

LOS ANGELES UNIFIED SCHOOL DISTRICT

SCHOOL CONSTRUCTION BOND CITIZENS' OVERSIGHT COMMITTEE

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L.A. City Controller's Office

Pamela Schmidt, Vice-Chair

Early Education Coalition

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AARP

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CA Tax Reform Assn.

Susan Linschoten (Alternate)

L.A. Co. Auditor-Controller's Office

Joseph P. Buchman – Legal Counsel

Burke, Williams & Sorensen, LLP

Thomas A. Rubin, CPA

Oversight Committee Consultant

Timothy Popejoy

Interim Bond Administrator

Daniel Hwang

Asst. Administrative Analyst

RESOLUTION 2015-25A

BOARD REPORT NO. 497-14/15

**AMENDMENT TO THE INFORMATION TECHNOLOGY DIVISION STRATEGIC
EXECUTION PLAN TO REVISE AND APPROVE THE MY INTEGRATED STUDENT
INFORMATION SYSTEM (MISIS) PROJECT**

WHEREAS, District Staff proposes that the Board of Education approve a further amendment to the Information Technology Division (ITD) Strategic Execution Plan (SEP) to revise and approve the My Integrated Student Information System (MiSiS) Project to allocate an additional \$79,600,000 of bond funding to continue working on the MiSiS Project through June 2016 to fix functional gaps, bolster technical infrastructure, and complete improvements to the user interface (the "Project"); and

WHEREAS, the goals of the Project are to provide a functional integrated student data system for schools in order to meet the needs of the District's teachers, administrators, school-based staff, students, and families and to replace the legacy student information systems to provide a single and comprehensive system built on modern technology, as mandated by the Modified Consent Decree; and

WHEREAS, over the last few months, the MiSiS team has focused heavily on correcting bugs and functional gaps, collecting requirements from business owners and end users, and ensuring readiness for Summer School, Master Scheduling, Year End Closeout, and New Year Enrollment; and

WHEREAS, during this time, MiSiS and Microsoft leadership have worked side by side to identify the remaining work needed to further stabilize MiSiS, improve performance, provide the functional capabilities needed by schools, and improve the user interface; and

WHEREAS, the District has amended its master services agreement with Microsoft to include a statement of work that covers functional gaps, technical infrastructure, and improvements to user interface along with protections to the District, including an extended warranty, a performance bond provided at Microsoft's expense, and a ten percent (10%) retention on fixed-price invoices that will become payable at the successful completion of the extended

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warranty period; and

WHEREAS, the main priority of the MiSiS Project is to provide a functional system for the schools in order to meet the needs of our teachers, administrators, students, and school-based staff; and

WHEREAS, the Project is currently defined with a \$53,965,725 funding allocation as listed in the 2014 Information Technology (IT) Strategic Execution Plan; and

WHEREAS, after due consideration and evaluation of the presentation on MiSiS to the BOC, and review of the report and recommendation on MiSiS by the BOC Information Technology Task Force, the BOC recommends to the Board of Education that this project be approved to move forward as proposed, and

WHEREAS, the input from system users is key to the success of any system, from original needs analysis and system design through pre-operations testing to post-operational feedback for error correction and suggestions for further improvements, and

WHEREAS, while there are still many very significant risks involved with moving forward with MiSiS, the BOC is favorably impressed with the turnaround of this project since it has been reorganized, properly staffed with the required level of expertise, been paid proper attention at the highest levels within LAUSD, adequately funded, and, in particular, well led by current project and top District management, and

WHEREAS, the BOC is well aware, as are the Members of the Board of Education, District staff, parents, students, and members of the general public, that the District has had significant problems with multiple recent major information technology (IT) projects, including Payroll, Common Core Technology Project/Instructional Technology Initiative, and ISIS/MiSiS, and

WHEREAS, the District has embarked on major Enterprise Resource Planning (ERP) projects, but has failed to properly utilize the vital starting point for ERP, Business Process Reengineering, to study world-class ways of conducting business and then transferring these concepts to how the District should operate at higher levels of productivity and cost-effectiveness, prior to beginning the design of the IT system, and

WHEREAS, it appears that lessons learned in past projects have not been carried forward to newer ones, such as the decision to forgo a parallel run of the old and new payroll system prior to cutting over to the new payroll system, and lack of adequate training of users at schools and at other field locations, that were major problems in payroll, were duplicated almost entirely in the initial roll-out of MiSiS, and

WHEREAS, the BOC is concerned that these issues are reflective of significant LAUSD institutional issues with such large projects, including, but not limited to, (a) inadequate understanding of and attention to IT projects at the highest levels of the District, (b)

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insufficient funding of IT, particularly in consideration of how improved processes, supported by appropriate IT systems, can improve District outcomes, reduce expenditures, and increase revenues, (c) inadequate compensation and other employment and recruitment factors that make it extremely difficult for the District to attract and retain the necessary IT technicians and managers as employees; (d) inadequate training of users, (e) resistance to new ways of doing things by users, (f) insufficient provision for maintenance and development of IT systems once initially installed, and

WHEREAS, the BOC believes that many of these issues are systemic to the way that LAUSD operates due to statutory and other external requirements that the District cannot unilaterally change, as well as others that the District has the legal ability to change, but would face major institutional issues in attempting to change, and

WHEREAS, the District does not have a source of funding, or a financial plan, for implementation and maintaining its IT infrastructure, such as replacement of classroom computer devices that have reached the ends of their useful lives, and

WHEREAS the Bond Oversight Committee is concerned that the substantial investment of bond funds in this and other projects will not be matched by continuing investment in general funds to operate and maintain the projects once they become operational. The District has built and equipped libraries and nurses' offices and numerous other facilities only to not have them staffed; we have built facilities and not committed the resources to properly operate and maintain them, and

WHEREAS, while the Superintendent has convened the Instructional Technology Initiative Task Force (ITI TF) to make recommendations to the Board of Education on technology in the classroom and related issues, a development that the BOC strongly supports, there are many other IT and related systems and issues that are not now being addressed in this detail with that level of priority and importance, and

WHEREAS, this proposed action allocates an additional \$79,600,000 from Bond Program funds allocated to the School Upgrade Program (SUP) category of need "unallocated funds for to-be-determined needs" to sustain the Project through June 2016 to complete this scope of work. The Project will be completed in three phases over the next twelve months; the MiSiS team will provide ongoing updates and return to the Bond Oversight Committee and Board of Education for review and approval to begin the each succeeding phase.

NOW, THEREFORE, BE IT RESOLVED THAT:

1. The School Construction Bond Citizens' Oversight Committee recommends that the Board of Education amend the Information Technology Division Strategic Execution Plans to revise and approve the My Integrated Student Information System (MiSiS) Project as described in the Board Report No. 497-14/15 a copy of which is attached

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AMENDMENT TO THE INFORMATION TECHNOLOGY DIVISION STRATEGIC EXECUTION PLAN TO REVISE AND APPROVE THE MY INTEGRATED STUDENT INFORMATION SYSTEM (MISIS) PROJECT

hereto in the form it was presented to the BOC and is incorporated herein by reference.

2. The BOC recommends to the Board of Education and the Superintendent that they commission a high-level study of the District's IT needs and ways to meet them, with an emphasis on being able to overcome the issues discussed above and other existing factors that degrade LAUSD's IT performance.
3. That this study be conducted by world-class experts in this field with significant experience with how other large entities, particularly governmental units that are highly dependent upon IT, have successfully addressed comparable issues.
4. That the Board of Education and the Superintendent publicly commit to maintain and guarantee the general fund resources necessary to operate and maintain bond funded IT projects to protect and honor the taxpayers' investment as a fundamental matter of policy.
5. That an oversight and advisory group, similar to that of the ITI TF, made up of stakeholders in LAUSD and IT, specifically including the bargaining units representing the District's IT professionals as well as other groups of represented and non-represented District employees, be put in place to help direct the recommendations of the study to the realm of the possible.
6. That all options be considered and explored, including contracting out for most or all IT services and staff.
7. That the report(s) on the above be presented to the BOC and, if not completed prior to the next future submissions to the BOC for IT projects for recommendations for funding to be made to the Board of Education, and interim report accompany such submissions.
8. This resolution shall be transmitted to the Los Angeles Unified School District Board of Education and posted on the Bond Oversight Committee's website.
9. That a written response as required by the Charter and Memorandum of Understanding between the Oversight Committee and the Board be provided to the Oversight Committee within 30 days, reporting either on action taken or proposed to be taken in response to this resolution and each recommendation herein.

