



INFORMATION & DATA

EdFuel's *Blueprint for Success* initiative aims to address a looming talent deficit in the education field, developing many more highly effective K-12 system leaders capable of managing complex and dynamic organizations. To support the field in strengthening talent pipelines, one element of this initiative is the development of competency maps that articulate the essential competencies (specific skills, knowledge, and relationships) for non-instructional roles in school district/network central offices. These maps will provide the foundation for an aligned, proactive approach to developing non-instructional school district/network leaders.

WHAT THIS MAP IS:

The *Blueprint for Success* includes seven functional competency maps (academics and instruction, advocacy, development, information and data, finance, operations, and talent) to show the knowledge, skills, and relationships necessary to manage school districts/networks. In addition to the functional competency maps, EdFuel's *Blueprint for Success* provides a separate *Leadership Map* that covers cross-functional leadership skills. The *Leadership Map* should be viewed alongside each functional map to cover the full set of leadership and function-specific skills required.

The *Information and Data Competency Map*, developed in collaboration with school district and network data systems leaders and field experts, represents the functional abilities necessary for the breadth of data roles typically within school districts or networks. This map is not prescriptive of an ideal set of roles within the information and data function. It is designed to be modular and customizable so that organizations can reconfigure the competencies described according to their own roles, titles, and structures.







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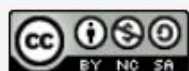
ORGANIZATION OF THIS MAP:

The *Information and Data Map* is specifically designed to highlight the critical skills needed across departments. Competencies fall within these categories:

 DATA STRATEGY Creating and delivering a data-focused strategy across school network to ensure continuous improvement across school district/network	 DATA MANAGEMENT Creating and maintaining the systems needed to collect and interpret student data across the school district/network	 DATA ANALYSIS Interpreting student data and network results, identifying trends, and recommending improvements	 APPLICATION AND ACTION Translating insights from student data effectively across the school network to the academics and instruction leaders to drive instructional improvement and organizational effectiveness
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Each competency is described at four organizational levels. While organizational structures and titles will vary, the table below gives sample job titles and descriptions to illustrate the levels:

COMPETENCY MAP LEVEL	SAMPLE JOB TITLES	DESCRIPTION
Individual Contributor	Research Analyst, Database Administrator	<ul style="list-style-type: none"> Responsible for completing individual workstreams and analysis, and preparing information for departmental consumption Analyzes student performance data and prepares summary reports
Manager	Manager of Data and Analytics, Manager of Organizational Learning, Knowledge Manager	<ul style="list-style-type: none"> Leads a small team within information and data department Oversees projects and daily activities to ensure timely completion and to meet quality standards Recommends key insights to department leader in attempt to improve organizational outcomes
Senior Manager/ Director	Director of Organizational Learning, Director of Information, Director of Technology, Director of Research & Evaluation	<ul style="list-style-type: none"> Leads multiple teams across information and data department Sets strategic direction for use of information and data across school district/network Selects systems and technology necessary to support organization's data needs, and works with academics team to recommend insights to improve student performance outcomes
Executive/ Officer	Chief Information Officer	<ul style="list-style-type: none"> Information and data leader of the organization and core member of leadership team Leads multiple departments or teams Sets strategy and vision for organizational use of data and creates data culture across organization Works with teams across the organization, particularly with academics and instruction team, to ensure understanding of student performance data and continuous improvement of results



DESIGN PRINCIPLES THAT GUIDED DEVELOPMENT OF THE COMPETENCY MAPS:

- **ACTION-ORIENTED:** Competencies are described in action-oriented language to encourage the design of development experiences and training approaches that will support individuals' growth in these areas.
- **ADDITIVE:** To avoid repetition, the competency levels build on one another, meaning that there is an expectation that senior level skills are also inclusive of those that precede it.
- **ANCHORED IN THE ENVISIONED FUTURE STATE:** As articulated in EdFuel's *Map the Gap* report, the education field is changing and dynamic; the competencies reflect what will be required of leaders over the next decade to achieve greater impact in this constantly-evolving field.
- **BEST IN CLASS:** Competency descriptions incorporate leading examples from best in class organizations in education reform and the private sector, and reflect key findings from *Map the Gap*.
- **CUSTOMIZABLE TO DIFFERENT ORGANIZATIONS' VALUES:** The competencies are intended to be adaptable to each organization based on its own culture and values; therefore, the competency maps will not explicitly state a set of required values or elements of an organizational culture.
- **MODULAR:** The functions and levels within competency maps are not the same as job titles; organizations of various sizes and stages of maturity can group various competencies according to their unique organizational structures and roles.

POTENTIAL AUDIENCES AND USES OF THE COMPETENCY MAP:

The *Information and Data Competency Map* is designed to support a wide variety of talent development efforts. The following is a non-comprehensive set of audiences and potential applications of this map:

- An individual—either within or outside the education field—can reference the map to understand the nature of the work and competencies required for academics roles, and as a guide to potential opportunities to better understand and develop such skills
- Departmental leaders could use the map as the basis for a competency-based evaluation system for their academics staff, and for an aligned set of development opportunities to bolster the department's performance
- Districts and charter school network leaders can reference the map to understand potential capacity or capability gaps within their academics departments
- Education nonprofit organizations—especially those focused on talent development—can use the maps to tailor their programming and professional development to the specific needs of individual functions, and to the specific needs of individuals as they grow within functions

ACKNOWLEDGMENTS:

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DATA STRATEGY

- Determination of data needs
- Strategy development
- Implementation
- Measurement and improvement
- Advancement of a data-driven culture



DATA MANAGEMENT

- Data collection
- Data quality control
- System maintenance
- Data security
- Data mapping and planning for integration
- Systems integration
- Process documentation



DATA ANALYSIS

- Modeling and tool development
- Identification of metrics
- Synthesis and implications
- Process documentation



APPLICATION AND ACTION

- Visualizations and dashboards
- Communication for data-driven decision making

KNOWLEDGE REQUIRED TO EXECUTE SUCCESSFULLY ON THESE COMPETENCIES:

- Organization's strategic plan and data strategy
- Effective data practices

- Data models and architecture
- Integration tools and methods

- Analytic tools and programs for data mining and manipulation
- Education analytics approaches

- Role of data in teaching and learning
- Use cases for data in education
- Data visualization and dashboard methods and tools

KEY RELATIONSHIPS TO DEVELOP AND MANAGE:

- Management team
- School leaders

- Management team
- Data analysis team
- School leaders
- Vendors and service providers

- Management team
- Data management team
- School leaders

- School leaders and teachers
- Academics team
- External stakeholders, including funders and media

COMPETENCY	INDIVIDUAL CONTRIBUTOR	MANAGER	SENIOR MANAGER/DIRECTOR	EXECUTIVE/OFFICER
DETERMINATION OF DATA NEEDS	<ul style="list-style-type: none"> Analyzes current and future data needs for teams and departments 	<ul style="list-style-type: none"> Manages analysis and research to identify data needs Surfaces trends and insights 	<ul style="list-style-type: none"> Monitors organization-wide data usage and anticipates future data needs Prioritizes data needs and shares with management team 	<ul style="list-style-type: none"> Promotes focus on data needs as an organization-wide priority
STRATEGY DEVELOPMENT	<ul style="list-style-type: none"> Performs research and analysis Identifies trends and surfaces insights 	<ul style="list-style-type: none"> Manages research and analysis Elevates insights to inform data strategy development Translates plans into team priorities and action steps 	<ul style="list-style-type: none"> Translates data strategy into department plan to achieve goals Recommends allocation of resources to achieve data strategy 	<ul style="list-style-type: none"> Leads development of data strategy that drives to achieve organization's strategic plan Ensures data strategy drives clear priorities Determines resources required to achieve data strategy
IMPLEMENTATION	<ul style="list-style-type: none"> Supports delivery of data goals and activities 	<ul style="list-style-type: none"> Translates implementation plan into team priorities and action steps Monitors implementation plan and manages team to support rollout of data strategy 	<ul style="list-style-type: none"> Sequences priorities over short- and long-term Develops an implementation plan for achieving data goals Drives communication of strategy across organization 	<ul style="list-style-type: none"> Champions data strategy as organization-wide priority Holds leadership team accountable for success against milestones
MEASUREMENT AND IMPROVEMENT	<ul style="list-style-type: none"> Collects and analyzes data to measure progress toward goals Identifies improvements to the data strategy 	<ul style="list-style-type: none"> Manages data collection and analysis aligned with key metrics Surfaces insights to inform improvements Leverages network to surface promising practices and applications for the organization 	<ul style="list-style-type: none"> Defines key metrics to measure impact of data strategy Monitors strategy effectiveness and determines improvements Collaborates with field and network to source and co-create solutions to shared challenges 	<ul style="list-style-type: none"> Ensures continuous improvement of strategy Actively contributes and seeks out best practices in data management to K-12 field

