that allow them to learn in a **real-world** context, inside the classroom and beyond…

Taking i21 to the Next Level

6th grade at:

- Knox MS
- Lewis MS
- Longfellow
- Mann MS

- Dana MS
- Pershing MS
- Wilson MS
- Montgomery MS

7th and 8th at Innovation MS

6th, 7th and 8th at Millennial Tech MS

Taking i21 to the Next Level

What students receive:

- Netbook with broadband access

- Netbook bag with student ID

- Charger

- Filtered internet

- Electronic textbooks

- Software programs including those for word processing, video editing, creating flipcharts, and electronic notebooks. All are compatible with District infrastructure and supported by the IT Dept.

Taking i21 to the Next Level

Site Support:

- Ongoing professional development
- i21 workshops
  - "Flipping" the classroom
  - Classroom visitations
  - Collaboration days
- Intro to TSS
- Designated Tech RT
- Administrator Support

Initial Student Survey

82% of students would prefer to do assignments at home on a computer.

86% of students said they learn better when teachers incorporate technology such as videos, interactive websites, and online games into their instruction.

38% of students do not have internet at home

- **91%** of parents said that they prefer that their child use a school-issued computer that includes software used at school, as well as filtered internet with built-in safeguards.

- **95%** of parents said that if given the choice they would like this program to continue next year.

Parent Feedback

"Having wireless internet is so great because my child can do her homework/school work any where and that is so important especially because she is back and forth between family because I am a single mom and work full time…"

"His organizational skills, desire to work, and his interest in his education has also vastly improved as a result of this netbook. This program is invaluable to him and also to students who would not otherwise have this opportunity."

"Fantastic program. Has helped us tremendously as we do not have a computer or internet at home. Now I check grades and my child has access to everything she needs to be successful."

Innovation Middle School

What does our 1:1 Mobile Learning look like?

- Personal learning devices

- Extended learning: 24/7 access

- Focused instructional delivery

- Creativity and collaboration

- GSA 2.6 put into practice

- Responsibilities and Acceptable Use

- Student voice, choice, and project-based learning

The LOGO Experience
Innovation Middle School

Impact of our 1:1 Mobile Learning…

- **99%** teacher retention over 4 years
- API gain of **43 points**, 767 in 2010 to 810 in 2011
  (highest growth for any middle school in SDUSD)
- Increased accountability for students and adults alike
- Creativity and collaboration efforts for students and adults
- Ability to differentiate instruction with "just in time" support
- Presentations/projects to authentic audiences motivates students to achieve higher levels of quality

Infrastructure Upgrades
and Equipment

Campus-wide Wireless Upgrades
Wide Area Network

- Approximately 11,000 dual band Cisco 802.11a/g/n access points will deployed for indoor and outdoor client access over 5 years

