Georgia Department of Education
Technology Services

3 Year Technology Plan
# 3 Year Technology Plan

Initiatives for Georgia’s Department of Education Technology Services

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TECHNOLOGY SERVICES VISION

Utilize technology to make education work for Georgia’s teachers, students, parents, business/industry, and educational partners by providing them with timely and accurate information using high quality data and tools that are easy to use, powerful, cost effective and readily accessible.

TECHNOLOGY SERVICES GOALS

The 3 components to getting timely and accurate information are high quality data, tools that easily allow a user to convert data into information, and high-speed access to both the data and tools. Accordingly, Technology Service’s strategy is founded on these three goals.

1. Collect and Maintain High Quality Data
2. Provide Easy, Powerful and Cost Effective Tools
3. Provide Fast and Ubiquitous Access to Data and Tools
The initiatives to accomplish these goals will be delivered in stages with the end result being the ability to provide customized education experiences to every Georgia Public School student.

**Georgia’s Path to Personalized Learning**

**Collect and Maintain High Quality Data**

Georgia is fortunate it had the foresight to begin annual collections of public school students and teachers information ten years ago so we already have a large pool of data about our students and teachers. The data collections team has also put into place the data collection policies and business rules to ensure the timeliness, integrity, and accuracy of the data being collected. The primary initiative for this goal is the ongoing support and enhancement of the data collection efforts. In addition, we are also pursuing the following high quality data initiatives:
• Provide teachers and administrators with ongoing training in collecting and reporting data to ensure high quality data. This training is delivered on line as well as at an annual data conference.

• Provide teachers and administrators with operational data stores so they can upload data into the Longitudinal Data System (LDS) as frequently as they want. This will provide LDS with more real-time information without putting a mandated burden on districts.

• Partnering with the Georgia Student Information System Association to ensure they have a voice in how data is collected and used within Georgia. This group also serves on the governance board for LDS.

• Provide a new accountability report called College and Career Readiness Performance Indicators (CCPRI) that will contain a broader set of metrics for our districts, parents, educational partners, and business & industry to better assess the progress towards Georgia’s Department of Education (GaDOE) goals. This will require a new set of quality data to be collected in addition to the current data we already collect.

• Provide new Teacher and Leader Effectiveness Measurements (TLEM) to help our districts, parents, educational partners and business & industry to better assess effectiveness of Georgia’s administrators and teachers. This will require new set of quality data to be collected in addition to the current data we already collect.

• Collaborate with the Alliance agencies to build the P20 database. This effort will allow the GaDOE access to a broader set of data about Georgia’s Students. Including, giving GaDOE ability to assess student success after graduation.

PROVIDE EASY, POWERFUL, AND COST EFFECTIVE TOOLS

Tools are the software systems that let users work with their data. Easy tools are intuitive and enable users to acquire, combine, analyze, and turn data into actionable information with minimal effort. Powerful tools are integrated with all of the users’ other tools eliminating the need to have multiple password and ids, rekey information or manually import it from other tools. Cost effective tools are affordable and can be sustained without high annual subscription or maintenance fees. They can also be modified, as the user owns the tool.

Technology Services is accomplishing this goal by implementing a portfolio of statewide applications that are fully integrated with one another and delivered via a foundational tool called the tunnel, which connects the local districts Student Information System (SIS) to the
GaDOE’s network. This connection allows users to access all state tools securely without any additional ID or password.

INITIATIVES FOR TEACHERS AND ADMINISTRATORS

• Provide teachers with access to their students’ longitudinal academic data and training on how to use the data effectively via the GaDOE’s LDS.

• Provide teachers with access to high quality digital resources that align to the GaDOE Common Core Georgia Performance Standards (CCGPS). This will save teachers from having to ensure the resources are aligned and effective. Within this system teacher can collaborate and share resources. These will be accessed via the GaDOE’s Teacher Resource Link (TRL).

• Provide Teachers with access to virtual textbooks to promote online-personalized learning via the GaDOE’s Virtual Learning.com website. Georgia Virtual School (GAVS) also has a training program it conducts for all brick and mortar teachers who want to set up a blended learning environment in their classroom.

