



## executive summary

he San Diego Unified School District Board of Education proposed an i21Now initiative and requested a report in December of 2013. On July 8, 2014, the i21Now Committee published its final report entitled Shaping a Vision to Support Next Generation Learning. The report was compiled by more than 70 San Diego Unified, business, higher education, non-profit, and community leaders, who volunteered over 1000 hours of work to formulate a vision for the future of i21.

The attached i21Now Status Update report lists specific goals as set forth by the i21Now Committee, the current state of each objective, and a statement about where we are headed for each item. The i21Now recommendations included here are:

### CURRICULUM AND PROFESSIONAL DEVELOPMENT

- Create learner-centered environments that support collaboration and critical thinking
- Incorporate reputable online resources and real-time data to differentiate instruction and engage students with real-world content
- Implement competency-based learning and problem-solving-based assessment, aligned with Common Core standards
- Foster digital literacy and parental/ community involvement
- Build scalable leader and teacher professional development models

#### **FACILITIES**

- Create safe, open, and welcoming learning spaces that respect neighborhood culture, with group tables, quiet corners, and large gathering spaces that facilitate different instructional modes, private learning, informal gatherings, and community experiences
- Develop new design guidelines for both new school buildings and the redesign of existing schools
- Incorporate sustainable strategies that create lifelong sustainable advocates
- Support teacher collaboration and professional development

#### DIGITAL TOOLS AND POLICY

- Provide equity of access to all students with individual devices and 24/7 connectivity
- Standardize on a limited number of device form factors and platforms to reduce costs
- Evaluate a blended model of district-supplied and student-owned devices
- Re-evaluate all San Diego Unified policies regarding privacy, new materials, AUP (Acceptable Use Policy), and compliance with CIPA (Children's Internet Protection Act)

#### **INFRASTRUCTURE**

- Create a robust, flexible, sustainable infrastructure to enable anytime/anyplace learning and extend the learning environment from school to home and beyond
- Support upgraded wireless, wired, and 1:1
   environments, plus building systems and
   VOIP (Voice over Internet Protocol), while
   ensuring accessibility with digital dashboards
   and portals
- Provide access to both cloud-based and locally available content and applications, and ensure physical and virtual security

#### **FINANCE**

- Pursue new funding sources and repurposing current funding by moving expenditures away from textbooks and structured classrooms toward virtual learning, digital content and personalized learning
- Provide policy makers and administrators with robust indicators of every transformative project's key implementation factors (KIF) aligned to District goals

#### **BROADBAND**

- Provide students with mobile access to broadband connectivity anytime/anyplace, while leveraging resources and partnerships to drive down costs
- Ensure sustainable funding to provide access at home and beyond for all students
- Create Broadband Task Force (District, Business, Government) to explore equitable access for all

San Diego Unified School District is pleased to present this Status Update report on the i21Now Committee initiative.

Sincerely,

Dan Stoneman
Chief Innovation Officer



#### **COLLABORATIVE CONVERSATIONS**

#### GOAL

Create learner-centered environments that support collaboration and critical thinking

#### WHERE WE ARE

With the implementation of a learning management system (LMS), our teachers are able to create virtual learning environments for students. Learning can take place in both synchronous and asynchronous settings. The LMS gives teachers the ability to create flipped classrooms as well as blended learning environments. Most importantly, students participate in collaborative discussions online as they address topics that promote critical thinking and problem solving.

Online digital resources, coupled with i21 technology, give teachers the ability to develop lesson plans with material that is engaging, relevant, and up-to-date. For example, students visit a reenactment of a Civil War Battle, study cell structure using a powerful microscope, and interact with native Spanish-speakers, all without leaving the classroom.