- As of January 2012

- -6,560 access points installed

- -2,640 rooms with i21WIRELESS

- -Over 46 schools are now campus wide

SDUSD Wireless Network Overview
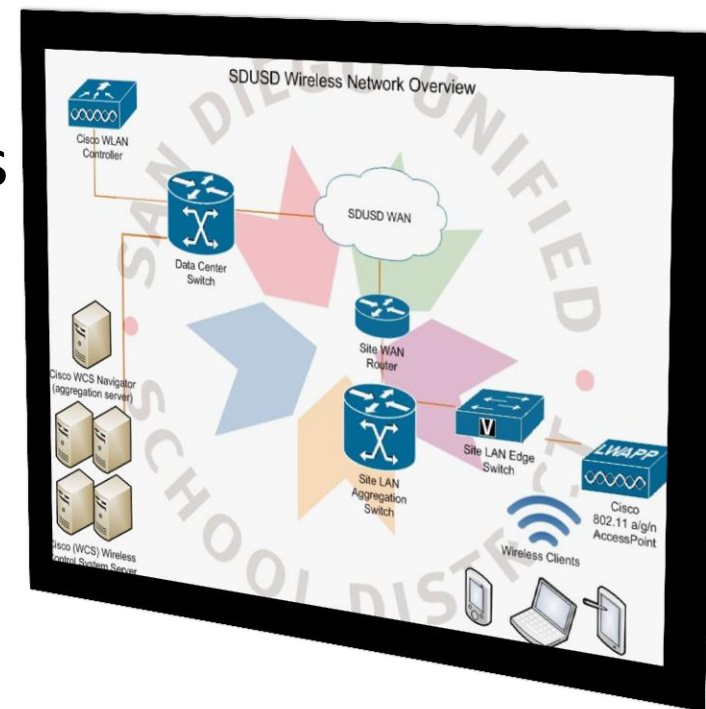
Campus-wide Wireless
Wide Area Network Upgrade
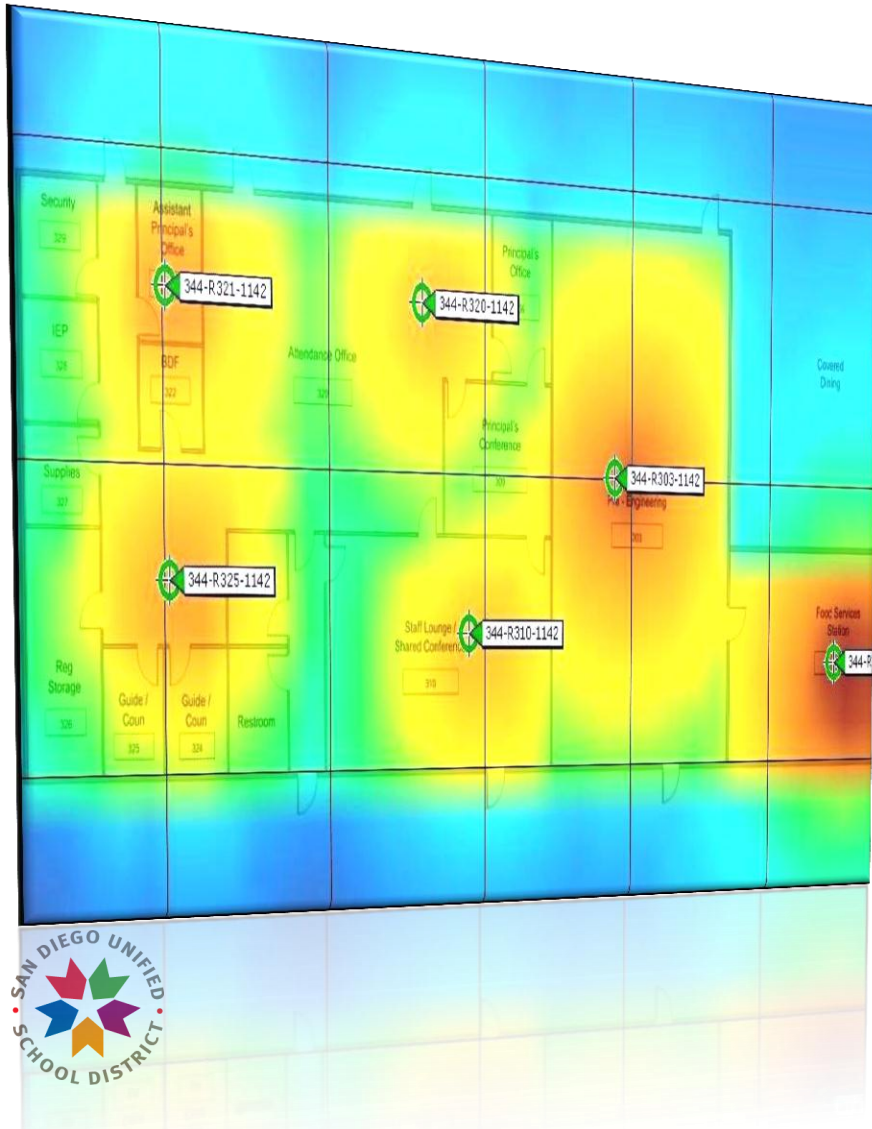
Centralizing controllers into the Data Center cuts down on service visits to remote sites..

Cisco Wireless Control System (WCS) with Cisco Mobility Services Engine allows staff to easily track client device location and monitor critical network performance statistics

i21 Interactive Classroom Equipment

Teacher Tablet
Software for Teachers

- ActivInspire Version 1.5.3144
- ActivEngage 1.1.17
- Document camera software SDP 50DX
-     USB Viewer, SDP 860 USB Viewer
-     3.3.2
- Firefox 3.6.8
- Internet Explorer 8.0.7601.17514
- Lanschool Student 7.4.2.2
- Kurzweil 3000 Version 11
- Microsoft One Note 2010
- Microsoft Office 2010
- Google Earth 5.2.1.1329
- Geogebra 3.2.42.0
- Snipping tool

Student Netbook
Software for Students

ActivInspire Version 1.5.3144
ActivEngage 1.1.17
Firefox 3.6.8
Internet Explorer 8.0.7601.17514
Lanschool Student 7.4.2.2
Kurzweil 3000 Version 11
Microsoft One Note 2010
Microsoft Office 2010
Google Earth 5.2.1.1329
Geogebra 3.2.42.0
Snipping tool

i21 sustainability estimates

after 5-year rollout is complete

I21 Sustainability
Netbooks after 5 years

Student computing device in a 1:1 model					
Grade Level	Quantity	Estimated Price	Estimated Annual Repair Costs	4 Year Replacement Cycle Annual Costs	
6-12	55820	$350.00		$4,884,250.00	
3-5	26690	$300.00		$2,001,750.00	
Sub Total	82510			$6,886,000.00	
Yearly Netbook Incidental Repair-Loss 3%	2475	$350.00	$866,355.00		

