

COUNTY OF SOLANO
CLASS SPECIFICATION
INFORMATION TECHNOLOGY INFRASTRUCTURE AND OPERATIONS
MANAGER

CLASS SUMMARY:

Under general supervision, plans, organizes and directs the development, installation, implementation, and maintenance of hardware, software, applications, and services for one or more of the following infrastructure delivery areas: application data and analytics; networks and mobility; information security; and/or, data center and operations. Plans, develops and implements project efforts that utilize information technology solutions; performs project and vendor management activities to ensure that assigned services meet customer expectations for time, cost and performance; coordinates resources necessary to successfully support projects/services; supervises professional and technical staff; and participates as a responsible, proactive, and positive team member of the departmental management team.

DISTINGUISHING CHARACTERISTICS:

This class is distinguished from the:

- **Assistant Director of Information Technology** class which manages technology divisions within the Department of Information Technology;
- **Systems and Programming Manager** class which plans, organizes and directs an electronic data processing division engaged in the design, development and administration of management information and data processing application systems, and performs complex computer systems and data base design and administration; and
- **Systems Analyst (Senior)** class which plans, designs, updates, and maintains the most difficult and complex computerized data processing application systems for large, multi-department of county-wide functions; acts as a project-team leader and technical expert in assigned areas of responsibility; and provides project management from initiation to implementation and maintenance for designated major systems.

SUPERVISION RECEIVED AND EXERCISED:

- Supervision is provided by the Assistant Director of Information Technology.
- Employees in this class supervise employees in classes such as Systems Analyst (Senior) and Systems Analyst
- Technical and functional supervision will also be performed over contract staff and service providers.

ESSENTIAL DUTIES: This class specification represents the core area of responsibilities; specific position assignments will vary depending on the needs of the department.

- Exercises management authority for assigned services and activities of the division managed and performs managerial responsibilities such as:

- monitoring purchases and expenditures;
- approving non-routine expenditures for workplace improvements, training, computer software, hardware, services, etc.;
- providing input to the unit's budget;
- monitoring goals and objectives of the unit and taking corrective actions as appropriate;
- recommending and implementing new policies and procedures to eliminate or reduce barriers to efficient or effective production and/or to improve customer service; and
- coordinating and monitoring the work of consultants and contractors by reviewing the performance and quality of work to ensure compliance with the applicable contract and by reviewing and approving claims for payments to ensure conformance with contract provisions and to prevent cost overruns.
- Performs supervisory duties to direct reports such as:
 - establishing standards for acceptable work products and evaluating performance;
 - interviewing applicants and making selections;
 - reviewing, approving and implementing disciplinary actions and terminations;
 - assigning work and planning and scheduling staff's work activities and deadlines;
 - reviewing work and recognizing employees' work efforts and accomplishments;
 - providing career development mentoring and recommending training and career development opportunities;
 - reviewing and approving timesheets and requests for leave; and
 - supporting and ensuring compliance with County and Department policies and procedures including those related to equal opportunity and to safety.
- Manages one or more of the following Information Technology (IT) service delivery areas:
 - Data Center and Operations: Serves as data center and operations expert in server, storage, database and end-user computing architecture and platforms; helps project teams plan and manage the support of new technologies; monitors data center performance and reliability; works closely with application architects and other functional area leads to ensure adequate operational solutions are in place; provides expertise in data center automation, virtualization, and provisioning; provides input and recommendations regarding business continuance issues, cloud computing, end-user computing and improvements to the operations of systems and processes supported.
 - Information Security: Serves as an information security expert in application development, database design, network and/or platform efforts, helping project teams comply with enterprise and IT information security policies, industry regulations, and best practices; works closely with enterprise architects and other functional area leads to ensure adequate security solutions are in place throughout all IT systems and platforms to mitigate risks and to meet business objectives and regulatory requirements; directs the development and maintenance of the information security strategy; leads the evaluation and development of secure solutions, based on approved security architectures; researches, designs and advocates new technologies, architectures, and security products; ensures the integration of all security solutions within and across each domain; leads vulnerability assessments, develops security monitoring and review

mechanisms and establishes remediation plans; and develops the business, information and technical artifacts that constitute the enterprise information security architecture and solutions.