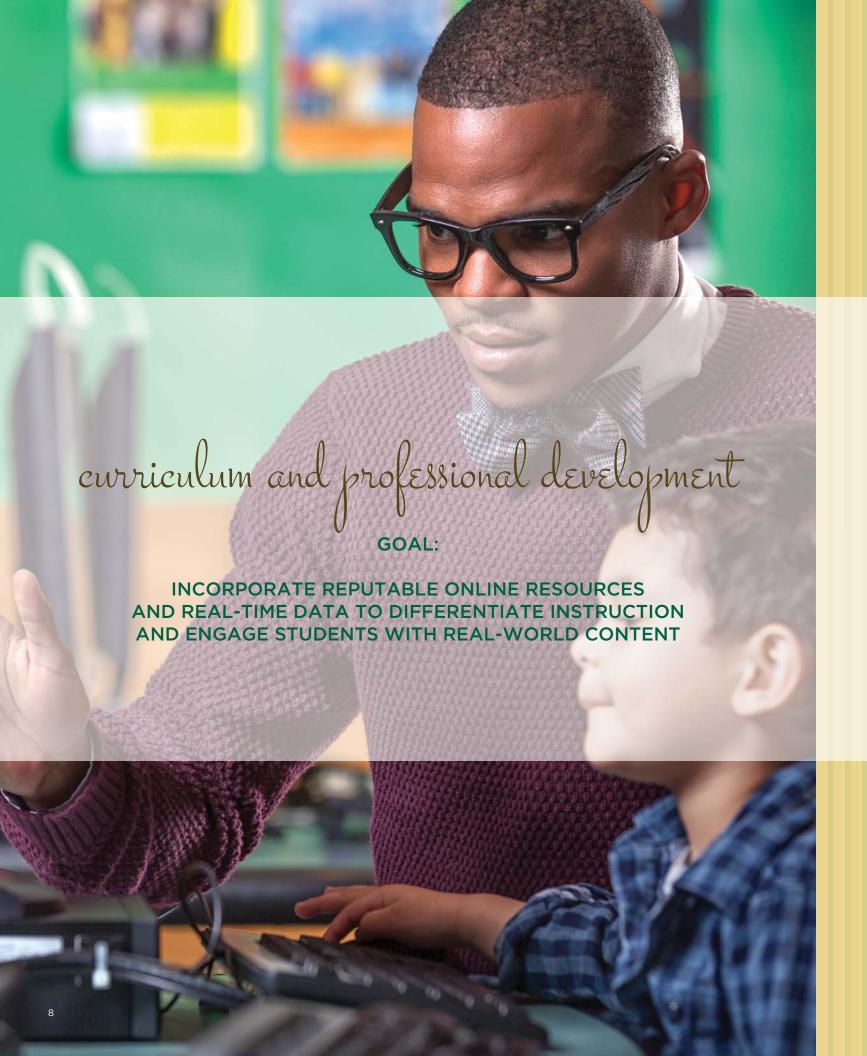
Teachers individualize instruction by using Khan Academy and other instructional resources to provide students with the instruction that they need. Each student has an instructional plan based on the competencies that he needs in order to move to the next level of understanding.

#### WHERE WE ARE GOING

The goal is to increase the number of teachers who use the LMS with their students. As usage increases, teachers will more likely share instructional resources with colleagues online. They will also more likely develop virtual collaborative groups with other teachers. Teachers will be able to improve curriculum and pedagogy as they meet in virtual professional learning communities with colleagues.

Inquiry-based "passion projects" using technology are being encouraged and supported. These teacher guided projects engage students more fully in their learning by giving them choice and options with regard to what and how they learn. Students start with a topic of personal interest. They connect with professionals locally and nationally to solve a problem or address a need in their community. Students use a variety of resources and tools that are available online.

Ways that high schools offer and deliver courses and how students experience learning is being explored. A reimagined high school experience for students would include satisfying high school graduation requirements through a combination of online courses, competency-based courses, and blended learning environments. The high school experience would be tailored to meet the individual needs of the student instead of being tailored to meet the needs of the educational institution.



#### **DIFFERENTIATED INSTRUCTION**

#### GOAL

Incorporate reputable online resources and real-time data to differentiate instruction and engage students with real-world content

#### WHERE WE ARE

Teachers differentiate instruction by creating a variety of formative assessments throughout a lesson. Assessment questions are displayed on an interactive white board. Students respond simultaneously using the software on their devices. Data is compiled immediately giving the teacher the ability to adjust the lesson to meet the needs of the students. Data collected can also help teachers to make instructional decisions about which students need additional individual assistance and which students would benefit from small group instruction.

#### WHERE WE ARE GOING

The goal is to explore additional online resources that not only provide data on how students are doing, but will also adapt the curriculum based on student responses. High quality, engaging curriculum that is based on real-world content will be selected by practitioners because they are best at recognizing the types of resources that will accelerate student achievement. Professional Learning Communities will make recommendations to San Diego Unified staff regarding the resources that will be supported by the Educational Technology Department.



#### **COMMON CORE**

#### GOAL

Implement competency-based learning and problem-solving-based assessment, aligned with Common Core standards

#### WHERE WE ARE

With competency-based learning, students can receive credit for knowledge that they have acquired outside of a formal educational setting. Students are given direct assessments to determine their knowledge in a given area. Traditionally, credit is based on the number of hours that students spend in a classroom. Many students throughout San Diego Unified School District are enrolled in online classes. These students have the ability to move through classes faster than if they were enrolled in traditional brick and mortar classroom courses. These online courses, which are aligned with Common Core Standards and are San Diego Unified-approved, are quasi competency-based. Students with a great deal of knowledge in a particular area can move through a course quickly. This gives students the ability to graduate earlier than expected or to recover credits expeditiously.