RESOLUTION 2015-25A
AMENDMENT TO THE INFORMATION TECHNOLOGY DIVISION STRATEGIC
EXECUTION PLAN TO REVISE AND APPROVE THE MY INTEGRATED STUDENT
INFORMATION SYSTEM (MISIS) PROJECT

ADOPTED on May 28, 2015, by the following vote:

AYES: **8** – Ms. Schmidt, Ms. Nguyen, Mr. Magruder, Mr. Francis, Ms. Marquez,
Mr. Naimo, Mr. Pansky, Mr. Waite

NAYS: **0**

ABSTENTIONS: **0**

ABSENT: **6** – Mr. English, Mr. Folsom, Mr. Escala, Ms. Lugo, Mr. Miller,
Ms. Valles

Pamela Schmidt

Pamela Schmidt
Vice-Chair

Quynh Nguyen

Quynh Nguyen
Secretary



LOS ANGELES UNIFIED SCHOOL DISTRICT Board of Education Report

Report Number:	497-14/15
Date:	June 9, 2015
Subject:	Amendment to the Information Technology Division Strategic Execution Plan to Revise and Approve the My Integrated Student Information Systems (MiSiS) Project
Responsible Staff:	
Names	Ramon C. Cortines, Superintendent of Schools Diane H. Pappas, Chief Advisor to the Superintendent
Office/Division	Office of the Superintendent
Telephone No.	213-241-7000

BOARD REPORT

Action Proposed: Staff proposes that the Board of Education amend the Information Technology Division Strategic Execution Plan (SEP) to revise and approve the My Integrated Student Information Systems (MiSiS) Project. The current project budget is \$53,965,725¹ in approved bond funding. This proposed action allocates an additional \$79,600,000 of bond funding to continue working on the MiSiS Project through June 2016 to fix functional gaps, bolster technical infrastructure, and complete improvements to the user interface. If approved, the new budget will be \$133,565,725.

Background: MiSiS was to replace the legacy student information systems to provide a single and comprehensive system built on modern technologies. The main goal of the MiSiS Project is to provide a functional integrated student data system for schools in order to meet the needs of our teachers, administrators, school-based staff, students, and families.

The Board initially approved the MiSiS Project with a budget of \$29,744,820 on June 18, 2013 (BOE 317-12/13), an additional \$3,600,000 to purchase desktop computers for school-based staff approved on October 14, 2014 (BOE 107-13/14), an additional \$12,120,905 to cover expenses for January and February 2015 approved on December 9, 2014 (BOE 256-14/15), and an additional \$8,500,000 on April 14, 2015 (BOE 421-14/15).

Over the last few months, the team focused heavily on correcting bugs and functional gaps, collecting requirements from business owners and end users, and ensuring readiness for Summer School, Master Scheduling, Year

¹ This does not include the expenditures for the previous Student Information System project (ISIS) or expenditures from Fiscal Years 2013 and 2014 that may ultimately be attributed to MiSiS.



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End Closeout, and New Year Enrollment. During this time, MiSiS and Microsoft leadership worked side by side to identify the remaining work needed to further stabilize MiSiS, improve performance, provide the functional capabilities needed by schools, and improve the user interface. Based on this analysis, the District has amended its master services agreement with Microsoft (BOE 483-14/15) to include the following:

- 1) Microsoft's "Sketch/Build/Stabilize/Release" methodology, using highly qualified Microsoft resources to expedite the development activities
- 2) Fixed pricing for the "Build/Stabilize/Release" phases of the work
- 3) A statement of work that covers functional gaps, technical infrastructure, and improvements to user interface; the full scope of work to be completed by the team during the next 12 months is detailed in Attachment C – MiSiS Master Work Order
- 4) Protections to the District, including:
 - a. an extended warranty,
 - b. a performance bond provided at Microsoft's expense, and
 - c. a ten percent (10%) retention on fixed-price invoices that will become payable at the successful completion of the extended warranty period

For the next 12 months, the MiSiS project will be split into multiple iterations of "Sketch/Build/Stabilize/Release" prioritized by school-based events, school needs, and District deadlines. The work will be completed by a project team consisting of District staff, Microsoft contractors, and non-Microsoft contractors.

During each "Sketch" iteration, MiSiS team members and subject matter experts from the central office and schools will capture MiSiS features and capabilities to be developed in a subsequent "Build/Stabilize/Release" phase. Microsoft will deliver a "Feature Acceptance Report (FAR)" to the District with a comprehensive set of requirements, development plan, test cases, acceptance criteria, fixed price and timeline. The MiSiS leadership team must sign-off on the FAR before Microsoft begins the Build/Stabilize/Release iteration.

During each "Build/Stabilize/Release" iteration, Microsoft will develop and test the MiSiS features and capabilities captured in the FAR for that iteration. Microsoft will turn over the code and test cases to LAUSD for testing and acceptance by the MiSiS team and subject matter experts who will validate that the resulting code works as designed. Microsoft will not get paid for this deliverable until the MiSiS leadership team confirms that



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Board of Education Report

Microsoft has met all of the functional and technical requirements for each iteration.

The current request for \$79,600,000 will sustain the project through June 2016 to complete this scope of work. The work will be completed in three phases over the next twelve months; the team will provide ongoing updates and return to the Bond Oversight Committee and Board of Education for review and approval to begin the next phase.

Expected Outcomes: Approval of the proposed action and subsequent investments will fund efforts to continue to stabilize MiSiS and improve performance, provide the functional capabilities needed by schools, and improve the user-interface.

Board Options and Consequences: Approval of the proposed action will provide additional funding needed for efforts to continue to stabilize MiSiS and improve performance, provide the functional capabilities needed by schools, and improve the user-interface.

If the proposed action is not approved, our schools, students, and families will be negatively impacted. Without this funding, our team will be delayed in stabilizing MiSiS and making it functional, and there could also be major disruption to schools at the start of the school year.

Policy Implications: Without this action, schools cannot meet students' needs. This action is consistent with the District's approval of the My Integrated Student Information System, in accordance with the Modified Consent Decree.

Budget Impact: The requested bond funding allocation being proposed as part of this action is \$79,600,000. Funding will come from Bond Program funds from the "unallocated funds" category in the School Upgrade Program.

There is no one time (non-recurring) General Fund impact associated with this request.

As the MiSiS system becomes operational, an additional allocation of ongoing General Fund will be needed starting in 2016-2017 for staff to maintain and update MiSiS to meet school needs. Staff will complete analysis as the project is completed in order to develop a comprehensive plan for maintaining and updating MiSiS in the future.

Bond Oversight Committee Recommendations: This item was considered by the School Construction Bond Citizens' Oversight Committee (BOC) at its May 28, 2015 meeting. Staff has concluded that this proposed SEP Amendment will facilitate the implementation of the ITD-SEP, and therefore it will not adversely affect the District's ability to successfully complete the ITD-SEP.



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Issues and Analysis: Not applicable.

Attachments: Attachment A – Bond Oversight Committee Resolution
Attachment B – Bond Oversight Committee Update
Attachment C – MiSiS Master Work Order – Scope of Work

Informative: None.

Desegregation N/A



LOS ANGELES UNIFIED SCHOOL DISTRICT Board of Education Report


Respectfully submitted,


APPROVED BY:

RAMON C. CORTINES
Superintendent

MICHELLE KING
Chief Deputy Superintendent

REVIEWED BY:


DIANE H. PAPPAS
Chief Advisor to the Superintendent


DAVID HOLMQUIST
General Counsel

☒ Approved as to form.



CHERYL SIMPSON
Interim Director of Budget Services and
Financial Planning

☒ Approved as to budget impact statement.



MARK HOVATTER
Chief Facilities Executive

☒ Approved as to impacts to facilities.



