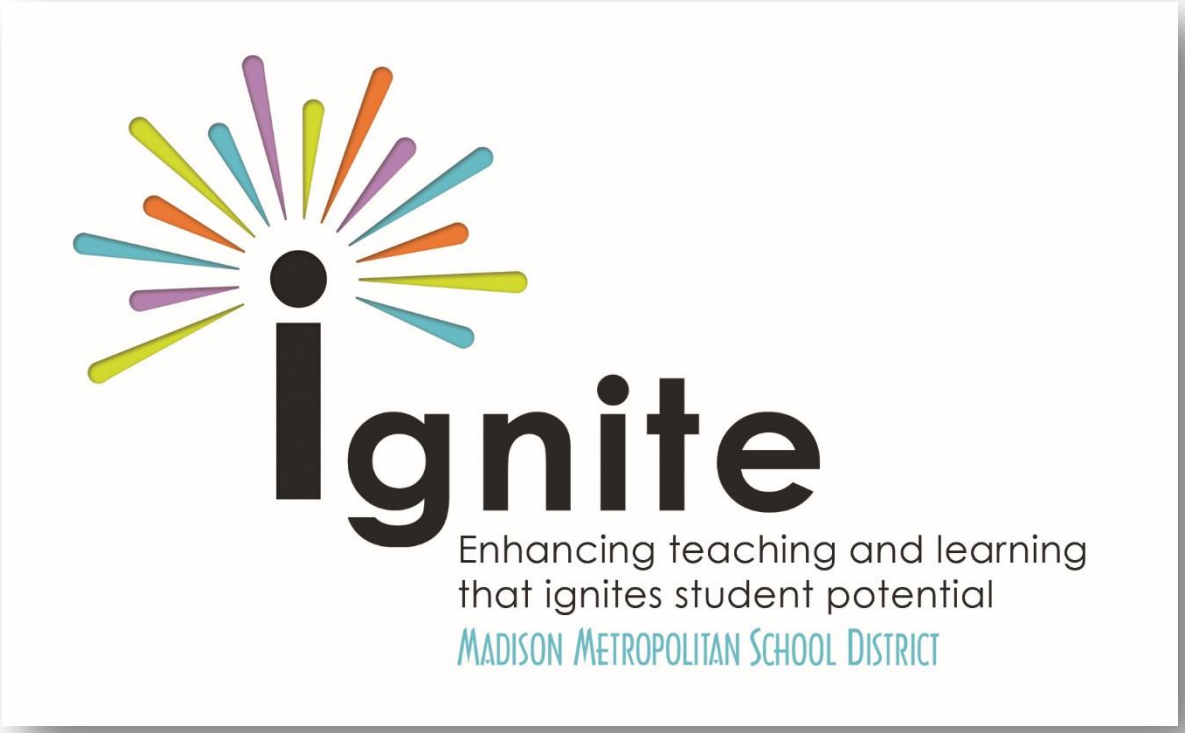
MADISON METROPOLITAN SCHOOL DISTRICT



Information and Technology Plan

September 2016

Introduction

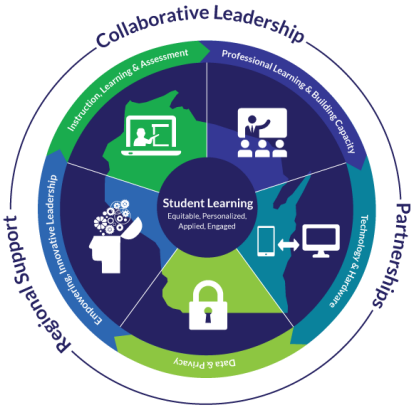
MMSD is intensely focused on ensuring that every school is a thriving school that prepares every student for college, career and community. The original Information & Technology Plan, approved in January 2014, began with a planning and implementation process for the development of a district digital culture that undergirds all priority areas in the Strategic Framework. Since 2014, we have learned even more about the importance of focusing on the "why" of instructional technology. This learning has encouraged us to continue leading with instruction and foreground student learning as the reason for our instructional technology investments. We know that without appropriate curriculum and pedagogy, we will not maximize the potential of instructional technology. Our commitment to the intentional integration of technology, curriculum, and instruction is evidenced by the location of our Instructional Technology staff within Curriculum & Instruction as opposed to Technical Services. Leading with the "why" of great teaching and learning informs many of our next steps. For example, we are branding the Information & Technology Plan as Ignite, which indicates our commitment to two ideas: first, that instructional technology is about student learning and not the technology itself, and second, that instructional technology is a spark that ignites great teaching and learning, rather than an endpoint.

Other shifts in this plan include planning efforts around the Department of Instruction's Digital Learning and Future Ready framework, connecting our efforts to those occurring nationwide. We are also integrating MMSD's Graduate Vision with Ignite, as we recognize the potential of instructional technology to help us facilitate the qualities our community said they wanted to see from our graduates.

Tony Evers, the Wisconsin State Superintendent set the vision for Digital Learning by stating:

"The skillful use of technology will have enormous payoffs in terms of every child's readiness for further education and the workforce. Digital tools are essential to student learning, as they connect our efforts to identify what students should know and be able to do, as well as help students and educators assess progress toward achieving academic goals."

Wisconsin Digital Learning Plan



Vision

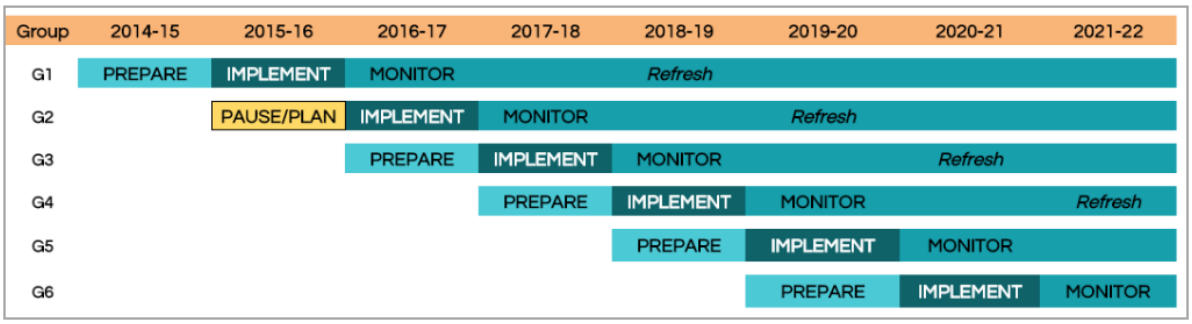
As we go forth into our framework adopted from Future Ready Schools and the Wisconsin Digital Learning Plan, our vision will guide our work:

> *Students, staff and families will engage in digital literacy learning and application through discovery, collaboration and creation. Accessible, flexible and differentiated digital tools and environments for every student at every school will provide transformative, future-ready learning opportunities. Ongoing personalized professional learning for staff will strengthen high-quality instruction and provide a relevant and engaging learning experience each learner. Engaged students, staff and families will create a thriving digital community to afford every student to graduate from high school, college, career and community ready.*

Phased Implementation Approach

Our phased approach to the implementation continuum is student-focused and equity-focused. We know that instructional technology can benefit students, and we see positive results already within MMSD. Our implementation continuum is designed to allow technology to follow students in schools through their feeder patterns to ensure they do not lose access to resources we believe are beneficial when progressing to a new school. The implementation continuum also helps us provide resources to our intensive support schools. Finally, this implementation continuum represents an approach that we believe we can implement within a sustainable and contained budget. We know resources are limited, our investments must be efficient and high-leverage. To view the Ignite Implementation Continuum, click here.