#### WHERE WE ARE GOING

A competency-based approach can be approximated by expanding the online course model throughout San Diego Unified. Developing a Districtwide structure that would allow K -12 students to be fully-enrolled in a virtual school or dually-enrolled in a virtual school and a brick and mortar school would give students more options and choices regarding how they learn and how they demonstrate what they know. In-school counselors would help students make good choices about the types of courses that they would take.



#### **DIGITAL LITERACY**

#### **GOAL**

Foster digital literacy and parental/community involvement

#### WHERE WE ARE

Digital literacy is a strand that is included in all professional development activities offered by the Educational Technology Department. Digital literacy is comprised of six broad standards which include creativity and innovation, communication and collaboration, research and information fluency, critical thinking and problem solving, digital citizenship, and technology operations and concepts. Teachers are supported with resources to expose their students to these standards. Additionally, many San Diego Unified-approved courses address these standards throughout the curriculum.

#### WHERE WE ARE GOING

The Educational Technology Department will collaborate with subject-area departments to develop ways that digital literacy skills can be infused into all curricula areas. Digital literacy skills will be blended seamlessly with more traditional types of curriculum and pedagogy. As teachers and students become more fluent with the use of technology, they will discover new ways to address digital literacy skills. Sometimes these skills will need to be taught explicitly, other times the instructional activity itself will serve to promote skill-building.

#### PROFESSIONAL DEVELOPMENT

#### GOAL

Build scalable leader and teacher professional development models

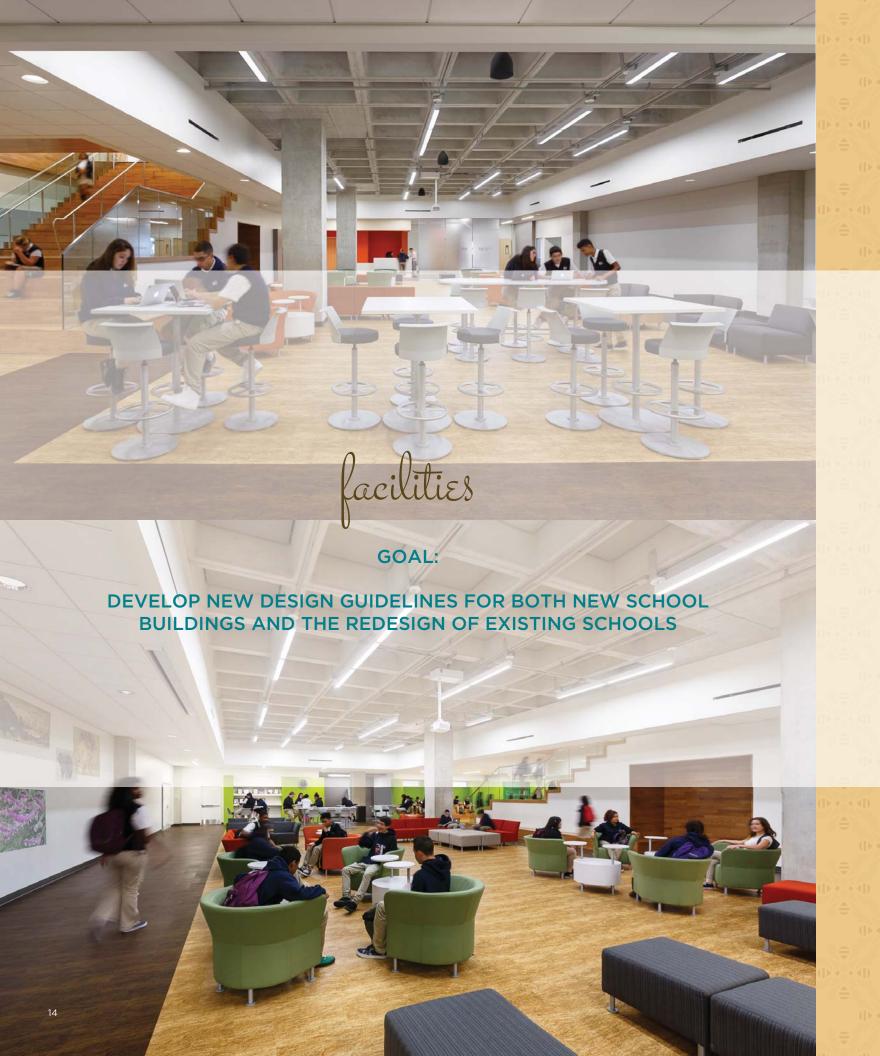
#### WHERE WE ARE

Currently the majority of our professional development offerings are conducted face-to face. These classes are delivered by teachers and staff who are considered experts at using technology to enhance and add value to curriculum and instruction. A limited number of classes are offered online through our learning management system. Teachers can take these courses at a time of their choosing.

#### WHERE WE ARE GOING

The Educational Technology Department is exploring the use of conferencing tools as a way to reach a larger audience of learners.