(Student computing device replacement is based on a 4 year replacement cycle. The optimal cycle is 3 years but the national average ranges 4-5 years)

I21 Sustainability
Teacher Tablet after 5 years

Teacher Computer Replacement			Estimated Annual Repair Costs	4 Year Replacement Cycle Annul Costs	
	Quantity	Estimated Price			
Number of TeacherTablets in Core Rooms	5800	$1,000.00		$1,450,000.00	
Yearly Tablet Incidental Repair 2%	116	$500.00	$58,000.00		

(Teacher computing device replacement is based on a 4 year replacement cycle. The optimal cycle is 3 years but the national average ranges 4-5 years)

I21 Sustainability
Promethean Board after 5 years

Promethean Boards	Quantity	Estimated Price	Estimated Annual Repair Costs	4 Year Replacement Cycle Annul Costs	Annual Support Agreement After Year 5 of Prop S
Promethean Maintenance Agreement					$850,000.00
Bulb Replacement every 4 years	5800	$250.00		$362,500.00	
Yearly Bulb Incidental Replacement 2%	116		$29,000.00		

(Promethean board life expectancy is estimated to be 18-20 years with proper maintenance)

Interact

I21 Sustainability
After the 5 year rollout is complete

i21 Sustainability Estimates				
After the 5 Year Rollout is Complete				
Student computing device in a 1:1 model				
Grade Level	**Quantity**	**Estimated Price**	**Estimated Annual Repair Costs**	**4 Year Replacement Cycle Annual Costs**	
6-12	55820	$350.00		$4,884,250.00	
3-5	26690	$300.00		$2,001,750.00	
Sub Total	**82510**			**$6,886,000.00**	
Yearly Netbook Incidental Repair-Loss 3%	2475	$350.00	**$866,355.00**		
(Student computing device replacement is based on a 4 year replacement cycle. The optimal cycle is 3 years but the national average ranges 4-5 years)					
Promethean Boards					
	Quantity	**Estimated Price**	**Estimated Annual Repair Costs**	**4 Year Replacement Cycle Annul Costs**	**Annual Support Agreement After Year 5 of Prop S**
Promethean Maintenance Agreement					**$850,000.00**
Bulb Replacement every 4 years	5800	$250.00		**$362,500.00**	
Yearly Bulb Incidental Replacement 2%	116		**$29,000.00**		
(Promethean board life expectancy is estimated to be 18-20 years with proper maintenance)					
Teacher Computer Replacement					
	Quantity	**Estimated Price**	**Estimated Annual Repair Costs**	**4 Year Replacement Cycle Annul Costs**	
Number of TeacherTablets in Core Rooms	5800	$1,000.00		**$1,450,000.00**	
Yearly Tablet Incidental Repair 2%	116	$500.00	**$58,000.00**		
(Teacher computing device replacement is based on a 4 year replacement cycle. The optimal cycle is 3 years but the national average ranges 4-5 years)					
District Annual Cost			953,355.00	$8,698,500.00	$850,000.00
$10,501,855.00					