Going forward, each cohort of schools will continue to participate in a year of planning and preparation to build the "why" and digital skills needed for a one-to-one student implementation. Group1 (G1) schools are in their second year of a one-to-one implementation. G2 is on an accelerated track to implement in January 2017, and G3 schools are currently engaged in the initial planning year and will implement digital devices in fall of 2017.



MMSD students will have access to a device when it is the very best tool to meet their learning target. Supported by our G1 lessons learned:

- Grades 2-12, students will continue to be in a one-to one environment, which means each student will have access to a digital device.
- Students in kindergarten and 1st grade will continue to have access to devices based on a two students-to-one device ratio.
- Selected K-12 student device to access digital resources will be a Chromebook. Before each cohort implementation, the device selection committee will research, evaluate and choose a Chromebook model for innovative, transformative learning that aligns with Ignite's sustainable resources.
- Schools may purchase additional devices using discretional funds for specialty courses that require a more robust computer and/or mobile devices, such as tablets for multimedia and skill building projects.
- Kindergarten and 1st grade classrooms will have a charging cart for up to 12 devices (2-to-1 ratio).
- Grades 2-5, each classroom will have a charging cart for up to 30 devices. Devices will be distributed based on total school enrollment.
- Grades 6-12 students will be provided with an assigned digital device to carry from class to class.

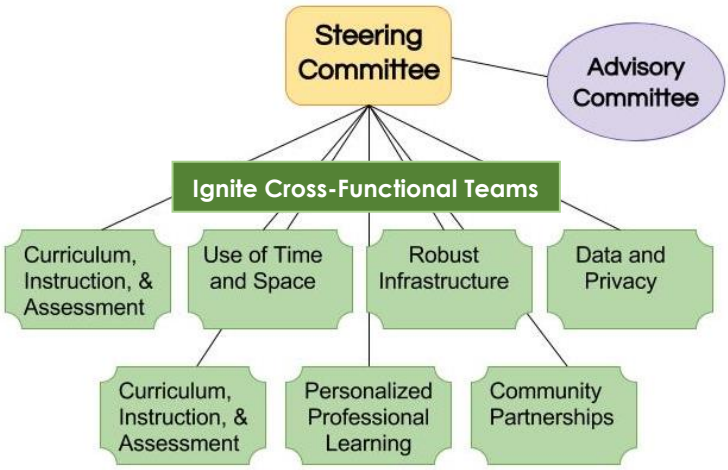
MMSD will explore procedures and policies to allow secondary students to take devices home starting in the 2017-18 school year.

Collaborative Leadership

Collaborative leadership, partnerships, and regional support surrounds the components of a digital learning implementation. We know we are not the first school district to attempt to transform teaching and learning while implementing a digital environment. Continued collaboration to learn from others can only strengthen best practices and assist in problem-solving challenges. We continually reach out to districts in our area, as well as districts that are similar in size and demographics outside of the area, for expertise and collaboration. We will also explore *The Institute: Personalized Learning* through CESA 1, and visit CESA 1 school districts who are reporting successful student results while implementing personalized learning. In addition, we will strengthen our relationship with the Instructional Technology Department(s) at the UW-Madison campus, as well as other higher education institutes. Finally, we will align our plan with the Department of Public Instruction's (DPI) vision and framework for Digital Learning.

Based on the previous Information and Technology plan, MMSD built a structure of collaborative leadership to guide and monitor the implementation of the plan. Ignite's collaborative structure includes the Steering and Advisory Committees. In addition, the plan includes the seven focus areas

that parallel the Future Ready dashboard. The Instructional Technology Director orchestrates communication structures within Ignite's collaborative leadership.



The **Steering Committee** includes key internal members in the district, including the Chief of Staff, Assistant Superintendent for Teaching and Learning, Assistant Superintendent of Business Services, Executive Director of Curriculum and Instruction, Director of Technical Services, Director of Instructional Technology and Media Services, Executive Director of Research, Accountability, and Data, Coordinator of Communications and Director of Building Services and Technology. This group guides the overall development and implementation of the plan, heads the project-based teams, selects schools for phasing of projects, informs and incorporates ideas from the advisory group, and is responsible for publicly reporting on the plan's progress.

The **Advisory Committee** is a partnership with representatives from key stakeholder groups both internal and external to MMSD, including teachers, principals, parents, students, community members, higher education, and industry experts. This group provides guidance to the steering committee on key issues.

Meanwhile, the **Cross-Functional focus area teams** meet upon need to achieve area next steps. Composition of these teams vary, with representation from pertinent departments throughout MMSD. If applicable, school-based staff will be members of these teams, including principals, teachers, and support staff. These teams work on the details of each focus area in the plan.

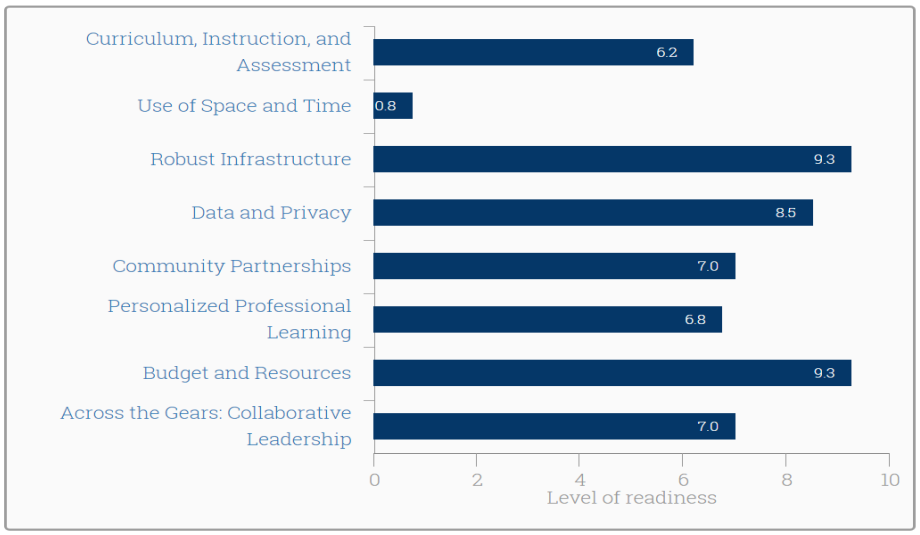
Plan Framework

In June 2016, the Department of Instruction hosted a regional summit for the national Future Ready Schools initiative. Over 40 Wisconsin districts discussed digital learning implementation best practices and shared resources and ideas during a round table forum. Ultimately, each district was able to explore the Future Ready dashboard to assess digital learning implementation readiness. The assessment brought areas of optimal readiness, as well as gaps in readiness to the forefront of our plan. Our lessons learned thus far and current research will work in conjunction with our learning from the Future Ready assessment.

The focus areas of Ignite are:

- ***Curriculum, Instruction, and Assessment***
- ***Use of Space and Time***
- ***Robust Infrastructure***
- ***Data and Privacy***
- ***Community Partnerships***
- ***Personalized Professional Learning***
- ***Budget and Resources***

Focusing on these areas will enhance the comprehensive systems and structures already in place for successful Ignite digital integration. To analyze our progress from the initial plan, our Leadership Team engaged in the Future Ready Schools pre-assessment. Relevant indicators for each area rated our digital implementation readiness. As the chart below reveals, our district has a high overall readiness level for digital integration based on the work already accomplished. Our greatest area of growth lies in the Use of Space and Time focus area, which we are addressing as more schools implement a digital learning environment and all students have access to digital tools and resources. Ignite reflects our lessons learned, current research, and digital implementation readiness.