• Provide Teachers with access to online courses to enable multiple personalized learning opportunities via the GaDOE’s GAVS. Provide teachers with credit recovery option to reduce the dropout rate via the GaDOE’s credit recover program within GAVS.

• Provide teachers with access to the GaDOE Instructional Improvement System (IIS) to enable the use of data to differentiate their students provide early warning indicators and promote personalized learning.

• Provide teachers with access to a Learning Management System (LMS) to enable personalized learning via the GaDOE’s LMS.

• Provide teachers with access to the GaDOE IIS to assist teachers and administrators in determining their strengths and weakness and obtaining the appropriate professional development.

• Provide teachers with a GaDOE Individual Educational Program (IEP) system to track all special needs students. This system would not require the teacher to enter all of the student info as it would be integrated with the LDS so data would automatically be populated and since this is maintained as a GaDOE system, as the student moved, all of their IEP information would be accessible by whatever school they moved to within the state. This system is delivered via LDS.
• Provide teachers and administrators with the GaDOE high school feedback system to provide information on the academic achievement of their graduates in post secondary schools. This data would include which student needed remediation and could indicate weakness within the K12 curriculum or specific teachers. This system will be available via LDS.

• Provide teachers with training so they can effectively use the state tools. This training will be available online within the various tools they have access to such as the LDS, TRL, IIS, LMS and GAVS.

• Maintain all student data in GaDOE repositories so that as a child moves within the state their data follows them. This is being done as the systems are being built.

• Provide teachers with access to common core standards aligned, high quality digital resources to enable blended learning via the GaDOE’s Teacher Resource Link.

• Provide teachers with a GaDOE Online Assessment System (OAS) to enable the creation, administration and analysis of formative tests. The system is delivered via LDS.

• Provide teachers and administrators with a GaDOE growth model that indicates academic growth patterns for students. The data from this tool can create an early warning indicator, enable personalized learning or uncover teacher or curriculum strengths and weaknesses. The system is delivered via LDS.

• Provide teachers and administrators with an operational data store so that they can upload data into LDS as frequently as they want. This will provide LDS with more real-time information without putting a mandated burden on districts.

• Technology Services maintains a rolling three-year technology plan that addresses sustainability and initiatives required to support keeping Georgia’s Teachers effective.
INITIATIVES FOR STUDENTS

- Provide students with training on Digital Citizenship and Digital Literacy to promote the effective use of technology. These will be delivered online via the GaDOE GAVS.

- Provide students with access to a LMS to enable personalize learning via the GaDOE’s student portal.

- Provide students with access to virtual textbooks to promote online personalized learning via the GaDOE’s Virtual Learning.com website.

- Provide students with access to online courses to enable multiple personalized learning opportunities via the GaDOE’s GAVS.

- Provide students with access to their longitudinal academic data and training on how to use the data effectively via the GaDOE’s student portal.

- Provide students with access to aligned, high quality digital resources to enable blended learning via the GaDOE’s student portal.

- Provide students with credit recovery options to reduce the dropout rate via the GaDOE’s credit recover program within the GAVS.

- Provide students with a virtual guidance counselor that can remind them of upcoming milestones they need to achieve, such as taking the PSAT or applying for scholarships. It would also record all of the activity so the student would have an historical log of their activities. This will be delivered via the GaDOE’s student portal.

- Maintain all student data in GaDOE repositories so that as a child moves within the state their data follows them. This is being done as the systems are being built.

- Technology Services maintains a rolling three-year technology plan that addresses sustainability and initiatives required to support keeping Georgia’s Student College and career ready.
INITIATIVES FOR PARENTS

• Provide parents with access to their student’s longitudinal academic data and training on how to use the data effectively via the GaDOE’s LDS. This information will assist parents with engaging in their child’s education.

• Provide parents with access to aligned, high quality digital resources to enable blended learning via the GaDOE’s parent portal.

• Provide parents with access to a learning management system to enable personalized learning via the GaDOE’s LMS.

