

LOS ANGELES UNIFIED SCHOOL DISTRICT

SCHOOL CONSTRUCTION BOND CITIZENS' OVERSIGHT COMMITTEE

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(Vacant)

CA Tax Reform Assn.

Joseph P. Buchman – Legal Counsel

Burke, Williams & Sorensen, LLP

(Vacant)

Oversight Committee Consultant

Timothy Popejoy

Bond Oversight Administrator

Daniel Hwang

Asst. Administrative Analyst

RESOLUTION 2018-18

BOARD REPORT NO. 528-17/18

**AMENDMENT TO THE INFORMATION TECHNOLOGY DIVISION STRATEGIC
EXECUTION PLAN TO APPROVE NEW STRATEGIC TECHNOLOGY PROJECTS
AND AMEND EXISTING STRATEGIC TECHNOLOGY PROJECTS**

WHEREAS, District Staff proposes that the Board of Education approve an amendment to the Information Technology Division (ITD) Strategic Execution Plan (SEP) to approve the definitions, allocate funds, and take the associated action(s) for the following new technology projects:

- Enterprise Reporting Projects (Phase 3)
 - o Instructional Analytics
 - o Student Support Analytics
 - o Special Education Analytics
 - o School Analytics
- LAUSD Mobile App Project
- Open Data Portal and Dashboards Initiative (Phase 2)
- IT Security Program
- 16 School Telecommunications Modernization Projects; and

WHEREAS, District Staff proposes the following actions:

- Approve the allocation of new sources of capital funds into the ITD managed portion of the School Upgrade Program (SUP) as follows:
 - o \$24,000,000 in cost savings from completed LAN modernization projects (BOE 094-14/15)
- Approve an increase of \$24,000,000 in the spending target associated with the “Technology Infrastructure and System Upgrades” SUP category of capital need

RESOLUTION 2018-18

AMENDMENT TO THE INFORMATION TECHNOLOGY DIVISION STRATEGIC EXECUTION PLAN TO APPROVE NEW STRATEGIC TECHNOLOGY PROJECTS AND AMEND EXISTING STRATEGIC TECHNOLOGY PROJECTS

- Move \$9,188,000 from the "Upgrade Districtwide Emergency Radio System Servicing Schools" SUP category of need to the "Technology Infrastructure and System Upgrades" SUP category of need
- Allocate \$18,604,000 of bond funding to complete Enterprise Reporting (Phase 3), LAUSD Mobile App Project, Open Data Initiative, IT Security Program, and 16 School Telecommunications Modernization Projects including network equipment upgrades that qualify for 2019 E-rate rebates.
- Approve filing of 2019 E-rate applications for 16 schools for network equipment upgrades and related services.
- Approve execution of the Enterprise Reporting (Phase 3), LAUSD Mobile App Project, Open Data Portal and Dashboards Initiative (Phase 2), IT Security Program, and 16 School Telecommunications Modernization Projects; and

WHEREAS, the SUP includes a spending target to address "Technology Infrastructure and System Upgrades"; and

WHEREAS, Enterprise Reporting – Instructional Analytics will allow for effective mechanisms for tracking student performance through various stages of their education, and give teachers, counselors, and principals the tools they need to make informed decisions about necessary interventions and to improve school processes; and

WHEREAS, Enterprise Reporting – Student Support Analytics will allow for improved monitoring and addressing of student behavior and discipline as well as reduce chronic absenteeism and help improve community relations; and

WHEREAS, Enterprise Reporting – Special Education Analytics will support schools in monitoring compliance with the Modified Consent Decree mandates by providing information on students with disabilities through school role-based dashboards, including services provided by non-public agencies; and

WHEREAS, Enterprise Reporting – School Analytics will centralize student performance data from multiple sources into a single, role-based system that will help teachers, counselors, principals, local district administrators and others easily access the data they need to support their role in delivering education to our children; and

WHEREAS, the LAUSD Mobile App Project will fulfill a board resolution (Res-016-17/18) to improve parent and community engagement by implementing a mobile app to provide information and receive input in support of the academic success of our children;

WHEREAS, the Open Data Portal and Dashboards Initiative (Phase 2) will fulfill a board resolution (Res-021-17/18) that aims to increase accountability and transparency by making District data available to parents through a public-facing portal and dashboards; and

RESOLUTION 2018-18

AMENDMENT TO THE INFORMATION TECHNOLOGY DIVISION STRATEGIC EXECUTION PLAN TO APPROVE NEW STRATEGIC TECHNOLOGY PROJECTS AND AMEND EXISTING STRATEGIC TECHNOLOGY PROJECTS

WHEREAS, the IT Security – Cyber Security Training & Awareness Project will allow the District to educate employees, parents and students on how to prevent cyber-attacks and protect their identity, their privacy, and District resources; and

WHEREAS, the IT Security – Security Analytics & Intelligence Project will increase storage and processing capacity for threat intelligence capabilities to meet the District's digital curriculum growth rate, resulting in a reduction in the frequency and impact of cyber security incidents; and

WHEREAS, the IT Security – Student Health Information Protection Program will establish a District-wide program that educates staff on the appropriate use of information and what minimum measures should be taken to safeguard student health records as required by law; and

WHEREAS, 16 School Telecommunications Modernization Projects will replace obsolete, end-of-life, and failing telephone and public address equipment and obsolete network equipment necessary to modernize their telecommunications systems at 16 K-12 school sites; and

WHEREAS, these projects are consistent with the District's commitment to address critical technology, communications, and safety needs; and

WHEREAS, District Staff has concluded that the proposed SEP amendment will facilitate implementation of the ITD SEP, and therefore, it will not adversely affect the District's ability to successfully complete the ITD SEP.

NOW, THEREFORE, BE IT RESOLVED THAT:

1. The School Construction Citizens' Bond Oversight Committee recommends that the Board of Education adopt an Amendment to the Information Technology Division Strategic Execution Plan to approve new strategic technology projects listed above and described in detail in Board Report 528-17/18, a copy of which is attached hereto in the form it was presented to the BOC and is incorporated herein by reference.
2. This resolution shall be transmitted to the Los Angeles Unified School District Board of Education and posted on the Oversight Committee's website.
3. The District is directed to track the above recommendation and to report on the adoption, rejection, or pending status of the recommendations as provided in section 6.2 of the Charter and Memorandum of Understanding between the Oversight Committee and the District.

RESOLUTION 2018-18
AMENDMENT TO THE INFORMATION TECHNOLOGY DIVISION STRATEGIC
EXECUTION PLAN TO APPROVE NEW STRATEGIC TECHNOLOGY PROJECTS
AND AMEND EXISTING STRATEGIC TECHNOLOGY PROJECTS

ADOPTED on May 31, 2018 by the following vote:

AYES: 9

ABSTENTIONS: 0

NAYS: 0

ABSENCES: 5

Quynh Nguyen

Quynh Nguyen
Chair

Stuart Magruder

Stuart Magruder
Executive Committee



Board of Education Report

File #: Rep-528-17/18, **Version:** 1

Amendment to the Information Technology Division Strategic Execution Plan to Approve New Strategic Technology Projects and Amend Existing Strategic Technology Projects

June 12, 2018

Information Technology Division

Division of Instruction

Action Proposed:

Staff proposes that the Board of Education amend the Information Technology Division Strategic Execution Plan (SEP) to approve the definitions, allocate funds, and take the associated action(s) for the following technology projects, as described in Attachment A:

- Enterprise Reporting (Phase 3)
 - Instructional Analytics
 - Student Support Analytics
 - Special Education Analytics
 - School Analytics
- LAUSD Mobile App Project
- Open Data Portal and Dashboards Initiative (Phase 2)
- IT Security Program
- 16 School Telecommunications Modernization Projects

The proposed actions are as follows:

- Approve the allocation of new sources of capital funds into the ITD managed portion of the School Upgrade Program (SUP) as follows:
 - \$24,000,000 in cost savings from completed LAN modernization projects (BOE 094-14/15)
- Approve an increase of \$24,000,000 in the spending target associated with the "Technology Infrastructure and System Upgrades" SUP category of capital need
- Move \$9,188,000 from the "Upgrade Districtwide Emergency Radio System Servicing Schools" SUP category of need to the "Technology Infrastructure and System Upgrades" SUP category of need
- Allocate \$18,604,000 of bond funding to complete Enterprise Reporting (Phase 3), LAUSD Mobile App Project, Open Data Initiative, IT Security Program, and 16 School Telecommunications Modernization Projects including network equipment upgrades that qualify for 2019 E-rate rebates.
- Approve filing of 2019 E-rate applications for 16 schools for network equipment upgrades and related services.
- Approve execution of the Enterprise Reporting (Phase 3), LAUSD Mobile App Project, Open Data Portal and Dashboards Initiative (Phase 2), IT Security Program, and 16 School Telecommunications

Modernization Projects.

Background:

On January 14, 2014, the Board of Education approved the establishment of the School Upgrade Program (SUP), the next phase of the District's Bond Program which will modernize, build and repair school facilities to improve student health, safety and educational quality. The Board's action approved the overarching goals and principles, funding sources, specific categories of need, and spending targets for the SUP. As proposed projects are developed, they are submitted to the Bond Oversight Committee (BOC) for consideration and the Board of Education for approval.

The SUP includes a spending target to address “Technology Infrastructure and System Upgrades.” The intended outcomes of each of the proposed projects to be executed within this spending target are as follows:

- Enterprise Reporting (Phase 3)
 - Instructional Analytics: This project will allow for effective mechanisms for tracking student performance through various stages of their education, and give teachers, counselors, and principals the tools they need to make informed decisions about necessary interventions and to improve school processes. \$9,702,000 (100% Bond Fund).
 - Student Support Analytics: This project will allow for improved monitoring and addressing of student behavior and discipline as well as reduce chronic absenteeism and help improve community relations. \$4,789,000 (100% Bond Fund).
 - Special Education Analytics: This project will support schools in monitoring compliance with the Modified Consent Decree mandates by providing information on students with disabilities through school role-based dashboards, including services provided by non-public agencies. \$2,089,000 (100% Bond Fund).
 - School Analytics: This project will centralize student performance data from multiple sources into a single, role-based system that will help teachers, counselors, principals, local district administrators and others easily access the data they need to support their role in delivering education to our children. \$3,406,000 (100% Bond Fund).
- LAUSD Mobile App Project: This project will fulfill a Board resolution (Res-016-17/18) to improve parent and community engagement by implementing a mobile app to provide information and receive input in support of the academic success of our children. \$2,621,000 Bond Fund (95%) and \$138,000 General Fund (5%).
- Open Data Portal and Dashboards Initiative (Phase 2): This project will fulfill a board resolution (Res-021-17/18) that aims to increase accountability and transparency by making District data available to parents through a public-facing portal and dashboards. \$3,252,000 (100% Bond Fund).
- IT Security Program:
 - Cyber Security Training & Awareness: This project will allow the District to educate employees, parents and students on how to prevent cyber-attacks and protect their identity, their privacy, and District resources. \$242,000 Bond Fund (95%) and \$13,000 General Fund (5%)
 - Security Analytics & Intelligence (Phase 2): This project will increase storage and processing

capacity for threat intelligence capabilities to meet the District's digital curriculum growth rate, resulting in a reduction in the frequency and impact of cyber security incidents. \$261,000 (100% Bond Fund)

- **Student Health Information Protection:** This program will establish a District-wide program that educates staff on the appropriate use of information and what minimum measures should be taken to safeguard student health records as required by law. \$604,000 (100% Bond Fund)
- **16 School Telecommunications Modernization Projects:** These projects will replace obsolete, end-of-life, and failing telephone and public address equipment and obsolete network equipment necessary to modernize their telecommunications systems at 16 K-12 school sites. \$15,638,000 Bond Fund (92%) and an estimated \$1,438,000 E-Rate Rebates (8%)

If approved, ITD will provide quarterly updates on the Projects.

