

The following item will be discussed at a virtual meeting of the Standing Committee on Finance and Operations on Thursday, June 11, 2020:

ROS #0-6 -Administration (May 15, 2020)

UPDATE ON THE STUDENT INFORMATION SYSTEM (SIS) PROCUREMENT PROJECT
– Center for Educational Leadership and Technology (CELT)

Committee Members

John L. Foley, Chair
Molly O. McCullough, Vice-Chair
Dianna L. Biancheria

Administrative
Representatives
Brian Allen

OFFICE OF THE
CLERK OF THE SCHOOL COMMITTEE
WORCESTER PUBLIC SCHOOLS
20 IRVING STREET
WORCESTER, MA 01609

AGENDA #2

The Standing Committee on FINANCE AND OPERATIONS will hold a meeting:

on: Thursday, June 11, 2020
at: 5:00 p.m.
in: the Esther Howland Chamber at City Hall

ORDER OF BUSINESS

- I. CALL TO ORDER
- II. ROLL CALL
- III. GENERAL BUSINESS

gb #9-11 - Administration (January 2, 2019)

To review the annual audit and agreed upon procedures on the Independent Accountant's Report on Applying Agreed Upon Procedures for Student Activity Fund Testing for fiscal years 2016, 2017, and 2018 prepared by CliftonLarsenAllen, LLP.

gb #9-260.1 - Administration/Mr. Monfredo/Miss Biancheria/Mr. Foley/Ms. McCullough/Mr. O'Connell (January 6, 2020)

Response of the Administration to the request to provide an update on the mold problem at Columbus Park Preparatory Academy and indicate whether or not the City Health Department has provided any recommendations for remediation of this problem.

gb #9-266 -Administration (August 21, 2019)

To review the status of the FY20 Budget and make appropriate transfers as required.

gb #9-267 -Administration (August 21, 2019)

To review the annual audit and agreed upon procedures report on compliance and internal controls for the City of Worcester, including the Worcester Public Schools, for the year that ended on June 30, 2019 which included the Government Accountability Office (GAO) and the Office of Management and Budget (OMB) A-133 Reports and the Management Letter.

gb #9-268 -Administration (August 21, 2019)

To review the annual audit and agreed upon procedures on the Independent Accountant's Report on Applying Agreed Upon Procedures for Student Activity Fund Testing for fiscal year 2019.

gb #9-269 -Administration (August 21, 2019)

To review the annual audit and agreed upon procedures on the Independent Accountants' Report on Applying Agreed Upon Procedures for the Department of Elementary and Secondary Education End of Year Financial Report for fiscal year 2018-19.

gb #9-355 -Miss McCullough/Miss Biancheria/Mr. Foley/Mr. Monfredo (October 23, 2019)

Request that the Administration explore the feasibility of providing bus transportation to secondary students that live less than 2 miles from school.

gb #0-33 - Mr. Foley/Mrs. Clancey/Ms. McCullough/Mr. Monfredo/Ms. Novick (January 8, 2020)

To include a standing item for "Transportation Update" at each Finance and Operations committee meeting with information provided regarding the problems facing student transportation and improvements experienced.

gb #0-58 - Ms. Novick/Miss Biancheria/Mr. Foley/Mr. Monfredo (January 29, 2020)

To discuss the proposal to move city polling locations into the Worcester Public Schools.

ROS #0-6 -Administration (May 15, 2020)

UPDATE ON THE STUDENT INFORMATION SYSTEM (SIS) PROCUREMENT PROJECT – Center for Educational Leadership and Technology (CELT)

IV. ADJOURNMENT

Helen A. Friel, Ed.D.
Clerk of the School Committee

STANDING COMMITTEE: **FINANCE AND OPERATIONS**

DATE OF MEETING: Thursday, June 11, 2020

ITEM: Administration (May 15, 2020)

UPDATE ON THE STUDENT INFORMATION SYSTEM (SIS) PROCUREMENT PROJECT –
Center for Educational Leadership and Technology (CELT)

PRIOR ACTION:

- 5-21-20 - Bob Walton, Information Technology Officer, provided background on the current SAGE software which has gone from 300 staff and students to over 40,000. The Administration sought input from principals, parents, students, staff and community which lead to the hiring of a consultant from CELT (Center for Educational Leadership and Technology). He introduced Dr. John Phillipio, Founder and Executive Director of CELT to present the PowerPoint. Dr. Phillipio stated that he was impressed by the positive school culture in the WPS which is a critical factor in the success of upgrading to a new system. He remarked that the interest from parents and students, who are part of the focus groups, was crucial. He said that the new SIS would provide a more streamlined point of entry for users and more consistent data, as well as new features that the SAGE system does not have.
- Mr. Monfredo stated that this is long overdue and it is time to move forward.
- Ms. Novick questioned the Administration's decision to hire a consultant rather than an internal employee.
- Mr. Walton stated that although the plan was to initiate on-line grading, that would only be for a short period of time.
- Ms. Novick requested a breakdown in cost to implement the system. She checked the section under the FY20 budget Non-Instructional Support Salaries and there was a half year position that had been added. There was no discussion with the School Committee about this process being changed. She also requested a further description of the islands.
- Mayor Petty requested that the item be referred to the Standing Committee on Finance and Operations for further discussion.
- Superintendent Binienda stated that the SIS is really needed and asked that the process not be held up.
- On a roll call of 7-0, the item was referred to the Standing Committee on Finance and Operations.

