



Digital Leap Success Matrix

CoSN's ***Digital Leap Success Matrix*** is a curated collection of best practices for school systems seeking technology solutions that will enable conditions for a successful digital transition. CoSN's ***Framework of Essential Skills*** is a curated collection of best practices for school system technology leaders with a focus on best practices for the individual. In relevant areas, there is alignment between both frameworks.

The ***Digital Leap Success Matrix*** contains ten specific skill areas:

1. Leadership and Vision
2. Strategic Planning
3. Ethics & Policies
4. Instructional Focus & Professional Development
5. Team Building & Staffing
6. Information Technology Management
7. Data Management
8. Communications Management
9. Business Management
10. Data Privacy and Security

Primary Professional Categories

I: Leadership and Vision

II: Educational Environment

III. Managing Technology and Business

1. Leadership and Vision

The executive team works together to develop a shared vision with all stakeholders for effective and strategic technology use. The vision describes how technology infused teaching and learning will support students in gaining the skills and knowledge they will need for success in college and the modern workplace. Student outcomes drive the educational vision, which describes how technology will be used to support school system goals.

1A. Shared Vision – School system leaders have created a shared vision for creating and sustaining a digital environment that is aligned with the school system strategic plan and goals.

Evidence:

- There is an approved digital vision for the school system.
- Stakeholders (administrators, teachers, students, parents, community members, etc.) were involved in the development, can articulate the vision in their own words and describe how their work supports the vision.
- The vision encapsulates what students will need to know and be able to do on graduation, and describes their path for reaching that milestone.

1B. Executive Leadership – A cross-functional executive leadership team meets periodically to monitor and communicate progress.

Evidence:

- There is evidence that this team meets regularly to monitor progress, prioritize resources, and actively communicate progress on the digital plan to stakeholders.
- The school system has a system in place to include the Technology Leader in cabinet level conversations.
- Executive leadership actively supports, participates in, and promotes interoperability initiatives. (i.e., the seamless exchange of information between computer systems and software.)

1C. Distributed Leadership – Decision-making is distributed to the school system staff that is closest to the day-to-day operations, information, and impact of specific decisions.

Evidence:

- School system staff report that decisions are made by those closest to the day-to-day operations and that they have the appropriate guidance and knowledge.
- Leaders report that they coordinate and work together toward common goals.

1D. Innovation and Experimentation – The school system supports action research, experimentation, and innovative practice.

Evidence:

- There is a process for initiating, collaboratively sharing, and reflecting on the results of promising innovative practices.
- Productive failure is recognized as progress and is encouraged.
- Innovative efforts are focused on addressing school system needs.
- Evidence of success of initiatives is collected to determine the value of the initiative and assess the opportunity to scale across the organization.

1E. Flexibility and Adaptability – The school system has an appropriate and quick response to changes in internal or external conditions.

Evidence:

- Leaders implement and are able to articulate a collaborative approach for addressing unexpected circumstances.
- The school system demonstrates organizational resilience and capacity to change.
- The school system collects metrics on system performance and has a process to evaluate the need for change.

1F. Data-Informed Decision Making – The school system uses evidence, data, and research in making educational and operational decisions.

Evidence:

- Leaders can articulate and provide examples of how data and research are used to guide school system decision making.

- Leaders can provide examples of key decisions that have been based on data.

1G. Continual Improvement – The school system is continually improving its processes and outcomes.

Evidence:

- There is a process to evaluate that projects are delivered on-time, within budget, and there are agreed upon performance standards.

1H. Equity – The school system ensures that all students have equitable access to, and use of, technology inside of school facilities and supports equitable access outside of school facilities.

Evidence:

- All students have equitable access to digital tools and content through a connected device at school, home, and elsewhere.
- All school facilities meet established minimum digital infrastructure standards.
- The digital plan supports equitable access to digital resources out of school access for all students.

2. Strategic Planning

School system leaders utilize their high-level view of the school system to identify the steps needed to transform the digital vision into a long-range plan, complete with specific goals, governance, objectives, and action plans.

2A. Clear Goals – The school system has clear and aligned goals.