My Integrated Student Information System

MiSiS Project Update

School Construction Bond
Citizens' Oversight Committee Meeting
May 28, 2015

AGENDA

- I. About MiSiS Improvement**
- II. Status Report: Current Milestones**
- III. Microsoft Contract**
- IV. Next Phase: Scope, Schedule, and Budget**
- V. Next Steps**

About MiSiS Improvement: Quick Facts

- Since, December 1, 2014, **2,246** software updates have been deployed across **21** weekly release cycles
- Roughly **84%** bug fixes; **16%** enhancements
- In January, the team averaged **45** updates per cycle; in April, we averaged **136** updates per cycle
- HelpDesk call center wait times are in minutes rather than hours; since February 2015, the team is closing more tickets than opening

About MiSiS Improvement: Quick Facts

- To date MiSiS has conducted **27** focus groups with participants including teachers, counselors, administrators and office staff:

Topics covered (number of sessions):

- Enrollment (2)
- Attendance (2)
- Scheduling (5)
- Summer School (1)
- Grade Book (14)
- Grades/Transcripts/Graduation Standards (3)

About MiSiS Improvement: Quick Facts

The superintendent recently invited all school-based personnel to participate in a brief survey about their experiences with MiSiS.

- **2,896** school-based employees responded
- When asked how much the system has improved since the beginning of the year:
 - **29%** reported MiSiS has “improved a lot”
 - **61%** reported “improved a little”
 - **8%** reported “not improved at all”
 - **2%** report “it has gotten worse”

Status Report: Current Milestones

Master Scheduling for 2015-16

- Schools are now able to view information for incoming students for 2015-16
- The Office of Curriculum Instruction and School Support (OCISS) has directed schools to commit their schedule by June 8
- 241 out of 291 secondary schools have begun the process; 16 have already committed

Status Report: Current Milestones

Closing Out the 2014-15 School Year

- Performance enhancements are underway for elementary and secondary report cards in preparation for end-of-year grading periods

2015 Summer School Readiness

- Summer school application reports are now available for all sending schools
- Counselors at receiving schools are able to add sections and schedule students for summer school

Status Report: Current Milestones

Opening the 2015-16 School Year

- The enrollment process was fine-tuned based on school user input
- We are working with Pupil Services on a plan to ensure students are enrolled at the correct schools, minimizing duplicates in the system
- We are deploying new tools that will verify that every student is enrolled and assigned to appropriate classes before the school year starts

Microsoft Contract: Structure

- Shift from straight “time and materials (T&M)” to a contract that is more deliverables-based
- A significant portion of the contract is “fixed price (FP)” – Microsoft only gets paid when they deliver
- Scope covers functional gaps, technical infrastructure, and improvements to user interface
- The work will be split into multiple iterations of Sketch/Build/Stabilize/Release prioritized by school-based events and District deadlines

Microsoft Contract: Structure

Sketch/Build/Stabilize/Release Iterations

Sketch (T&M): Microsoft and LAUSD capture MiSiS features and capabilities to be developed in a subsequent Build/Stabilize/Release phase. Microsoft delivers a “Feature Acceptance Report (FAR)” to LAUSD with a comprehensive set of requirements, development plan, test cases, acceptance criteria, fixed price and timeline. LAUSD must sign-off on the FAR before Microsoft begins the Build/Stabilize/Release phase.

Build/Stabilize/Release (FP): Microsoft develops and tests the MiSiS features and capabilities captured in the FAR for that phase. Microsoft turns over the code and test cases to LAUSD for testing and acceptance. LAUSD must sign-off on the code before Microsoft gets paid.



Microsoft Contract: Assurances

Fixed Price Deliverables	Microsoft does not get paid for fixed price deliverables until LAUSD tests and accepts the delivered code with test cases and confirms that Microsoft has met all of the functional and technical requirements for each phase.
60 Day Extended Warranty	Microsoft will correct all defects caused as a result of an omission or act of Microsoft from July 1, 2015-June 30, 2016, plus a 60-Day Extended Warranty through August 30, 2016.
Percentage Holdback	Microsoft will only bill for a percentage of each fixed-price deliverable after LAUSD's acceptance; the remaining percentage will become payable following successful conclusion of the 60-Day Extended Warranty.

Microsoft Contract: Assurances

Third Party Review	LAUSD will engage an outside technical firm to review each Feature Acceptance Report before signing-off for development to begin.
Performance Bond	Microsoft will provide LAUSD with a performance bond in the amount of the 12-month contract as an assurance that LAUSD can continue the project in the event of a material breach by Microsoft.
Termination for Convenience	LAUSD may cancel the contract at any time for any reason (with due notice to Microsoft).

Microsoft Contract: Assurances

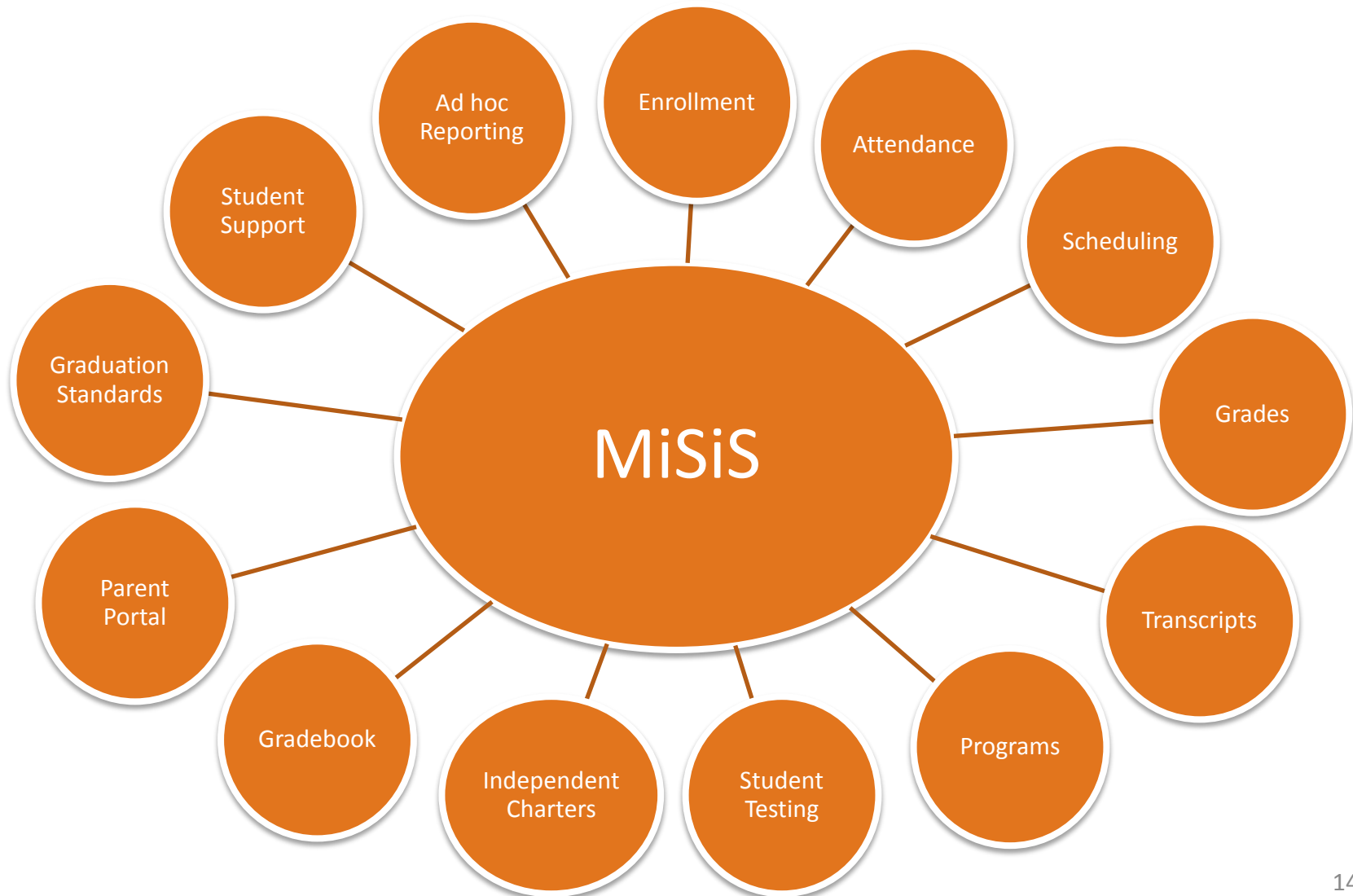
Rate Freeze

Contractor Rates	Microsoft agreed to maintain their current contractor rates through June 30, 2016 (no increases in last 4 years); equivalent to a 5% discount
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Value-Added Benefits

Training Credits	Microsoft will provide LAUSD with \$250,000 in free training credits for courses offered through Microsoft Academy or equivalent
Planning Support	Microsoft is giving LAUSD 350 hours of free planning support for building technical roadmaps and selecting Microsoft training courses

Next Phase: Full Scope



Next Phase: Full Scope

Target Accomplishments for 2015-16 Include:*

- **ENROLLMENT:**
 - Identify and address reporting problems related to magnet school/primary school
 - Enhance and update the ability to identify students and access complete enrollment history
 - Improve validation, minimizing duplicates and overlapping enrollments/schedules

**Note: Complete scope of work is provided in the MiSiS Master Work order*

Next Phase: Full Scope

Target Accomplishments for 2015-16 Include:*

- **ATTENDANCE:** Provide tools necessary to meet attendance audit and compliance requirements.
- **STATE REPORTING:** Implement interface between MiSiS Attendance and California Longitudinal Pupil Achievement Data System (CALPADS) report system.
- **SCHEDULING:** Refine screens and reports related to master and walk-in scheduling as identified.