Conferencing tools would allow our presenters to deliver professional development from one central location to teachers throughout San Diego Unified at different locations. Teachers throughout the District could communicate and collaborate during this type of synchronous learning event. The Educational Technology Department is also developing additional online courses, as well as blended learning courses.



#### **DESIGN GUIDELINES**

#### GOAL

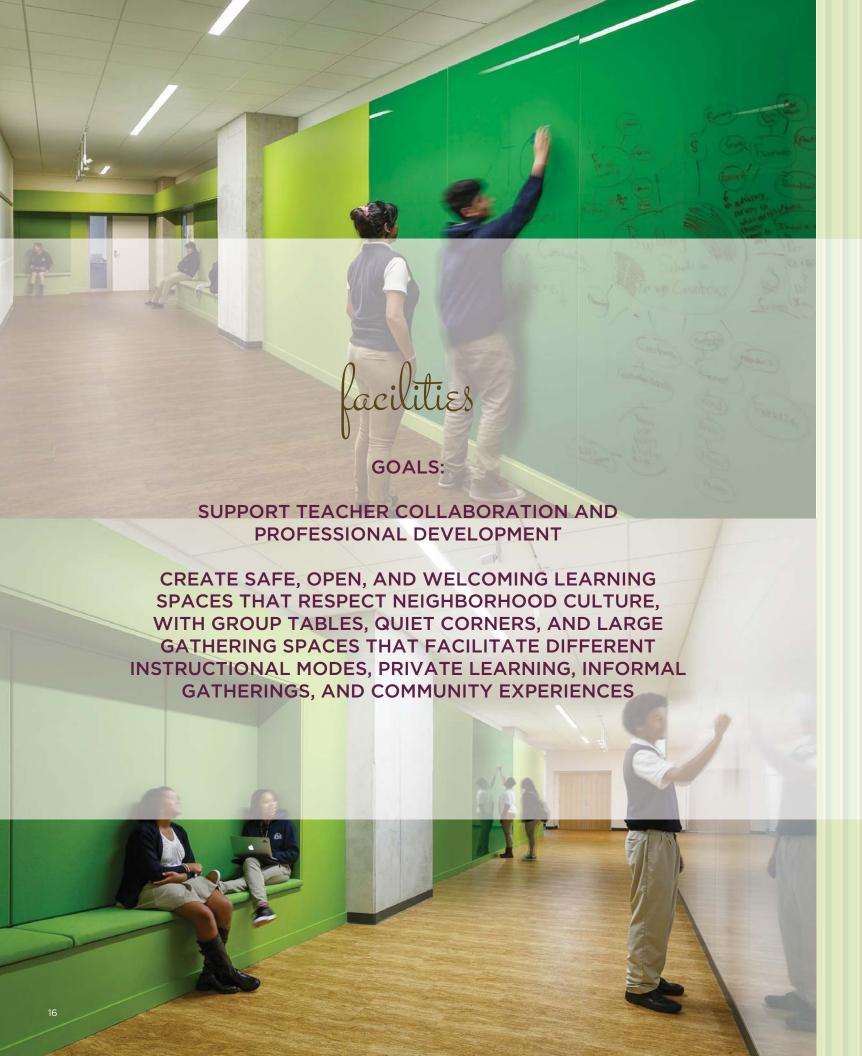
Develop new design guidelines for both new school buildings and the redesign of existing schools

#### WHERE WE ARE:

San Diego Unified recognizes and embraces current leading knowledge of learning space design and is collaborating with educators, education technology specialists and architects to enhance design guidelines for learning spaces informed by 21st century educational theory and methods. Learning spaces will be safe, open, and welcoming, respecting neighborhood culture, with group tables, quiet corners, and large gathering spaces that facilitate different instructional modes, private learning, informal gatherings, and community experiences. The updated 21st century learning design guide will shape new facilities as well as modernization and renovation of existing environments.

#### WHERE WE ARE GOING:

The i21Now learning design guide will be used by staff and designers to create new and renovated spaces. The 21st century learning spaces will be: student centered, pedagogy driven, teacher supportive, sustainable and community connected. The new guidelines will transform learning environments so that the spaces enable teaching and learning tailored to support the Common Core curriculum with the integration of technology. The new design guide will be completed in the second quarter of 2015 and made available to design professionals and staff. San Diego Unified School District will construct and modernize school facilities based upon these new design guides.



#### **SUPPORTIVE ENVIRONMENTS**

#### GOAL

Support teacher collaboration and professional development

#### WHERE WE ARE

With the implementation of Professional Learning Communities (PLCs) at every school site, San Diego Unified has moved away from a centralized professional development model. PLCs support teacher collaboration and professional development as a means to improve student achievement.

#### WHERE WE ARE GOING

Spaces will be created for teachers to collaborate using the latest technology tools. Online resources that support teacher learning are readily available and San Diego Unified-created media will enhance instruction.