Expected Outcomes:

Staff anticipates that the Board will amend the ITD-SEP to define the new projects described herein and allocate \$42,604,000 of Bond Program funding. These projects will help address the critical needs of the District's technology infrastructure and software systems.

Board Options and Consequences:

Failure or delay of approval will postpone the execution and/or implementation of the proposed projects and programs and the associated benefit to the schools and students.

Policy Implications:

This action is consistent with the District's long-term goal to address unmet school needs as described in Proposition BB and Measures K,R,Y, and Q.

Budget Impact:

The proposed projects have a total budget of \$42,604,000 of Bond Program funding and General Fund. This funding will be allocated from the following sources:

Amount	Funding Source
\$24,000,000	Bond Funds from cost savings from completed LAN modernization projects within the ITD SEP
\$18,604,000	Bond Funds from "Technology Infrastructure and System Upgrades" SUP category of need in the ITD SEP
\$1,438,000	Estimated potential E-Rate Rebates
\$151,000	One-Time General Fund
\$44,193,000	GRAND TOTAL

A total of \$151,000 in one-time General Fund is needed for non-bond eligible expenses:

- \$138,000 for the LAUSD Mobile App Project, currently unfunded.
- \$13,000 for the IT Security Program, which will be funded within the Information Technology

Division's current budget.

Upon completion of the projects, an estimated \$977,475 of ongoing General Fund is needed for maintenance and future enhancements of the LAUSD Mobile App, \$775,851 of ongoing General Fund is needed for maintenance and future enhancements of the Open Data Portal and Dashboards, and \$2,959,525 of ongoing General Fund is needed for maintenance and future enhancements of the Enterprise Reporting Dashboards. These General Fund needs are currently unfunded.

Issues and Analysis:

Attachments:

Attachment A - Project Definitions and Associated Actions

Attachment B - Bond Oversight Committee Meeting Presentation

Attachment C - Bond Oversight Committee Resolution

Informatives:

None.

Submitted:

RESPECTFULLY SUBMITTED,

APPROVED & PRESENTED BY:

AUSTIN BEUTNER
Superintendent

SHAHRYAR KHAZEI
Chief Information Officer
Information Technology Division

REVIEWED BY:

DAVID HOLMQUIST
General Counsel

___ Approved as to form.

REVIEWED BY:

CHERYL SIMPSON
Director, Budget Services and
Financial Planning

___ Approved as to budget impact statement.

MARK HOVATTER
Chief Facilities Executive

___ Approved as to impacts to facilities.



Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18

Program: Enterprise Software Systems
Project: Instructional Analytics
Budget: \$9,702,000 (100% Bond Fund)

Introduction

A vast amount of attendance, behavior, coursework, demographic, assessment and other data is collected at LAUSD every day. LAUSD has been monitoring this data for years, but most of that work is done by Central Office administrators who are often only looking at a single variable such as marks, or Smarter Balanced Assessment Consortium (SBAC) results. Teachers, who could use data about their current students to tailor lesson plans and offer targeted support, often get the information they need long after it's useful, or they see data in formats that is difficult to use and understand.

The Enterprise Reporting Team has already captured a significant amount of instructional data which is used in analytic reporting; however, additional data is needed to support role-based dashboards and to help LAUSD achieve strategic goals. Instructional analytics for the 2018-19 school year will focus on the following key areas:

1. Assess individual student progress using integrated longitudinal data
2. Build an advanced analytics model for student performance assessment and intervention recommendations
3. Develop and deploy advanced analytics for College and Career Readiness for individual students and subgroups, including a College and Career Readiness Student Guide
4. Provide teachers, parents, and counselors insights into Common Core Standard Elementary Marks
5. Integrate Smarter Balanced English Language Arts and Math Assessments with other data in a form that is useful for teachers and school administrators
6. Assess impact of student instructional programs
7. Provide change management support to schools to maximize benefits from the investment in the new dashboards

Scope

The project scope includes the seven key areas listed above and described below.

1. Assess Individual Student Progress Using Integrated Longitudinal Data

Integrating all of the data that is collected so that it can be used together as an integrated whole will provide many benefits including: addressing student performance, identifying at-risk students, and providing valuable insights to teachers and administrators to improve educational outcomes. Bringing all of the data together

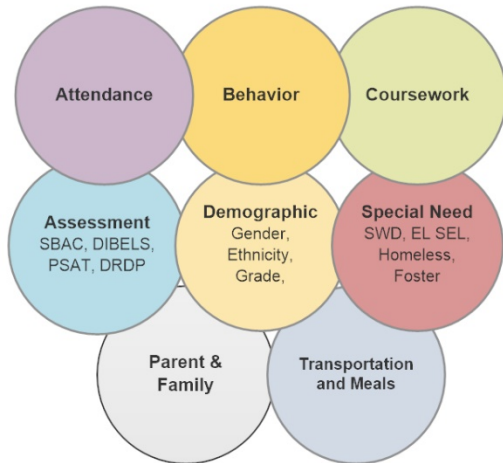


Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18

in one place can save teachers and principals a lot of time and make data analysis more practical, particularly for teachers.

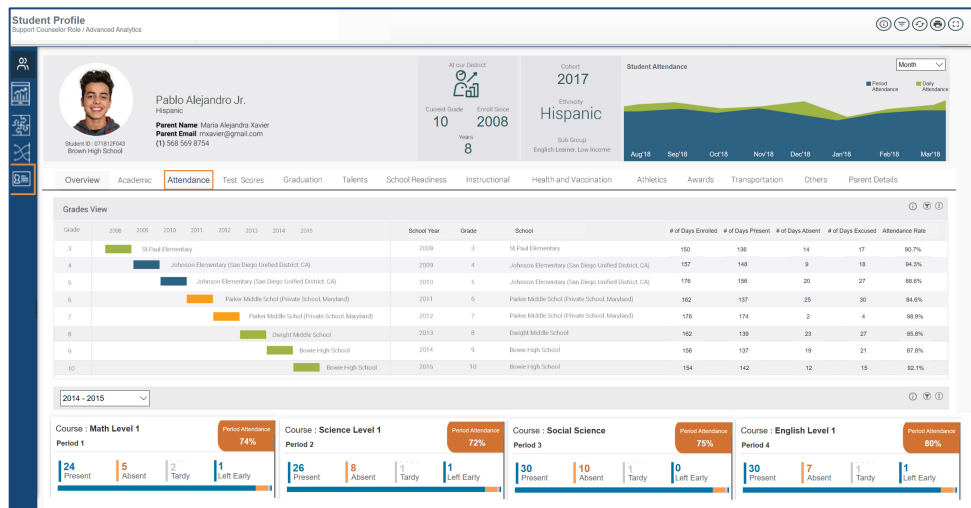
Effective mechanisms are needed to track data as students transition through various stages of their education. For LAUSD to evaluate and understand the impact of particular policies on graduation requirements and college and career readiness, it must follow students through K–12 into postsecondary and the workforce. In addition, LAUSD must establish feedback loops to teachers, counselors, and parents to make informed decisions for necessary interventions and to improve school processes.

Student Data



This will be accomplished by building a dashboard to track student performance from transitional kindergarten (TK) through graduation in Grade 12. The dashboard will pull data from a variety of sources, such as MiSiS, Welligent, EESIS, Schoology, and possibly Naviance to build a longitudinal student performance record for each student.

The analytics system will track Student Performance data at multiple times during the year, such as end of terms/semesters. Using defined progress metrics, a visualization will be built that shows a student's history of progress year by year. The data will also be aggregated to show results by school or for student groups. Individual progress records will be stored and viewed in a student profile dashboard as shown below.





Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18

2. Build an Advanced Analytics Model for Student Performance Assessment and Intervention Recommendations

Advanced analytics enables analysis of massive quantities of data. It can be used to deliver faster, more accurate results to identify risks and offer recommendations when anomalies are recognized. Using integrated longitudinal progress monitoring data, we plan on designing an advanced analytics model to assist teachers, counselors, and principals in monitoring student performance assessment and providing intervention recommendations where needed.

Via early warning indicators, advanced analytics could greatly aid in assisting teachers and administrators in identifying students at risk. It can also help to provide intervention recommendations to get students back on track when they are struggling in selected subject areas such as math or having difficulty in literacy. Here are some specific examples of how advanced analytics could be used for academic progress monitoring:

- Saving teachers, counselors and principals time in preparing for parent-teacher conferences, identifying problems and planning interventions, and preparing individualized graduation and learning plans
- Identifying students at risk using integrated attendance, behavior, and coursework information
- Providing targeted interventions and support to help get the student back on track
- Using historical data and predictive analytics to project future trends
- Assessing college and career readiness and providing recommendations

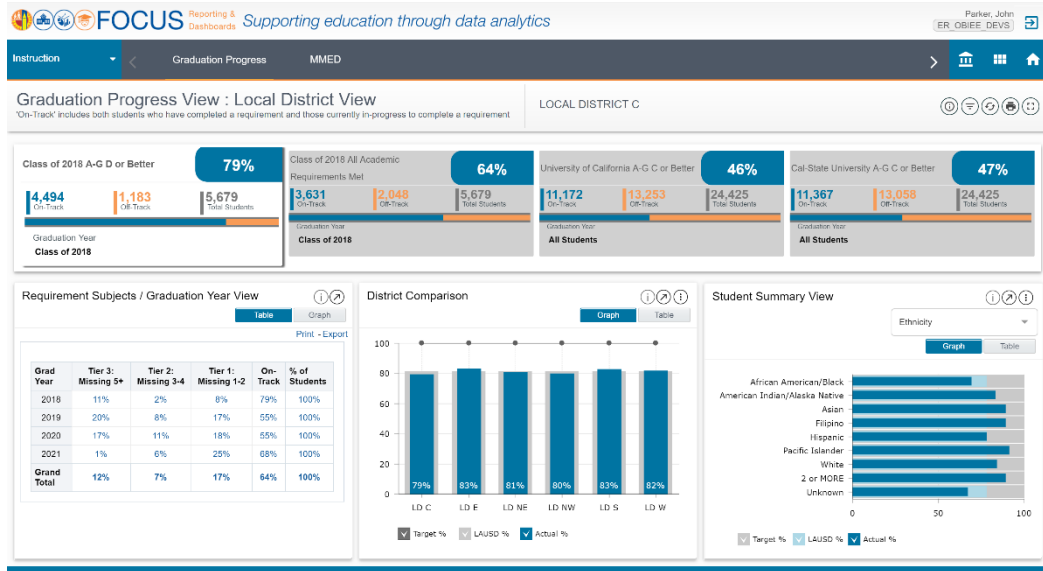
3. Develop and Deploy Advanced Analytics for College and Career Data for Individual Students and Prepare Student Status Guides



The Enterprise Reporting team recently designed and deployed a Graduation Progress Dashboard to monitor students' on-track to graduate according to LAUSD's A-G D or Better, as well as University of California and California State University's A-G C or Better standards.



Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18



This project will expand upon this dashboard to measure college and career readiness. College and career readiness will be measured on both a student-by-student basis and a school basis using the College/Career Indicator defined by the California Department of Education (CDE). Additionally, a College and Career Readiness Student Guide will be developed for distribution to students, during counselling sessions, and parents via the Parent Portal.

4. Provide Teachers, Counselors, and Parents Insights into Complex Data

The new Elementary California Content Standards (CCS) Progress Report for grades K-5/6 and Transitional Kindergarten (TK) were implemented in the 2017-18 school year to provide a consistent, comprehensive system for reporting pupil progress and for providing student achievement data for the CCS.

Even though implementation of the new standards has not been easy and has added significant complexity for entering elementary marks, the data that is captured is very valuable in assessing student performance. The goal is to integrate this valuable information with attendance, behavior and assessment data to provide teachers, administrators, and parents with insights into student learning. In addition, the Enterprise Reporting team will build embedded analytics for the Parent Portal so that parents can view their child's progress against the standard.

5. Integrate Smarter Balanced ELA and Math Assessments with Other Data in a Form that is Useful for Teachers and School Administrators

The District's SBAC assessment dashboards provide a comprehensive view of how LAUSD standards performed on SBAC Math and ELA assessments. These dashboards



Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18

were primarily designed for Central Office and Local District staff. One goal of the Instructional Analytics project is to present SBAC assessment data in a format that is useful for teachers and utilize this information in conjunction with attendance and behavior data to gain insights into a student's performance such as comparing SBAC scores to academic marks, or comparing SBAC ELA marks to literacy level.

5. Evaluate Impact of School Instructional Programs

LAUSD has a myriad of instructional and after school programs to provide students educational opportunities designed to fit the student's unique needs. Schools and central office staff need better information to determine if programs are achieving their desired objectives and that students are progressing the way the programs are intended.

For example, LAUSD provides five different instructional program options tailored to meet the diverse needs of English learners (ELs) and the educational preferences of the parents of ELs in elementary schools. Parents of ELs may choose any of these programs which are listed below.

- Dual Language Program (DL)
- Maintenance Bilingual Education Program (MBE)
- Transitional Bilingual Education Program (TBE)
- Structured English Immersion Program (SEI)
- Mainstream English Program (ME)

The ultimate goal for each instructional program option is for English Learners to meet performance criteria to reach full proficiency in English. This represents only instructional programs for English Learners; there are many other instructional programs for other areas and secondary students.

In addition to instructional programs, there are many beyond-the-bell programs which serve over 150,000 students each day in over 600 schools. After School Education & Safety (ASES), 21st Century Community Learning Center (CCLC), Ready, Set, Go!, Youth Services, Outdoor and Environmental Education, Music and Entertainment Education programs provide a safe place for students to go after school, as well as opportunities for education and enrichment. The three components of the programs include:

1. **Academic Tutorial Program:** Students study subjects such as Reading, Math, Writing, Science, Social Studies, and Computers. In addition, high school ASSETS Programs focus on college preparation and job readiness.
2. **Recreational Program:** Students participate in physical activities including Intramural Sports, Structured Physical Activity, Dance, and Aerobics.
3. **Enrichment Program:** Students participate in classes such as Life Skills, Art, Cooking, and Music.



Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18

School principals, counselors, and teachers need to know how many students are in each program and how well the students are progressing in meeting the programs' objectives. To provide better program analytic information, the following capabilities will be built:

- Schools will be able to see a list of students and the students enrolled in each program
- When viewing in individual student's profile, counselors and teachers will be able to see which program where a student participates
- Program administrators will be able to see how many students are enrolled in each program in conjunction with student progress information
- Counselors will be able to better recommend programs that are available providing opportunities for student connection.

7. Support Program and Policy Alignment and Provide Support for Local Districts and Schools in the Implementation of Effective Change

The new analytic capabilities will provide many benefits to LAUSD, both in terms of academic performance as well as potential financial savings in the areas of increased ADA revenue and being able to retain students who might go to a private or other school for education. However, achieving these benefits will require careful coordination with program and policy decision makers and an effective change strategy for schools. One aspect of the Instructional Analytics project will be to support program and policy alignment and support effective change in schools and local districts.

Expected Outcomes

- Data is used to provide a clear picture of a student's progress, enabling early identification of problems and patterns, as well as allowing interventions to be applied earlier.
- Teachers use their student dashboards to view how each student is performing and provide praise or additional interventions as needed, creating a personalized learning path for each student.
- Data is used by teachers and counselors to make decisions that drive student learning. Teachers use data to assist them in preparing daily lesson plans and to decide which books to recommend to students.
- Counselors have the data they need to advise students and make decisions that lead to students being college and career ready.
- A higher percentage of students are at or above standards on SBAC assessment tests.



Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18

- Schools will have the support they need to effectively accommodate the planned change.
- Analytics will be aligned with program and policy.
- **Students**
 - o Increasing student scores on SBAC assessment tests
 - o Increasing graduation rates and reducing drop-out rates
- **Teachers and Counselors**
 - o Saving teachers, counselors, and principals time by aggregating and simplifying the vast amount of information that is collected
 - o Delivering needed college and career readiness data to parents, counselors, and students
 - o Integration of attendance, behavior, and coursework (i.e., ABCs), which provides early warning signs to identify students at risk
 - o Intervention recommendations can save teachers and counselors a great amount of time and result in better education outcomes
- **Principals**
 - o Elementary Principals will have enhanced reporting on CCS marks and can use this information to improve educational outcomes
 - o Enables effective implementation of interventions based on Multiple Tiered Systems of Support (MTSS)
 - o Significantly enhances student progress monitoring beyond simple early warning systems and at-risk students methods that are currently used in MyData
- **Parents**
 - o Parents will be more informed and involved in their child's education progress through providing embedded analytics in the Parent Portal
- **Financial Benefits**
 - o Better student outcomes, reduced dropout rates, and higher graduation rates will ultimately result in less enrollment decline and higher revenue

Schedule

Estimated completion is June 2019.



Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18

Program: Enterprise Software Systems
Project: Student Support Analytics
Budget: \$4,789,000 (100% Bond Fund)

Introduction

The Enterprise Reporting Team made significant improvements in student support service analytics in the 2017-18 school year, including building numerous attendance dashboards, providing support to mental health, building a geospatial dashboard, and building subject areas and dashboards for foster youth and homeless students. Moving forward, we will leverage the work that has been done and work with the Student Health and Human Services Division to build three key capabilities, which are defined below.

Scope

The project scope includes three key capabilities. See below for explanations of each capability.

1. Build Capability to Monitor Student Discipline and Behavior and Provide Recommendations for Positive Behavior Intervention and Support (PBIS)

The Enterprise Reporting team will build an advanced analytics model, with predictive analytics, to assist teachers and staff with student behavior and discipline problems. LAUSD has several programs and systems to track and manage student behavior and discipline. However, responsibilities for the programs are managed across multiple departments and programs, which confuses school staff. Some of the departments and programs that are involved in student behavior and discipline include:

- Health and Human Services
- Discipline Foundation Policy
- Restorative Justice
- School-Wide Positive Behavior Interventions and Support (SWPBIS)
- School Climate Bill of Rights
- Student Discipline and Expulsion Support Unit
- Special Education
- Mental Health
- Rubric of Implementation
- Discipline Data Report
- iStar Incident Management
- School Police

Behavior and discipline issues are recorded in a variety of ways in MiSiS including:



Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18

- Student Contact Log
- Counseling Communications
- Discipline Interventions
- Counseling Interventions
- Discipline Referrals
- Counseling Referrals
- Student Success and Progress Team (SSPT) Referrals
- Student Success and Progress Team (SSPT) Meetings
- Work Habit Marks
- Cooperation Marks

Most of the information is summarized at the student level in the MiSiS Social Adjustment Report. However, the report does not clearly distinguish between behavior related issues and academic counseling such as college/career planning. The information is also not aggregated to allow the examination of key trends in student groups.

As the focus shifts from discipline and compliance to positive behavior, new measures are needed to effectively gauge behavior and discipline at LAUSD. Guidelines are well defined in the Discipline Foundation Policy and much work has started on SWPBIS. The Rubric of Implementation (ROI) is effective for assessing school progress toward adoption; however, the metrics to measure individual student behavior are lacking. Several mechanisms exist in MiSiS that are used to capture behavior and related discipline; however, little is done with the data once it is captured.

Advanced analytics enables the analysis of massive quantities of data. It can be used to deliver faster, more accurate results to identify risks and offer recommendations. Advanced analytics could greatly aid in assisting teachers and administrators with behavior and discipline problems at LAUSD. Here are some specific examples:

- Calculate behavior index for each student so that school staff know the behavior trend for each student and for subgroups of students.
- Identify students at risk.
- When incidents do occur, recommend interventions that are appropriate.
- Recognize behavior interventions based on PBIS tier and incident type.
- Provide teachers and administrators intervention recommendations given the child's risks, PBIS tier, behavior incident history, and past interventions.

Implementing an advanced analytics model will provide significant benefits for monitoring student behavior and discipline at LAUSD:

Student Benefits

- Reductions in problem behavior including less referrals, suspensions, and expulsions
- Improved effectiveness for intensive interventions



Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18

- Improved student engagement with improved academic performance
- Students perceive school as a safer, more supportive environment
- Increased family involvement

Staff Benefits

- Less work – Teachers see recommended interventions as part of standard workflow and do not have to review numerous guides and policy bulletins which are confusing and time consuming
- A lower number of behavioral incidents improves staff morale and enables staff to focus on instruction instead of behavioral issues
- Staff enjoy consistency across faculty and schools.
- Improved classroom management.