BACKUP:

- Annex A (33 pages) contains a copy of the PowerPoint presentation.
Annex B (1 page) contains a copy of the cost analysis.
Annex C (5 pages) contains a copy of information regarding the item.



Update on the Student Information System (SIS) Procurement Project

Executive Briefing for:

- Superintendent Ms. Maureen Binienda
- School Committee Members

Thursday, May 21, 2020



Presentation Overview

- What are some general SIS Procurement observations to date?
- What is the status of the SIS Procurement project?
- What are the critical success factors associated with SIS procurement, implementation, and integration going forward?
- How can WPS use the new SIS to reduce the “Islands of Information” and develop a more learner-centered, secure data system?
- What are the major upcoming milestones and timelines?
- Questions/answers and closing comments.

What are some general SIS procurement observations to date?



Islands of Information and Technology



SAGE



Mosaic



Versatrans



Personnel/Payroll



Pentamation



**Digital
Curriculum**



**School Improvement
Planning**



Learning Management

WPS – Past and Future State

Past

- SIS is one of many isolated islands of information
- Past software applications, services, process improvements, and project management were budgeted separately
- Significant number of manual processes are time consuming and create multiple points of entry causing inconsistent data
- There is a need for well-documented framework for aligning people, processes, programs, projects, and data

Future

- SIS is the electronic bionic heart of a Learning Management System
- SIS Procurement has a comprehensive 5-year total cost of ownership budget
- Portal-based system with pre-defined digital dashboards. Data will be entered and validated at the source
- WPS adopted a comprehensive “Enterprise (Information) Data Architecture” that aligns people, processes, program, projects, and data

SIS Challenges, Risks, and Options

- Process Improvements and Alignments
- Training and Support vs. Intuitive End-user Interface
- Data Governance, Management, and Ownership (message and subscribe relationships)
- Support – 24 x 7 x 365
- Cyber Security, Data Accuracy, and Network Reliability
- Installation vs. Implementation vs. Integration
- Personalized, Blended, and Remote Learning

Why a Contemporary SIS Now?

Worcester Public Schools' new SIS will:

- Improve the use of data to guide and inform student learning anywhere and at any time
- Be much more user-friendly and intuitive
- Become the cornerstone of WPS' data management architecture
- Increase the use of data to improve decision-making and redirect costs
- Support more contemporary education reforms and post-COVID19 data management needs
- Encourage data use by parents, teachers, and students
- Streamline State and Federal reporting requirements

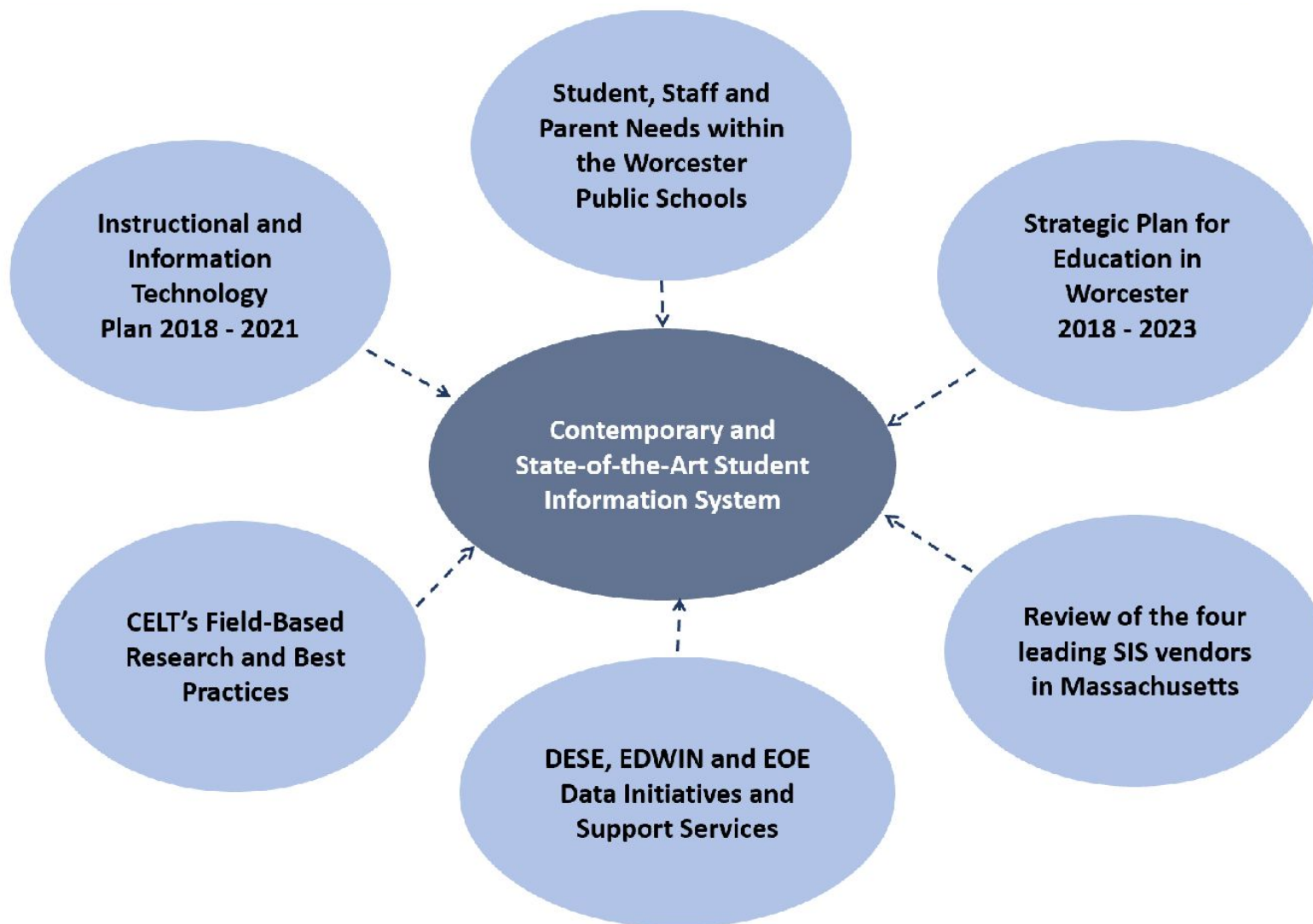
How Do You Budget for IT?