- Application Data and Analytics: Serves as an application data and analytics expert helping project teams comply with enterprise and IT data policies, industry regulations, and best practices including current and emerging accessibility standards; plans information architecture by studying the strategy and target audience, envisioning the data architectural scheme, information structure and features, functionality, and user-interface design; works closely with enterprise architects and other functional area leads to ensure adequate data and analytic solutions are in place throughout all IT systems and platforms to meet business objectives; directs the development and maintenance of the data and analytic strategies; leads the design of the information architecture, across multiple data types; leads the evaluation and development of solutions including business intelligence, dashboard and data presentation, reporting and workflow tools; designs and advocates new technologies, architectures, and data and analytics services; ensures the integration of all data and analytic solutions within and across each domain including SharePoint, GIS, and the County's web presence; and leads County open data initiatives and develops the business, information and technical artifacts that constitute the enterprise information architecture and solutions.
- Network and Mobility: Serves as network and mobility expert in the architecture and design of local and wide-area, wired and wireless networks, telephony, and video systems. Participates in/contributes to technical discussions relative to future network and mobility architecture direction especially related to cloud-centric topologies; participates in enterprise strategy development, including environmental analysis, opportunity identification, and business case development; defines the principles that guide network, mobility, telephony, and video technology decisions for the enterprise; designs and leads the implementation of network infrastructure, mobility, telephony, and video technologies architecture based on business requirements and IT strategies, as well as to rectify gaps within the current environment; leads the assessment of the capacity and resource utilization of networks and mobility hardware and software; approves and modifies the designs and architectures by reviewing end-user topology, security, performance, and interoperability requirements; oversees and facilitates the evaluation and selection of network, mobility, telephony, and video hardware and software technology and product standards, as well as the design of standard configurations.
- Performs the following in support of the IT service(s) for which responsible:
 - Identifies short-term and long-term work unit and/or vendor teams' goals, objectives priorities and activities to be accomplished consistent with the department's strategies and recommends, plans, directs, coordinates and participates in the implementation of accepted strategies and plans;
 - Researches and evaluates a variety of operations resources and services available, identifies possible improvements in the departmental IT solutions, and initiates purchase and/or modification of hardware, software and/or vendor services;

- Develops standards and procedures for departmental users related to assigned services;
- Plans, directs, and monitors pilot studies and special projects involving assigned services to better support multiple program needs and requirements and prepares reports and recommendations based on various research, studies and projects;
- Serves as principle and primary advisor to department management and/or vendors regarding assigned services and the department's utilization of same;
- Determines if external consultants or contractors will be required to complete project plan or service needs, provides advice and counsel to the vendor relationship decision-making and contract development processes and develops and manages strategy vendor and partnership relations;
- Administers, monitors, and evaluates contract services with a variety of service providers/vendors, negotiates modifications and changes with contractors/vendors per administrative directives, oversees and monitors services provided to ensure quality and timely delivery of same, monitors timely and accurate invoicing, approves invoices for payment, and resolves vendor performance disputes.
- Identifies and implements best practices of optimizing assigned services to improve operational performance and ensure service-level requirements are met;
- Meets regularly with team including vendor teams to gather work statuses, discuss work progress and obstacles, provide advice, guidance, encouragement and constructive feedback, present performance assessments and establish individual and team objectives; and
- Directs the investigation and resolution of complaints/concerns related to the IT work unit's services and activities; identifies and initiates solutions to issues involving policy, service delivery, contractor/vendor relations, and/or personnel actions.
- Reviews, analyzes, and evaluates changes in federal and state laws and regulations that will have an impact on the delivery of services and establishes action plans to ensure compliance with pertinent guidelines and regulations; advises the departmental management team of specific plans, costs and recommendations for mandated program, policy, and procedural modifications.
- Represents the County and department and acts as liaison with a variety of federal, state, and local agencies/organizations to ensure communication with the input into all decision-making and data collection processes that impact the goals and objectives of the department and its solutions.
- Maintains professional knowledge in applicable areas and keeps abreast of changes in job related rules, statutes, laws and new business trends; makes recommendations for the implementation of changes; reads and interprets professional literature; attends training programs, workshops and seminars as appropriate.
- Performs other duties of a similar nature or level as assigned.