District Benefits

- Significant contributor to achieving the District's five goals:
 - 100 percent graduation
 - Proficiency for all
 - 100 percent attendance
 - Parent and community engagement
 - School safety
- Sustained effects across administrators, teachers, counselors and central office – avoids cost of continually re-creating systems that draw resources away from effective education
- Effective transition of behavior and discipline efforts when a student or staff shift from one school to another
- Manage data, systems, and practices for achieving benefits for Positive Behavior Interventions and Supports (PBIS)

2. Utilize Real-Time Attendance with Advanced Analytics to Reduce Chronic Absenteeism

LAUSD has a significant opportunity to reduce chronic absenteeism by using advanced analytics combined with real-time attendance data. The advanced analytics model will be integrated with the Teacher and Counselor Role-based Dashboards and with the Parent Portal to engage resources that can truly make a difference in reducing chronic absenteeism.

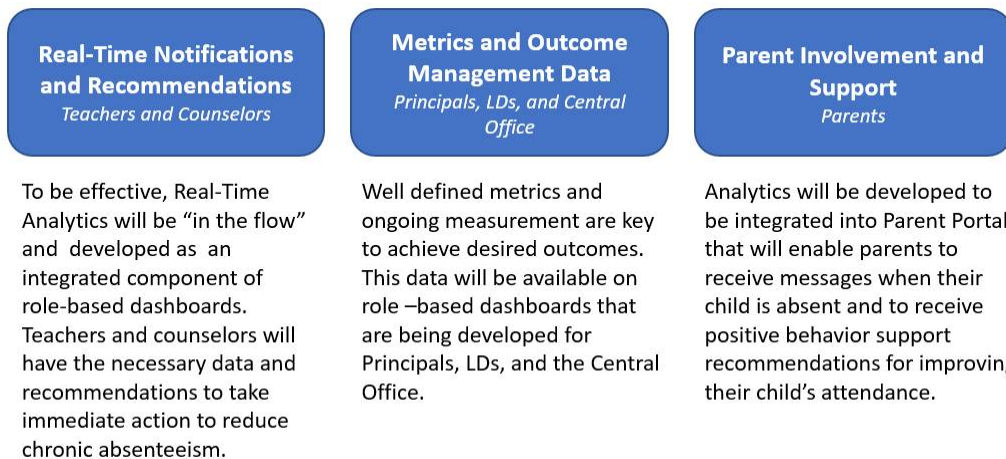
The Real-Time Attendance system will consist of back-end and front-end components. The back-end components will perform the functions shown in the diagram below.



Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18



Data that is harvested from these components will be presented to users via the front-end components listed below.



Implementing an advanced analytics model will provide significant benefits for reducing chronic absenteeism at LAUSD:

Student Benefits

- Improved attendance rates, which correlates directly with improved academic achievement results
- Students feel better about themselves from positive behavior and supports

Teacher Benefits

- Increased job satisfaction because they get to spend more time on student learning, as opposed to behavior issues
- Receiving recommendations for interventions saves time and makes their job easier

School Benefits

- Schools should see a significant reduction in referrals as other districts that have fully implemented PBIS have seen 20-60 % reduction in office referrals
- Increased family involvement



Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18

District Benefits

- Lower cost from reducing referrals for psycho-educational testing
- Increased safety
- Improved school climate
- Based on experience of other Districts that have implemented PBIS, LAUSD should see increased staff time engaged in academic activities and improved academic performance.
- Significant financial benefits from increased ADA revenue

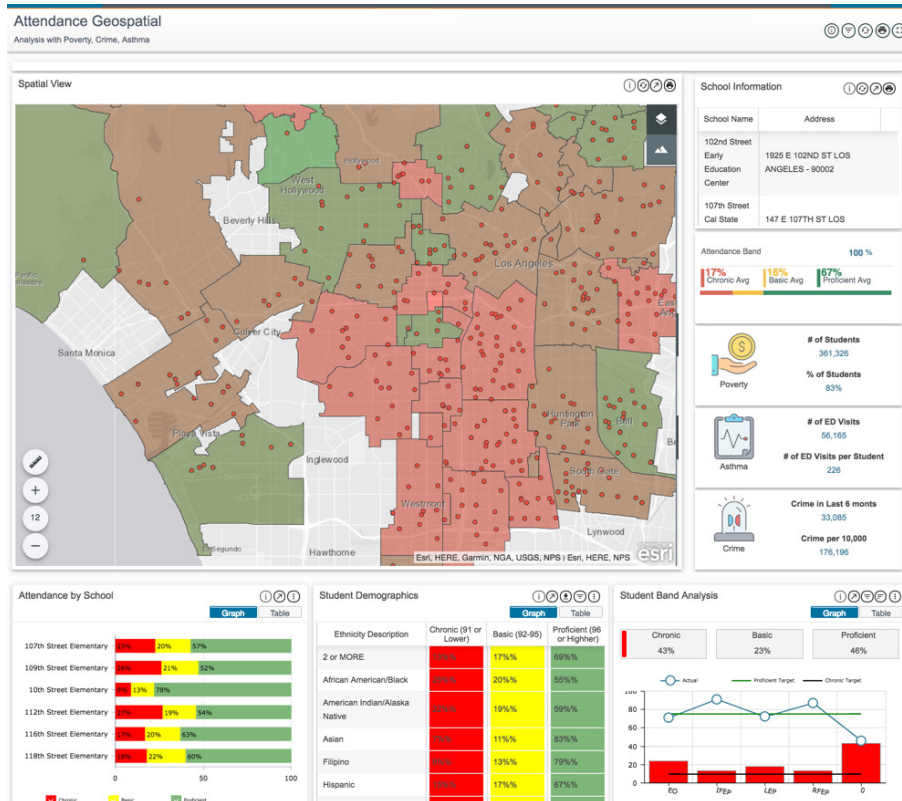
3. Expand on Geospatial Capabilities to Provide Principals with Needed Data about their Community to Reverse Declining Enrollment, Leverage Community Resources, and Reduce Chronic Attendance

The Enterprise Reporting Team implemented basic geospatial dashboarding capabilities recently for measuring the impact of poverty, health, and crime on chronic absenteeism and an additional geospatial dashboard for viewing the Equity Index for schools by geographic area. The goal for this project is to significantly expand these capabilities by collecting a variety of additional information by high school attendance boundary and working with the Office of Data and Accountability (ODA), Facilities, and the School Management Services / Master Planning and Demographics Unit to provide governance and standardization of location master data. Using this data, schools will be able to answer questions such as:

- What is the average commute distance for a student to get to school?
- Do students that live further from school have lower attendance than students living close to school?
- Within a high school attendance boundary, what percentage of students attend a LAUSD high school?
- What early education centers are located within a high school boundary?
- How much gang related crime exists by high school boundary?
- Do geographic areas with high asthma rates have lower attendance rates?



Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18



Additional capabilities will be added to provide schools with data about their community to develop good school/community relationships. The data to be collected has not been completely defined, but the following data is being considered for inclusion:

- Population demographics
- Social development trends (e.g. Tapestry index)
- City and county parks
- Public libraries
- Homeless shelters
- Family youth centers
- College and university campuses
- Business that could provide opportunities for college and career readiness

A strong community relationship is essential to improving attendance rates, increasing college career readiness of students, and reversing declining enrollment trends. Providing principals with curated data from the City of Los Angeles and LA County will be enhance their school support toolkits. The Enterprise Reporting Team will work with the Student Health and Human Services Division staff to gather key information about



Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18

their communities. We will geocode this data by high school attendance boundary so that schools can see valuable data on businesses, non-profits, and other organizations that operate within their attendance boundary.

Feeder patterns, also called *clusters*, are the elementary, K-8, and middle schools which feed into each high school. Defining and managing clusters ensures that there is continuity for the neighborhood students in the K-12 program. Schools within a cluster (i.e., HS Attendance Boundary) can work together to address education needs within their community. A Community Dashboard can be a very effective tool for schools within a cluster to work together to promote their community and monitor community trends.

Significant benefits accrue through providing schools with a tool to foster community development and relationships. Building community relationships is important to achieving goals of increasing college and career readiness and addressing declining enrollment trends.

Expected Outcomes

- Enables effective deployment of positive behavior and enables teachers to spend more time on learning and less time on behavior, resulting in higher levels of academic achievement
- Increased attendance rates and decreased chronic absenteeism, resulting in improved student performance
- Community demographic information and dashboard enable schools to build relationships needed for improving college and career readiness.
- Increased attendance and lower declining enrollment result in millions of dollars of additional revenue for LAUSD.
- Enable effective deployment of Multi-Tiered Systems of Support (MTSS) interventions for LAUSD.

Schedule

Estimated completion is June 2019.

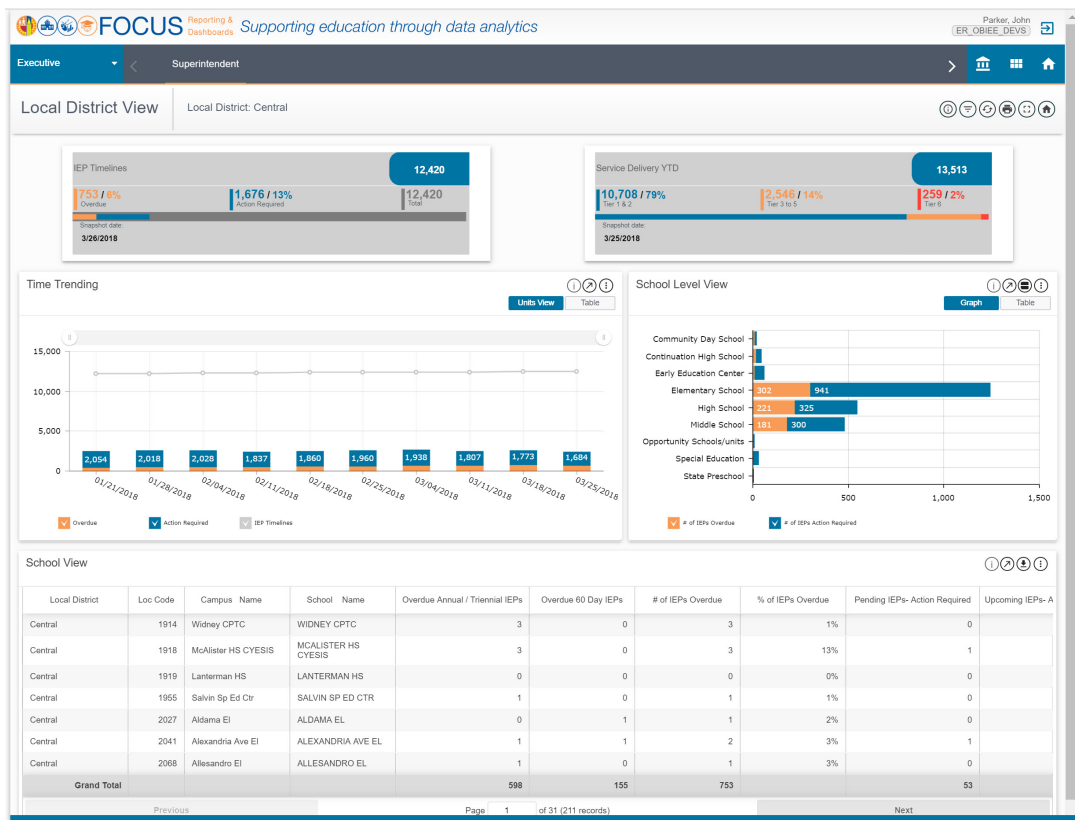


Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18

Program: Enterprise Software Systems
Project: Special Education Analytics
Budget: \$2,089,000 (100% Bond Fund)

Introduction

In the 2017-18 school year, the Enterprise Reporting Team designed and built several subject areas and dashboards for the Division Special Education. Below is one of the dashboards that we created that monitors Individualized Education Program (IEP) timelines and service delivery. These two measures, in addition to being substantial compliance indicators, will also be included as Local Control Accountability Plan (LCAP) measures under Basic Service beginning the 2018-19 school year.