Evidence:

- The school system has approved goals and action steps articulated as part of its current strategic plan.
- Administrators and educators can clearly articulate the system goals in their own words.
- Established goals align with the school system vision and are regularly reviewed.

2B. Measures and Metrics – The school system regularly measures progress against goals.

Evidence:

- The school system has established qualitative and quantitative measures to regularly assess progress against goals and to measure the effectiveness of technology for teaching and learning.

2C. Governance – The school system has an effective governance process.

Evidence:

- The school system has and adheres to a governance process for managing its digital learning

implementation.

- The school system maintains evidence that projects and initiatives are aligned and prioritized to the established goals.

2D. Resource Alignment – Resources are aligned to build capacity according to defined school system priorities.

Evidence:

- Budgets, staffing, and other resources are allocated to meet school system goals.
- Resource allocation includes planned sunset of initiatives that no longer align to the strategic plan.

2E. Instructional Goals Precede Technology Goals – School system use of technology follows the goals and vision for teaching and learning.

Evidence:

- Technology projects and processes are clearly aligned to articulated instructional goals.
- Education technology solutions are selected, configured, and implemented with teaching and learning as a primary consideration.

2F. Technology Planning – The school system plans for technology implementation, funding, and evaluation.

Evidence:

- There is a current, board-approved technology plan.
- Planning reflects the input of all stakeholders, provides for instructional and operational technology needs, and has identified funding and reporting procedures.
- The plan includes strategies to consider project lifecycles.
- The school system achieves outcomes consistent with interoperability, including adhering to interoperability design principles and standards, and ensuring the project(s) are included and supported by the organization's enterprise architecture, strategic roadmap, and procurement processes.

3. Ethics and Policies

The school system leadership team models responsible decision-making and manages the creation, implementation, and enforcement of policies related to the social, legal, and ethical issues linked to technology use throughout the school system.

3A. Legal Compliance – The school system understands and adheres to applicable local, state, and federal laws.

Evidence:

- School system leadership can demonstrate knowledge of applicable local, state, and federal laws and can identify the processes used to ensure compliance.

- The school system conducts a periodic review of processes and provides proper public notice and communication to ensure local, state, and federal law adherence.

3B. Responsible Use – The school system maintains policies for responsible and ethical use of technology and reviews them regularly.

Evidence:

- There are written policies that guide students and staff in the responsible use of technology and policies are updated when needed.
- Education regarding these policies is provided annually for all students and staff.

3C. Social-Media and Email Communication – The school system maintains policies for the use of social media and email.

Evidence:

- There are written policies that guide students and staff in the appropriate use of social media and email communication.
- Policies are updated when needed.
- Education regarding the implementation of these policies is provided for all students and staff.

3D. Data Storage and Retention – The school system maintains policies for the storage and retention of data.

Evidence:

- There are written policies for how data is stored, how long it is held, and under what circumstances it is retained; these policies are fully followed.

3E. Disaster Recovery and Business Continuity – The school system maintains policies for disaster recovery and business continuity.

Evidence:

- There are written policies regarding disaster recovery and these policies are fully followed.

3F. Data Security – The school system maintains policies for ensuring information and data security

Evidence:

- There are written policies and procedures for ensuring data security and these policies are fully followed.
- These policies are compliant with local, state, and federal law and conform to industry practice.

3G. Student Data Privacy – The school system maintains policies for assuring appropriate student data privacy and such policies comply with local, state, and federal laws.

Evidence:

- There are written policies for ensuring student data privacy and these policies are fully followed.
- Policies reflect both legal requirements and aspirational practice.
- Education regarding the implementation of these policies is provided for all students and staff.

3H. Environmental Conservation – The school system maintains environmentally friendly policies for the purchasing, disposing, and responsible use of technology.

Evidence:

- There are written policies for purchasing and disposing of technology and these policies adhere to best practice for energy saving and environmental protection.

3I. Accessibility – The school system maintains policies ensuring accessibility for all students, staff, and stakeholders.