#### GOAL

Create safe, open, and welcoming learning spaces that respect neighborhood culture, with group tables, quiet corners, and large gathering spaces that facilitate different instructional modes, private learning, informal gatherings, and community experiences

#### WHERE WE ARE

San Diego Unified has been improving physical environments wherever possible to transform existing traditional environments into modern learning spaces. To help reach this goal, Facilities Planning and Construction Division (FPC) has implemented interactive 21st century classroom equipment and student devices across San Diego Unified into over 5,400 classrooms.

#### WHERE WE ARE GOING

San Diego Unified will construct new facilities and modernize existing campuses utilizing 21st century design guidelines and capital resources made available by Propositions S & Z. Facilities will be collaboratively developed with educational leadership, staff, advisors, industry experts and community stakeholders. Learning environment designs will align with Vision 2020 to fully modernize our facilities to best meet the current and future needs of students, teachers and communities.



#### **SUSTAINABLE STRATEGIES**

#### GOAL

Incorporate strategies that create lifelong sustainability advocates

#### WHERE WE ARE

San Diego Unified School District has taken steps to weave sustainability concepts into the fabric of K-12 education to develop informed stewards of our planet and to engage students and educators in the measures that will be identified in an overall Climate Action Plan. These efforts aim to provide students with real-world environmental literacy, develop more awareness of available resources and connect teachers and partners through professional development, curriculum design, performance tasks, lessons and units that integrate environmental literacy in a meaningful and engaging way for students. San Diego Unified has implemented the following: coursework and standards that support environmental literacy; partnerships with outside agencies that support developing student environmental literacy; supplemental programs at schools that support environmental literacy applications both at school and at home; and, professional development opportunities for teachers to connect with environmental literacy resources.

#### WHERE WE ARE GOING

The Office of Leadership and Learning and Facilities Planning and Construction are exploring the feasibility of adopting California's Education and the Environment Initiative (EEI) into the Common Core State Standards, along with other teaching and partnership engagements.



#### 1:1 COMPUTING

#### GOAL

Provide equity of access to all students with individual devices and 24/7 connectivity

#### WHERE WE ARE

The Learning on the Go program has been implemented at 13 schools throughout San Diego Unified School District. Depending on the school, students at grade 5, 6, 7, 8, or grades 7 and 8 are issued student devices and other accessories. Students may bring the devices home and have connectivity to the internet for completing assignments and accessing resources. Learning on the Go teachers receive additional professional development in curriculum, pedagogy, and best practices on how to use technology as a tool to enhance instruction. Additionally, each Learning on the Go school offers a technology class to students. Students in these classes provide tech support to school staff and students. They learn valuable skills in computer repair and trouble-shooting.

#### WHERE WE ARE GOING

San Diego Unified is exploring ways to close the digital divide among students. Providing mobile broadband and 1:1 devices for all students would help to provide all students with an equitable education. This model would also allow teachers to "flip" their classrooms and to provide for a blended learning environment.

#### **LEVERAGE STANDARDS**

#### GOAL

Standardize on a limited number of device form factors and platforms to reduce costs

#### WHERE WE ARE

To date, the i21 program has delivered three different device platforms. A Technical Advisory Group was formed and met each year to come to consensus on student devices before device purchases were made. Standardization has always been a concern of the team and project. Device standardization streamlines and drives down the cost and complexity of device support.

#### WHERE WE ARE GOING

A device advisory group will still need to continue to evaluate new hardware on the market and discuss its possible impacts on student learning. This group should expand to include more teachers and site administrators to broaden the conversation and knowledge sharing. Device standardization should always be a key factor when choosing a device, as it has a major impact in technical support, cost, staffing and being able to provide expedient service to San Diego Unified School District.



#### **BYOD ASSESSMENT**

#### GOAL

Evaluate a blended model of San Diego Unifiedsupplied and student-owned devices

#### WHERE WE ARE

Upon the culmination of the i21 device rollout scheduled for completion in January 2015, San Diego Unified will have provided a device for every student in their classroom. This is a great first step in equitable access to technology for all students, no matter their socio-economic background.

#### WHERE WE ARE GOING

It is essential that we continue to provide equitable access to technology for all students in San Diego Unified School District. The only way to achieve that goal is continued issuance of San Diego Unified computing devices. Bring Your Own Device (BYOD) and blended BYOD models both have their benefits and drawbacks. The only way to ensure that all students in such a diverse district as San Diego Unified have equitable access to 21st century learning tools is to continue the model of furnishing devices. Leveling the playing field, and making sure that all students have the same access to technology is paramount to successful 21st century learning skills.