Working closely with the Division of Special Education, the Enterprise Reporting Team captured most of the data needed from Welligent, which is now available for ad hoc reporting. The goals for the 2018-19 school year are (1) to demonstrate that LAUSD is in substantial compliance with applicable federal special education laws and regulations, and (2) to provide better management and monitoring of special education services



Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18

provided by nonpublic agencies and schools. Both of these initiatives are explained below.

Scope

The project scope includes the two key initiatives mentioned above. See below for explanations of each initiative.

1. Ensure Compliance Through Integration of Substantial Compliance Metrics into Role-Based Dashboards

The focus for special education analytics for the 2018-2019 school year is to develop analytics that permit the District to monitor and timely address special education compliance and performance so that no systemic problems exist that prevent the District from being in substantial compliance with special education laws and regulations. Evidence of this is required prior to disengagement from the Modified Consent Decree (MCD). Use of this data will also contribute to the District's efforts to increase performance on the special education State Performance Plan indicators. Substantial compliance metrics will be integrated into the role-based dashboards that are being built, including the Student Profile. Building these metrics into school role-based dashboards will support the identification of noncompliance and the application of standards for responding to noncompliance. Metrics can be included for students, teachers, counselors, assistant principal elementary instructional specialists (APEIS), and least restrictive environment (LRE) specialists.



Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18

The following substantial compliance metrics will be covered:

- Graduation Completion Rates
- Academic Performance
- Suspensions and Expulsions
- Least Restrictive Environments
- Parent Participation
- Disproportionality
- IEP Timelines
- Secondary Transition Goals and Services
- Complaint Management and Resolution
- Service Delivery
- IEP Translation

2. Provide Enhanced Accountability and Management of Nonpublic Schools and Agencies

One of the goals of the MCD is educating students with disabilities in the least restrictive environment. Additionally, in the State's most recent reporting cycle for the Special Education Annual Performance Report, the State Performance Plan indicator regarding least restrictive environment contained a performance target for Districts of less than 4.4% of students with disabilities attending separate schools (such as nonpublic schools). We are building analytics to track students in nonpublic schools more effectively.

In addition, we plan to provide better mechanisms to manage contracts and subsequent invoices for nonpublic agencies. Nonpublic agencies are generally used to provide Behavior Intervention Implementation (BII) and Behavior Intervention Development (BID) services to students with disabilities. Due to a variety of reasons, it is difficult to control the costs associated with nonpublic agencies. Nonpublic agencies submit invoices for services provided to students with disabilities. It is important to verify these invoices against student attendance to ensure we are not paying for days where the student did not attend. Taking Individualized Service Agreement and invoice data from Welligent and attendance data from MiSiS should significantly strengthen controls in this area.

Expected Outcomes

- Substantial Compliance indicators and metrics will be integrated into school role-based dashboards to ensure special education compliance and performance are addressed and that schools are in compliance with special education laws and regulations.



Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18

- Better management of nonpublic agencies or schools and reduction in the use of nonpublic schools will result in significant cost savings for LAUSD and help achieve least restrictive environment (LRE) goals

Schedule

Estimated completion is June 2019.



Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18

Program: Enterprise Software Systems
Project: School Analytics
Budget: \$3,406,000 (100% Bond Fund)

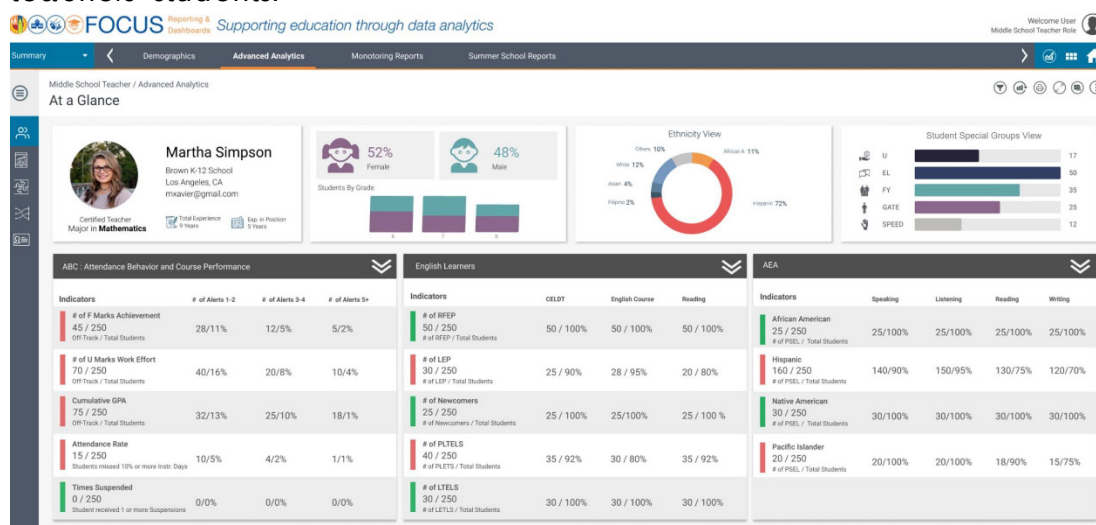
Introduction

In previous projects, the Enterprise Reporting Team focused on delivering self-service reporting capabilities and basic dashboards. Now the Enterprise Reporting Team will leverage the data and base functionality to deliver advanced analytic capabilities to schools and Local Districts. The five items below describe the basic work to be done.

Scope

1. Build Role-Based Dashboards for Teachers, Counselors, Principals, and Local District Administrators

Whereas we previously built single-purpose, single-function dashboards to measure specific metrics such as graduation progress, chronic attendance or English learner reclassification, we are now planning to leverage these existing capabilities for the creation of role-based dashboards for positions such as middle school teachers, special education teachers, high school principals, attendance counselors, etc. The goal of these dashboards is to integrate data from multiple sources so that employees only have to go to one place to see analytic data they need to support their role in delivering education to children. This dashboard is designed to provide key metric data for middle school teachers' students:

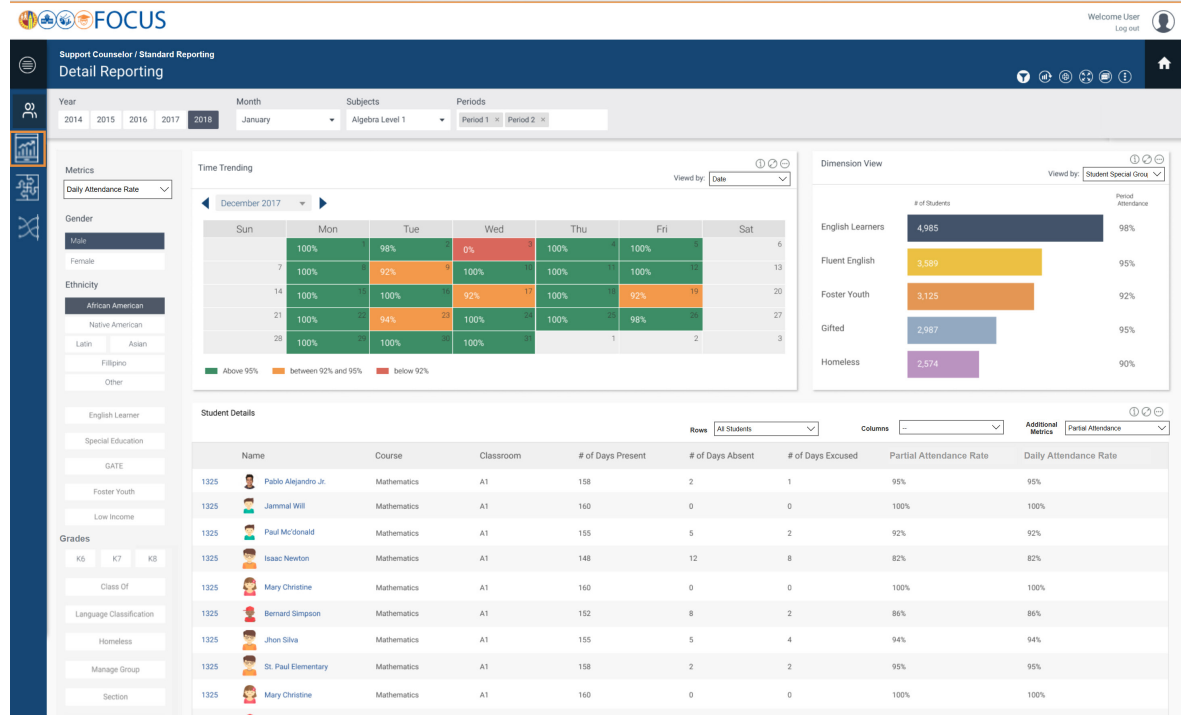


The teacher sees a Metrics at a Glance view and can drill to detail from the metrics to see additional detail as shown in the next image. For example, a teacher might see that 12 of her students did not meet the Smarter Balanced



Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18

Assessment Consortium (SBAC) ELA standard; by double clicking on the metric, the teacher will be provided a list of the students. From there, he student can click on an individual student to view the student profile where the teacher can help identify underlying causes of this issue.



2. Integrate Data from Multiple Sources to Provide Advanced Analytic Capabilities for Schools to Manage Performance of Student Groups

We will provide counselors, principals, and Local District staff with advanced analytic capabilities to enable them to select a group of students, such as foster youth or students participating in athletics, and analyze problems and opportunities by comparing multiple metrics together. Examples might include: Tardy rate vs GPA, smarter balanced results vs work habits, or suspension days vs. marks, among others. The screenshot below shows how this capability might look in a Principal's dashboard.



Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18

Dimension Ranking
Central Office Role / Advanced Analytics

School Year: 2018, Month: Jan, KPIs / Metrics: LAUSD Attendance Rate, Metric Definition: Periodic, Local District: , School Type: , Grade: , Ethnicity: , Special Group: , Campus:

Special groups view by - Cross KPIs

Analyze by	LAUSD Attendance Rate		Partial Attendance		CDE Attendance Rate		Tardy Rate		% of Students in Chronic band	
	Current Period	Rank	Current Period	Rank	Current Period	Rank	Current Period	Rank	Current Period	Rank
English Learner	88%	1*	92%	3*	67%	2*	7%	5*	12%	4*
158 Students	Last Year: - 2%	Last Year: - 1%	District Avg: + 2%	Last Year: + 2%	District Avg: + 2%	Last Year: + 2%	District Avg: + 2%	Last Year: + 2%	District Avg: + 2%	Last Year: + 2%
Fluent English	90%	2*	93%	2*	71%	1*	4%	6*	6%	4*
135 Students	Last Year: - 2%	Last Year: - 2%	District Avg: + 2%	Last Year: + 2%	District Avg: + 2%	Last Year: + 2%	District Avg: + 2%	Last Year: + 2%	District Avg: + 2%	Last Year: + 2%
Foster Youth	84%	3*	94%	1*	68%	3*	5%	4*	6%	4*
110 Students	Last Year: - 2%	Last Year: - 2%	District Avg: + 2%	Last Year: + 2%	District Avg: + 2%	Last Year: + 2%	District Avg: + 2%	Last Year: + 2%	District Avg: + 2%	Last Year: + 2%
Gifted	12%	Rank: + 2	Current Period	Rank: + 2	Current Period	Rank: + 2	Current Period	Rank: + 2	Current Period	Rank: + 2

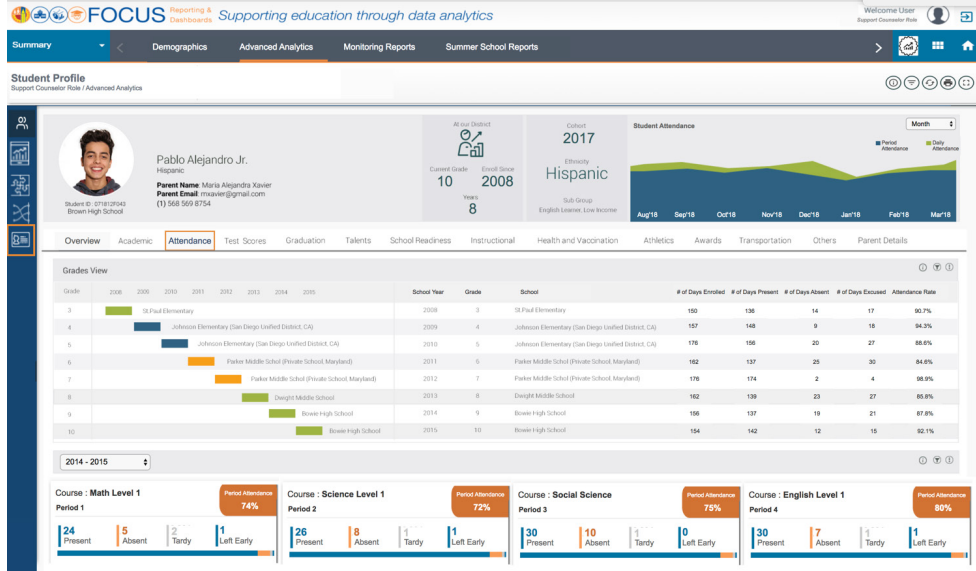
Using the data, the principal might discover that students that missed 5 or more days of class within a grading period have lower math marks than students who did not miss any days. In this case, the principal might want to work with teachers to provide the students a way to catch up such as Saturday or after school tutoring, or giving additional assignments in Schoology.

3. Provide a 360 Degree View of Attendance, Behavior, and Coursework Performance Data for a Student

As we integrate Focus with MyData, we will need to replace the Comprehensive Student History Report. We will replace this critical functionality with a Student Profile Dashboard. School users from role-based dashboards will be able to drill-down to Student Profiles to obtain a 360-degree view of a student's performance. The goal of the Student Profile is not only to provide data, but also to provide insights and recommendations on where the student needs to improve to get back on target for achieving college and career readiness. For example, let's look at a student that has a declining GPA, has met standards on SBAC ELA and Math, but has many absent days. It is clear that this child has significant unmet potential but current work habits, increasing absences, and behavior are becoming a concern. Interventions are needed to motivate the student to reduce absences, and reverse declining trends in GPA if the student intends to go to College. Recommended interventions might include a counseling session and recommend/require the child to watch a motivational video available in Naviance. These insights and interventions could be identified by a predictive analytics model and provided to the counselor or teacher in the student profile saving the teacher and counselor a significant amount of time and providing guidance of what needs to be done to get this child back on track.



Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18



4. Integrate Human Resource and Financial Data into Principal Dashboards

The district uses SAP to managed financial, human resource, and payroll transactions and data. SAP is a very powerful system; however, with this power comes complexity. It is challenging to integrate financial and human resource data with student and master scheduling data. We started the process of extracting data from SAP in this school year and we plan to fully integrate it into school and Local District role-based dashboards. By having this data available, schools will be able to:

- Validate special education teacher assignments against required credential assignments
- View remaining non-committed budget data in the Principal's dashboard
- View instructional costs per enrolled student
- Analyze revenue lost from chronic attendance

5. Build Embedded Analytics for Parent Portal

Research shows that active parent involvement is an important factor in addressing a variety of concerns about their child's education including attendance, behavior, and coursework (i.e., ABCs). We will build capabilities to provide embedded analytics functionality in the Parent Portal. Additionally, advanced analytics could be used to provide insights and intervention recommendation to parents. Here are some examples of how this might be used:

- Notify parents when their children are absent using real-time attendance
- Provide positive feedback to parents on their children's behavior



Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18

- Provide an overview of California Common Standards (CCS) elementary marks for their child
- Provide an overview of how their child performed on the SBAC assessments
- Show a history of their child's progress from Kindergarten to 12th grade
- Show how their child's progress towards college and career readiness

Expected Outcomes

- **Improved Student Outcomes** – Using advanced data discovery tools, users can find insights that can lead to improved student outcomes, such as shorter time for EL reclassification, higher graduation rates, and higher attendance, among others.
- **Increased Revenues** – Using advanced monitoring, workflow, and alerting could help increase ADA by 1%, resulting in an additional \$50 million in revenues to the District.
- **Reduced Costs** – Schools will be able to create their own reports without IT support providing much more timely information to support decisions and activities at a far lower cost.
- **Increased Efficiencies** – Using advanced workflow capabilities can streamline many processes and eliminate manual activities, freeing up teacher and administrative staff's time to focus on other activities.

Schedule

Estimated completion is June 2019.



Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18

Program: Enterprise Software Systems
Project: LAUSD Mobile App Project
Budget: \$2,669,000 Bond Fund (95%) and \$140,000 General Fund (5%)

Introduction

This project is in response to a board resolution (Res-016-17/18) to improve parent and community engagement by implementing a mobile app to provide information and receive input in support of the academic success of our children.

The mission of the project is to consolidate the District's online web presence and deploy a Mobile Smartphone App with the following goals:

- **Anywhere/anytime/any language 24/7 access** – Get instant access to real-time grades, attendance, comments, assignments and scores directly from the teacher's gradebook. Communicate and inform in Spanish and English – with support for multiple translations.
- **Strengthen the relationship with parents and students** – Parents who are actively involved in their child's education can help keep students on track. Parents who know their student's grades and assignments can discuss progress, offer help, or give encouragement.
- **Create transparency** – where parents always know what's going on at the school – events, meetings, after-school events, volunteer opportunities, emergencies, and calendar.

According to Pew Research, about three-quarters of U.S. adults (77%) say they own a smartphone. The Economist reports that smartphone sales surpassed computer sales in 2010 and over 80% of households in the US have replaced computers with smartphones.

Scope

The project will include three key components:

- **Mobile Smartphone App**
Design and implementation of a new LAUSD mobile app that displays District, office, and school information and connects to existing District applications.
- **Enterprise/Web Content Management System (CMS)**
Implementation of an enterprise CMS on Oracle Web Center Suite.
- **School & Office Websites – "Responsive" Mobile Web Templates**
Design reusable website templates to easily build and re-use content across all school and office websites for the district.



Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18

Expected Outcomes

- **Increased parent engagement and student success**
 - Enhanced transparency between parent, student, and teacher/school
 - Increased investment in the use of Parent Portal and Schoology
- **Improved communication**
 - Mobile platform gives parents real-time access and tracking to their student's information, encouraging better communication with their child
- **Cost reduction and reduced maintenance costs**
 - Elimination/consolidation of duplicate projects and resources
 - Allows for re-use of components, services, API's, content, documents, and data; therefore eliminating duplicate systems
- **Simplified user experience**
 - Easy-to-use navigation, layout, and site structure based on user needs. Feedback will be measured by Positive Survey Feedback and In-App Comment Feedback on App, Positive App Ratings from In-Store, and Landing Page Feedback
- **ITD strategic alignment**
 - Better sharing of apps across other sources/systems with low maintenance cost. Consolidates skills set, creates a center of excellence, and higher quality
 - Leverages MiSiS and Schoology as systems of record

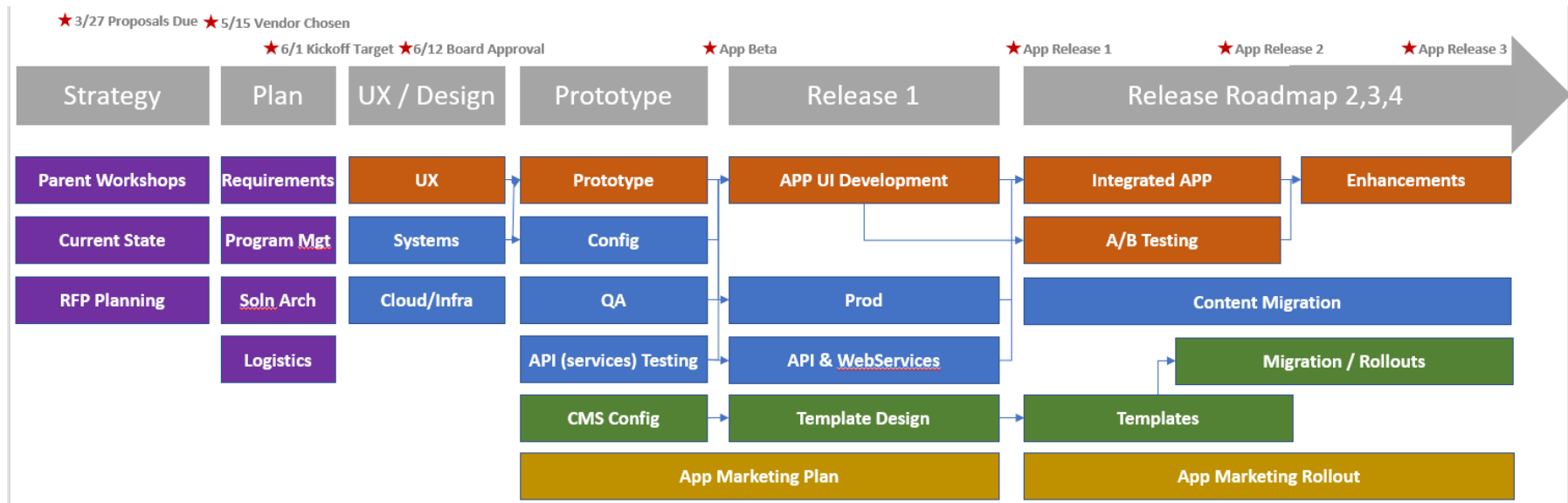
Schedule

Estimated completion is June 2019. A high-level timeline is included below.



Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18

Estimated Timeline for the LAUSD Mobile App Project





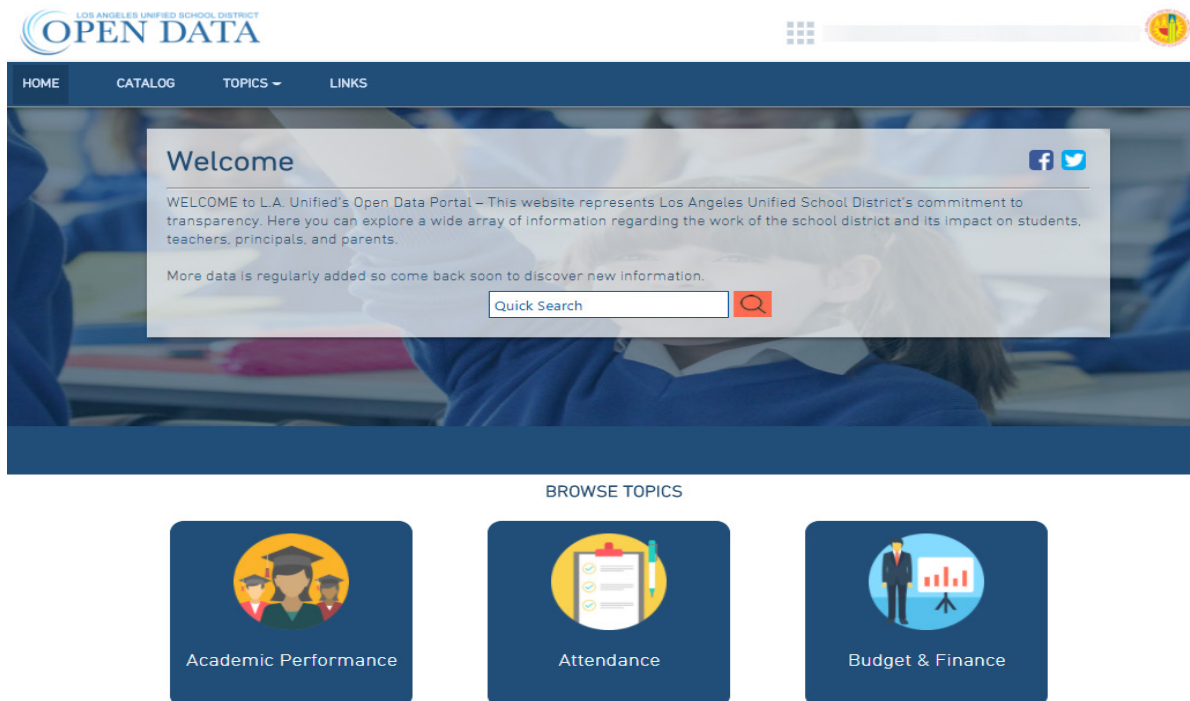
Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18

Program: Enterprise Software Systems
Project: Open Data Portal and Dashboards Initiative – Phase 2
Budget: \$3,252,000 (100% Bond Fund)

Introduction

The LAUSD Board of Education has made a strategic decision to make its data more open to parents in order to increase accountability and transparency (Res-021-17/18). Open data increases citizen participation in government, public education and community engagement, and provides needed information for decision making in both the private and public sectors.

The Information Technology Division (ITD) is currently developing an Open Data Web Portal and Dashboards, which will appear as Public Pages, allowing parents to search and find public/unprotected LAUSD documents. At present, Phase 1 of the Open Data Portal and Dashboards Project is in progress and will be deployed in the upcoming months. Below are sample screenshots of the Open Data Portal and Dashboards currently under development (these preliminary designs are likely to change before the initial release).

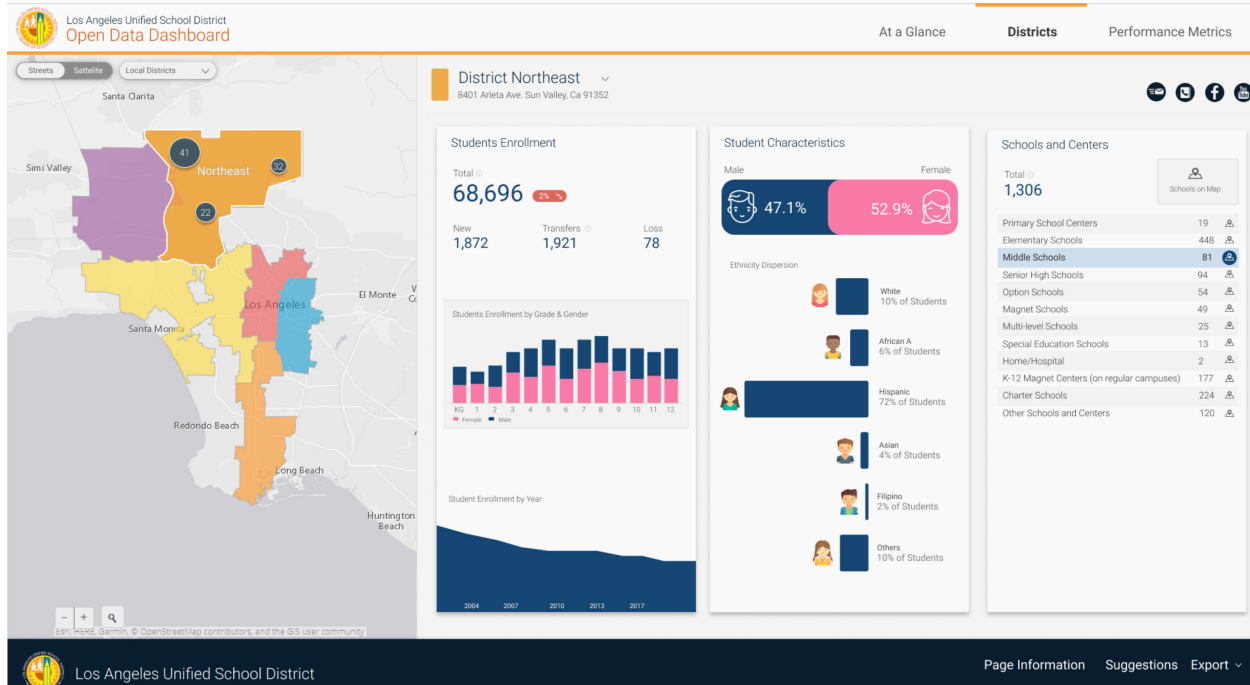




Information Technology Strategic Execution Plan

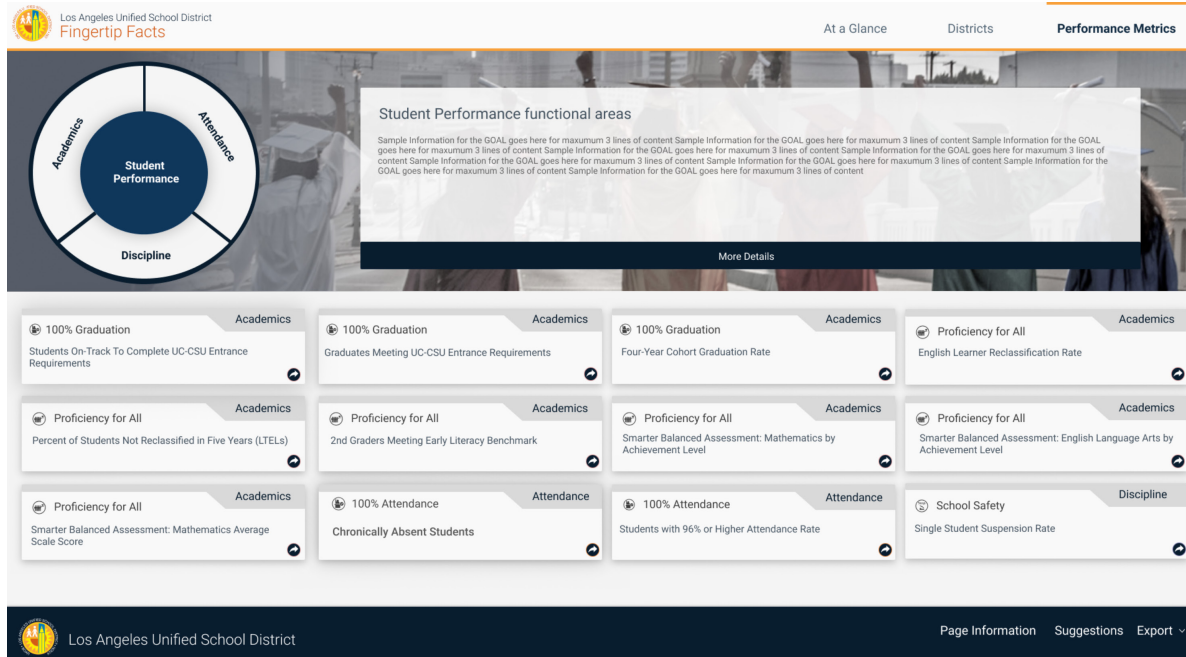
Project Definitions and Associated Actions