* Prior to i21, the district spent on average annually $10,680,375 on computers

l21 Sustainability
5 Year Technology Plan Budget

ITSS 5 Year Technology Plan Budget
Fiscal Years 2011-2015

Legend:
- ITSS
- Ed Tech Title 1
- *Prop S
- SSFF
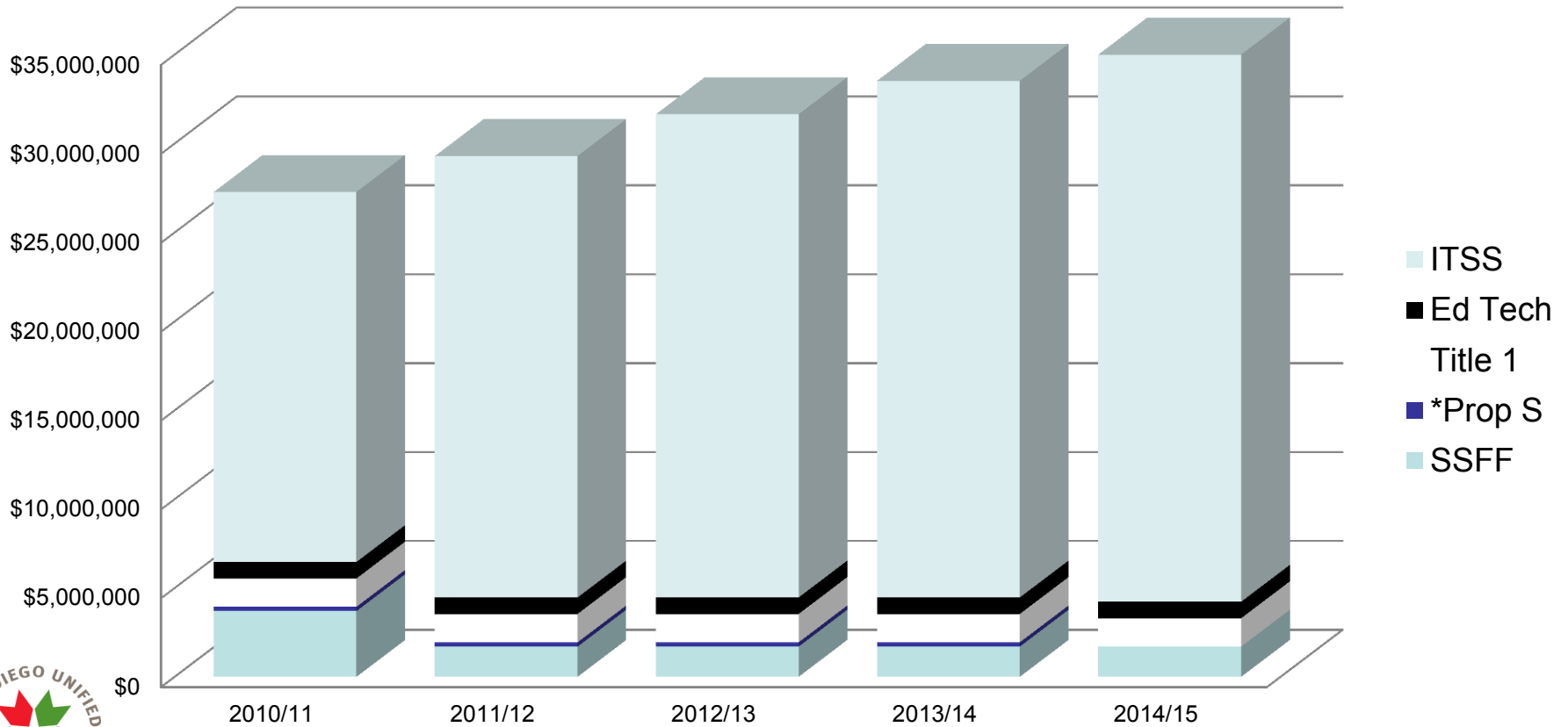
District Road Map

2009-2011

Professional development journey begins.

Building i21 site capacity.

Solid network infrastructure.

Just-in-time assessment.

Installation of i21 classroom suite.

2009-2011   2011-2012   2012-2014

i21 roadmap

2011-2012

An evolving learning experience.

Increased access to digital resources, intervention programs and classroom websites.

Business intelligence drives decision-making.

24/7, 365 access to learning.

Leadership development.

2011-2012
2012-2014

i21 roadmap

2012-2014

Digital textbooks begin to replace print material.

Personalized instruction meets the needs of the 21st century learner.

Digital dashboards with drill-down access to a variety of real-time district data.

50% of high school students will take at least one course online.

All core classrooms are equipped for the 21st century.

2012-2014

i21 roadmap

"The i21 instructional program is in the **vanguard** of true 21st Century instructional strategies…"

"…a **leading example** of where public education is headed as school districts learn to harness the potential of technology to enhance student achievement through an **engaging student-centric** approach that **mirrors the digital world** in which they live…"

Gartner, Inc. December 2011

Questions

Level 1 - Entry

Instructional technology is textbook-based; tools are blackboards, worksheets, and overhead projectors. Teachers have little experience with computer technology.

Level 2 - Adoption

Teachers may be concerned about how technology can be integrated into daily instruction . <u>Technology is interspersed</u> <u>among traditional whole-group lectures</u>, recitations, and seatwork.

Level 3 - Adaptation

<u>Technology becomes thoroughly integrated into traditional classroom practice</u>. Lecture, recitation, and seatwork remain the dominant form of student tasks but students use word processors, databases, some graphic programs for approximately 30-40% of the school day.

Level 4 - Appropriation

A milestone evidenced by a change of personal attitude toward technology. <u>Teachers begin to replace old habits</u> with new and use technology effortlessly as a tool to accomplish real work.

Level 5 - Invention

Interdisciplinary project-based instruction, team teaching, and individually paced instruction become common. Students were busier, more active; the classrooms buzz. Students can be observed helping other students over technology hurdles and they help their teachers. <u>Teachers adapt to the more empowered status of students</u>.