CITY OF SAN JOSE
CAPITAL OF SILICON VALLEY

Citywide Data Strategy

May 2025

Providing quality, efficient, and equitable services for all residents and businesses in San José through data-driven solutions.

Message from the City Manager

The Citywide Data Strategy is a critical step toward becoming a more responsive, equitable, and data-informed government. This strategy reflects the City of San José's unwavering commitment to improving the quality of life for our residents by harnessing the power of data to better understand community needs, drive more effective decision-making, and deliver services in a transparent and accountable way.

Developed by the City's Information Technology Department, their leadership and collaboration across departments has been instrumental in shaping a strategy that centers on people, equity, and measurable results. With contributions from stakeholders throughout the organization, this plan establishes a unified framework to ensure data is collected, shared, and used responsibly and ethically across all City departments.

Whether addressing homelessness, improving emergency response, or optimizing public services, data is foundational to making informed and impactful decisions. This strategy provides us with the tools and principles to embed data into the core of how we serve our community.

This strategy will guide our path forward as we continue advancing San José's performance goals. I thank all City staff who contributed to this effort and look forward to the positive outcomes this plan will help us achieve together.

Jennifer Maguire
San José City Manager

Message from the Mayor

To deliver the outcomes our residents deserve with the limited resources we have available, we must be data-driven. We can't just have bigger government, we need to have better government.

Right now, our data exists in silos that span across many different entities both internal and external to our departments, which makes it harder to find trends, draw insights and forge new solutions. Through the Citywide Data Strategy, we can break these silos to create cross functional collaboration with key partners when solving issues like unsheltered homelessness or pedestrian safety.

This strategy will ensure we capture the right data at the right time, that we store and clean the right content, communicate findings in an optimized manner for the right decision makers and the general public, and guarantee knowledge integration across the organization and digital infrastructure. Making a difference in the lives of our residents and achieving performance management that continually improves City operations depends on success at every stage of our city's data management pipeline.

Matt Mahan
Mayor of San José

Introduction

The City of San José is committed to providing quality, efficient, and equitable services to all residents and businesses in San José to maximize community and economic opportunity. Enabling a large organization to perceive and address community needs requires a focus on providing the tools to measure service availability, accessibility, delivery, and satisfaction. To achieve these goals, it is essential to identify what outcomes to measure and how to measure them, fix any gaps in the data, and build systems that help us improve City services over time. This strategy will help City service delivery and continuously improvement our work by focusing on opportunities for the San José community that have high impact.

Figure 1. Boy and girl playing on grass in park.

This data strategy will set ongoing standards and processes on which the City can dedicate resources based on clear priorities by using shared methods to track progress and focus on real results for our community.

The City of San José is implementing a unified information management framework to support City's mission to provide quality public services, facilities and opportunities that create, sustain, and enhance a safe, livable, and vibrant community for its diverse residents, businesses, and visitors. This framework includes:

1. Developing and implementing a clear vision and direction for how the City's data assets are maintained and managed in supporting the delivery of services to the residents and businesses of our City in the most effective, efficient, equitable, and transparent way.
2. Reviewing and establishing appropriate Citywide policies, processes, and procedures to ensure consistent and effective data management practices across all City departments.
3. Ensuring compliance with all legal and regulatory standards in consultation with the City Attorney's Office, including accessibility and security requirements, in City data management policies and practices.
4. Establishing requirements and guidelines for Departments to educate and support the departmental staff in their efforts to improve data quality for timeliness, accuracy, and completeness.
5. Developing policies and guidelines and promote standards for how data assets are used for analytics and decision making.

6. Providing guidelines and support for the development of new approaches to how data could be properly utilized by emerging new technologies, such as artificial intelligence (AI), to improve service delivery for residents.
7. Ensuring data policies and procedures are in alignment with City of San José's Digital Privacy Policy and Information and Systems Security Policy, to foster interoperability and integration of data platforms and sharing of data between City departments when authorized by law to improve the quality, effectiveness, and efficiency of City services.
8. Providing policies, procedures, and guidelines for data sharing and systems integration between City systems and systems of other government agencies for regional data collaboration when required and authorized by law or other mandates while doing so without compromising the privacy of the residents.
9. This strategy outlines a three-year roadmap that allows for strategic budget investments, staff allocation, and alignment with institutional priorities, ensuring a successful and scalable implementation.