“A person who needs a tool but cannot afford it eventually pays for the tool but never gets it.”

- Henry Ford

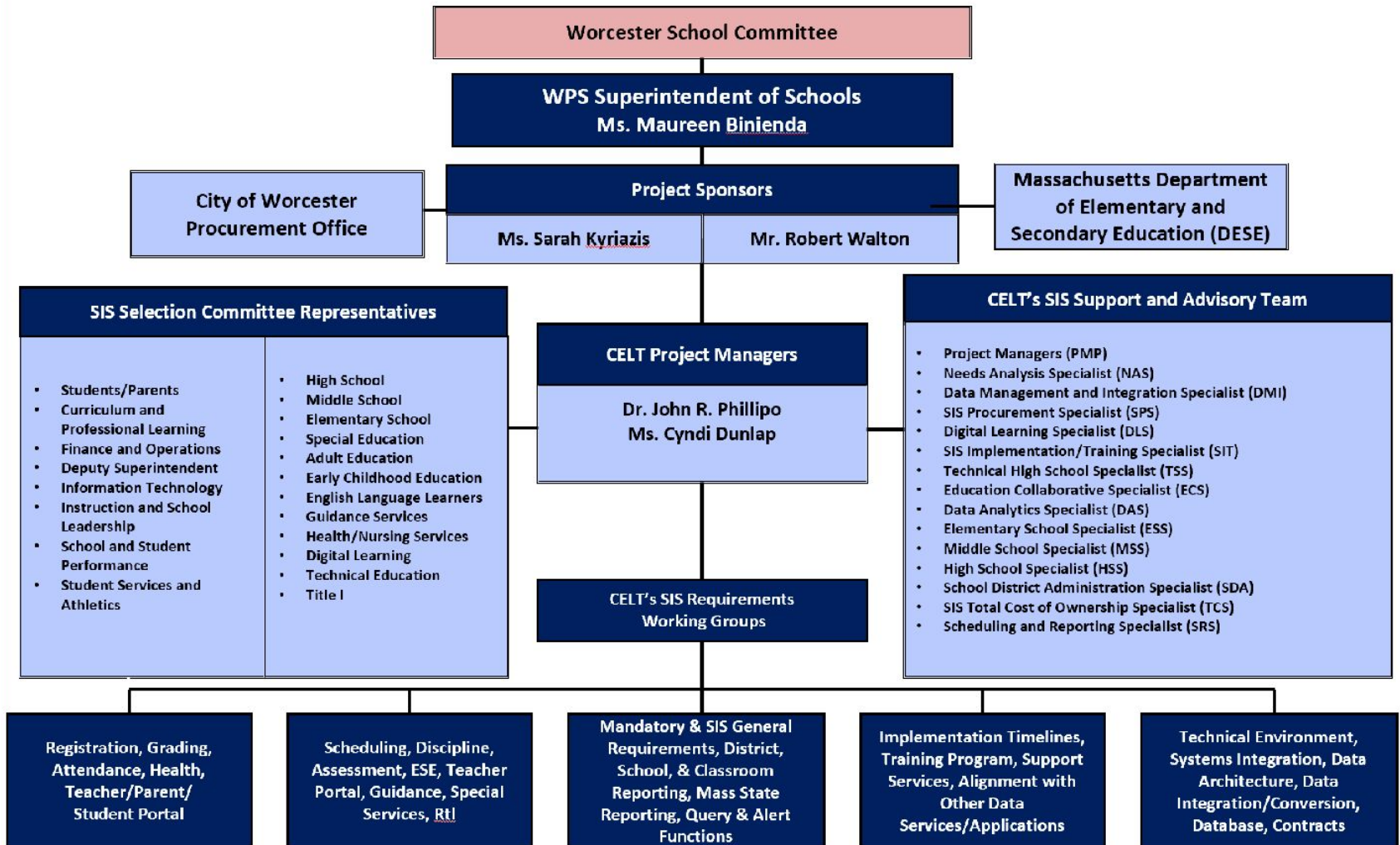
Strategy for Selecting a New SIS



What is the status of the SIS procurement project?