**Note: Complete scope of work is provided in the MiSiS Master Work order* ¹⁶

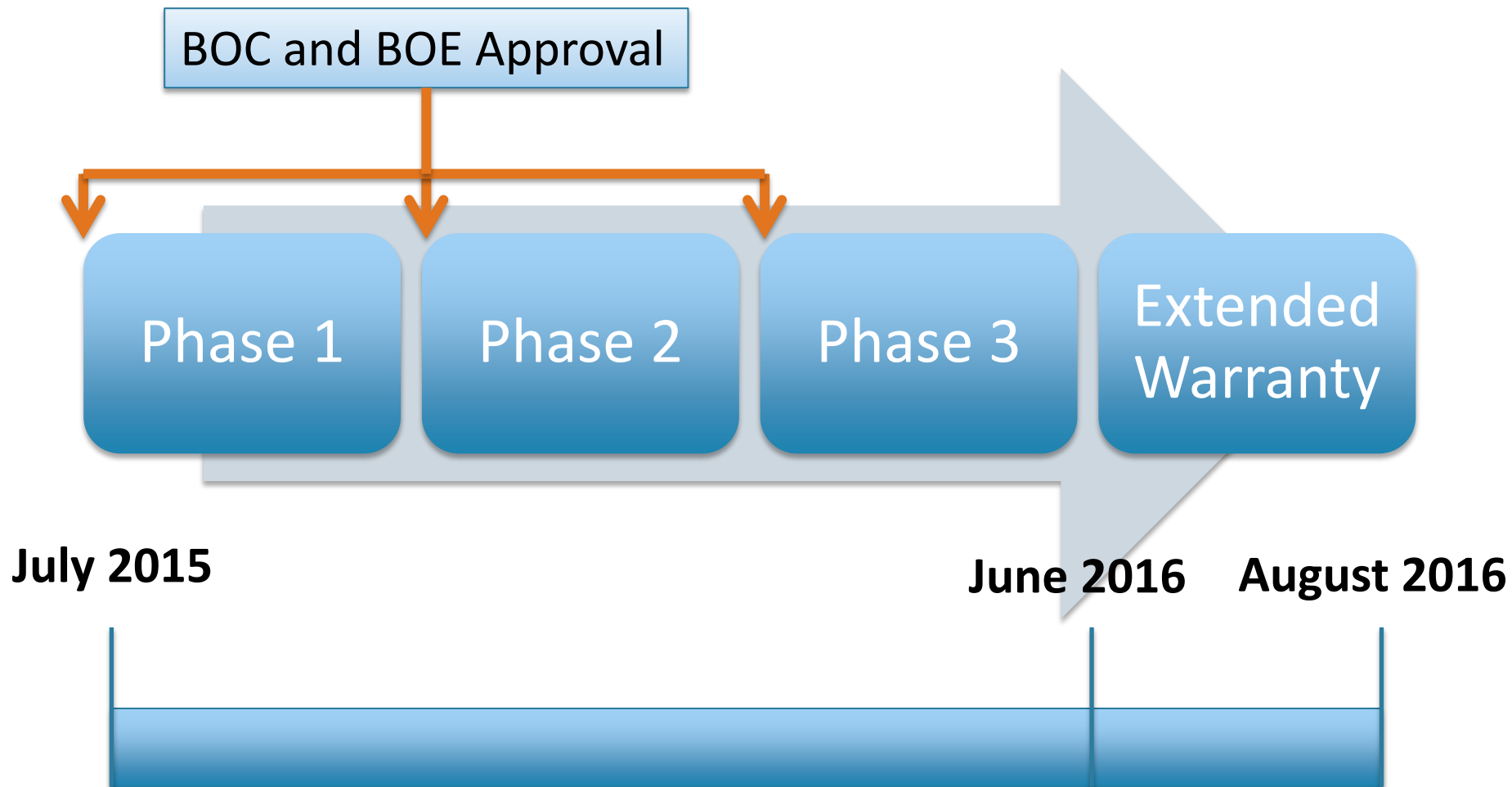
Next Phase: Full Scope

Target Accomplishments for 2015-16 Include:*

- **GRADES:** Enable access to grade entry and reporting on mobile devices for teachers
- **TRANSCRIPTS:** Allow transcripts to adapt to changing graduation and college entry requirements
- **GRADUATION STANDARDS:** Finalize individualized graduation progress reports
- **REPORTS:** Deliver a full range of reports and ad-hoc reporting (MiSiS Explorer) schools need

**Note: Complete scope of work is provided in the MiSiS Master Work order*

Next Phase: Schedule



Next Phase: Staffing Plan

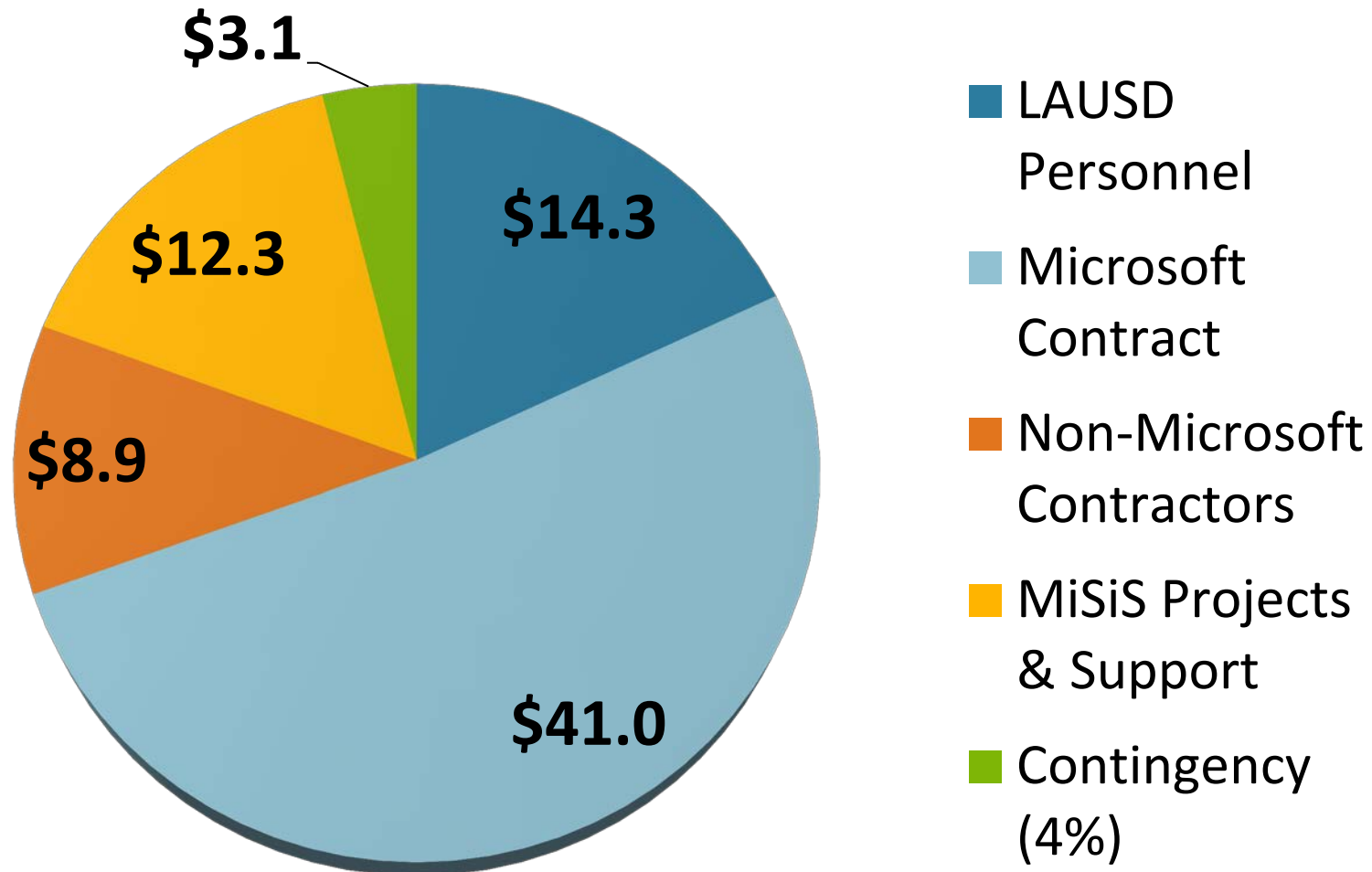
- There are currently **197** MiSiS team members:
 - **93** LAUSD positions
 - **104** contractors
- For 2015-16 we will have:
 - **93** LAUSD positions
 - **40** non-Microsoft contractor positions, including developers, business analysts, testers, and project managers
 - No set number of Microsoft contractors due to the deliverables-based nature of the new contract.