Purpose

Data plays a key role in the effective and efficient delivery of services. The City of San José collects, generates, and manages various types of data from service delivery and operations. High-quality, timely, and accurate data ensures consistent availability of data for enterprise solutions and informed decision-making. Having a structured approach to data management promotes data availability, consistency, reliability, traceability, and process repeatability thereby laying the groundwork for knowledge management and the adoption of advanced technologies.

Figure 2. City staff providing services to residents living in recreational vehicles (RVs).

The City currently invests significant time and resources in leveraging data to support decision-making. This is largely due to the absence of an enterprise-level data governance framework. Any initiative that involves coordination across multiple departments or external partners becomes resource-intensive and time-consuming.

Without standardized processes for data management, teams often duplicate efforts, face delays in accessing accurate information, and struggle with inconsistent data practices. Establishing a consistent, citywide approach to data governance would enable faster, more reliable data access and improve the efficiency of cross-departmental collaboration.

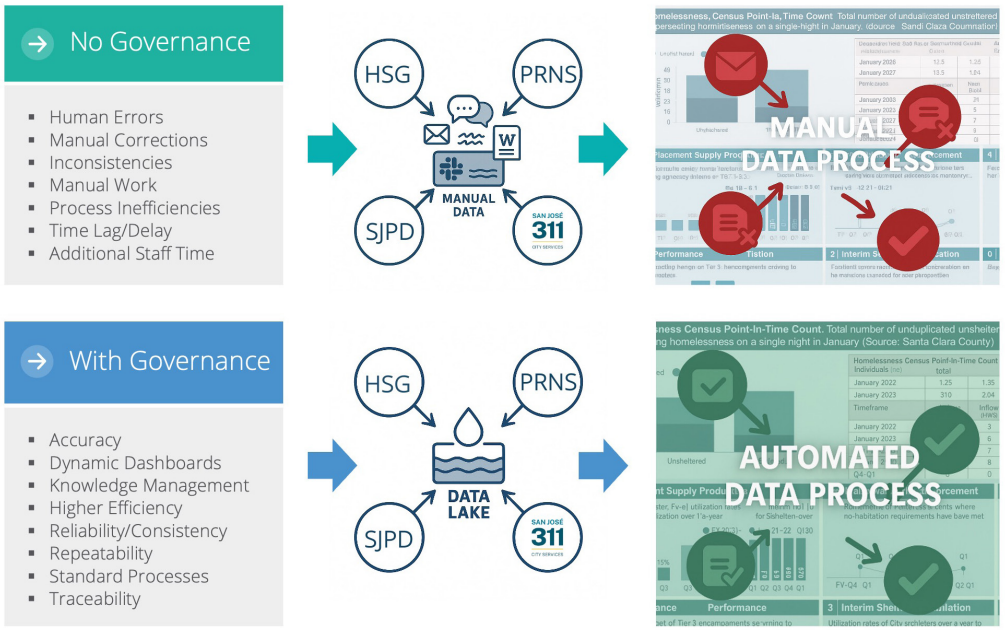

Figure 3.

Why City-wide Data Governance Matters—shifting from manual, siloed data to an automated, shared data lake.

Data is the foundational element that enables artificial intelligence (AI) systems to learn, make predictions, and generate insights. With the increase in the adoption of AI tools and its use in the decision-making process, it is becoming more important to ensure that the data that fuels AI systems is of good quality, accurate, and reliable. Proper management of data is crucial to ensure that AI systems produce accurate, unbiased, and ethical results. Proper data governance ensures data quality for use in AI systems and that the City can continue providing smarter, more resilient, and citizen focused services for future programs and initiatives.