COMPETENCY	INDIVIDUAL CONTRIBUTOR	MANAGER	SENIOR MANAGER/DIRECTOR	EXECUTIVE/OFFICER
ADVANCEMENT OF A DATA-DRIVEN CULTURE	<ul style="list-style-type: none"> • Responds to internal requests for data in a timely way, providing data in an actionable form to stakeholders • Executes on workplan to increase end users' ability to use data • Seeks opportunities to support end users 	<ul style="list-style-type: none"> • Leads team to provide timely, actionable data • Develops workplan to increase end users' ability to use data • Seeks opportunities to support end users 	<ul style="list-style-type: none"> • Supports management team to make data analysis part of all decision making and continuous improvement • Leads department to provide timely, actionable data • Develops plan to increase end users' ability to use data to inform decisions 	<ul style="list-style-type: none"> • Champions data as engine for achieving organization's mission, and influences management team to make data analysis part of all decision making • Ensures data are reported in a timely, actionable way • Ensures continuous growth in end users' ability to use data to inform decisions
CRISIS MANAGEMENT	<ul style="list-style-type: none"> • Quickly responds to school crises 	<ul style="list-style-type: none"> • Executes plan to handle and manage crisis • Executes mitigation necessary to contain implications of a given crisis 	<ul style="list-style-type: none"> • Develops crisis management processes and guides short- and long-term solutions • Prepares plan to handle crises and works with leaders to ensure they know key actions and steps • Develops plan to mitigate potential future issues, and recommends course of action to executives 	<ul style="list-style-type: none"> • Sets expectations for crisis management and ensures quick response to crises • Communicates with key stakeholders to manage and contain crises • Anticipates and mitigates any "domino effect" that may result from a given crisis
PROCUREMENT AND CONTRACT MANAGEMENT	<ul style="list-style-type: none"> • Researches vendor services and provides input into selection process 	<ul style="list-style-type: none"> • Prepares analysis to recommend improvements to vendor contracts 	<ul style="list-style-type: none"> • Negotiates vendor contracts and leverages scale • Ensures diversification of vendors 	<ul style="list-style-type: none"> • Leads procurement and contract management process • Negotiates provision of services by external organizations (e.g., transportation)