Next Phase: Staffing Plan



Next Phase: Budget

MiSiS Project Budget Augmentation = \$79,600,000



Next Phase: Budget

Major Budget Categories

Item	Budget
LAUSD Personnel	\$ 14,300,000
Microsoft Contract	\$ 41,000,000
Contractors	\$ 8,900,000
MiSiS Projects and Support	\$ 12,300,000
Sub-Total	\$ 76,500,000
Contingency (4%)	\$ 3,100,000
TOTAL	\$ 79,600,000

Next Phase:

Major Budget

Includes:

- Data Validation Tool
- Third Party Oversight
- Grade Book Integration
- Special Education/Ad Hoc Reporting
- Parent Access Portal

Item	
LAUSD Personnel	
Microsoft Contract	\$ 41,000,000
Contractors	\$ 8,900,000
MiSiS Projects and Support	\$ 12,300,000
Sub-Total	\$ 76,500,000
Contingency (4%)	\$ 3,100,000
TOTAL	\$ 79,600,000

Examples of Other Customized Public Systems

California Health and Human
Services Electronic Benefit
Transfer (EBT) System
\$70 million

Arizona Customized
Student Testing System
\$70 million

Healthcare.gov
\$200 million

MiSiS
\$133 million to date

California DMV Vehicle
Registration System
(cancelled)
\$200 million

California Healthcare
Enrollment, Eligibility
and Retention System
(CalHEERS)
\$350 million

State of California's
Franchise Tax Board (FTB)
Enterprise Data to Revenue
(EDR) project
\$400 million

Veterans Affairs
Computerized Patient
Record System
\$3.6 billion

MiSiS Roadmap for the Next Two Years

Next 12 Months

- Continue to stabilize system and improve performance
- Provide the functional capabilities needed by schools
- Improve the user-interface

12 to 24 Months

- Make architectural improvements
- Transition operations and support
- Continue improving user experience



Our Vision

A **fully-integrated** student information system that helps advance **every student** toward graduating **college-prepared** and **career ready**



Historical Costs for ISIS and MiSiS

	ISIS	MiSiS			Grand Total ISIS and MiSiS
	ISIS Total	Previously Approved*	Current Proposal	MiSiS Total	
Bond	\$ 15,615,749	\$ 62,838,034	\$ 79,600,000	\$ 142,438,034	\$ 158,053,783
COPS	\$ 72,169,781	\$ -	\$ -	\$ -	\$ 72,169,781
Grant	\$ 5,980,863	\$ -	\$ -	\$ -	\$ 5,980,863
General Fund - Project	\$ 62,302,320	\$ 275,000	\$ -	\$ 275,000	\$ 62,577,320
PROJECT TOTAL	\$ 156,068,713	\$ 63,113,034	\$ 79,600,000	\$ 142,713,034	\$ 298,781,747
General Fund - Operational	\$ 3,533,150	\$ 11,386,216	\$ 3,500,000	\$ 14,886,216	\$ 18,419,366

Full Details of Project Budget and Expenditures are available in the ISIS and MiSiS Project Expenditures Reports

*Includes \$8,872,309 of approved ISIS funds used to transition to MiSiS

All amounts are updated as of 5/27/15

MiSiS Master Work Order

Attachment 1: Scope and Description of Services

1. GENERAL

Contractor's performance of the Services in connection with the completion of the Project is broken down into two primary areas: (a) the MiSiS Solution Area / Feature Administration, Implementation, Maintenance and Enhancements (collectively, the "**Functional Areas**"); and (b) the MiSiS Administrative / Technical System Upgrades and Enhancements (collectively, the "**Technical Areas**").

2. FUNCTIONAL AREAS

A high level description of the MiSiS Functional Areas is included in the Master Work Order. This Section 2 and Exhibits 1, 2, and 3 to this Attachment 1 provide additional details regarding each Functional Area. As of the SOW Effective Date, it is the Parties' intention that the following Functional Areas will be included in MiSiS; provided, however, during the Sketch Phase, the Parties will refine the relevant scope in relation to such Functional Areas for MiSiS:

2.1 Enrollment

General	<ul style="list-style-type: none">• Implement improved district-level process tracking and monitoring of school-level scheduling to enable oversight.• Implement algorithm improvements to increase scheduling effectiveness.
Magnet school/primary school association	<ul style="list-style-type: none">• Develop new reports to provide data for Magnet office and school to monitor Magnet enrollment and student ethnicity by section• Enhance existing reports so users can run all reports for the Magnet location only.• Enhance MiSiS Explorer to allow schools to run reports for preferred location (campus) and Magnet location (school).
Student enrollment enhancements	<ul style="list-style-type: none">• Define process for standardizing postal address conformity.• Load historic enrollment data.• Address identified UI workflow, navigation, standards compliance, and presentation issues.• Review the student identification process and make changes to further automate the correct identification of students with other relevant systems.• Remediate contradictory data exists after merge• Critical student data not showing in MiSiS because the Student ID does not exist in MiSiS for months after ID change.

New Year Enrollment	<ul style="list-style-type: none"> • Extend MiSiS search capabilities to reduce the number of duplicate students. • Extend MiSiS explorer capabilities • Work with LAUSD staff to analyze the No-Show/Student Transfer Process to confirm the data in system is correctly indicating their enrollment status. • Work with LAUSD staff to analyze the Primary/Magnet locations so users can see the students from the associated magnet schools related to the Primary location. • Implement enhancements in the enrollment process to automate the withdrawal process to ensure students can be enrolled and scheduled on their first day • Implement enhancements to the year-end process to ensure consistent end of enrollment codes and reporting especially consistent year end codes and alignment with other key criteria like special education
Next Year Enrollment Promotion	<ul style="list-style-type: none"> • Enhance existing enrollment process • Implement changes to reduce duplicate students and avoid overlapping enrollment and schedules • Enhance No-Show/Student Transfer process to validate correct enrollment status • Implement Report(s) that shows Primary/Magnet data • Assist LAUSD to run next year enrollment process • Execute script to promote non-matriculating students to the next grade level prior to running Next Year Enrollment script • Process span school 6th grade designation (i.e., secondary versus elementary) • Add Transfer to Mass Update to reduce data entry
NYE Process Management	<ul style="list-style-type: none"> • Implement tools to provide oversight of the schools activities for New Year Enrollment and Year End Processing with respect to school assignments for matriculating students.