Each Ignite focus area includes components of:

- ***Planning*** – based on lessons learned and current research
  - a synthesis of our current state
  - an analysis of the Future Ready Schools pre-assessment
- ***Implementing*** – action within the next three years
  - action steps based on the focus area components
- **Assessing** – project leader will support
  - project trackers to support the completion of goals
  - implementation feedback
- ***Refining*** – reassessing short and long-term goals
  - data-based decisions to continue or discontinue practices

Curriculum, Instruction, and Assessment

With professional learning and intentional collaboration and planning, **Digital Learning** can be individualized and personalized to ensure all students reach their full potential to succeed in college, a career, and in their community.

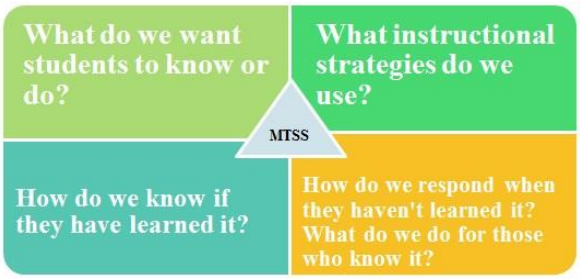
"Digital learning is defined as the strengthening, broadening and /or deepening of students' learning through the effective use of technology."

–Future Ready Schools

As a district, we are incredibly focused on great teaching and learning – because we know this is what will get the best results for all students. MMSD's *Great Teaching Matters Framework* communicates the district's vision and goals for effective teaching that is responsive to the cultural and linguistic assets of all learners. Integrating devices and using intentional digital strategies with coherent instruction provides opportunities to personalize student learning. Great Teaching Matters Framework can help ensure all students have access to a challenging education, with high expectations through immediate digital feedback for teachers and students to reflect and adjust on learning goals. Digital integration also affords opportunities for supporting diverse groups of students, gives students the tools they need to personalize learning, and provides a platform for exploration of college and career pathways. Digital integration also assists teachers in planning for coherent instruction, engaging in gradual release of responsibility to deliver instruction, and utilizing data to make adjustments to instruction based on student needs.

Planning

MMSD believes all students need equitable access to appropriate applications that enhance learning and support coherent instruction. The district provides digital resources for learning, including e-books, online resources, and applications. We have built a list of approved apps and extensions that are targeted on purposeful integration to support learning needs.



Access to digital tools and strategies amplifies the Multi-Tiered System of Supports (MTSS), which is the integration of evidence based instruction, interventions, and assessments to address the full range of student academic and behavioral needs present in today's classroom. In MTSS, the needs of all learners are identified and supported early through increasing levels of instructional time and intensity. By using performance data and monitoring learning rates and social emotional-behavioral development of students, schools make important instructional decisions to meet the needs of *ALL* of our learners. Digital implementation affords students and teachers to access the appropriate learning resources to meet the full range of academic and behavioral needs, including supports for diverse student groups like English Language Learners, advanced learners, and students with disabilities.

Use	Available in Your District	In Your District's Plans	Not Yet a Priority
Online coursework	✔		
Intelligent adaptive learning	✔		
Digital content in a variety of formats and modes (i.e., visual, auditory, text)	✔		
Assessment data (formative and summative)	✔		
Social Media	✔		
Blended learning		✔	
Digital tools for problem solving (visualization, simulation, modeling, charting, etc.)	✔		
eCommunication sites for student discussions	✔		
eCommunication sites for teacher discussions	✔		
Real-world connections for student projects	✔		
Tools for students to develop products that demonstrate their learning	✔		
Digital student portfolios	✔		
Online research	✔		

For students with disabilities, the Student Services Department continues to provide students with the assistive technology (i.e., devices used to increase, maintain, or improve the functional capabilities of a child) and accessible instructional materials (i.e., specialized or alternative formats, including audio, digital, Braille or large print text) for those students who require these resources, either as adaptations to the student's digital device or additional hardware.

Our district's current readiness to implement digital tools and instructional strategies shows high.

As we continue to plan for Curriculum, Instruction and Assessment, we understand **Online Learning,** and access to content online, is growing exponentially across the country. We have been offering online learning opportunities for students for the past eight years, primarily through Madison Virtual Campus (MVC). Our district developed an "embedded

approach" to online learning. In contrast to a "virtual school," Madison Virtual Campus provides students with options for taking online courses while maintaining all of the benefits and resources available in our high schools.

In conjunction with MVC, we are increasing our online programming to include access to digital learning in a blended format primarily for credit recovery. Programs such as Odysseyware and Apex provide an option for students to take coursework on a different modality to build skills and regain credit. In addition, we are increasing blended learning classrooms where students are able to access learning both face-to-face and online. Access to learning anytime, anywhere will help prepare students for college, career, and community.

"Blended Learning is a formal education program in which a student learns at least in part through the delivery of content and instruction via digital and online media with some student control over time, place, path or pace."-Heather Staker

We are currently in the process of implementing Virtual Learning Spaces at all of the high schools. A *Virtual Learning Space (VLS)* is a virtual/online location where learners and instructors meet together, despite being physically distant from each other. To create a VLS, audio/visual interactive equipment is provided within a specific physical room, or on a mobile cart that travels between rooms. This equipment connects students and teachers to each other within a *synchronous* (live/real-time) online learning environment. Examples of instructional possibilities include:

- Joining classes at other school
- Creating district-wide, aligned courses
- Flexible scheduling
- Virtual Field Trips
- Accessing Advanced Placement coursework
- Personalized Pathways integration

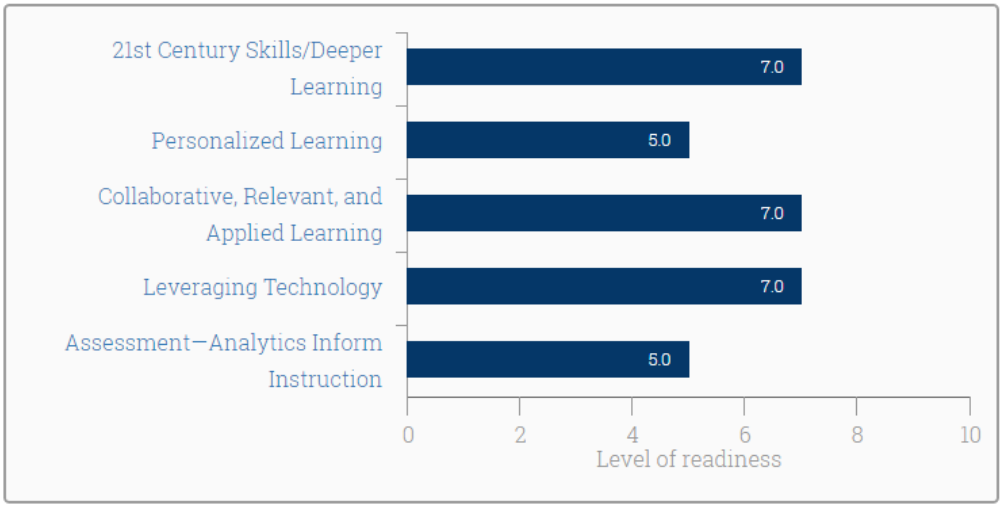
In addition as a part of Curriculum, Instruction and Assessment, the Academic and Career Planning (ACP) process integrates digital access and application. ACP is both a process and product by which students grades 6-12—in collaboration with key school staff, families, and community members— chart, refine, and progress towards their personalized pathways by exploring who they are and what they want to do with their lives. This includes progress checks as they move towards short and long-term goals. Through ACP, students take ownership of their learning and graduate with the skills, knowledge, dispositions, and sense of self to be college, career, and community ready. Along the pathway to achieving goals, students participate in and create projects and artifacts that can be selected for their electronic portfolio. Over the next three years, ACP integration will scale from 6th to 12th grade students.