SIS Procurement Project Organizational Chart



Current SIS Needs Analysis Activities

- Superintendent's Invitation to Participate
- Research and Best Practices
- Topical Focus Groups
- Key Stakeholder Interviews
- Document Reviews and Analysis
- Birds-of-a-Feather Focus Groups
- Working Group Analysis and RFP Reviews

Level of Inquiry and Participation*

- Students
- Parents
- Classroom Teachers
- School Principals / Assistant Principals
- District Administrators and Support Staff
- School Committee and Community

* Includes representatives from elementary, middle, high, technical and alternative schools.

SIS Milestones and Timeline

- **Planning and Orientation** Mar – Apr 2020
- **Data Collection and Needs Analysis** Apr – May 2020
- **Draft & Vet Functional Requirements and Bid Specifications** May 26 – Jun 12, 2020
- **Advertise & Circulate RFP** Jun 15 – Jul 10, 2020
- **Evaluate RFP Responses** Jul 13 – Jul 24, 2020
- **Vendor Demonstrations and Reference Checks** Aug 3 – Aug 7, 2020
- **Vendor Selection** Aug 10 – Aug 14, 2020
- **Develop/Negotiate Contract** Aug 17 – Aug 21, 2020
- **Plan/Conduct Implementation** Aug 24, 2020 – Dec 17, 2021

SIS Procurement Functions and Features

A. Registration, Grading, Attendance, Health, Teacher/Parent/Student Portal

- Unique Student ID
- Registration
- Attendance
- Transfers
- Gradebook/Assessment
- Transcripts
- Home/School Portal

B. Scheduling, Discipline, Assessment, ESE, Teacher Portal, Guidance, Special Services, Rtl

- Scheduling (Master, HS, MS, Pre-school, Elem)
- Health
- Discipline
- Special Education

C. Mandatory & SIS General Requirements, District, School, & Classroom Reporting, Mass. State Reporting, Query & Alert Functions

- Edit Rule Standardization
- Data Architecture
- School/Parent Reporting
- Data Import/Export
- State/Federal
- System Interoperability
- Transportation

SIS Procurement Functions and Features

D. Implementation Timelines, Training Program, Support Services, Alignment with Other Data Services/Applications

- SIS Proficiencies by Position
- Training Documentation
- Helpdesk
- Just-in-Time Learning Apps
- Maintain Skills Acquisition Inventory
- Project Management

E. Technical Environment, Systems Integration, Data Integration/Conversion, Database, Contracts

- Hardware Configuration
- Network System
- Software Tailoring
- Software Modifications
- System Interfaces
- Contract Development

What are the critical success factors associated with SIS procurement, implementation, and integration going forward?



SIS Procurement Strategy

The purpose of an SIS procurement is not to produce a SIS RFP, but rather to produce RESULTS, such as:

- Improve student achievement
- Build constituency support
- Enhance staff productivity
- Support operational efficiency
- Foster learner-centered decision making

Getting it Right: Required Level of Effort

- Needs Analysis and SIS Procurement 25%
- Process Improvement and Alignment 20%
- Data Governance and Management 20%
- Training and Ongoing Support Plan 15%
- Organizational Development Strategy 10%
- Project Management, Quality Assurance, and Oversight 10%

100% = Success

SIS Training Plan and Support Program

The following elements are part of a comprehensive SIS training and support program:

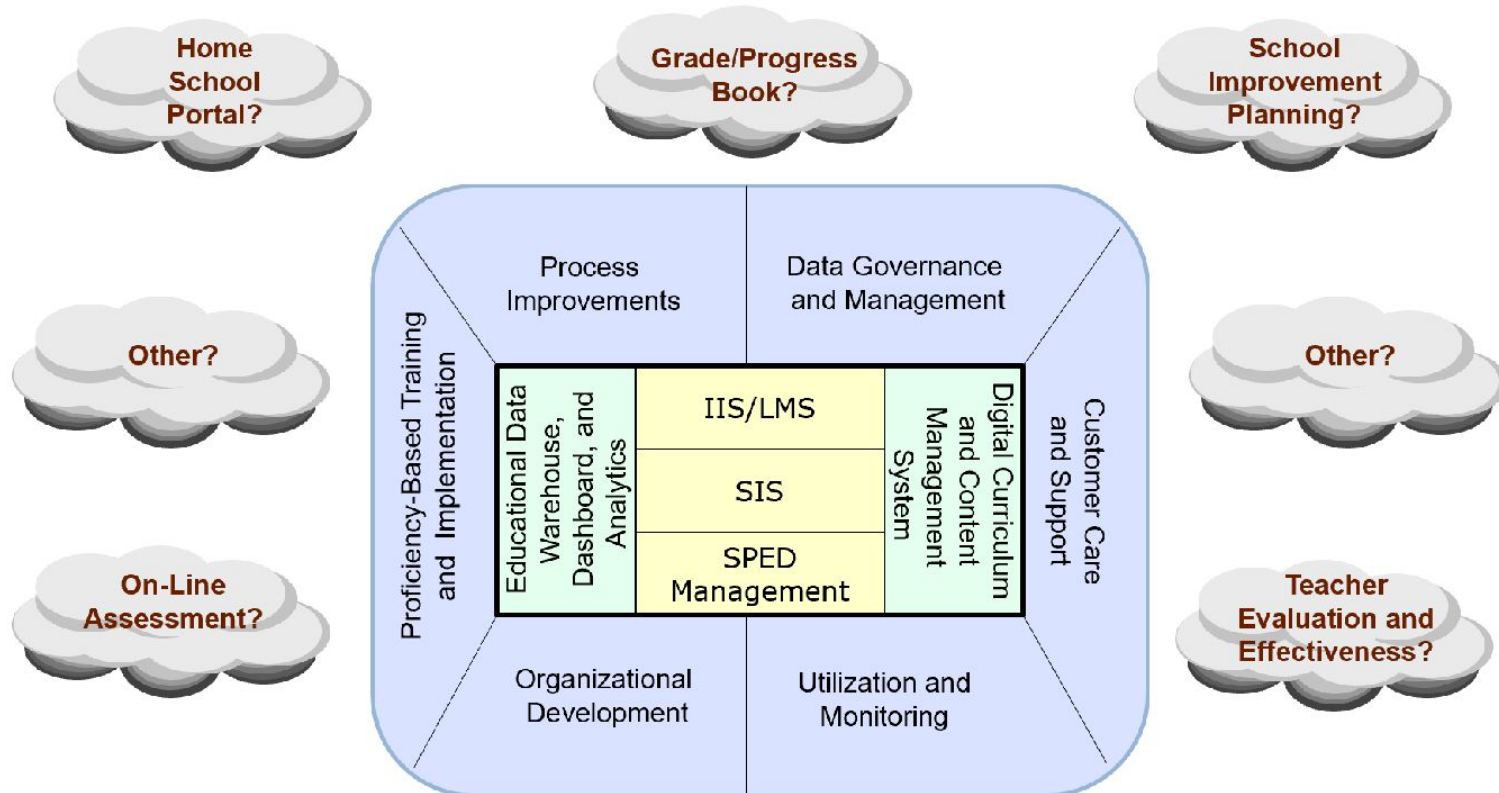
- Classroom Training*
- Topical Webinars*
- Online Training Modules*
- Role-Based Portal and Screens
- Proficiency Based Management System (Basic, Intermediate, Advanced)
- Adult Learning Styles/Theories
- Business Process Specialists
- IT Experts/Advisors
- School-Based Facilitators
- Area-Based Support Services
- FAQ Website*
- Help Desk Support Services*
- Just-in-Time Assistance*

* Digitally Archived and Searchable

How can WPS use the new SIS to reduce the “Islands of Information” and develop a more end-user friendly learner-centered data system?