Evidence:

- There are written policies regarding how all stakeholders are afforded equal access to technology and the Internet.
- Professional development is provided for all staff regarding universal design and the implementation of these policies.

3J. Policy Effectiveness – The school system reviews and improves policies relating to technology on a regular basis.

Evidence:

- There is a policy review process to monitor effectiveness and update as necessary, all existing policies.
- There is a policy review process to consider, adopt, vet, and approve new policies.
- These reviews take place at the highest appropriate levels in the organization.

4. Instructional Focus and Professional Development

School system leaders budget, plan, and coordinate ongoing, purposeful professional development using technologies for all staff.

4A. Adaptation of Innovative Practices – The school system encourages staff to bring in best practices from the field and adapt them to their own circumstances.

Evidence:

- Educators can identify the resources, case studies, or research that have inspired classroom practices and can articulate how those practices are being adapted for their classes.

4B. Student Ownership – school system encourages use of technology to support student ownership of their learning.

Evidence:

- Administrators and educators leverage technology and digital resources to make teaching and learning more student-centric or personalized.

4C. Balanced Outcomes – The school system values and uses multiple metrics of student success, including content area mastery, as well as 21st century skills.

Evidence:

- Balanced priority is given to cognitive skills, content knowledge, 21st century skills (e.g. creativity, communication, collaboration, critical thinking), and non-cognitive skills.

4D. Data-Informed Instruction – Teachers use formative and summative assessment data to customize their instruction.

Evidence:

- Assessments are integrated into instructional content and practice.
- Educators meet on a regular basis to discuss student assessment data as a way to revise and personalize instruction.

4E. Data-Informed Learning – The school system uses technology to help meet the learning needs of all students.

Evidence:

- Learning is customized to each student's level, pace, interests, and needs.
- There are multiple ways for students to demonstrate content mastery and options reflect student voice and choice.

4F. Professional Development – Professional Development is experiential, ongoing and job-embedded.

Evidence:

- Teachers gain familiarity with technology tools and content through student-centered practice, rather than lecture, whenever possible.
- Stakeholders are given training in the use of data reporting and administrative systems and education technology tools.
- Educators have access to peer coaching.

4G. Collaborative Professional Development – Professional development is collaborative, with teachers advancing their practice together.

Evidence:

- Teachers have opportunities to participate in sharing and reflecting on their practice with other educators.

- Teachers teach other teachers the successful tools and approaches they have discovered in their own practice.
- Delivery of professional development reflects a job-embedded, personalized learning environment (online modules, collaboration spaces, etc.).

4H. Continual Improvement – The school system is continually improving its processes and educational practices.

Evidence:

- There are processes in place for frequently reflecting on, evaluating, and improving current instructional practices.
- The school system can provide examples of such improvements.

5. Team Building and Staffing

School system leaders create and support cross-functional teams for decision-making, technology support, professional development, and other aspects of the school system’s technology program. The school system aligns resources to functional requirements. The school system hires motivated, self-directed staff.

5A. Organizational Structure – The school system has an effective, functional, streamlined organizational structure.

Evidence:

- There are documented lines of authority, clear organizational charts, documented spans of control, and streamlined operations.

5B. Cross-functional Structures – school system operations are cross-functional not siloed.

Evidence:

- School system and project organizational charts show teams that include representatives from appropriate stakeholder functions.
- Leaders across functions come together to plan and implement change.

5C. Motivating Environment – The school system fosters an environment that supports intrinsic motivation for all staff.

Evidence:

- The work environment supports autonomy, mastery, and purpose.

5D. Functional Alignment – Functions are clearly aligned to the school system goals.

Evidence:

- School system organizational charts show functions that are aligned with evolving goals and

the vision for a digital environment.

- School system deals effectively with redundancies or obsolete functions.
- Resources are consistently evaluated and aligned with new goals.

5E. Human Resources – The school system allocates the human resources required to support all functions.

Evidence:

- School system organizational charts show resources adequate to support the evolving needs.
- There is adequate staff to support functions.

5F. Communication Transparency – The school system communicates, in a timely and clear fashion, information that impacts stakeholders.