"Today, students are facing a different kind of job market than they did in the past. Employers are not only tracing our digital footprints but also viewing portfolios and résumés online and learning about us with the click of a link."-Jordan Friedman, The Huffington Post

Digital integration in our G1 schools supports classroom formative and summative assessments to inform coherent instruction and learning. We also provide devices to all schools to support the overall

administration of state and district large-scale assessments. Currently, each school has the infrastructure and devices to provide students the tools and environment necessary to engage in online testing.

In conjunction with lessons learned, research and current-state of programming, analyzing our pre-assessment results in the Curriculum, Instruction, and Assessment focus area will help guide our next action steps. Working in each area to improve digital learning opportunities will increase student readiness for college, career, and community.



Implementing

It is our goal, through Ignite, to provide devices, in all schools to support a rigorous and innovative digital learning environment. In the next three years, the Curriculum, Instruction and Assessment team will focus on deepening 21st Century Skills within coherent instruction, provide staff learning opportunities to build and implement personalized learning strategies in the classroom, build out collaborative, relevant, and applied learning opportunities, leverage technology to enhance teacher teams and instruction, and continue to integrate digital assessment strategies.

Focus Area Components	**3-Year Action Steps**
21st Century Skills/Deeper Learning	• Integrate the new International Society of Technology Education's (ISTE) standards for Administration, Teachers, and Students. • Increase makerspace concept and flexible learning spaces in classrooms and libraries
Personalized Learning	• Implement a district vision and plan to integrate personalized learning in the next iteration of the

	strategic framework • Provide professional learning to teachers ready to use digital tools and resources to personalize learning
Collaborative, Relevant, and Applied Learning	• Build out Academic and Career Planning 6-12 • Support Personalized Pathways implementation at High Schools • Explore coursework opportunities, such as: -STEM coursework -Computer Science articulation -High School Genius tech support course • Increase local online teachers
Leveraging Technology	• Ensure students and staff have equitable access to digital resources to amplify learning • Collaborate with Curriculum and Instruction Coordinators to build digital resources
Assessment – Analytics Inform Instruction	• Implement a digital tool– such as a Learning Management System- to collect and analyze formative assessment consistently • Increase student ownership of data by using digital tools to monitor progress

Use of Space and Time

In order for MMSD to provide flexible learning options to for students to access content, engage in the content, and express what students know and understand, it is imperative to create the right use of time and space.

Planning

Select schools are starting to integrate shared spaces with dynamic layouts and exciting technological resources that serve as "Makerspaces," allowing our students to tinker, explore, discover, and create. Students can choose to problem-solve and work together or independently.

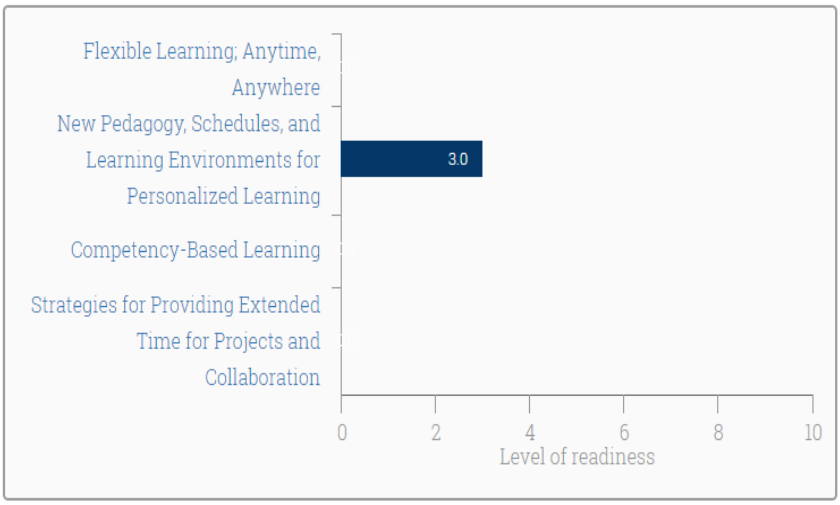
Makerspaces provide hands-on, creative ways to encourage students to design, experiment, build and invent. Industry leaders and higher education centers are among some of the groups supporting K-12 education and community groups with the resources and technology to create makerspaces, which help young people develop confidence, creativity, and spark an interest in science, technology, engineering, math, the arts, and learning as a whole through making.

The district is updating, in collaboration with community donors and grants, **library media centers** to create inviting, flexible spaces with up-to-date digital audio/visual hardware. Our libraries are ideally positioned to serve as innovation centers where makerspaces promote collaboration and creation, centered around technology, allowing students to produce things together that will be impossible alone and without the right resources (Colegrove, 2013).

In addition to space upgrades, digital resources – such as the OverDrive System, the first comprehensive, district-wide digital ebook system – contribute as an essential part of a modern school library that allows access to quality digital media resources for anytime, anywhere access.

As our Leadership team looked at this focus area, it was evident that this is an area of growth and opportunity.

To infuse flexible learning anytime, anywhere, MMSD is striving to provide equal access to course content online, blended, or face-to-face. In addition, programs such as Youth Options, Course Options, and internships provide dual credit for both district graduation and higher education institutions. Yet another avenue to access content is through Virtual Learning Spaces, as describe in the previous section.



Implementing

As we continue to phase in a digital culture over the next three years, we will focus on creating increased opportunities for students to engage in anytime, anywhere learning (including personalized spaces), scheduling for blended and personalized learning, focus on competency-based metrics for learning, and strategies to provide extended time for projects and collaboration. It is our goal to provide implementation structure while providing space for schools to contextualize for their school community.

Focus Area Components	3-Year Action Steps
Flexible Learning Anytime, Anywhere	• Implement the Online Learning Plan for Virtual Learning Spaces and Blended Learning • Devise a plan for Secondary students to take devices home; filter secured and access options available
New Pedagogy, Schedules, and Learning Environments for Personalized Learning	• Build Personalized Pathways schedules where students engage in learning that best fits the learning goals • Review Middle School schedules to capitalize on opportunities to provide flexible learning schedules and environments • Build flexible learning spaces at Elementary Schools • Explore LMTS schedules to implement vision of current job description
Competency Based Learning	• Explore competency-based learning opportunities
Strategies for Providing Extended Time for Projects and Collaboration	• Explore opportunities to extend learning across classrooms, school, and home

Robust Infrastructure

In order to have a success integration of digital devices and resources, a district must have a strong infrastructure. This infrastructure supports the use of all technologies, systems and structures to use the technologies, and resources to support the systems.

Planning

Currently we support a Wide Area Network (WAN) which is a system of high-speed fiber lines that connect every school to Central Office resources and the Internet. The district's WAN is a private fiber network called the Metropolitan Unified Fiber Network (MUFN). In January 2017, MMSD will complete an upgrade for fiber communications equipment that will increase the bandwidth to 10 Gigabits from every school. This will accommodate the significant increase in network devices and demand for more high speed applications that require more bandwidth and will meet our needs in forthcoming years.

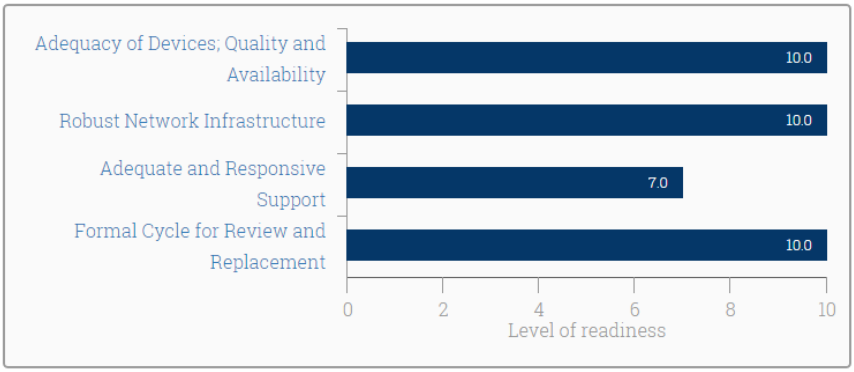
Each MMSD building has a **Local Area Network (LAN)** connected to the WAN. A LAN provides the connections to the computing devices in a school or building so they can access the Internet or access district resources. The device that provides connectivity between the WAN and Local Area Networks (LANs) is called a core switch, which was replaced 2014-15. A plan will be developed in 2017-18 to upgrade all of the LAN switches at each site.