COMPETENCY	INDIVIDUAL CONTRIBUTOR	MANAGER	SENIOR MANAGER/DIRECTOR	EXECUTIVE/OFFICER
DATA COLLECTION	<ul style="list-style-type: none"> Executes on project plans for systems implementations Provides training and support for data collection, maintenance, and access to school site office staff and data entry staff across departments 	<ul style="list-style-type: none"> Develops project plans for systems implementations based on knowledge of relevant data models and architecture Forecasts system license, support, and infrastructure needs Recommends adjustments to data system roadmap 	<ul style="list-style-type: none"> Develops implementation plan based on roadmap and knowledge of relevant data models and architecture Determines improvements to data system roadmap Collaborates with school leaders and management team to implement accountability strategies that motivate staff to collect data 	<ul style="list-style-type: none"> Creates roadmap to design, identify and implement data collection systems, informed by relevant data models and architecture used by leading school operators and organizations Ensures roadmap is aligned to data strategy Champions the importance of data collection and with leadership team, develops accountability strategies that motivate staff to collect data
DATA QUALITY CONTROL	<ul style="list-style-type: none"> Performs data quality control processes Resolves data quality issues in partnership with colleagues 	<ul style="list-style-type: none"> Plans and manages data quality control processes Resolves data quality issues in partnership with colleagues 	<ul style="list-style-type: none"> Defines organizational standards for data quality Problem solves with management team if data quality needs are not met 	<ul style="list-style-type: none"> Sets expectations for data quality Ensures data meet quality expectations and organizational needs
SYSTEM MAINTENANCE	<ul style="list-style-type: none"> Executes on maintenance workplans, maximizing system uptime Troubleshoots system problems Communicates with vendors as needed 	<ul style="list-style-type: none"> Develops maintenance workplans Troubleshoots complex and high priority system problems Communicates with vendors as needed 	<ul style="list-style-type: none"> Prioritizes and plans maintenance across systems, allocating appropriate resources 	<ul style="list-style-type: none"> Sets expectations for system uptime and maintenance
DATA SECURITY	<ul style="list-style-type: none"> Executes data security protocols 	<ul style="list-style-type: none"> Supervises execution of data security protocols 	<ul style="list-style-type: none"> Defines department's plan for data security Minimizes plan's restrictions on operations 	<ul style="list-style-type: none"> Ensures organizational data are secure Ensures implementation of security protocols has minimum level of restriction on operations

COMPETENCY	INDIVIDUAL CONTRIBUTOR	MANAGER	SENIOR MANAGER/DIRECTOR	EXECUTIVE/OFFICER
DATA MAPPING AND PLANNING FOR INTEGRATION	<ul style="list-style-type: none"> Executes data mapping and transformations Tests data scripts for quality assurance 	<ul style="list-style-type: none"> Coordinates data mapping and transformation Plans refinements to data schemas and integrations 	<ul style="list-style-type: none"> Develops plan for data mapping and transformation Prioritizes refinements to data schemas and integrations 	<ul style="list-style-type: none"> Ensures data mapping and transformations are in place for integrations Ensures data schemas and integrations meet organizational needs
SYSTEMS INTEGRATION	<ul style="list-style-type: none"> Executes on systems integrations Proactively identifies and resolves potential issues 	<ul style="list-style-type: none"> Oversees systems integrations Proactively identifies and resolves potential issues 	<ul style="list-style-type: none"> Prioritizes systems integrations to ensure data are accessible to end users Removes roadblocks so department can execute 	<ul style="list-style-type: none"> Ensures systems integrations meet end user and organizational needs
PROCESS DOCUMENTATION	<ul style="list-style-type: none"> Develops and maintains documentation of data collection, management, and integration processes 	<ul style="list-style-type: none"> Coordinates documentation of data collection, management, and integration processes 	<ul style="list-style-type: none"> Ensures appropriate documentation of data collection, management, and integration processes Oversees continuous documentation review and update process to ensure documentation is current 	<ul style="list-style-type: none"> Sets expectations for documentation of data collection, management, and integration processes Ensures documentation stays current