City programs are organized around City Service Areas (CSAs), which categorizes services from individual departments into the City's five key lines of business: Community and Economic Development, Environmental and Utility Services, Neighborhood Services, Public Safety, and Transportation and Aviation Services. An additional CSA, Strategic Support, represents the internal functions that enable the other five CSAs to deliver services to the community. These cross-departmental CSAs serve as a platform for strategic planning, ensuring that decisions align with the priorities set by the Mayor and City Council.

The City uses a performance-based budget as required by City Council Policy 1-18[1]. All performance at the Core Service[2] level must be consistent with the priorities set at the CSA and department levels and the outcomes of the CSA at the City level, meeting the performance, budget goals, and policies established by the Mayor and City Council. The CSA performance modernization initiative allowed the City Administration to report more meaningful measures and performance targets and forecasts in the budget. By utilizing data across these areas, the City can track, measure, and optimize performance, ensuring services are effectively coordinated and delivered in line with community needs. The data collected and analyzed within CSAs informs policy decisions, resource allocation, and overall service improvement, driving efficiencies and effectiveness across all levels of City operations. By integrating robust data practices starting at the program level and moving up

1 https://www.sanjoseca.gov/home/showpublisheddocument/84856/638599304386930000
2 https://www.sanjoseca.gov/home/showpublisheddocument/121088/638817189664570000

to performance management, the City can enhance its ability to make informed decisions, prioritize investments, and achieve measurable outcomes, ensuring greater accountability and efficiency in service delivery.

The City of San José's Data Strategy takes a people first stance: technology is only as powerful as the people who use it, and both must operate inside clear, repeatable processes.

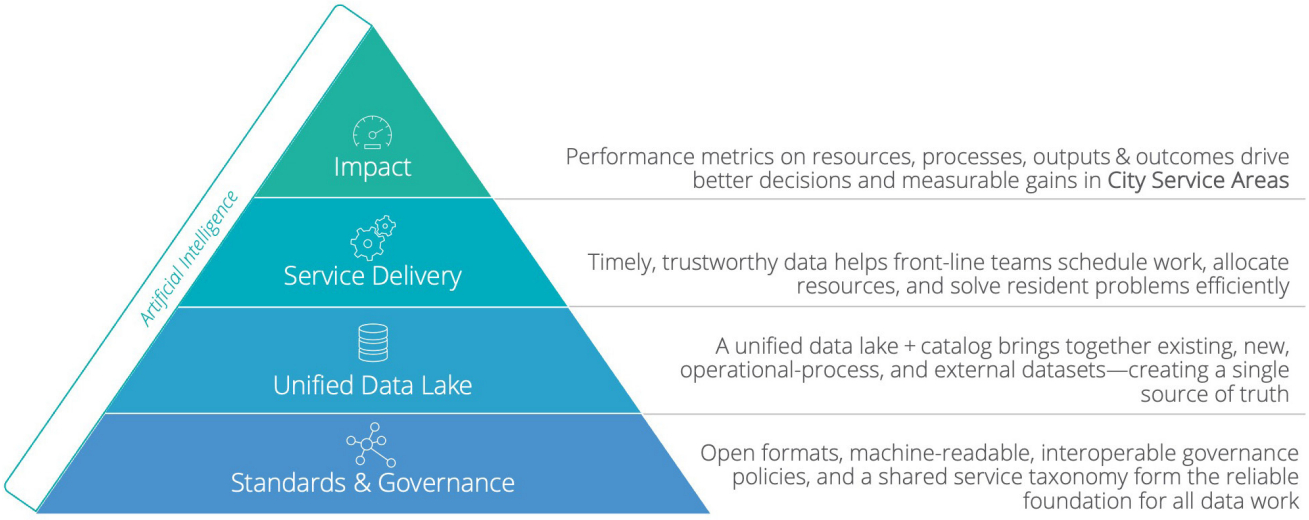

Figure 4. From Data Standards to Impact—how unified data and AI fuel CSA performance.