Attachment A – BOE #528-17/18





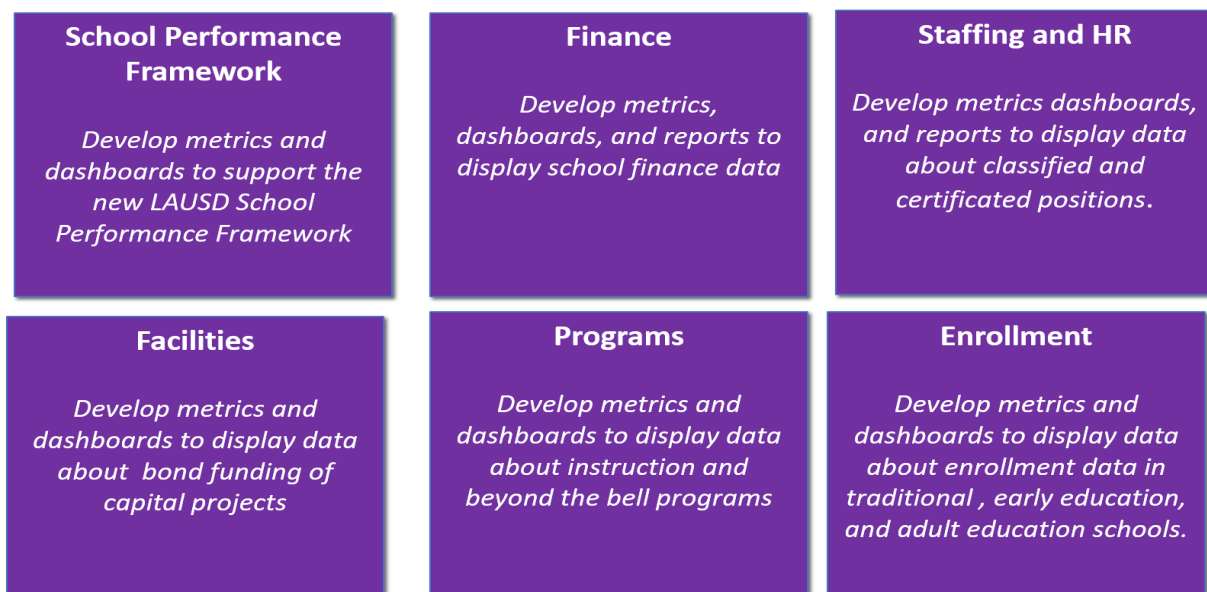
Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18



Phase 2 of the Open Data Portal and Dashboards Initiative will build upon the new platform and incorporate additional metrics not include in Phase 1.

Scope

- Incorporate the following metrics, dashboards, and reports:





Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18

Expected Outcomes

- Increased transparency district-wide
- Increased accountability
- Increased parent engagement
- Increased participation in decision-making
- Improved efficiency
- Enhanced performance
- Develops trust, credibility and reputation
- Promotes progress and innovation
- Stores and preserves Information over time

Schedule

Estimated completion is June 2019.



Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18

Program: IT Security
Project: Cyber Security Training and Awareness
Budget: \$242,000 Bond Fund (95%) and \$13,000 General Fund (5%)

Introduction

According to IBM's "2014 Cyber Security Intelligence Index", 95% of all security incidents involve human error. These errors occur when District staff click on items in malicious emails, or simply visit what appears to be a legitimate website. The District incurs significant costs to mitigate hundreds of successful cyberattacks each month made possible by human errors. It is estimated that human errors that allow successful email attacks alone cost mid-sized companies \$1.6 million each year, according to industry reports.

Many of these errors can be eliminated by exposing users to repetitive training that teaches them how to avoid common cyberattacks before they can compromise District resources. The financial losses prevented by implementing a cybersecurity training program is typically far greater than the cost of the program itself, making it the most cost-effective security solutions for mitigating cybersecurity attacks.

Scope

The goal of this initiative is to establish a Districtwide Information Security Training and Awareness program that educates parents, students and staff on how to protect District resources, their identity, and their privacy from common cybersecurity attacks.

The project will include:

- Role-based cybersecurity training videos for District staff
 - Parent Cybersecurity Awareness Workshop kits that Parent Centers across the District can use to train parents on how to protect their children online while at home
 - Train-the-Trainer training for Parent and Community Representatives at local school sites
 - Anti-phishing tool to test the cybersecurity resiliency of school-based staff
- New policies to support a Districtwide cybersecurity training and awareness program

Expected Outcomes

- Mandatory annual cybersecurity training for all school-based staff through MyPLN
- Increased parent engagement to close the cybersecurity divide
- Reduction in the cost of mitigating successful cybersecurity attacks
- Create a culture of cybersecurity awareness and resiliency that integrates into the day-to-day decisions and District operations

Schedule

Estimated completion is June 2019.



Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18

Program: IT Security
Project: Security Analytics and Intelligence – Phase 2
Budget: \$261,000 (100% Bond Fund)

Introduction

In 2014, the Bond Oversight Committee approved the first Security Analytics and Intelligence project, which involved implementation of a tool to collect security event logs from a variety of networked devices such as student 1-to-1 computers, educational applications, and firewalls. These logs are stored and analyzed to produce actionable threat intelligence on whether a cybersecurity attack has occurred, is happening now, or may happen in the future.

Since the completion of the initial project, the District has made a significant shift to digital curriculum, resulting in exponential growth in the number of devices, students, and staff using the District's network. Consequently, more logs are generated and have exceeded the storage and processing capacity of the initial solution. The ability to identify past, present, and future network attacks and data breaches is now significantly diminished.

The objective of Phase 2 of this project is to restore threat intelligence capabilities to operational levels by increasing the initial solution's storage and processing capacity to meet the District's digital curriculum growth rate.

Scope

- Procure, install and configure additional data processing and storage hardware

Expected Outcomes

- Continued threat intelligence operations through 2021
- Identify and investigate potential cybersecurity attacks
- Reduction in the frequency and impact of cyber security incidents

Schedule

Estimated completion is June 2019.



Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18

Program: IT Security

Project: Student Health Information Protection Program

Budget: \$604,000 Bond Fund (100%)

Introduction

The goal of this project is to establish a District-wide student health Information protection program to educate staff on the appropriate use of student health information and minimum measures that should be taken to safeguard student health records as required by law. This program will bring the District into compliance with applicable HIPAA regulations.

Scope

- Develop a mandatory HIPAA training video for staff engaged in managing student health information. Training video will be integrated with the District's Learning Management System, MyPLN.
- Implement a technology that classifies protected student health information
- Deploy a data loss prevention technology that actively scans files and documents to detect and prevent unauthorized transmission of protected student health information outside the District network
- Configure the solution to securely access the District's network
- Install and configure the required initial physical infrastructure to support the solution

Expected Outcomes

- Compliance with HIPAA regulations
- Improved protection of student health information
- Annual training for staff managing student health information

Schedule

Estimated completion is June 2019.



Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18

Program: Safety, Communications, and Security
Project: School Telecommunications Modernization at 16 K-12 School Sites
Budget: \$15,638,000 Bond Fund (92%) and \$1,438,000 Estimated E-Rate Rebates (8%)

Introduction

Telecommunications services are essential to the District's instructional, instructional support, and safety operations. The District's Information Technology Division (ITD) continuously explores advancements in telephone and public address systems and technologies to provide reliable and cost effective voice services at schools and offices.

The District's current telephone and public address/intercommunications systems are 13-18+ years old and most of the existing telecommunications cabling infrastructure is 15-30+ years old. As a result, 95% of the K-12 schools will have increasing reliability and availability challenges with their telecommunications systems and services. School staff will continue experiencing phone outages and disruptions due to failing equipment and deteriorating cabling. Staff and students will be at risk of not being able to make calls from or hear announcements in classrooms, in offices, or on other parts of the campus during times of emergencies or for daily communications.

Scope

The School Telecommunications Modernization Projects will upgrade the telecommunications system infrastructure at K-12 school sites. This project will replace obsolete, end-of-life, and failing telephone and public address systems. The project scope for 16 K-12 school sites includes:

- Replacing existing telephone equipment placing phone service on the existing data network
- Replace office and classroom telephones
- Replace existing public address equipment and the uninterruptible power supply (UPS) and integrate with the school's network
- Where needed, replace cabling and speakers
- Replace aging wired network equipment with the network equipment necessary for telephone/public address upgrades

Expected Outcomes

ITD will apply for E-rate rebates for eligible network equipment replacements at all 16 school projects.

ITD expects to attain and sustain reliable voice communications services for the attached list of 16 K-12 schools to meet daily and emergency communication needs.



Information Technology Strategic Execution Plan Project Definitions and Associated Actions Attachment A – BOE #528-17/18

Expected project outcomes include:

- Improved reliability and quality of school telephone services
- Improved reliability and availability of classroom notification and emergency-oriented school communications services
- Maximized IT investments
- Allow greater monitoring of equipment and phone failures
- Reduced service and support costs
- Improved operational efficiencies

Schedule

Estimated completion is September 2020. Schedule and budget information for each school project is listed below.



**Information Technology Strategic Execution Plan
Project Definitions and Associated Actions
Attachment A – BOE #528-17/18**

Loc Code	Site Name	Board District	Anticipated Start	Anticipated Completion	Project Budget	Estimated E-Rate	Total
5233	MELVIN ES	3	Q2 2019	Q3 2019	\$735,417	\$40,606	\$776,023
6878	MONTARA AVE EL	3	Q2 2019	Q3 2019	\$818,460	\$92,585	\$911,045
6178	RAMONA ES	2	Q2 2019	Q3 2019	\$821,425	\$64,595	\$886,020
5219	MELROSE M/S/T MAG	3	Q3 2019	Q4 2019	\$499,538	\$27,359	\$526,897
8174	HENRY MS	1	Q3 2019	Q4 2019	\$1,044,570	\$117,125	\$1,161,695
5726	O'MELVENY ES	5	Q3 2019	Q4 2019	\$980,651	\$52,248	\$1,032,899
4260	GRANT ES	1	Q3 2019	Q4 2019	\$850,422	\$57,581	\$908,003
4445	HART ST EL	3	Q4 2019	Q1 2020	\$788,496	\$87,053	\$875,549
4881	LIMERICK EL	5	Q4 2019	Q1 2020	\$718,837	\$89,470	\$808,308
8306	OLIVE VISTA MS	5	Q4 2019	Q1 2020	\$1,250,280	\$115,029	\$1,365,309
8356	REVERE MS	2	Q1 2020	Q2 2020	\$1,212,544	\$225,474	\$1,438,018
4786	LA SALLE ES	1	Q1 2020	Q2 2020	\$818,460	\$44,265	\$862,725
2616	BUDLONG EL	1	Q1 2020	Q2 2020	\$1,417,607	\$93,882	\$1,511,489
7781	WILMINGTON PARK EL	3	Q2 2020	Q3 2020	\$909,240	\$86,802	\$996,042
5329	MIRAMONTE EL	5	Q2 2020	Q3 2020	\$1,069,190	\$78,250	\$1,147,440
8618	WILSON SH	3	Q2 2020	Q3 2020	\$1,702,962	\$165,665	\$1,868,627