2.2 Attendance

General	<ul style="list-style-type: none"> • Analyze the Attendance summary screens to verify they address all school types. • Analyze 'Attendance at a glance' page to show data for the previous years.
Attendance Submission for State Reports	<ul style="list-style-type: none"> • Elementary: Provide the ability for teachers to enter absence reason codes without updating the status, back to the beginning of the school year • Provide ability to invalidate attendance by System Admin • Create Independent Study attendance submission weekly view • Create System Administrator capability to invalidate

	<p>attendance</p> <ul style="list-style-type: none"> • Provide more accurate attendance not submitted reporting • Provide capabilities to meet attendance audit and compliance requirements
Attendance Summary Enhancement	<ul style="list-style-type: none"> • Implement Extensions to the ad hoc reporting capability to meet exemplar attendance reporting specifications for all school types • Implement selected tools to provide oversight of the schools activities for New Year Enrollment and Year End Processing related to the following interfaces • Deliver the ability to submit ADA reports to CALPADS. • Provide the ability to extract CALPADS validated data from MiSiS in the standard CALPADS formats for both attendance and all CALPADS submissions

2.3 Scheduling

General	<ul style="list-style-type: none"> • Enhance the scheduler tools, including master scheduling, to enable multiple terms to be scheduled concurrently. • Perform remediation of Walk-in Scheduler tools and Request Generator performance to enable improvements to the system. • Analyze current Campus and Magnet school scheduling approach with LAUSD staff to define enhancements, improve scheduling process for these school types. • Implement improved district-level process tracking and monitoring of school level scheduling to enable oversight. • Identify areas of focus to the Scheduling Engine algorithms and implement algorithm improvements to increase scheduling effectiveness. • Review, validate and identify additional improvements to the scheduling tools
Campus and Magnet Combined Scheduling	<ul style="list-style-type: none"> • Update reports supporting the defined method of scheduling Magnet students for the district. • Enhance application screens supporting the defined method of managing and scheduling Magnet students between campus and preferred location.
Request Generator Performance (groups)	<ul style="list-style-type: none"> • Improve Request Generator group execution speed • Implement group processing performance improvements for student request publishing
Scheduler improvements	<ul style="list-style-type: none"> • Implement Scheduler tools changes as identified by TFS work items • Implement Scheduling Engine enhancements for identified priority usage scenarios from sketch

Scheduling status reporting (district level)	<ul style="list-style-type: none"> Implement reports to monitor school scheduling progress. Such as committing a master, rollover status, and students not scheduled for pre-commit and post-commit scheduling
Walk-in Scheduler Performance Improvements	<ul style="list-style-type: none"> Implement enhancements in Walk-in Scheduler for streamlined UI interactions, loading students, inline reports and automated scheduling Implement mass scheduling students and scheduling off site sections scenario enhancements Implement Walk-in Scheduler performance improvement scenarios identified by analysis/sketch
Scheduler Import Process	<ul style="list-style-type: none"> Identify usage scenarios that will address LAUSD selected priority issues from sketch Implement enhancements to the schedule import process identified by review of current process
Master Scheduling Reports	<ul style="list-style-type: none"> Update master scheduling reports to reflect student programming and placement.
Concurrent Term Editor	<ul style="list-style-type: none"> Implement enhancements to the concurrent term editor screen for automated scheduling.

2.4 Grades

Grades	<ul style="list-style-type: none"> Re-envision UX for grades to provide for a more responsive end user experience. Conduct user research to define scenarios for improvements to the grades module Design and Implement a new Elementary, standards based report card.
GPA Calculation Modifications	<ul style="list-style-type: none"> Update MiSiS Explorer to display GPAs Analyze the GPA calculation algorithms to improve overall performance. Update GPA screen to display GPA calculation Add the ability to invoke the GPA and Rank re-calculation process per business rules Implement role restrictions for GPA and Rank calculations

2.5 Gradebook

Certain Microsoft responsibilities with respect to the Gradebook module are provided in this Section. Additional Functional Areas and Technical Areas for the Gradebook module not otherwise provided in this Attachment 1 may be added under this SOW through the Contract Change Management Process.

Gradebook	<ul style="list-style-type: none"> • Improve user perceived performance for teachers switching between periods, saving assignments, and generating reports. • Improve the default gradebook view to limit the teachers view to only information pertinent to them and their students. • Update navigation controls to address shortfalls identified by existing TFS items. • Enable global application notifications • Assess and address as necessary grade categories, special symbols, and grading scales. • Provide an impact analysis of MiSiS running on various mobile platforms • Assess impact of displaying a Common Core State Standard (CCSS) report card
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2.6 Transcripts

Transcript UI Enhancements	<ul style="list-style-type: none"> • Improve maintainability for changes to yearly graduation standards • Improve edits and reporting to ensure quality of grades and courses in support of graduation requirements • Add/replace/remove UI features as identified during the assessment of priority in Sketch Phase such as: <ul style="list-style-type: none"> ○ Add Course End Date to column in the Transcript History screen ○ Add capability to add multiple transcripts at a time. ○ 'Not Applicable' should be checked by default. ○ Make the GPA and Ranks as separate options to display. ○ Include option to Rank by School only or Rank by Campus only. ○ Separate Credits from 'Graduation Requirements' section into the section where GPAs display. ○ Modify parameter logic such that when 'All' is selected, then the 'Not Applicable' should be unselected by default.
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2.7 Programs

General	<ul style="list-style-type: none"> • Load of School Programs from LOCNX file and record year to support overlapping years and prior year reporting. • Implement Title 1 Eligibility status for every student in Title I school.
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	<ul style="list-style-type: none"> • Load the Academic Intervention record for applicable Students by School of Advanced Studies • Collect data in support of other financial reimbursement programs specifically Local Community Funding Formulas. • Provide the associated unduplicated student reporting. This involves adding some new fields and dates including the alternate income reporting fields.
English Learner	<ul style="list-style-type: none"> • Improve batch handling of EL overnight processes • Provide additional reports as specified by the sketch and addressed in priority order • Update to the MiSiS explorer to support English Learner queries • Enhance Reclassification Letter (multiple languages) to handle tests referenced in 2014-2015 reclassification criteria • Enhance English Learner screen to leverage new table storing results from the nightly process • Enhance Mass Reclassification screen to leverage new table storing results from the nightly process • Develop District-wide and ESC-wide reports for EL data • Create process to extract student data for English Learners • Develop reports required to report primary language test and English proficiency test information • Implement data remediation changes as identified during sketch • Implement enhancement to system to assist with improving the EL data quality by remediating source of issues
Foster	<ul style="list-style-type: none"> • Implement specifications for application enhancements screen and report changes and additions • Update data imports to support relevant foster student data (Probation office, CALPADS Foster)
Gifted / Talented Program (GATE)	<ul style="list-style-type: none"> • Enhance support to GATE with mass identification of students • Improve screens and reports for School for Advanced Studies, Visual/Performance Arts and Conservancy of Fine Arts
Health / Immunizations	<ul style="list-style-type: none"> • Implement enhancements to support Welligent data interface, screen UI and additional ad-hoc reporting fields
Homeless	<ul style="list-style-type: none"> • Implement changes necessary to allow non-LAUSD students to be entered into the Enrollment screen and collect the necessary relevant homeless data. • Develop reports for the Homeless Office
Migrant	<ul style="list-style-type: none"> • Provide a means to implement changes necessary to allow non-LAUSD students to be entered into the Migrant screen and collect the necessary relevant migrant data. • Develop report to support the Migrant Office

Special Education	<ul style="list-style-type: none"> • Document business rules for displaying Special Education data • Analyze and design additional reports for Special Education • Implement additional Special Education screens and reports as defined by analysis • Develop tighter integration between Welligent and MiSiS to ensure transactions are processed without manual intervention
Cafeteria Management System – Meal Eligibility	<ul style="list-style-type: none"> • Improve Meal Eligibility reporting to notify of users of eligibility changes by date range and overall eligibility reporting • Develop reports to support Food Services and Cafeteria workers • Improve integration to ensure consistency of meal codes between the CMS and MiSiS systems