To maintain access to the **wireless network** - the wireless controllers, the devices that manage the access points, was upgraded by adding a redundant failover controller system which was installed in 2014-15. In the event that any controllers fail, another secondary controller will take over without any loss in connectivity. The **wireless network** in each building will be analyzed and necessary adjustments to the wireless system will be made as needed. A plan to upgrade and replace the wireless access points and other components of the wireless system will be developed in 2017-18.

"Preparing students to be successful for the future requires a robust and flexible learning infrastructure capable of supporting new types of engagement and providing ubiquitous access to the technology tools that allow students to create, design, and explore."-Office of Educational Technology

The **storage area network and virtual server system (SAN)** is the main storage system for all of the district's electronic files and systems. This system will be replaced in 2016-17 using funds from the 2015 Referendum. The main goal of this new system will be to provide 24/7 access to District resources by building in a real-time fail-over capacity that we do not have presently.

Our pre-assessment revealed MMSD as a high level of readiness to support Ignite. This is evident in G1 schools as they have already implemented school-wide digital devices. All students are able to access the internet when needed for instruction and learning.



Implementing

In the next three years, we will continue to implement devices with new G cohorts, build a more robust infrastructure, increase responsive support for all, and implement a 3 year review and replacement cycle for student devices in the G1 Cohort. We will research virtual server options to ensure maximum efficiency with high security.

Focus Area Components	3-Year Action Steps
Adequacy of Devices, Quality and Availability	• Research, review and recommend student devices for future "G" Cohorts • Research, review and recommend classroom equipment for each "G" cohort
Robust Network Infrastructure	• Conduct a risk and cyber threat assessment and create a Disaster Recovery plan based on the replacement of the SAN • Increase bandwidth to Internet Service Provider (ISP) to 10Gbps • Create and implement an MMSD wireless authentication page • Create plan for devices to go home (include internet filter) • Upgrade all of the LAN switches at each site • Upgrade and replace the wireless access points and other components of the wireless system
Adequate and Responsive Support	• Provide and assess technical support in buildings
Formal Cycle of Review and Replacement	• Implement a 3 year plan of review and replacement of student devices • Implement a 3 year plan of review and replacement of staff devices • Plan a 6 year plan of review and replacement of classroom equipment

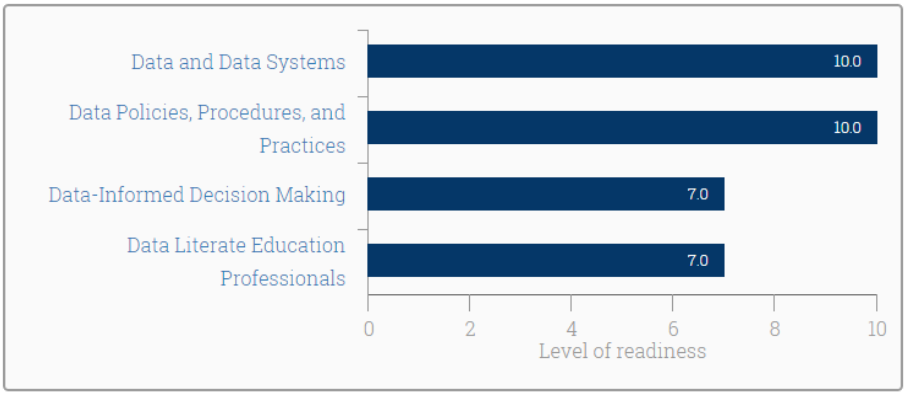
Data and Privacy

To better support data-based decision making to personalize instruction, the district will maximize the utility and accuracy of its data information systems. District data systems include Infinite Campus (IC), the primary system for entering and retrieving data for all of district students; OASYS, data system for academic and behavior interventions, Special Education, Advanced Learning, and English as a Second Language program; and the MMSD Data Dashboard, the primary holder of consolidated student, school, and district data. As teachers utilize district systems, they will collect, analyze and synthesize data in partnership with students to access and engage in learning experiences relevant to each student.

Planning

We understand the importance of student data privacy and security. To ensure safe use of digital programs, our legal department analyzes privacy policies of requisitioned digital programs to safeguard MMSD student data. Also, we recently released updated guidelines for Technology Acceptable Use and Social Media to safeguard use of technology and the internet.

Our pre-assessment concluded a high readiness for MMSD in the Data and Privacy focus area. Teacher teams are more intentional about using data to make decisions about planning, teaching, reflecting and adjusting. School Improvement Plan trends are showing increased professional learning and use around data.



Implementing

In the next three years, we will review our student data systems, policies, procedures, and practices. We will be constructing an MMSD guidance document regarding Student Data Privacy and Security utilizing current research and tools. We will continue to support data driven decision-making as a system and for teaching and learning.

Focus Area Components	3-Year Action Steps
Data and Data Systems	• Continue to build a structure to manage Infinite Campus support to students, teachers, secretaries, schedulers, and parents
Data Policies, Procedures, and Practices	• Build Student Data Privacy and Security Guidance
Data Informed Decision-Making	• Research a Learning Management System to assist in digital collection of data and student progress monitoring
Data Literate Education Professionals	• Continue to build data literacy across all aspects of the district including Central Office, schools, families and the community

Community Partnerships

As we plan to deploy devices to all students, it is critical to use this opportunity to enhance the connection between the community, families and schools. A continual two-way communication plan for families and schools to provide timely information on digital device deployment, managing digital students, and digital skill building opportunities promotes positive relationships.

Planning

MMSD understands the importance of family and community partnerships in student academic success. There are three key departments that focus on specific strategies to build relationships:

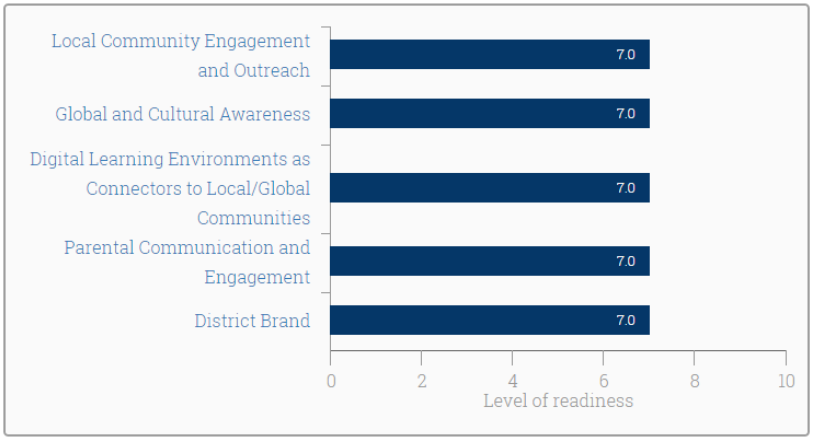
1. Family, Youth and Community Engagement Department
2. Department of Strategic Partnerships & Innovation
3. Communications Department

Together, these departments strive to:

- Provide new opportunities for parent learning and leadership
- Foster two-way communication
- Provide Professional Development around Family and Community partnerships for MMSD staff

Ignite supports communication efforts by providing a mean to digital devices and access to online resources.