EDUCATION, TRAINING AND/ OR EXPERIENCE:

Bachelor's degree and Experience

Education: Bachelor's degree or higher from an accredited college or university with a major in Information Technology, Engineering, Computer Science, Management Information Systems, Business Administration, Public Administration, Project Management, Mathematics or a closely related field;

AND

- **Experience:** Two (2) years of full-time experience in the class of Systems Analyst (Senior) with Solano County. OR
- The equivalent of three (3) years of full-time experience coordinating the acquisition, implementation and maintenance of information technology systems, infrastructure programs and/or networking projects including at least two (2) years leading and/or supervising information technology professionals, technical staff, and/or technology contractors.

OR

Associate's degree and Experience

- **Education:** Associate's degree or higher from an accredited college or university with a major in Information Technology, Engineering, Computer Science, Management Information Systems, Business Administration, Public Administration, Project Management, Mathematics or a closely related field;

AND

- **Experience:** The equivalent of four (4) years of full-time experience responsible for and/or project lead on complex infrastructure or systems and programming projects as a Systems Analyst (Senior) with Solano County. OR
- The equivalent of five (5) years of full-time experience coordinating the acquisition, implementation and maintenance of information technology systems, infrastructure programs and/or networking projects including at least two (2) years leading and/or supervising information technology professionals, technical staff and/or technology contractors.

OR

Training and Experience

Education: Relevant coursework and/or technical certification in Computer Science, Information Technology or Management Information Systems, Networks and Communications, Information Security, Information Technology Service Manager, or closely related field:

AND

- **Experience:** The equivalent of six (6) years of full-time experience responsible for and/or project lead on complex infrastructure or systems and programming projects as a Systems Analyst (Senior) with Solano County. OR
- The equivalent of ten (10) years of full-time experience coordinating the acquisition, implementation and maintenance of information technology systems, infrastructure programs and/or networking projects including at least two (2) years leading and/or supervising information technology professionals, technical staff, and/or technology contractors.

LICENSING, CERTIFICATION AND REGISTRATION REQUIREMENTS:

- Applicant must possess a valid California driver's license, Class C, by the date of appointment.
- Some positions in this class will require the applicant to possess one or more of the following certifications:
 - Network and Mobility: Cisco Certified Network Professional (CCNP) Routing and Switching; Cisco Certified Network Associate (CCNA) Security; Cisco CCNA Voice; Cisco CCNA wireless.
 - Information Security: Cisco CCNP Security; Certified Information Systems Security Professional (CISSP) or Certified Information Security Manager (CISM) or SANS Global Information Assurance Certification (GIAC).

REQUIRED KNOWLEDGE, SKILLS AND ABILITIES:

Note: Knowledge, skill and ability requirements will vary depending on the division managed.

Knowledge of:

- Principles and practices of management, supervision, leadership, motivation, team building, organization, training, and conflict resolution.
- Systems, services and activities of the division managed, at the advanced to expert level.
- Policies, regulations, and procedures governing departmental programs, and funding.
- Computerized information systems utilized from a user perspective.
- IT/data systems analysis and design.
- Operating systems architecture and utilities.
- LAN/WAN network hardware and software vendors and products.
- Data communications concepts and principles.
- User training methods and techniques.
- Computer hardware and software error research and correction alternatives.
- Standard and accepted regulations, principles, practices, and policies of information technology; data systems operations, administration, planning and budgeting.
- Standard and accepted bidding and procurement methods and techniques.
- Techniques and principles of project management including risk assessment and mitigation.
- Infrastructure planning and operations, design, and deployment, as well as system life cycle management.