To make the connections between People, Process, and Technology unmistakable, we highlight the action each pairing unlocks:

- **People + Technology = Innovate**
  Introducing up-skilling sessions and "try-it" labs help staff spot quick ways today's tools can make everyday tasks easier—and build confidence for bigger ideas tomorrow.
- **Process + Technology = Automate**
  Leveraging technology to ensure data quality, documenting how data is collected, and cataloging and consolidating datasets into a shared space with role-based access will help improve efficiency and access to relevant data.
- **People + Process = Scale**
  Bringing people together, identifying the data problems on the ground and collaborating to find collective solution to those problems will be the key to make an organization wide impact and bring about a cultural change.

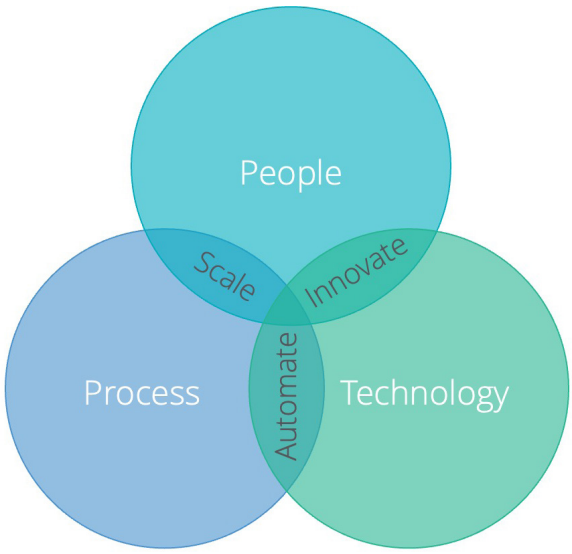

Figure 5. People – Process – Technology Model: Linking Innovate · Automate · Scale

Together, these levers create a self-reinforcing cycle: people innovate, documented processes let us automate, and shared methods enable wins to scale across the City.

Stakeholders

This strategy will support service delivery and service quality goals that are a priority to the City's key stakeholders:

1. Residents and community members can benefit from enhanced transparency and more responsive and efficient public services. For example, having access to cross-departmental data on homelessness can enable the City to monitor and report progress on addressing unsheltered homelessness and managing encampments. This integrated view can provide a comprehensive understanding of homelessness-related services and their interconnections, allowing the City to make data-informed decisions, adjust priorities, and focus resources where they are needed most.
2. City-elected officials and executive staff can ensure that policies and investments are both effective and aligned with community needs through evidence-based decision making and improved accountability.
3. Departmental staff can deliver higher-quality services through streamlined operations and empowered decision-making.

Engaging with partners at different levels including public, philanthropic, private agencies and academic institutions can foster economic development and innovation. Standardized data practices can facilitate sharing of insights across sectors through improved collaboration and interoperability.

The current use of data at the City and at most government organizations is purely analytics and metrics tracking. Figure 2 shows how that engagement works at different levels — tactical, analytical, strategic, and public — in the organization through visual dashboards. At the base level is tactical data used by department staff. The second level is analytical data, which helps department leadership find trends and drive programs and initiatives. Strategic dashboards for elected officials and City leaders guide policy and funding choices. At the top of the pyramid are public dashboard for residents and the community. Public dashboards help residents see key services and results with data they can trust.