Evidence:

- The school system implements a pathway to ensure that all stakeholders have information in a timely manner.

5G. Job Descriptions – The school system has job descriptions and evaluations for all staff.

Evidence:

- Every position has an up-to-date job description.
- Evaluation instruments and processes align with job descriptions.

5H. Professional Growth – The school system supports and implements professional growth plans for each staff member.

Evidence:

- Every staff member has a documented plan for multi-year, relevant professional growth.
- The school system allocates appropriate funds to support professional growth.

6. Information Technology Management

The school system maintains a robust infrastructure that aligns to industry standards and is adequate to meet the needs of stakeholders.

6A. Security – The school system has effective architecture, design, and maintenance to support current and emerging security concerns, including virus/malware protection, intrusion detection, patch management, and application controls.

Evidence:

- The school system regularly conducts a technology security audit (including passwords and role-based permissions to data) and promptly addresses concerns.
- The school system reviews and modifies network security policies and access to reflect

current needs of a digital school system.

- The school system addresses the security of digital communication and remote access.
- The school system has established general controls in areas of access, systems development and maintenance, documentation, operations, and security.

6B. Network Standards – The school system uses industry-accepted standards for hardware and networks.

Evidence:

- The school system has established and enforces a set of published hardware standards including Internal Network, Devices, LAN, Primary Network, WAN, Security Cameras, Phones/VOIP, and wireless.

6C. Connectivity – The school system network supports current capacity needs and can be expanded to meet future needs.

Evidence:

- The school system has established annual goals to meet or exceed bandwidth capacity as identified by the FCC for LAN, WAN, and Internet.
- Network coverage and density are adequate to meet user needs as evidenced by specific data such as heat maps and bandwidth utilization.
- The school system has an effective process to address issues when wireless coverage issues are reported.
- The school system has realistic projections for future Internet usage/capacity needs.

6D. Software and Device Management – The school system has the tools and processes to effectively manage school system software and devices.

Evidence:

- The school system is utilizing tools and systems that allow for effective management of devices and software.
- The school system selects and employs tools that allow for the evolving use and management of mobile devices.
- Standards and processes are in place for replacement of computing devices based on the needs of the evolving business functions and learning environments.

6E. Business Continuity – The school system has implemented processes in support of business continuity of critical systems.

Evidence:

- The school system has evidence of regular testing of business continuity and recovery procedures.

7. Data Management

The school system manages the data systems that are needed for operations and instruction. There are general controls in the areas of access, system development and maintenance, documentation, operations and physical security. To the extent possible, systems are integrated and interoperable and provide each user with a simple interface to the functionality he/she needs. The school system maintains appropriate controls and safeguards for both student and staff personal information.

7A. Comprehensive Education Architecture – The school system provides data systems configured to provide the information the school system needs while also meeting the needs of all end users in systems such as:

- SIS
- Finance
- HR
- Health
- Special Ed
- Parent Notification Systems
- Data Warehouse
- Content Management
- Assessment
- Security and camera systems
- SSO / Identity Management
- Learning Management Systems

7B. Data Systems Access – The school system has appropriate and well-designed data systems readily available to stakeholders.

Evidence:

- The school system tracks and reports on system access and reliability to meet stakeholder expectation and service level agreements. 6.
- The school system implements authentication and authorization interoperability standard, including having a system in place to identify a person every time they log on, with records of the tools, resources, and data they are allowed to access.
- The school system minimizes the number of obstacles to system access through reducing the number of unique username and password sign-on.

7C. Data Integration – The school system has a data architecture plan that integrates systems and data that support a streamlined workflow

Evidence:

- Disparate data systems are connected in a way that automates and efficiently transfers data.

- The school system maintains appropriate memorandums of understanding (MOUs) for interoperability project(s) including formal documentation with goals, intended outcomes, and expected actions between two or more organizations.
- The school system collaborates with leaders and stakeholders regarding the use of governance of student data to inform instruction.
- The school system has a written formal process in place to enforce acquisition vetting processes and contracts that, at a minimum, address applicable compliance laws while supporting innovation, transparency, and curricular goals.