• Provide parents with access to virtual textbooks to promote online personalized learning via the GaDOE's Virtual Learning.com website.

• Provide parents access to the credit recovery option to reduce the dropout rate. This system is delivered via the GaDOE’s credit recover program within the GAVS.

• Provide parents with access to online courses to enable multiple personalized learning opportunities via the GaDOE’s GAVS.

• Maintain all student data in GaDOE repositories so that as a child moves within the state their data follows them. This is being done as the systems are being built.

• Provide parents with access to high quality digital resources to enable blended learning via the GaDOE’s parent portal.

• Provide parents with a GaDOE IEP system to track all special needs students. Since this is maintained as a GaDOE system, as the student moved, all of their IEP information would be accessible by whatever school they moved to within the state. This system is delivered via parent portal.

• Provide parents with a GaDOE OAS to enable the creation, administration and analysis of formative tests. The system is delivered via the LDS.

• Provide parents with a GaDOE growth model that indicates academic growth patterns for students. The data from this tool can be used as an early warning indicator and enable personalized learning. The system is delivered via parent portal.
• Provide parents with a virtual guidance counselor that can remind them of upcoming milestones their child needs to achieve, such as taking the PSAT or applying for scholarships. It would also record all of the activity so the parent would have an historical log of their activities. This will be delivered via the parent portal.

• Technology Services maintains a rolling three-year technology plan that addresses sustainability and initiatives required to support keeping Georgia's parent engaged.

INITIATIVES FOR BUSINESS AND INDUSTRY

• Provide students, teachers, and parents with the data, tools and access necessary to use technology as an enabler to create a skilled workforce.

• Provide online access to Career, Technical, and Agricultural Education (CTAE) and career pathway courses to maximize opportunities to all students to gain the workforce skills offered by these courses. This is delivered via the GAVS.

• Provide access to high-speed broadband connectivity 24/7 to local county offices.

• Develop industry specific virtual courses to increase the portfolio of course offerings to students. This is delivered via GAVS.

• Provide business and industry a view into the return on investments in education. Financial data will be merged with student achievement data to produce this information. Access is through a public facing part of the LDS.
INITIATIVES FOR EDUCATIONAL PARTNERS

- Provide Georgia's teacher preparation programs comprehensive training kits for all state tools so that new teachers coming into the classroom will have already been trained and certified on how to effectively use GaDOE's data, tools and bandwidth.

- Partnering with the First Lady's Children's Cabinet to share data between state agencies such as Division of Family and Children Services (DFACS), Department of Juvenile Justice (DJJ), Juvenile Court and Department of Human services (DHS).

- Partner with Department of Juvenile Justice (DJJ) to provide them access to the GaDOE LDS so they can better serve their students. This access is provided via the LDS system.

- Partner with Department of Health Services (DHS) to integrate the information in the Georgia Registry of Immunization Transactions and Services (GRITS) into the GaDOE LDS so they can better serve their students.

- Partner with local school districts to produce an annual longitudinal data report for state legislators.

- Partner with Untied Way to provide student data to their agencies to enable them to measure their various program effectiveness on multiple outcomes, such as: student achievement, absenteeism, dropout prevention, literacy and discipline.

- Participate with efforts to create Common Educational Data Standards (CEDS). This effort will allow states to leverage their resources.

- Collaborate with the 17 Race to the Top states to leverage and share resources. This effort will allow Georgia to utilized digital content and professional development that other states have created for the common core.

- Participate in states effort to develop and align digital resources with the common core standards. This effort will allow Georgia to utilized digital content and professional development that other states have created for the common core. It will also allow Georgia to share our digital content with other states.
• Partnering with CCSSO to develop an initiative with their technology arm Education Information Management Advisory Consortium (EIMAC) to drive the CCSSO’s strategy of building robust state information systems.

• Collaborating with the International Association for K-12 Online Learning (iNACOL) to set standards for virtual schools. This effort will assist Georgia in ensuring our student have access to high quality online learning. This work will be used to develop Georgia’s clearinghouse for virtual courses specified by house bill 175.

• Partnering with our legislators to develop a model for the GAVS that creates a self-sustaining, low cost virtual courses for Georgia’s students.