When reviewing the Community Partnerships focus area pre-assessment results, the level of district readiness across all categories is consistent at 7 out of 10. We will continue to leverage existing partnerships and foster new ones.



Implementing

In the next three years, we will continue our focus on building partnerships with other districts, higher education institutes, community, and families. We will dedicate efforts to connect global to build cultural and linguistic awareness and communities. As we implement digital cultures across the district, we will focus on communication using digital tools that make sense for families.

Focus Area Components	3-Year Action Steps
Local Community Engagement and Outreach	• Collaborate with the Madison Public Library, and other community businesses to promote parent education for Digital Literacy • Bridge UW-Madison's Personalized Learning research into MMSD's classrooms
Global and Cultural Awareness	• Continue work with the National Equity Project to integrate an equity lens on leadership, school, and classroom environments and projects • Engage in virtual projects to connect and explore diverse cultures, ethnics, and races
Digital Learning Environments as Connectors to Local/Global Communities	• Integrate digital platforms such as Google Hangouts and Zoom to connect to classrooms and experts across the globe • Integrate Virtual Learning Spaces to connect Personalized Pathway students to local and global resources
Parental Communication and Engagement	• Create a Family and Community plan utilizing digital tools and resources for communication at each school* • Provide learning opportunities that include digital tools and resources to support digital literacy
District Brand	• Brand Ignite through social media, e-newsletters, storytelling, the district/school websites, and other digital and printed materials

*In 2016-17, together with the Department of Family, Youth, and Community Engagement (FYCE), each school will create and implement a Family and Community Engagement plan to increase communication and partnerships. The Department of Strategic Partnerships & Innovation and the Office of Communication will also support this work.

"G" schools will intentionally integrate digital applications and strategies that promote two-way communication into their Family and Community Engagement plans. The Instructional Technology team will assist each school to use and facilitate digital tools and strategies.

Personalized Professional Learning

Intentional, careful, and concerted planning facilitates the success of instructional technology implementation. So does a sustained focus on professional development for staff. As such, we plan to continue aspects of our investment in staff that both research and our early implementation lead us to believe are enhancing our success, including a full

year of professional development for staff in a school before students receive devices, using instructional technology coaches to support school success, and encouraging principal and staff commitment to successful instructional technology implementation.

Planning

In support of staff professional productivity and efficiency, each MMSD teacher and administrator will continue to receive a device, such as a laptop. Access to a mobile device provides a means to support Educator Effectiveness, multi-media lessons, and team building through collaboration.

A comprehensive professional learning approach around digital implementation is integrated into our common learning outlined in the Strategic Framework.
Professional Learning will be facilitated by modeling digital tools and resources that will be available to use with students.

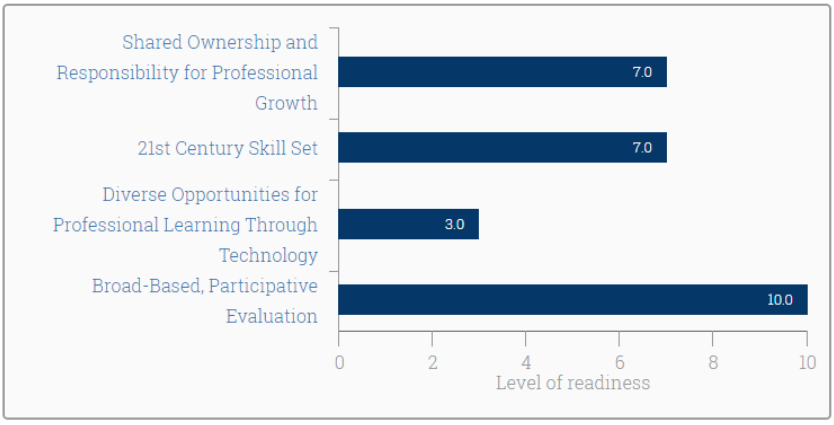
"It was SO great to have the time today to actually dig in to so many things and get help/ideas from the tech specialists. I hope the district will offer more days like this. It was so productive and worthwhile!"

5th Grade Teacher, Huegel Elementary

Through a comprehensive approach to digital implementation professional learning, teachers have substantial time to engage in professional learning. The majority of professional learning occurs at school sites and is a central part of each school's School Improvement Plan (SIP). Schools have flexibility to determine how time is used and which resources are prioritized for digital implementation. During contract hours, teacher learning occurs during District PD Days, staff meetings, selected early release days, and coaching sessions. A Central Office Instructional Technology Coach supports each G school to assist in a systematic approach to professional learning based on a monthly professional learning framework.

Another important aspect of this comprehensive professional learning approach is the optional, non-contract professional learning opportunities during summers and on select weekends, through face-to-face, online, or "flipped" professional development methods**.** In the summer, the MMSD Instructional Technology team provides professional learning sessions to reach the diverse digital readiness levels of staff. Participants receive either Professional Advancement Credits (PACs) or pay to earn academic credits. At times, professional development opportunities also offer extended employment for "G" schools. Finally, MMSD is continually developing supportive digital implementation resources for teacher self-guided professional learning.

Our pre-assessment in the area of Personalized Professional Learning emphasizes areas as seen in the chart. The district is at varying levels of readiness due to the progression of the phased-in "G" cohort plan. As the Ignite Plan moves forward, all schools will ramp up these opportunities for all MMSD staff.



Implementing

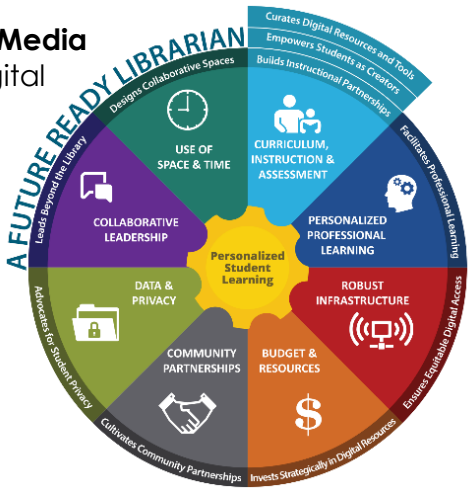
The Director of Instructional Technology and Media Services supervises, guides, and monitors progress of "G" school implementation professional learning. In addition, central office Instructional Technology Coaches play a critical role in site-based support through team building, specific guided learning, Library Media Technology Specialist coaching, summer/workshop professional development, and developing resources to support all. Over the next three years, we will focus on providing personalized professional learning opportunities for Central Office, schools (intensely focused on "G" cohorts), families, and the community. We will continue to fulfill our mission to build skills and coaching capacity with Library Media Technology Specialists at all schools. In addition, we will continue to build multi-modal ways to access learning: face-to-face, peer-to-peer, online, and blended.

Focus Area Components	**3-Year Action Steps**
Shared Ownership and Responsibility for Professional Learning	• Continue to position Library Media Technology Specialists as the site-based information and technology coach* • Integrate digital tools and strategies by school leadership to model integration
21st Century Skill Set	• Build cohort of Google Certified teachers • Provide Central Office Google training
Diverse Opportunities for Professional Learning through Technology	• Provide a variety of modalities to access professional learning (face-to-face, blended, online)
Broad-Based	• Facilitate a variety of Professional Learning opportunities to support digital implementation

*As "G" schools prepare and implement digital learning, the **Library Media Technology Specialist (LMTS)** will co-plan, co-teach, and provide digital leadership and instructional technology coaching for their school staff.