2.8 Summer School

General	<ul style="list-style-type: none"> • Review, define and prioritize enhanced functionality that supports enrollment management for Summer School • Review and define enhancements to support usage of the Scheduler Tools for summer school class scheduling • Definition and effort to support the reporting needs of summer school which will expand on the current implementation that previously supported summer school execution
Summer School Enrollment Management Process	<ul style="list-style-type: none"> • Implement changes to student enrollment features to track students to be scheduled for summer school classes • Create support for Mass enrollment of summer school students • Review the Summer school close process to ensure course completion and impacts of classes taken have been reflected in the student's records and enrollment and schedules.
Summer School Scheduler Tools	<ul style="list-style-type: none"> • Increase efficiency and reduce the number of student scheduling errors • Enhance Teacher Section and Student Schedule Summary report modifications to support Summer School
Summer School Reporting	<ul style="list-style-type: none"> • Implement Enrollment Count by Summer School Location Report per specification • Implement Summer School Statistical Report per specification • Implement Grade Summary by Course and Location Report per specification

2.9 Graduation Standards

Graduation Standards	<ul style="list-style-type: none">• Update graduation standards logic.• Provide mass update of the status of 'Service Learning' requirement.• Add a 'Courses that don't count towards Graduation' section in the Graduation Standards Report• Investigate a means to automatically waiver the eligible Special Education and the eligible Foster Care students from applicable Graduation Requirements.• Enhance Grade Level Benchmark graphs to display years completed for the students' current grade level.• Develop a Graduation Audit Report for Class of 2016 and beyond.
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2.10 Student Support

Discipline	<ul style="list-style-type: none">• Enhance the Student Support screens and reports to include recent policy changes, and performance meter goals.• Develop the Opportunity Transfer screens to include student tracking information and parent notification letter reports.• Provide a means to identify students for services in support of Non-compliance compulsory education laws and District policy.
Counseling	<ul style="list-style-type: none">• Update and enhance counseling communication screen to support school counselor functions. * Update and enhance counseling communications report to support school counselor functions.
Academic Intervention	<ul style="list-style-type: none">• Update and enhance academic intervention screen to support school counselor functions.• Update and enhance academic intervention report to support school counselor functions.

2.11 Charter Schools

Certain Microsoft responsibilities with respect to the integration of LAUSD's Charter Schools into the MiSiS system are provided in this Section and in Exhibit 4 to this Attachment 1. Additional Functional Areas and Technical Areas for Charter Schools not otherwise provided in this Attachment 1 may be added under this SOW through the Contract Change Management Process.

Charter Schools	<ul style="list-style-type: none"> • Participate in design and approach discussions • Document selected design • Support incremental release of designed and approved functionality • Create unique LAUSD student IDs for all charter students • Exchange of transcripts and student information as students move between charter and LAUSD schools to provide continuous services to students • Provide necessary data to LAUSD Charter Schools Office and Division of Special Education
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2.12 Adhoc reporting in MiSiS Explorer

MiSiS Explorer	<ul style="list-style-type: none"> • Review, define and prioritize MiSiS Explorer attributes for enhanced functionality • Enhance the static group builder's performance and functionality • Update and enhance the dynamic criteria in MiSiS Explorer and improve performance and functionality • Update performance when selecting criteria in the dynamic group builder
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2.13 Manage Groups

Manage Groups	<ul style="list-style-type: none"> • Update and enhance the Manage Group screens which allow for selective advanced search capabilities and scheduling functions • Static Groups – Review, define and prioritize Manage Group enhancements for timely performance and functionality • Dynamic Groups – Update performance when selecting criteria in the dynamic group builder
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2.14 Student Testing

Prepare and Administer Test	<ul style="list-style-type: none"> • Enhance outbound interfaces as specified by the sketch and addressed in priority order • Enhance Coding Roster reports as specified by the sketch and addressed in priority order • Additional reports as specified by the sketch and addressed in priority order.
Capture Test Results	<ul style="list-style-type: none"> • Enhance inbound interfaces as specified by the sketch and addressed in priority order

	<ul style="list-style-type: none"> • Improve monitoring and exception notification of inbound interfaces from various sources • Enhance Test Scores screens (add/edit/delete) as specified by the sketch and addressed in priority order • Implement data remediation changes as identified during sketch • Implement enhancement to system to assist with improving the student testing data quality by remediating source of issues • Enhance outbound interfaces to send manual test corrections to SST
Review Test Results	<ul style="list-style-type: none"> • Enhance Test Scores screens (read) as specified by the sketch and addressed in priority order • Enhance Student Testing reports as specified by the sketch and addressed in priority order • Additional reports as specified by the sketch and addressed in priority order. • Update to the MiSiS explorer to support student testing queries • Develop District-wide and ESC-wide reports for student testing data

3. TECHNICAL AREAS

3.1 Overview

- (a) As of the SOW Effective Date, Contractor will use the Microsoft Solutions Framework (MSF) to execute the Technical Areas of this SOW. The MSF is a solution development approach that provides for well-defined phases that take into account development of requirements, architectural design, detailed software design, software development, system testing, and managed release cycles. Pursuant to the Contract Change Management Process described in Section 7.5 of the Master Work Order, the Parties may agree to execute select Technical Areas of this SOW under another mutually agreed approach. As of the SOW Effective Date, the Parties anticipate that the execution of the Technical Areas under this SOW will be charged under the T&M charging model.
- (b) A high level description of the MiSiS Technical Areas is included in the Master Work Order. This Section 3 and Exhibit 5 to this Attachment 1 provide additional details regarding each Technical Area. As of the SOW Effective Date, it is the Parties' intention that the following Technical Areas will be included in MiSiS; provided, however, during the "**Envision Phase**" of the MSF process, the Parties will refine the relevant scope in relation to such Technical Areas for MiSiS:

Component	Specification
Security	Security review Compliance remediation
Performance	Identification and remediation of performance issues
Testing	Testing infrastructure and automation
Technical	Application lifecycle management Environments High availability Project server Reporting environment Personalization Data migration
Data Quality	Data validation Data quality
Architecture	System architecture Improve maintainability
Reporting	Reporting architecture, environment, and ad-hoc reporting capability
Integration	Integration with other systems including Welligent, IODS, LMS

3.2 Security

General	<ul style="list-style-type: none"> • Determine key logs and required access • Validate against audit and security requirements • Logging of key tables • Viewing of changes made via screen
Compliance remediation	<ul style="list-style-type: none"> • Work with LAUSD selected outside council to determine the discrete set of federal and state regulations and compliance standards that MiSiS will be held to • Review items identified above with each working team to capture impacts and conflicts • Document remediation plans for each item identified during the assessment • Integrate remediation plans into integrated development and deployment master schedule

3.3 Performance

Performance	<ul style="list-style-type: none">• Provide specific target goals for the system to meet during normal operations• Conduct analysis and review of the application response times and a definition of the target response times• Enable instrumentation; analytics, telemetry, and availability• Provide strategy for testing every release to confirm the production releases adhere to target performance metrics• Prioritize enhancements and deployments based upon impact and severity of performance issues and upcoming milestones
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3.4 Testing

Testing	<ul style="list-style-type: none">• Do analysis of the highest value areas that would benefit from additional Unit Tests, Functional Tests, Integration Testing, and Performance Testing• Create automated test cases in TFS that cover the highest value areas• Define with LAUSD staff a series of baseline tests to ensure a minimal quality level for each build• Conduct ongoing testing including:<ul style="list-style-type: none">○ Unit Testing○ System / Functional Testing○ Integration Testing○ Performance and Stress Testing○ Security Testing○ ADA Section 508 Testing
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3.5 Technical

Application Lifecycle Management	<ul style="list-style-type: none">• Baseline set of automation tests to ensure a minimal quality level for each build• Deploy all aspects of the application through Release Management• Implementation and validation of changes recommended as part of ALM assessment• Focus on minimizing manual processes
High Availability	<ul style="list-style-type: none">• Conduct assessment and document recommendations to increase overall system availability• Define table partitioning strategy for tables in the database to support table row growth

	<ul style="list-style-type: none"> Implement system enhancements to manage data archiving in support of retention and system performance requirements
Project Server	<ul style="list-style-type: none"> Implement Project Server to integrate TFS tasking and planning with shared MS project planning tools
Reporting Environment	<ul style="list-style-type: none"> As part of the overall solution strategy, identify and document optimal use of data warehousing for the solution Create a latent reporting environment in support of ad-hoc user needs
Personalization	<ul style="list-style-type: none"> Provide a means for individual identity management Apply individual identity to personalization of the solution Review user provisioning, access lease management, and usage policies for patterns, core and exceptional needs Identify user groups, exceptional access requirements, and scenario based entitlements Determine responsible parties and boundaries of control
Data Migration	<ul style="list-style-type: none"> Develop format templates and the form data should take Design/development of automated migration scripts Review and define additional specifications for Data Migration Validation of migrated data from source system to destination system
Administration UI	<ul style="list-style-type: none"> Provide the ability to manage the domain including values, descriptions, active status, and order default using the application Implement enhancements for system administrator to manage defined lookup tables within the application Implement specification for managing system functions for district system administrator