#### **POLICY ASSESSMENT**

#### GOAL

Re-evaluate all San Diego Unified policies regarding privacy, new materials, AUP (Acceptable Use Policy), and compliance with CIPA (Children's Internet Protection Act)

#### WHERE WE ARE

Integrated Technology Support Services, which includes the San Diego Unified School District Educational Technology Department, is associated with State, Federal, local, and professional organizations which monitor and advise constituents of new and revised policies in the area of technology and instruction As bulletins and notices are received, San Diego Unified's policies and procedures are reviewed and updated as appropriate. Changes are communicated to the superintendent, board members, administrators, principals, teachers, students, and parents.

#### WHERE WE ARE GOING

The Educational Technology Department will continue to keep abreast of new policies and laws related to instruction and technology. Advocacy for changes to existing policies and laws, as appropriate, based on changes in the instructional and educational environment will occur. As changes are recommended, "best practices" and current research in the field will be maintained.



#### ANYTIME / ANYPLACE

#### GOAL

Create a robust, flexible, sustainable infrastructure to enable anytime/anyplace learning and extend the learning environment from school to home and beyond

#### WHERE WE ARE

Thanks to Propositions MM, S and Z, San Diego Unified's schools have a robust, high capacity, wired and wireless infrastructure foundation required for today's modern age of connectivity and learning scenarios. Students have access to private cloud data and apps through the development of the my.sandi.net web site, as well as the ability to interact with their teachers, retrieve and turn in homework 24/7 from anywhere, at any time. Students also have an internet connection with our learning management system.

#### WHERE WE ARE GOING

With the addition of Data Center 2 at Serra High school, a critical component will be added to ensure that San Diego Unified School District's private cloud and services are accessible 24/7 without interruption. Private and public cloud services that are device agnostic and are available anywhere in the world where an internet connection is available will be continued to be developed and deployed.

# GOAL: **SUPPORT UPGRADED WIRELESS, WIRED, AND 1:1 ENVIRONMENTS, PLUS BUILDING SYSTEMS AND VOIP** (VOICE OVER INTERNET PROTOCOL), WHILE ENSURING **ACCESSIBILITY WITH DIGITAL DASHBOARDS AND PORTALS**

#### **FACILITATE ACCESS**

#### GOAL

Support upgraded wireless, wired, and 1:1 environments, plus building systems and Voice over Internet Protocol (VOIP), while ensuring accessibility with digital dashboards and portals

#### WHERE WE ARE

The San Diego Unified School District's Integrated Technology Support Services (IITS) and Facility Planning and Construction (FPC) have supplied over 90 schools with modern VOIP phone systems as well as campus-wide wireless networks that extend wireless connectivity to the property lines of each campus. Additionally, 802.11n wireless networks have been installed in 5,400 core instructional classrooms around the District as part of i21Now. To support the bandwidth back to the District's data center and internet connection, every elementary site has been provided with a fiber Wide Area Network (WAN) connection at 100Mbs speeds, and all secondary schools have been connected at 1Gbs.

#### WHERE WE ARE GOING

IITS and FPC will continue to collaborate to streamline the remaining VOIP installations over the next two to three years. The team will streamline changes to the network infrastructure at the schools to address potential bandwidth bottlenecks, as well as installation of new generation 802.11ac wireless access points, providing the potential for gigabit speeds over WIFI. In the same 2-3 year timeframe, the intent is to accomplish the completion of campus-wide wireless coverage at the remaining schools that currently do not have adequate coverage in their administrative, common areas, and outdoor areas. Once all sites have a robust, highly available, campus-wide wireless network, a Districtwide guest wireless network will be deployed, providing basic internet access to support parents and community members who visit our schools. To support the ever increasing bandwidth over the next five plus years and to align with the White House's ConnectED initiative, WAN bandwidth will be increased to all elementary schools with over 400 student enrollment to 1Gbs and will double the secondary sites' current speeds to 2Gbs.



#### **UNIVERSAL SECURE ACCESS**

#### GOAL

Provide access to both cloud-based and locally available content and applications, and ensure physical and virtual security