• Partner with vendors to establish a working model of the 21st century classroom. The working model is called the Center for Classroom Innovation (CCI) and is located in the GaDOE building.

• Partner with the Georgia Student Information System Association to ensure they have a voice in how data is collected and used within Georgia. This group also serves on the governance board for LDS.

• Partner with the State Instructional Technology committee to ensure Technology Services is providing the best support to them. This group also serves on the governing board for the CCI.

• Technology Services maintains a rolling three-year technology plan that addresses sustainability and initiatives required to support keeping Georgia’s educational partners engaged with the GaDOE.

• Partner with the Alliance agencies to build the P20 database. This effort will allow the alliance agencies access to a broader set of information about Georgia’s Students.
PROVIDE FAST AND UBIQUITOUS ACCESS TO DATA AND TOOLS

The best tools and data are useless unless you have access to them. Technology Services final goal is to provide fast and ubiquitous access to the GaDOE’s data and tools for Georgia’s teachers, students and parents. The state of Georgia currently supplies 3MG of bandwidth to each public school in Georgia. The 3MG allows for a moderately fast connection to the internet for about 30 users at one time. To pursue the blended learning environment, which mixes traditional brick and mortar teaching with online courses, hundreds of users, will need to be connected concurrently. If we are to pursue personalized learning where each student learns at a different pace then we will need to have the entire student body and teachers of a school connected at the same time. This will require more than the 3MG schools have today. The primary initiative here is to obtain a minimum of 100MG of bandwidth per school and investigate methods to achieve that connection. One possible solution is to collaborate with the Board of Regents to leverage their university network called Peachnet. Another option would be to work with commercial vendors to establish the capacity. Currently we are costing out these options.

In addition, we are pursuing the following access initiatives:

- Maintain all networks, hardware, data and software tools in a harden data center to ensure reliable performance, constant availability and secure access. Hardened data center and backup data center are operated with a 3 year refresh plan to ensure performance.

- Partner with the Department of Administrative Services (DOAS) to establish statewide contracts for procurement of wireless technology to aid schools in connecting to the state 100MG per school.

- Maintain all student data in GaDOE repositories so that as a child moves within the state their data follows them. This is being done as the systems are being built.
TECHNOLOGY SERVICES STRATEGIC PLAN

Provide Fast and Ubiquitous Access to Data and Tools

- Enables access to digital resources for teachers, students, and parents.
- Enables access to state tools.
- Enables online testing.
- Provides faster access to resources.
- Enables BYOD.
- Reduces the need for textbooks.
- Provides access to data center services.

Provide Easy, Powerful and Cost Effective Tools

- Delivers state-wide common tools to teachers, administrators, students, and parents.
- Provides longitudinal student data to teachers, parents, and students.
- Provides access to digital resources for teachers, students, and parents.
- Enables student information to move with student.
- Provides access for teachers, parents, and students to over 100 online courses.
- Enables rollout of Career Pathways.
- Enables Roll out of Common Core Standards.
- Enables Districts ability to get information on out of state students.
- Enables district to track students who have left the state.
- Reduces the need for districts to spend money on system tool.
- Enables teacher prep programs to train pre-service teachers on DOE data and tools.
- Enables blended learning in brick and mortar classrooms.
- Enables customized learning.

Collect and Maintain High Quality Data

- 10 years of longitudinal history on 1.6 million Georgian students over 16 million records.
- Linkages between students, teachers, courses, professional development, and teacher prep programs.
- 550 business rules to insure quality.

The Internet Cloud

District Networks

Data Center Services

Other Internet Services

Longitudinal Data System

College Career Readiness Performance Index

Digital Resources

IEP RTI System

Gadoe Data Collections

Finance Information System

Gadoe Infrastructure

Gadoe Instructional Technology

Gadoe Instructional Improvement System

Survey System

Common Core Linked to Digital Resources

Online Assessment System

Class Keys Leader Keys Teacher Keys

Gadoe Assessment System

Gadoe Student Growth Models

Gadoe Data Applications

Ready Now

Working on