3.6 Data Quality

Data Quality	<ul style="list-style-type: none"> Create a back end script to address these data issues that are approved by business owners/central office users Create Ad Hoc reports that will identify these missing data elements Provide a means to monitor data prior to school based events Address date dependent data base values to support changing values over the years. Resolve data base inconsistencies and implement the edits to avoid in the future. Examples include: <ul style="list-style-type: none"> 1 - functionality that application verifies dates (school cohort, school section, section enrollment) are always in sync.
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	2 – application to respect “valid” flags for attendance and section.
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3.7 Architecture

General Architecture	<ul style="list-style-type: none"> • Review existing network topology, solution, requirements, and database documentation • Review helpdesk, system logs, and change requests • Interview key stake holders, network support and solution development staff • Document As-Is key findings • Review and approve architectural alignment with Functional Areas • Document recommend changes for consideration • Implement system health information tracking of provisioning, access, and key scenario implementation • Assess DB table structure and normalization for improvement areas and implement as approved • Implement high priority recommended changes • Evaluate and implement other upgrades and transitions from a web browser perspective to HTML 5+ and removal of Silverlight
Improve Maintainability	<ul style="list-style-type: none"> • Review all logs, proactive monitoring, and system health information tracking systems for reoccurring (potentially negatively impacting) patterns • Document runbooks and response action plans for specific alerts • Increase Operations engagement with the development team to provide better understanding of the application to assist with support and process improvement • Document processes and procedures related to maintenance process

3.8 Reporting

Reporting	<ul style="list-style-type: none"> • Define an architecture and approach that will support the requirements and user scale as defined during the analysis • Report results of current architecture and application usage patterns • Implement approved reporting architecture • Re-assess needs for ad-hoc reporting • Implement additional pre-defined reports • Implement solution for ad-hoc reporting
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3.9 Integration

Integration	<ul style="list-style-type: none">• Define an architecture and approach that will support required integration with other systems used by LAUSD• Implement agreed upon standards for interface execution, error reporting and escalations• Development and use of APIs to integrate the sharing of data with parent Portal, LMS and potentially Charter systems
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4. INFORMAL KNOWLEDGE TRANSFER

- (a) Contractor will provide Informal Knowledge Transfer throughout the Project. Informal Knowledge Transfer activities are secondary to completing work products and maintaining the project schedules.
- (b) No Deliverables, work products or meeting summaries will be provided for these sessions or activities. Informal Knowledge Transfer is a valuable adjunct to, but not a substitute for, formal training.

5. FORMAL TRAINING

- (a) Subject to Section 13 of the SOW, Microsoft agrees to offer LAUSD, at no cost to LAUSD, gratuitous funds in an amount not to exceed \$250,000 for the purposes of formal training under Microsoft's Training Academy or other formal training Microsoft may provide.
- (b) LAUSD may choose the specific trainings for which the gratuitous funds will be used. LAUSD agrees to notify Microsoft of its training elections before each training engagement begins, and such elections will be documented in an exhibit attached to the signed Gratuitous Services Letter between the Parties.

6. SOFTWARE PRODUCTS AND TECHNOLOGIES

The MiSiS development and production environments that are in place at the commencement date of this SOW are the anticipated environments for this SOW. The products listed in the table below are the only known changes required to deliver this Project; however, additional needs may be discovered during execution. LAUSD is responsible for obtaining all required licenses and products for the environments listed in the table below. Any additional needs will be reviewed with LAUSD leadership.

Table 6: Solution Software Required

Product/Technology Item	Version	Required By Date
Team Foundation Server	2013	Start of Engagement
Visual Studio Release Management	2013	Start of Engagement
Visual Studio Ultimate (load testing)	2013	Start of Engagement

Visual Studio Premium (developers)	2013	Start of Engagement
Visual Studio Test Professional (test)	2013	Start of Engagement
Microsoft Project	2013	Start of Engagement
Jaws	16	Start of Engagement
Telerik UI for ASP.NET AJAX'	Q1 2015	Start of Engagement
SQL Server Enterprise Edition	2014	Start of Engagement

7. ENVIRONMENTS

LAUSD will continue to make available during the term of this SOW, the current development and production environments that are available to the project team as of the SOW Effective Date. The only changes anticipated to address the requirements are in the table below. The Party listed is responsible for establishing the environment in the location specified and by the time noted.

Table 7: Required Environments

Environment	Location	Responsibility	Ready by
Development	LAUSD HQ Data Center	LAUSD	Within 3 weeks of start date
Test	LAUSD HQ Data Center	LAUSD	Within 3 weeks of start date
UAT	LAUSD HQ Data Center	LAUSD	4 weeks prior to UAT start date
Pre-Production	LAUSD HQ Data Center	LAUSD	4 weeks prior to UAT start date
Production	LAUSD HQ Data Center	LAUSD	4 weeks prior to UAT start date

8. TESTING

- (a) It is important for the LAUSD MiSiS Owner(s), Solution Architect, Project Manager, Development Lead, Test Lead, and Release Lead to contribute to the quality of the development by providing acceptance criteria for the features. The acceptance criteria should provide one or more of the following:
 - (i) Testable functionality or results expected.
 - (ii) Need for performance/load testing per release.
 - (iii) Metrics and measures defining expected performance and scalability, which may be determined during each Sketch Phase.
 - (iv) User Interface mock-ups or wireframes to convey intended look and feel for the users.
 - (v) Reference models or architectures as applicable to be used to assess the technical quality of the solution.
- (b) This information is the Features and Acceptance Test Cases stored within TFS prior and signed off by LAUSD prior to development starting for each iteration.

- (c) Additionally the following industry standard types of testing will be performed as part of this Statement of Work:

Test Type	Description	Primarily Responsible Party	Provides Test Data/Cases	Guidance & Support	Environment
Unit Testing	Documenting and executing unit test cases are the responsibility of the developers.	Microsoft	Microsoft	LAUSD	Development
System / Functional Testing	System/Functional Testing focuses on the functionality meeting the design.	Microsoft	LAUSD	LAUSD	Development
Integration Testing	Integration Testing focuses on the integration and interaction of the newly delivered solution components with previously implemented system components, or	LAUSD	LAUSD	Microsoft	Test
Performance and Stress Testing (If mutually agreed in the related Enhancement Requirements)	Test and validate storage configuration with production hardware.	Microsoft	LAUSD	LAUSD	Test
Security Testing	Security testing focuses on ensuring users can access data and perform actions in a	LAUSD	LAUSD	Microsoft	Test / Pre-Prod
ADA Section 508 Testing	Section 508 testing focuses on accessibility of an application's functionality for those individuals	LAUSD	LAUSD	Microsoft	Test

User Acceptance Testing (UAT)	User functionality of key real world scenarios.	LAUSD	LAUSD	Microsoft	Test/Pre-Prod/Sandbox
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As defects are identified during testing, they will be prioritized in accordance with Section 7.8 of the Master Work Order. Except as otherwise agreed in writing by LAUSD, all Severity 1 and Severity 2 defects must be corrected and confirmed corrected as a pre-condition to acceptance of the Deliverable to which they pertain. Severity 3 and 4 defects will be reviewed and prioritized for correction in a future BSR Phase.

9. Enterprise Architect Role

Subject to Section 13 of the SOW, pursuant to Annex D – Key Microsoft Roles and Responsibilities; Enterprise Architect role description, Microsoft agrees to provide LAUSD up to 350 gratuitous Architectural Technical and/or Service Team delivery hours over the Performance Period of Statement of Work No. 1 (“ESP Services”). These Enterprise Strategy Program Services, including estimated expenses, are valued at \$120,000. Microsoft will provide these ESP Services, including travel and living expenses, at no cost to LAUSD and without expectation or entitlement to compensation, and LASD has no legal or moral obligation to pay for said services.