As we phase in this role, the school LMTS will:

- Participate in ongoing district professional learning



- Collaborate with teachers to provide a school-wide perspective and expertise in digital/information literacy curriculum, standards, and student outcomes
- Co-teach and co-plan lessons around digital implementation and provide instructional technology coaching
- Help teachers and students become information and digital literate, as well as ethical and safe digital citizens

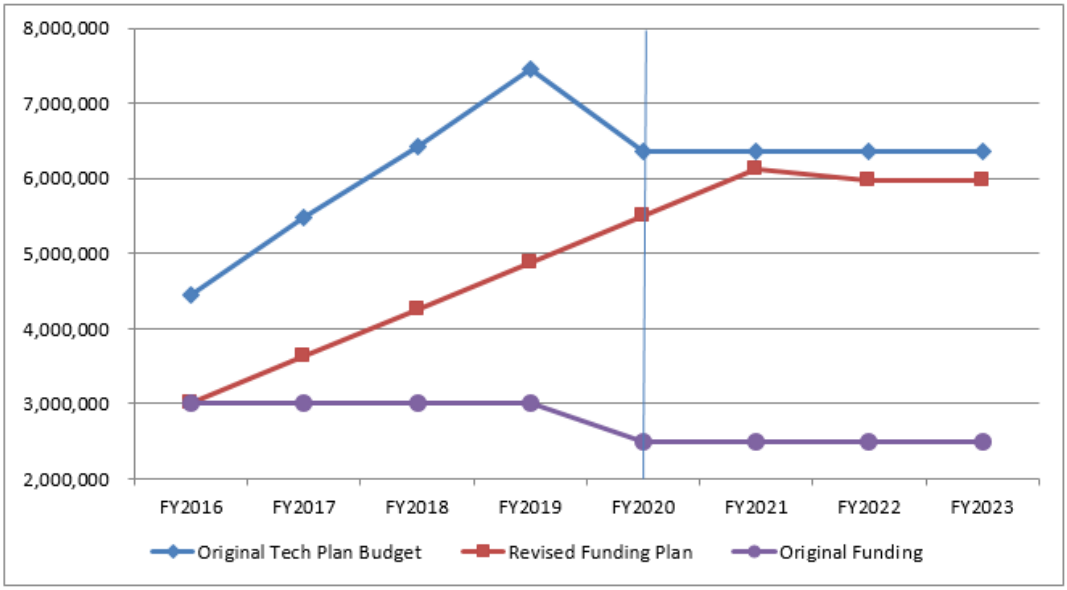
Budget and Resources

The Ignite Plan includes deliberate preparation, implementation, and monitoring phases to ensure each project area's success. We are learning from each other and from emerging best practices, building on successes, spreading out costs and addressing key challenges that arise. Digital devices are powerful tools for transforming education and meeting students' needs in creative, innovative and flexible ways. We are committed to providing more equitable access to digital devices for all students.

Planning

Based on our experience with G1, we have developed a financially sustainable approach to funding the annual cohorts. Our approach includes rigorous criteria for the selection of student devices; improved and more cost-efficient classroom designs; and better timing of purchasing decisions to take advantage of best pricing in the market. MMSD also created a comprehensive repurposing plan for existing equipment and devices in "G" schools. The repurposed equipment is cascaded to other schools in the district based on compelling needs criteria.

The Ignite Plan will require a consistent multi-year effort to increase the budget as needed to support this plan. Technology funding during the 2013-14 school year was just $1.5 million, far below what would be expected for a district of our size. Given this low baseline funding, the original technology plan budget (blue line in chart above) required annual funding increases in excess of $1 million dollars each year for the next three years. This is difficult to achieve given the financial constraints facing Wisconsin school districts.

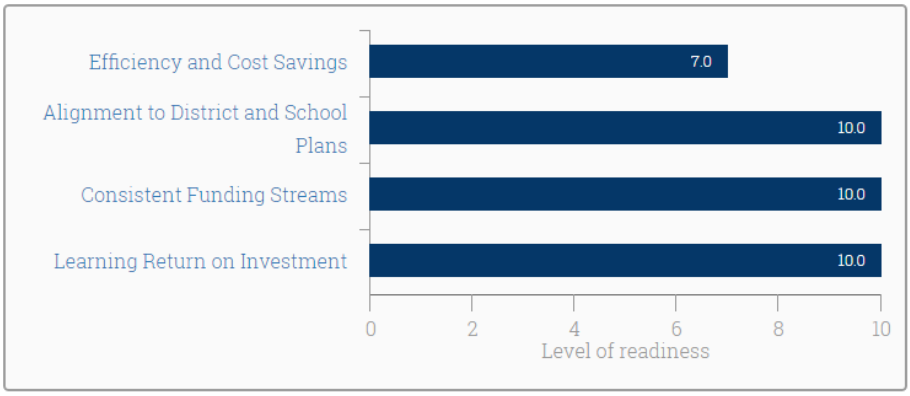


Therefore, a revised funding plan (red line in chart above) instead calls for additional technology funds of $625,000 per year. All of these funds would be repurposed from our existing budget and represent a priority around digital learning and systematic implementation of the plan. This funding pace would increase the technology budget from $3 million to $6 million over the next five years beyond 2015-16 and will support the goals of Ignite. The Ignite budget includes $ 2.0 million of approved referendum funding for infrastructure and may be supplemented by promissory note funding (TID 25) from 2016 to 2021. As we ramp up Ignite and onboard more schools, we will look at adding additional Instructional Technology Coaches to support implementation.

		FY17	FY18	FY19
Student Computing	Lease	$896,323	1,451,501	$2,142,136
Staff Computing	Lease	$904,172	$938,242	$904,357
School Learning Spaces	Purchase/Lease	$446,167	$710,257	$628,507
Network and Servers	Purchase/Lease	$1,248,429	$1,070,000	$1,120,000
Software/Miscellaneous	Purchase	$110,000	$80,000	$80,000
	Total	**$3,625,000**	**$4,250,000**	**$4,875,000**

-Chart found on pp 130-131 of Adopted Budget 6/27/16

Our pre-assessment in the focus area of Budget and Resources reveals a district high level of readiness for a digital implementation. After reflection and careful analysis of resource costs, a sustainable budget increase over the implementation of the plan has been established.



Implementing

In the next three years, we will analyze efficiencies and cost savings, continue to align budget and resources to district and school plans, provide the School Board with an annual sustainable budget, and analyze our learning return on investment.

Focus Area Components	3-Year Action Steps
Efficiency and Cost Savings	• Analyze digital resources to replace curricular expenses • Bid the leasing contract in advance to expedite the order and simplify the process • Redesign the bidding process within board policy to ensure best product at best price • Identify opportunities where targeted use of promissory note proceeds (TID 25) could positively impact Ignite
Alignment to District and School Plans	• Support School Support Plans and the Strategic Framework with digital resources and tools • Analyze need for additional Instructional Technology Coaches
Consistent Funding Streams	• Prepare a yearly budget to be approved by the Board of Education
Learning Return on Investment	• Analyze the Digital Literacy surveys of "G" schools each year to reflect learning return

Assessing each Focus Area

The action steps in each focus area are intended to be implemented over the next three years. Some will be implemented earlier in the plan as it relates to the Strategic Framework's high-leverage actions. Because these action steps align with cross-departmental work streams, the cross-functional focus area team, comprised of multiple departmental staff, will convene to collaboratively discuss and monitor action step progress. The components of the focus area will be included in the project tracker to monitor progress.

In addition, the Research and Programs Evaluation Office will annually support the creation of an Ignite implementation and data collection tracker. Each focus area will be included.

Refining each Focus Area

Based on our annual progress and project tracker, we will reflect and adjust as needed. Also, as we learn from each G cohort's implementation of a digital culture, we will refine our practices to better meet the needs of our schools and all of our students.