7D. Workflow – The school system has created and implemented workflow efficiencies throughout the organization.

Evidence:

- The technology department can demonstrate that it has reduced redundancy in systems and data entry through workflows that automate data routing and approval processes and that allow for efficient information sharing.
- Users are satisfied that systems meet their business and learning needs.

7E. Effective Data Reporting – The school system provides accurate, appropriate, and timely reporting of data.

Evidence:

- The school system has processes to assure clean data and accurate information.
- The school system provides reports and data to key stakeholders in a timely manner.

7F. Standardized Assessment – The school system provides a technology environment that meets the needs of standardized assessments.

Evidence:

- The school system meets infrastructure and device standards for its state and local testing needs.
- Bandwidth is sized to manage the online testing requirements while not impacting other instruction or school system functions.

7G. Data System Performance – The school system is constantly improving the effectiveness and efficiency of enterprise IT systems.

Evidence:

- A process exists for reporting, tracking, and resolving problems and technical issues specific to improving individual system performance, efficiency, and effectiveness.
- IT leadership meets regularly with stakeholders and implements processes to gather feedback and consider stakeholder requests.

8. Communications Management

The school system manages the platforms and messages used to communicate transparently with internal and external stakeholders, effectively using both emerging and mature technologies as appropriate.

8A. Communications Systems – The school system maintains effective communications systems to communicate with stakeholders.

Evidence:

- The school system effectively uses a variety of digital technologies to improve and enhance communication.

8B: Marketing – The school system effectively markets its digital vision to all stakeholders.

Evidence:

- The initiative has a compelling name, a brand, and rationale that is understood by parents and shared with the press and community.

8C: Mobile Communications – The school system provides access to communication tools via mobile devices.

Evidence:

- The school system ensures that communications are responsive across all devices.

9. Business Management

The school system manages budget, financial operations, disaster recovery, and business continuity effectively. The school system determines the return on investment for all technology implementations. School system leaders foster good relationships with vendors, potential funders, and other key groups.

9A. Sustainability – The school system has funding plans and approaches that assure the long-term sustainability of school system technology resources.

Evidence:

- The school system has a comprehensive budget plan with appropriate and adequate sources of funding for device and system refresh, network expansion, digital instructional resources, and staff.
- The school system provides evidence that cost analysis models (total cost of ownership, value of investment, purchasing or leasing devices/network services, outsourcing for expertise not on staff) are frequently used and updated.

9B. Road Mapping – The school system is prepared for future device and network demands.

Evidence:

- The school system maintains a multi-year 'roadmap' technology plan that starts with the end-user in mind (teachers, administrators, students, support staff, etc).
- This plan has realistic assumptions about the growth in demands based on end-user needs (e.g. internet bandwidth and wide area network bandwidth (if appropriate), network architecture, capacity, reliability, industry standard, flexibility for growth).
- The school system has a documented roadmap for enterprise interoperability.
- The plan includes appropriate devices based on identified purpose.
- Appropriate databases, repositories, and functional data systems are included in the plan.
- The implementation plan (roadmap) has identified budgets that support that growth.
- The school system publishes progress on project implementation and service level agreements to stakeholders.

9C. Funding – The school system secures appropriate annual funding to meet the needs of the school system technology plan and staffing.

Evidence:

- The school system maintains an approved budget that shows sources of funding and expenditures for infrastructure, storage and backup, devices, tools, digital content, internet access, and professional development.
- The school system has a long-term funding model to appropriately staff IT services and the eLearning team to achieve its technology plan.
- The school system fosters good relationships with the community and potential partners in support of a strong technology base.
- The school system has aligned capital, categorical and operational funding sources to adequately address planned expenditures.

9D. Resources – The school system allocates resources to align with program goals and priorities.

Evidence:

- The school system has a system in place to include the CIO/CTO/Technology coordinator as part of the administrative (cabinet level) conversations around priorities and expenditures.
- This collective work and decision making have resulted in a comprehensive funding model that directly supports the technology plan (roadmap).

9E. Federal Funds – The school system makes effective use of eRate, Title, and other funding programs.