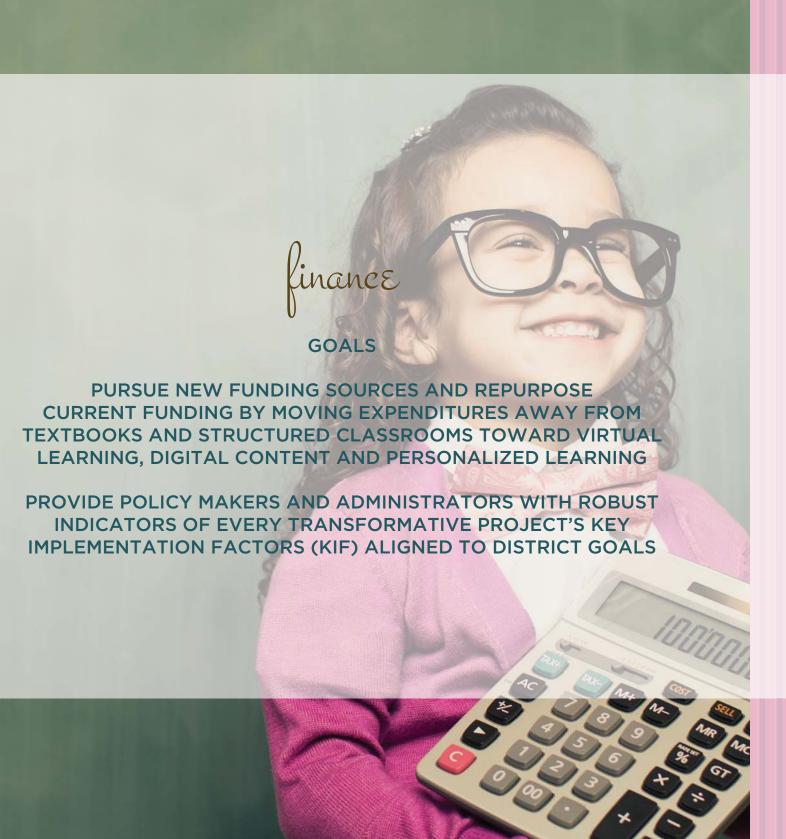
#### WHERE WE ARE

Under the Five-Year Enterprise Software Plan, San Diego Unified's ITSS Department has upgraded core business, student information, and reporting systems with the latest technologies in support of San Diego Unified's i21Now and Vision 2020 initiatives. In parallel with the Five-Year Enterprise Software Plan, ITSS has been working with several departments and schools to evaluate and deploy new cloud-based systems in order to invest less in internal infrastructure when it is cost effective and when security of data/access meets San Diego Unified's strict requirements.

#### WHERE WE ARE GOING

ITSS will continue to partner with and support schools and San Diego Unified program/business offices to add value and efficiencies to systems in place or that are new/being evaluated. Cloud technologies are constantly evolving and monitoring the growth and purpose in K-12 is and will continue to be a priority for ITSS leadership. Over the next year, San Diego Unified will be moving special education (IEP), RTI, GATE, and 504 systems, the Visiting Teacher/Substitute Management system, and the web content management system (www.sandi.net) into the cloud; San Diego Unified will no longer be hosting these systems in District's data center.

San Diego Unified's Business Intelligence team is collaborating with Teaching and Learning staff to build an early warning system with interactive dashboards and reports for schools to support the goal of increasing student achievement. ITSS will continue to invest and provide resources to expand real-time and on-line tools, as prioritized by San Diego Unified leadership, to inform staff and the public with current and relevant information.



#### LEARNING INTELLIGENCE

#### GOAL

Pursue new funding sources and repurpose current funding by moving expenditures away from textbooks and structured classrooms toward virtual learning, digital content and personalized learning

#### WHERE WE ARE

As budgets have diminished, California has moved away from requiring districts to purchase new textbooks every seven years. Currently the purchase of new textbooks has been suspended until 2017 unless districts have the funding source for such a purchase. San Diego Unified School District has continued with current adoptions and provides supporting materials to teachers that comply with the Williams Act.

#### WHERE WE ARE GOING

Student materials must reflect the growing trend of digital learning. As San Diego Unified works toward providing students with their own devices, The District's purchase of instructional materials will, when available, provide students the ability to access them via their device.

