CoSN Interoperability Maturity Model	Level 1 **Initial**	Level 2 **Emerging**	Level 3 **Integrated**	Level 4 **Optimizing**	Level 5 **Transformative**
Teaching & Learning / Administrative Efficiences	Beginning to use digital resources and systems for instruction and administration.	Some elements of or portions of data are being analyzed and used to inform instruction and administrative decisions.	Most data is leveraged across departments for greater insight and data-driven decision-making.	Data needed on a real-time basis is available to inform instructional and administrative decisions.	District culture of using predictive and prescriptive analysis to increase student learning and administrative efficiency. Using real-time data across the enterprise (student performance, finance, HR, IT) to inform decisions.
Leadership & Vision	Developing an understanding of the value and purpose of interoperable systems.	IT and Academic Departments beginning to engage in cross-departmental communication in order to mitigate issues.	Departmental leadership proactively plans for change management and provides resources to grow access, reliability, and capacity ahead of the demand.	The executive team works together to develop and implement a shared vision with all stakeholders for effective and strategic use of technology.	Established culture of collaboration. Students are able to determine their own instructional pathway through individual voice and choice. Administrators are able to leverage information in more holistic ways, for continuous improvement.
IT Governance	Awareness of the need for more systematic management of basic IT and academic objectives, such as device management and the acquisition of digital content.	Siloed initiatives to create policies for vetting vendors and digital resources for interoperability, security, and data privacy.	Cross-departmental processes in place to vet vendors and digital resources for interoperability, security, and data privacy.	School system leadership team models responsible decision-making and manages the creation, implementation, and enforcement of policies addressing the social, legal, and ethical issues linked to technology throughout the school system.	A formal IT governance structure and culture that ensures the executive decision-making body addresses the needs of all stakeholders.
Data Governance	Awareness of need for data accuracy, integrity, and management. Leadership acknowledgement of FERPA data privacy responsibilities.	Staff with access to personally-identifiable data receive training on FERPA and other relevant federal, state, and local data privacy policies. Processes in place to ensure data accuracy, integrity, and management.	Cross-departmental discussions on data governance. Clear definitions and values for major data elements are established and maintained. Staff assigned to monitor updates on data privacy regulations.	School system leadership has established a data governance policy and a culture that reflects the value of data and the shared responsibility to protect the data.	A formal data governance structure and culture that ensures the executive decision-making body addresses the needs of all stakeholders.
Information & System Integration	Manual upload/download processes.	Inventory of major data systems and sources. Some degree of automated integration between applications and systems.	Information formatted in a standard way to enable movement of data between systems at the department and school levels and make it available to stakeholders on a regular schedule.	Through the use of open standards, systems are integrated and interoperable and provide each user with a simple interface to the functionality needed. The system maintains appropriate controls and safeguards for student and staff personal information.	Enterprise environment that is agnostic to devices, applications, and digital resources to allow for the integration of tools, data, and content to support student learning and operational decisions.
Infrastructure	Awareness of the need for secure and robust network systems and hardware.	Creating a secure environment that enables limited access to individual systems' data from remote locations.	Creating a secure environment that enables role-based access to system data from remote locations.	The school system maintains a robust infrastructure that aligns to industry standards and is adequate to meet the needs of stakeholders.	Instructional and operational practices no longer limited by internal infrastructure. Building intelligence into systems to provide predictive and prescriptive analytics to students, teachers, administrators, and parents.

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