Evidence:

- The school system conducts an annual application for maximum, timely, and appropriate federal funding (e.g. eRate, Title I, Title II, etc).

- The school system stringently follows relevant rules and regulations to procure hardware and services with the most flexibility to carry out the school system infrastructure growth plan.
- The school system follows USAC and other applicable rules and regulations to archive records of transactions, and to track purchased assets.

9F. Purchasing – The school system employs effective purchasing practices.

Evidence:

- The school system follows federal, state, and local regulations in expending dollars to implement the technology plan.
- The school system has defined standards for purchasing hardware and designing the network.
- Best practices should be in place to secure competitive pricing.
- Technology leadership demonstrates successful partnerships with vendors to meet the school system's needs.

9G. Disaster Recovery – The school system has effective disaster recovery processes in place.

Evidence:

- The school system has a documented, comprehensive disaster recovery plan that is routinely practiced and updated.
- The school system has evaluated the use of cyber insurance as a risk management tool to protect its assets.

9H. Business Continuity – The school system has effective business continuity processes in place.

Evidence:

- The school system has implemented a documented business continuity plan that is updated annually and practiced/tested by the appropriate departments or department partnerships.

9I. Key Performance Indicators – The school system maintains and acts on Key Performance Indicators (KPI's).

Evidence:

- The school system has and acts on key performance indicators to evaluate their success in reaching key project and cost objectives.
- These indicators are publicly available. In technology, these indicators include support metrics (e.g. support, network service, database service).
- The indicators are adequate, useful, updated often, and based on stakeholder feedback.

10. Data Privacy and Security

The school system implements practices and systems to ensure privacy and security of organizational data.

10A. Compliance – The school system ensures compliance with federal and state laws, board policy, and contracts relating to organization data privacy and security.

Evidence:

- The school system has implemented policies and procedures demonstrating compliance with applicable federal and state laws relating to data privacy and security.
- The school system demonstrates purposeful engagement with vendors, external and internal organizations as agreements are reached on data collection and dissemination.
- The school system has a well-documented plan for securing network and systems.

10B. Privacy and Security Protection – The school system maintains processes and systems to protect student and staff personal information.

Evidence:

- The school system limits and delimits the collection, sharing, and storage of data to those data necessary to perform the school system's functions.
- There is evidence that the school system is in full compliance with federal, state, and local laws.
- The school system has a plan in place to communicate their privacy efforts to stakeholders.
- The school system is adhering to student data privacy standards and best practices.
- The school system protects access to systems and data, granting access only to authorized individuals.
- The school system requires school staff to attend privacy and security training and offers instruction to all stakeholders on an annual basis.
- The school system conducts a bi-annual security audit of its systems.
- The school system uses rostering interoperability standards to enroll groups of students into software solutions to create their IDs and passwords.

10C. Prevention/Mitigation– The school system prevents and/or mitigates harm to the security of the organization resulting from breach.

Evidence:

- The school system has a plan in place to ensure community-wide commitment to securing organizational systems and data.
- The school system monitors to ensure the plan place to ensure community-wide commitment to securing organizational systems and data is properly implemented.

- Incident response plans have been developed to address attack on organizational systems and/or data privacy.

10D. Communication – The school system makes decisions and implements strategies that will protect, inform, and educate stakeholders.

Evidence:

- Leadership practices of the school system reflect an understanding of data privacy and security.
- Business practices of the school system include a process for vetting online services for data privacy and security.
- Data security practices are in place and updated as needed.
- Professional development practices in all areas of school operations and academics embed privacy and security of student data.
- Teachers implement a curriculum to promote student information literacy, digital citizenship, and Internet safety.

Copyright © 2018 CoSN (the Consortium for School Networking). All Rights Reserved.
1325 G Street, NW, Suite 420, Washington DC, 20005

NOTICE: Reproduction of this document or any of our webpages or their contents at other websites, in machine readable or electronic or other soft copy form, is prohibited; reproduction in printed documents for sale is also prohibited. Permissions must be granted explicitly by CoSN and copyright ownership noted.

Updated: October 2022