- Current and emerging technologies, technology directions and strategic application to business needs.
- Principles and practices of budgeting, cost analysis, and fiscal management.
- Oral communication techniques to include presentations to groups of various sizes in a positive, inclusive, and motivational manner.
- Customer service techniques for dealing with customers, often in a difficult or confrontational situation.
- Formats and appropriate terminology for written communications such as business correspondence, policies, procedures and narrative reports.

Skill and/or Ability to:

- Supervise, evaluate, train, and develop staff and organize and manage their work.
- Conceptualize, launch and deliver multiple IT projects on time and within budget.
- Improve operational efficiency, service delivery and information management across all lines of business and technology platforms.
- Stay current with developments in new technologies and platforms.
- Build relationships; maintain and extend networks within, across and external to organizational boundaries
- Make decisions and recommendations clearly linked to the organization's strategy and financial goals, reflecting an awareness of external dynamics.
- Advocate change, identify and act on opportunities for continuous improvement, and mobilize others to support change through times of stress and uncertainty.
- Plan strategically.
- Incorporate into the plans business priorities, strategies, goals, emerging technologies, industry trends and economic viability.
- Understand, interpret, and accurately explain laws, regulations, and policies governing departmental data systems operations and processes.
- Plan, organize, direct, and evaluate the activities and operations of professional, technical, and clerical staff involved in complex and comprehensive activities.
- Establish and direct the maintenance of designated documentation and records in an accurate and timely manner.
- Conduct and integrate assigned functions and activities in a cohesive and effective service delivery system.
- Secure cooperation and teamwork among departmental staff and other departments/contractors.
- Establish and maintain effective working relationships with those contacted in the performance of required duties.
- Manage projects, including the ability to effectively deploy resources and manage multiple projects of diverse scopes in a cross-functional environment.
- Manage a variety of simultaneous work projects and carry them through to successful completion.
- Determine the appropriate course of action in stressful and/or emergency situations.
- Administer contracts and grants according to designated guidelines and regulations.
- Communicate information and ideas clearly and concisely, both orally and in writing.

- Work with and speak to various cultural and ethnic individuals and groups in a tactful and effective manner.
- Provide customer service that meets and exceeds unit goals and expectations.
- Prepare a variety of written communications to include reports, policies and procedures.
- Maintain accurate records and document actions taken.
- Maintain confidentiality of records and information per pertinent laws/regulations.
- Use modern office equipment to include computers and related software applications.

PHYSICAL REQUIREMENTS:

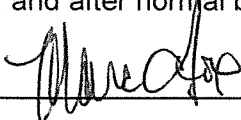
- **Mobility and Dexterity:** This class typically requires employees to perform the following: stooping, kneeling, reaching, standing, walking, fingering, grasping, feeling (i.e. sense of touch), and repetitive motion.
- **Lifting, Carrying, Pushing and Pulling -- Sedentary Work:** Employees in this class exert up to 10 pounds of force occasionally and/or a negligible amount of force frequently or constantly to lift, carry, push, pull or otherwise move objects.
- **Vision:** This class typically requires employees to have close visual acuity, with or without correction, to prepare and analyze data and figures, transcribe, view a computer terminal, read, etc. This class requires some employees to have depth perception in order to operate a motor vehicle.
- **Hearing/Talking:** This class typically requires employees to perceive the nature of sounds at normal speaking levels with or without correction, and have the ability to receive detailed information through oral communication. This class requires employees to express or exchange ideas by means of the spoken word.

WORKING CONDITIONS:

- **Office Work:** Employees in this class will most often be working in an office setting.
- **Traffic Hazards:** Employees in this class may be required to operate a vehicle and thus will be subject to traffic hazards while driving.

OTHER REQUIREMENTS:

- **Background Checks:** The County may conduct a background check and a reference check on candidates prior to appointment to a position within this class
- **Independent Travel:** Incumbents may be required to travel independently, for example, to perform work at other work sites, to attend meetings with other County employees, to attend meetings with community organizations, etc.
- **Hours of Work:** Incumbents may be required to work weekends, holidays, irregular hours, on-call, and after normal business hours.



Director of Human Resources

- Date Approved by the Director of Human Resources: March 26, 2015
- Date Revised: September 12, 2016
- Class Code: 367060