Planning and Building WPS' Learning Enterprise System

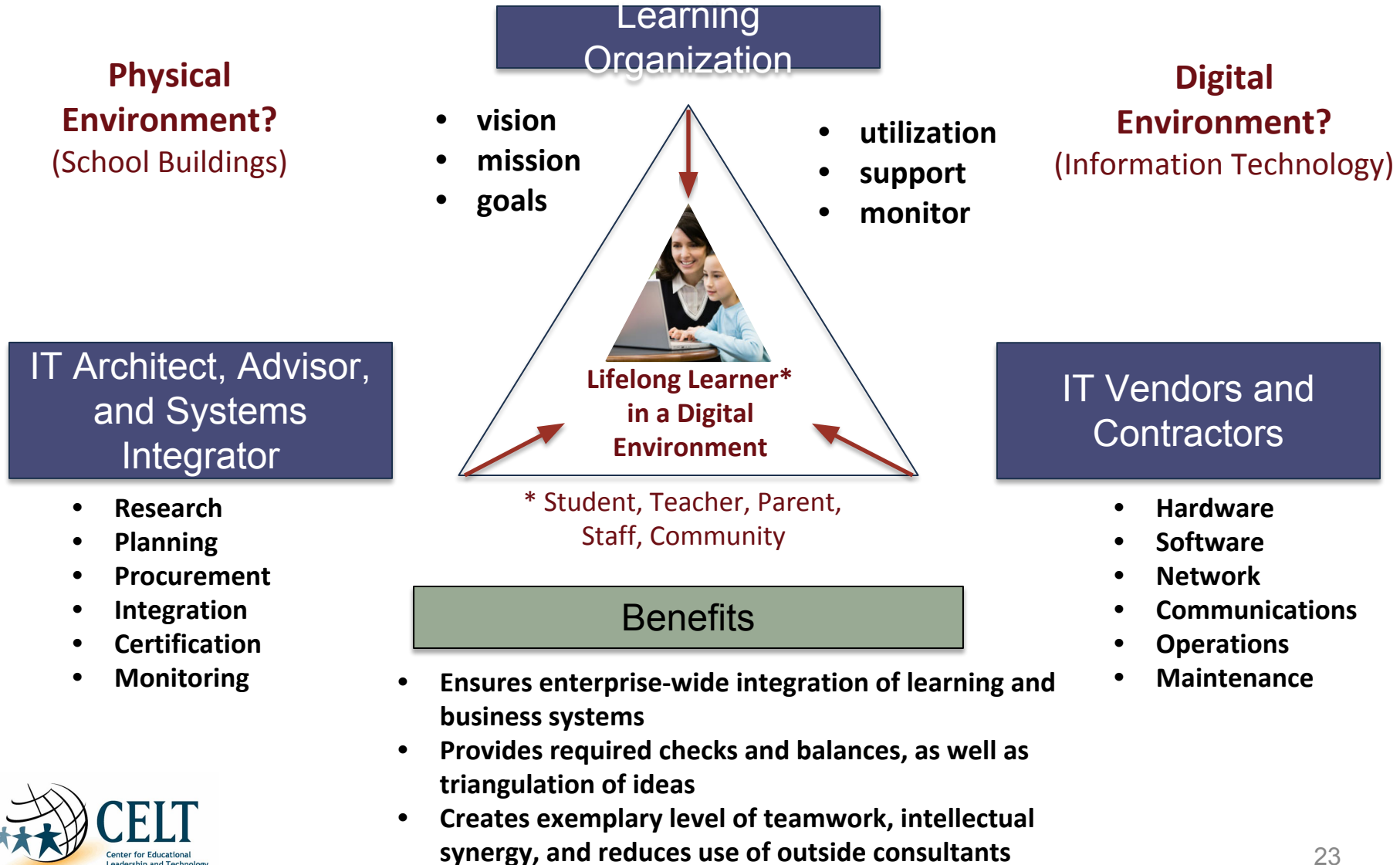


In support of...

- Personalized Learning
- Remote Learning
- Enterprise Architecture
- Mobility
- Charter Schools
- Career/Technical Education
- Life-Long Learning
- Social Media
- Competency-based Graduation
- Home Schoolers
- Learner-Centered Decision Making
- Parental Involvement

- Needs Analysis and Procurement
- Installation, Data Conversion, and Training
- End-user Implementation and Integration
- Broad-scale Effort to Make WPS' Data Useful and Used
- Ongoing Maintenance, Support, and Upgrades
- Adopt and Adapt an “Enterprise Data Architecture”
- Employ a “Triangulated” Approach to Project Management

IT Architect, Implementation, and Procurement Approach



Questions and Answers



What Else Should We Know?