#### GOAL

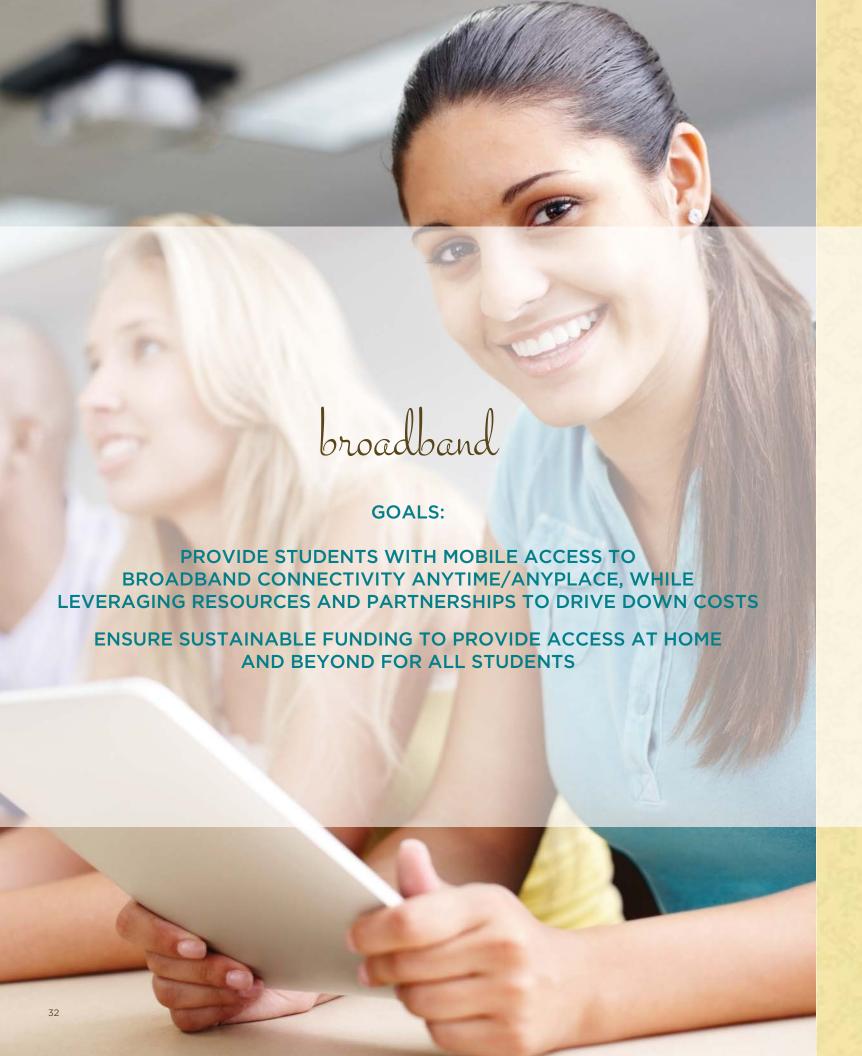
Provide policy makers and administrators with robust indicators of every transformative project's key implementation factors (KIF) aligned to District goals

#### WHERE WE ARE

San Diego Unified School District has implemented processes and procedures supported through technology geared towards gathering high quality data for presentation in tailored reports and dashboards. The first phase of implementation that spans multiple groups is nearing completion; the required organizational change is being managed; and, training is being provided for advanced technology. Reports and dashboards furnish on-demand real-time data and enable flexibility and agility in aligning/realigning key implementation factors to San Diego Unified's goals.

#### WHERE WE ARE GOING

The initial phase of this process improvement is completing by year's end to be followed by a well thought-out and comprehensive expansion of processes supporting all of Facility Planning and Construction's service areas. This expansion will integrate with the capabilities of the initial phase to support additional KIF analytics.



#### **MOBILE BROADBAND**

#### GOAL

Provide students with mobile access to broadband connectivity anytime/anyplace, while leveraging resources and partnerships to drive down costs

#### WHERE WE ARE

Upon completion of the two-year FCC pilot the ITSS Department has continued to support a mobile broadband initiative which is currently serving 3,109 students in the San Diego Unified School District through our Learning on the Go (LOGO) program. Currently LOGO students take home an i21 program issued device with broadband provided at no cost to the student or the family so they can take advantage of learning any place, any pace, anytime.

#### WHERE WE ARE GOING

In conjunction with goal #2 and #3 of the Broadband Subcommittee, San Diego Unified's current goal is to proceed with a phased increase in mobile broadband enabled devices. The challenge with deploying a high volume of mobile broadband devices is the high cost. San Diego Unified is currently in negotiations with broadband service providers in an attempt to drive down the costs of this service. A Request for Proposal may also be considered to further leverage San Diego Unified's purchasing power.

#### GOAL

Ensure sustainable funding to provide access at home and beyond for all students

#### WHERE WE ARE

We understand the high learning value of providing broadband access to each student's home, and potentially to provide each student with mobile broadband access. As stated in the previous goal, we currently have only been able to provide mobile broadband access to 3,109 students in our LOGO program. This program is currently subsidized through E-Rate funding. However, this funding is going to diminish starting in 2015, and is expected to be completely phased out over the next three years.

#### WHERE WE ARE GOING

In the near future, San Diego Unified seeks to deliver one-to-one mobile computing to every student. Access to broadband services outside of school and outside of the school day is required to fully leverage the potential for increased student learning within a 1:1 mobile computing model. Students who have 1:1 mobile devices, and a mobile broadband connection, have the ability to work in a flipped classroom model. The flipped classroom model provides better student learning outcomes by highly leveraging teacher/student interaction at the point of need.



#### **EQUITABLE ACCESS**

#### GOAL

Create Broadband Task Force (San Diego Unified School District, Business, Government) to explore equitable access for all

#### WHERE WE ARE

There are currently no known San Diego countywide multi-organizational broadband initiatives.

#### WHERE WE'RE GOING

San Diego Unified School District seeks to facilitate a San Diego countywide multi-organizational broadband task force. The vision is for this task force to be made up of interested individuals from local school districts, telecommunications companies, business parties interested in workforce development and government agencies. The mandate of the task force will be to find ways to provide low cost broadband services to all San Diego county K-12 students.