In Action

To visit Ignite in action and access online resources for schools, please visit: https://technology.madison.k12.wi.us/ignite.

Focus Area Component	Goals	Year 1 16-17	Year 2 17-18	Year 3 18-19
Curriculum, Instruction and Assessment				
21st Century Skills/Deeper Learning	• Integrate the new International Society of Technology Education's (ISTE) standards for Administration, Teachers, and Students.			
	• Increase makerspace concept and flexible learning spaces in classrooms and libraries			
Personalized Learning	• Implement a district vision and plan to integrate personalized learning in the next iteration of the strategic framework			
	• Provide professional learning to teachers ready to use digital tools and resources to personalize learning			
Collaborative, Relevant, and Applied Learning	• Build out Academic and Career Planning in grades 6-12			
	• Support Personalized Pathways implementation at High Schools			
	• Explore coursework opportunities, such as: -STEM coursework -Computer Science articulation -High School Genius tech support course			
	• Increase local online teachers			
Leveraging Technology	• Ensure students and staff have equitable access to the right digital resources			
	• Collaborate with Curriculum and Instruction Coordinators to build digital resources			
Assessment – Analytics Inform Instruction	• Research/Implement a digital platform– such as a Learning Management System- to collect and analyze formative assessment consistently			
	• Increase student ownership of data by using digital tools to monitor progress			
Use of Time and Space				
Flexible Learning Anytime, Anywhere	• Implement the Online Learning Plan for Virtual Learning Spaces and Blended Learning			
	• Devise a plan for Secondary students to take devices home; filter secured and access options available			
New Pedagogy, Schedules, and Learning Environments for Personalized Learning	• Build Personalized Pathways schedules where students engage in learning that best fits the learning goals			
	• Review Middle School schedules to capitalize on opportunities to provide flexible learning schedules and environments			
	• Build flexible learning spaces at Elementary Schools			
	• Explore LMTS schedules to implement vision of current job description			
Competency Based Learning	• Explore competency-based learning opportunities			
Strategies for Providing	• Explore opportunities to extend learning across			

	Extended Time for Projects and Collaboration	classrooms, school, and home			
Robust Infrastructure					
	Adequacy of Devices, Quality and Availability	• Research, review and recommend student devices for future "G" Cohorts			
		• Research, review and recommend classroom equipment for each "G" cohort			
	Robust Network Infrastructure	• Conduct a risk and cyber threat assessment and create a Disaster Recovery plan based on the replacement of the SAN			
		• Increase bandwidth to Internet Service Provider (ISP) to 10Gbps			
		• Create and implement an MMSD wireless authentication page			
		• Create plan for devices to go home (include internet filter)			
		• Upgrade all of the LAN switches at each site			
		• Upgrade and replace the wireless access points and other components of the wireless system			
	Adequate and Responsive Support	• Provide and assess technical support in buildings			
	Formal Cycle of Review and Replacement	• Implement a 3 year plan of review and replacement of student devices			
		• Implement a 3 year plan of review and replacement of staff devices			
		• Implement a 6 year plan of review and replacement of classroom equipment			
Data and Privacy					
	Data and Data Systems	• Develop a structure to manage Infinite Campus support to students, teachers, secretaries, schedulers, and parents			
	Data Policies, Procedures, and Practices	• Build Student Data Privacy and Security Guidance			
	Data Informed Decision-Making	• Research a Learning Management System to assist in digital collection of data and student progress monitoring			
	Data Literate Education Professionals	• Continue to build data literacy across all aspects of the district including Central Office, schools, families and the community			
Community Partnerships					
	Local Community Engagement and Outreach	• Collaborate with the Madison Public Library, and other community businesses to promote parent education for Digital Literacy			
		• Bridge CESA 1 and UW-Madison's Personalized Learning research into "G" classrooms			
		• Engage in virtual experiences to connect and explore diverse cultures, ethnics, and races			
	Digital Learning Environments as Connectors	• Integrate digital platforms such as Google Hangouts and Zoom to connect to classrooms and experts across the globe			

	to Local/Global Communities	• Integrate Virtual Learning Spaces to connect Personalized Pathway students to local and global resources			
	Parental Communication and Engagement	• Create a Family and Community plan utilizing digital tools and resources for communication at each "G" school			
		• Provide learning opportunities that include digital tools and resources to support digital literacy			
	District Brand	• Brand Ignite through social media, e-newsletters, storytelling, the district/school websites, and other digital and printed materials			
Personalized Professional Learning					
	Shared Ownership and Responsibility for Professional Learning	• Continue to position Library Media Technology Specialists as the site-based information and technology coach			
		• Model digital tools and strategies by school leadership during PD			
	21st Century Skill Set	• Build cohort of Google Certified teachers by offering training sessions			
		• Facilitate Central Office Google training			
	Diverse Opportunities for Professional Learning through Technology	• Provide a variety of modalities to access professional learning (face-to-face, blended, online)			
	Broad-Based	• Facilitate a variety of Professional Learning opportunities to support digital implementation			
Budget and Resources					
	Efficiency and Cost Savings	• Analyze digital resources to replace curricular expenses			
		• Bid the leasing contract in advance to expedite the order and simplify the process			
		• Redesign the bidding process within board policy to ensure best product at best price			
		• Identify opportunities where targeted use of promissory note proceeds (TID 25) could positively impact Ignite			
	Alignment to District and School Plans	• Support School Support Plans and the Strategic Framework with digital resources and tools			
		• Analyze need for additional Instructional Technology Coaches			
	Consistent Funding Streams	• Prepare a yearly budget to be approved by the Board of Education			
	Learning Return on Investment	• Analyze the Digital Literacy surveys of "G" schools each year to reflect learning return			

Plan Evaluation Cycle

Technology is not a program or initiative, but rather a tool to support our essential work; as such, digital integration will be considered as part of a holistic review of the district's progress on our goals and indicators of success.

The Research and Programs Evaluation Office (RPEO) has the capacity to evaluate the Ignite Plan internally. For this plan, RPEO recommend a three-year cycle for evaluation:

	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20
Information & Technology Plan	Board Approval	Implementation Year	Implement. Report Year	Updated Plan Implementation Year	Monitoring Year	Evaluation and Plan Update Year	Monitoring Year

This is not to suggest that there will be no oversight of plan during non-evaluation years; regular data review at the program level would of course continue on an annual basis. However, public reporting on success and data analysis methods designed to identify specific impacts in an evaluative manner would be reserved for the conclusion of evaluation years. Our description of what would happen during each type of year appears below:

- **Board Approval:** Initial plan is approved by the Board
- **Implementation Year:** Plan is first implemented in schools
- **Monitoring Year:** Board of Education receives plan update including one page of narrative highlights and next steps from plan leaders, relevant one-page quantitative summary data from RPEO (non-evaluative)
- **Evaluation and Plan Update Year:** Evaluative report including data from prior years is drafted and presented to the Board during the middle of the school year (e.g. between December-February); remainder of year is devoted to authoring updated plan to be implemented the subsequent year

Current data from the 2015-16 G1 implementation in the Tech Plan Implementation Report and Tech Plan Digital Literacy Survey Report show progress in all of the initial Tech Plan project areas. A consistent thread of data will be collected through the administration of the Digital Literacy Surveys at the start and end of each school year. In the initial implementation year, the district studies digital literacy growth. The second administration of the surveys will focus on comparing the staff and student survey results. The third year, because of the depth of data, the district will focus on our data as it compares to a wider, broader research base.

The schedule for the Digital Literacy Survey administration for the next three years is:

2016-17	2017-18	2018-19
G1 Sept & June G2 Jan & June	G1 Sept & June G2 Sept & June G3 Sept & June	G1 Sept & June G2 Sept & June G3 Sept & June G4 Sept & June