Closing Comments

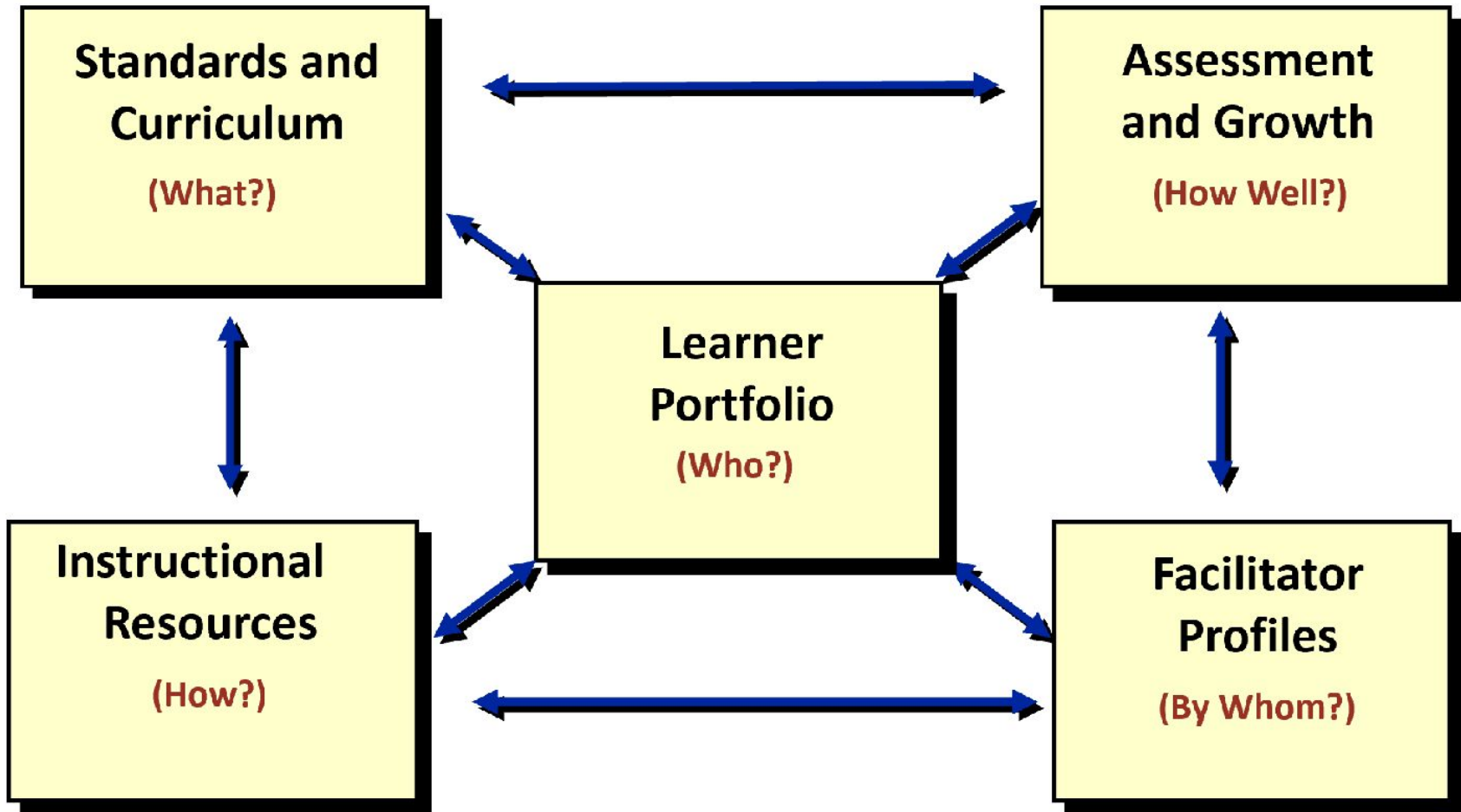


Creating a Data Management Architecture

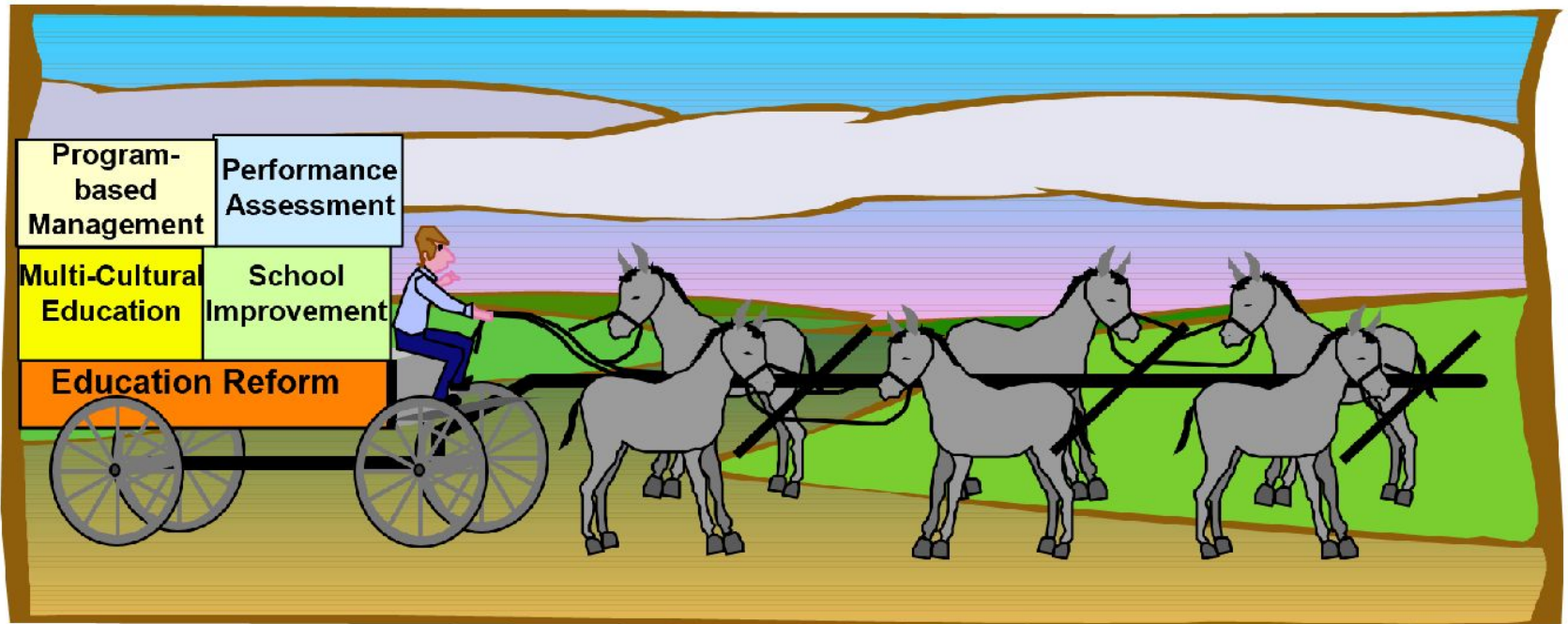
- Learner centered
- Instructionally focused
- Performance oriented
- Data driven
- User friendly
- Fiscally affordable



A Framework for Transporting Learning to the 21st Century



There's More to Technology Procurement than Just Hooking Things Up!



**Operational
Maintenance**

**Staff
Development**

**Organizational
Support**

Shifting How We Use Data

By Using Data as a Flashlight, and Not as a Hammer

* Adapted from the Data
Quality Campaign (DQC)



About CELT

For more than a quarter-century, the Center for Educational Leadership and Technology (CELT) has been the nation's preeminent thought leader and field-based practitioner in the alignment of leadership, learning, and technology in support of improved student achievement and enhanced staff productivity with an emphasis on the research and planning related to personalized, blended, and remote learning.

CELT's mission is to help learning organizations attain their vision, mission, and goals by integrating high-quality, mission critical **programs**, **services**, and **technology** with the organization's **people** and **processes** in the most timely, efficient, and cost-effective way possible.

Dr. John R. Phillip

Dr. John Phillip is the founder and Executive Director of the Center for Educational Leadership and Technology (CELT). CELT assists schools in linking 21st century educational reforms with the effective use of information technology. Dr. Phillip is nationally and internationally recognized as a resource consultant for learning organizations, businesses, and state/federal departments of education on issues related to architecting and implementing a "digital" infrastructure in support of contemporary teaching, learning, and management. He has taught graduate courses, authored journal articles, and made numerous presentations on interactive learning technologies and their impact on student achievement and educational leadership. Dr. Phillip is a former science/math teacher and school administrator. He has served as director of a national technology "lighthouse" program for at-risk youth, as well as a developer/demonstrator for three nationally validated (USDOE/OERI) education technology programs. He recently coauthored the article: Learning Management System: The Missing Link and Great Enabler and was recently recognized as Distinguished Alumni for Professional Achievement by Worcester State University.