COMPETENCY	INDIVIDUAL CONTRIBUTOR	MANAGER	SENIOR MANAGER/DIRECTOR	EXECUTIVE/OFFICER
MODELING AND TOOL DEVELOPMENT	<ul style="list-style-type: none"> Produces descriptive analytics Surfaces insights and trends from descriptive analytics and modeling (e.g., correlation of metrics) 	<ul style="list-style-type: none"> Scopes and manages descriptive analysis Produces predictive analytics to understand future outcomes Surfaces insights and trends from analytics Builds innovative tools to facilitate end user access to analytics 	<ul style="list-style-type: none"> Prioritizes analysis to answer most pressing questions, incorporating input from all departments Communicates insights, trends, and tools and recommends next steps Leads continuous improvement of models and tools 	<ul style="list-style-type: none"> Ensures analytic models and tools provide accurate, actionable insights to drive strategy Ensures execution of high quality, efficient analysis
IDENTIFICATION OF METRICS	<ul style="list-style-type: none"> Identifies metrics for end users to monitor Analyzes historical metrics to determine time intervals for monitoring (e.g., daily, monthly, annually) 	<ul style="list-style-type: none"> Recommends metrics to provide actionable information for diverse end users Recommends time intervals to monitor metrics 	<ul style="list-style-type: none"> Determines metrics to provide actionable information for diverse end users Integrates metric monitoring into organizational routines 	<ul style="list-style-type: none"> Ensures metrics provide actionable information for diverse end users Ensures metrics are integrated into organizational routines at meaningful time intervals
SYNTHESIS AND IMPLICATIONS	<ul style="list-style-type: none"> Synthesizes key findings Executes on improvements to data synthesis 	<ul style="list-style-type: none"> Develops workplans for data synthesis and approach to communication with stakeholders Delivers improvements to data synthesis 	<ul style="list-style-type: none"> Elevates key findings and communicates implications to various stakeholders Prioritizes continuous improvement of data synthesis informed by stakeholder feedback 	<ul style="list-style-type: none"> Ensures meaningful implications are communicated in a timely and accessible way to stakeholders Ensures continuous improvement of data synthesis informed by stakeholder feedback
PROCESS DOCUMENTATION	<ul style="list-style-type: none"> Develops and maintains documentation of data analysis and synthesis methods and processes 	<ul style="list-style-type: none"> Coordinates documentation of data analysis and synthesis methods and processes 	<ul style="list-style-type: none"> Determines metrics to provide actionable information for diverse end users Integrates metric monitoring into organizational routines 	<ul style="list-style-type: none"> Ensures documentation of data analysis and synthesis methods and processes Ensures documentation stays current

COMPETENCY	INDIVIDUAL CONTRIBUTOR	MANAGER	SENIOR MANAGER/DIRECTOR	EXECUTIVE/OFFICER
VISUALIZATIONS AND DASHBOARDS	<ul style="list-style-type: none"> Executes on iterative process to create visualizations and dashboards for end users (e.g., teachers, school leaders, leadership team), ensuring data are accurate and aligned to end user needs Supports use cases through training and coaching 	<ul style="list-style-type: none"> Coordinates iterative design process that incorporates end user feedback to create actionable visualizations and dashboards Recommends ways to align visualizations and dashboards with preexisting structures and routines Supports use cases through training and coaching 	<ul style="list-style-type: none"> Plans and prioritizes visualization and dashboard development, leading iterative design process to incorporate feedback from end users Leads alignment of visualizations and dashboards with preexisting structures and routines Ensures accessibility of visualizations and dashboards 	<ul style="list-style-type: none"> Drives visualizations and dashboards to provide actionable information to end users throughout the organization Ensures visualizations and dashboards seamlessly incorporate data into daily work
COMMUNICATION FOR DATA-DRIVEN DECISION MAKING	<ul style="list-style-type: none"> Translates data into relevant insights and implications Anticipates and empathizes with stakeholder reactions Supports colleagues to interpret findings 	<ul style="list-style-type: none"> Develops clear messages and insights from data, and recommends approach to communicate them to various audiences Guides team to anticipate and empathize with stakeholder reactions Supports colleagues to interpret findings 	<ul style="list-style-type: none"> Communicates actionable data insights to stakeholders and supports use in effective decision making Models ability to consider and plan for stakeholder reactions and to modify communication approach as needed Advises management team and school leaders on findings and implications and ensures they are prepared to publicly represent 	<ul style="list-style-type: none"> Promotes user-centric approach to communicating data insights Advises leadership team and Board on findings and drives data-driven decision making Coaches leadership team and Board to share findings with key constituents Communicates key findings to high priority external stakeholders

SOURCES:

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