Dr. Phillip completed his doctoral degree studies at the Harvard University's Graduate School of Education in the area of Administration, Planning, and Social Policy.

Contact Us

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WORKING DRAFT

Cost Estimates for SIS Needs Analysis, Procurement, and Implementation

No.	TASK	Cost/Student	Year 1	Year 2	Year 3	Year 4	Year 5
Core SIS Services							
1.0	SIS Software License, Hosting, Updates and Backup Services	9.00	225,000	225,000	225,000	225,000	225,000
2.0	Data Migration/Conversion	1.00	25,000	0	0	0	0
3.0	Configuration of API Environment	1.00	25,000	0	0	0	0
4.0	Customization and Report Allowance	1.00	25,000	5,000	5,000	5,000	5,000
5.0	QA Test Environment	0.25	6,250	0	0	0	0
6.0	Implementation Management (Vendor)	0.50	6,250	6,250	0	0	0
7.0	Training and Support	4.00	50,000	25,000	12,500	12,500	10,000
	7.1 End User Training						
	7.2 Train the Trainer Program						
	7.3 Training Documentation and Video Archives						
	7.4 Training Updates						
	SUB TOTAL		362,500	261,250	242,500	242,500	240,000
	SUB COST PER STUDENT		14.50	10.45	9.70	9.70	9.60
Best Practice SIS Services							
8.0	Process Improvement and Management	2.00	25,000	25,000	0	0	0
9.0	Data Governance and Management	2.00	25,000	25,000	0	0	0
10.0	Project Management and Oversight (CELT)	1.75	43,750	43,750	0	0	0
11.0	Change Management	0.50	12,500	0	0	0	0
12.0	Legal Contract Review	0.10	2,500	0	0	0	0
13.0	HR/Organizational Development Assistance	0.50		12,500	0	0	0
14.0	Enterprise Data Management Architecture	0.50		12,500	0	0	0
15.0	Data Analytics and Visualization Tools	3.00		75,000			
	SUB TOTAL		108,750	193,750	0	0	0
	SUB COST PER STUDENT		4.35	7.75			
	TOTAL	0.00	471,250	455,000	242,500	242,500	240,000
	TOTAL COST PER STUDENT		18.85	18.20	9.70	9.70	9.60

Admin/Staff SAGE

- ▶ View Student Data
 - ▶ Enrollment Totals
 - ▶ Student Detail
 - ▶ Alumni Detail
 - ▶ Student Inquiry
 - ▶ Snapshot
 - ▶ Transcript
- ▶ Enrollment
- ▶ Attendance
- ▶ Discipline
 - ▶ Infraction
 - ▶ History
 - ▶ Summary
- ▶ Test Score
- ▶ Mark
 - ▶ Quarter/Interim
 - ▶ GPA
 - ▶ Rank
- ▶ Schedule
 - ▶ Compliance
 - ▶ Conflict
 - ▶ Reports
- ▶ Child Study
- ▶ ELL
 - ▶ Program
 - ▶ Service
- ▶ SpEd
 - ▶ IEProgram
- ▶ Sports
 - ▶ Eligibility
 - ▶ Participation
 - ▶ Summary
- ▶ Transportation
 - ▶ Routes
 - ▶ Orders
 - ▶ Stops
- ▶ Next Year
- ▶ Tools
 - ▶ Export/Query Data
 - ▶ Payroll
 - ▶ Misc Data



Student Portal

- ▶ Accounts Are Created Automatically
- ▶ Staff Can Reset Student's Password
- ▶ Student's Information
 - ▶ Student Profile
 - ▶ Attendance
 - ▶ Course History
 - ▶ Academic Standing
 - ▶ Quarter Mark
 - ▶ Interim Mark
 - ▶ Schedule
 - ▶ Next Year Schedule
 - ▶ Next Year Course Selection
 - ▶ Test Score
- ▶ Single Sign-On
 - ▶ Naviance
 - ▶ McGraw Hill ConnectED
- ▶ Quick Links



Parent Portal

- ▶ Self Registration
- ▶ Password Recovery
- ▶ Student Claiming Wizard
- ▶ Student Information
 - ▶ Student Attendance
 - ▶ Course History
 - ▶ Student Marks
 - ▶ Student Schedule
- ▶ Quick Links



MySAGE (Teacher Access)

- ▶ Teacher version of SAGE
- ▶ Permissions automated
 - ▶ teachers gain access as long as they are linked to students



MySAGE

- ▶ View Student Details
 - ▶ Student photo
 - ▶ password reset
 - ▶ attendance summary
 - ▶ test scores
- ▶ Homeroom list
- ▶ Class List
- ▶ Mark
 - ▶ Interim/Quarter
- ▶ Schedule
 - ▶ Current year
 - ▶ Next Year Location
 - ▶ Next Year course selection
 - ▶ Next Year Schedule
- ▶ Course History
 - ▶ Current year marks in all classes
 - ▶ Prior year marks
- ▶ IEP Program
 - ▶ Most current IEPs available for all active SpEd students
- ▶ Version History
 - ▶ Tracking of new features added