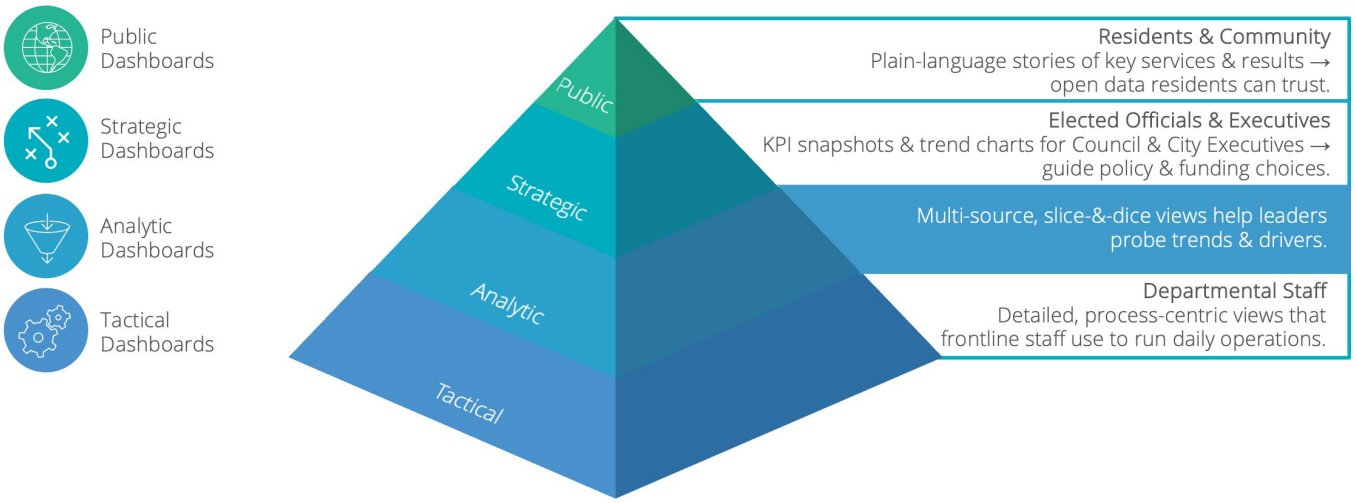

Figure 6. Four-Tier Dashboard Pyramid—linking Public, Strategic, Analytic, and Tactical views to their key stakeholders.

With the technological advancements and use of artificial intelligence tools data will play a central role in allowing government to have a proactive approach to service delivery as informed by data versus the reactive approach. This will change how the engagement with data will shape in the future and will have to be redefined.

Equity

In November 2022, the City Charter was amended to adopt an Equity Values and Standards Policy, which establishes a framework for advancing racial and social equity and applying equity standards to the conduct of members of the City Council, City Boards, Commissions, decision-making bodies, and City employees.

Embedding equity practices in every step of how the City collects, uses, and manages data, or "data lifecycle," ensures compliance with the City Charter and builds on the City's commitment to data practices that are inclusive, fair, and representative of the community. By prioritizing equity the City can:

- Enhance representation by ensuring that the data collection and analysis reflect the diverse needs and experiences of all residents in San José, including marginalized communities.
- Promote inclusive decision-making by identifying and addressing disparities, enabling policies and services that are fair and effective.
- Increases transparency and accountability by highlighting and mitigating biases within data processes, building trust with the public.
- Drive equitable outcomes by informing resource allocation and program development that directly addresses and reduces systemic inequities.

Having equitable data governance in San José can support the creation of more balanced, responsive, and just public policies and services.

Approach

The City's approach to improving information management focuses on collaboration and effective data governance. This includes creating appropriate governance structures, developing Citywide processes, building trust within the organization, and establishing standards across different City initiatives and focus areas. This work is a commitment to better understanding how the City operates so we can make smarter, more informed decisions at every level. A successful data system is one that's easy to use, encourages open sharing of information, and supports teamwork across departments. When these efforts align with City priorities, they help us track progress, make improvements based on data, and build long-lasting practices that bring real value to both the City and the people we serve.

Reducing unsheltered homelessness remains a top priority for the City. To effectively address the challenges around homelessness, the City requires accurate, high-quality, and relevant data to inform decision-making. This data strategy serves as a critical framework, enabling the City to test and apply data-driven solutions to directly address homelessness and drive measurable, impactful outcomes. Building on this foundation, the City will scale these efforts to across all City departments, integrating data-driven decision-making to improve service delivery, enhance interagency coordination, and optimize resource allocation. By expanding this approach, the City aims to maintain a comprehensive, Citywide data governance that supports long-term, sustainable improvements across multiple policy areas.

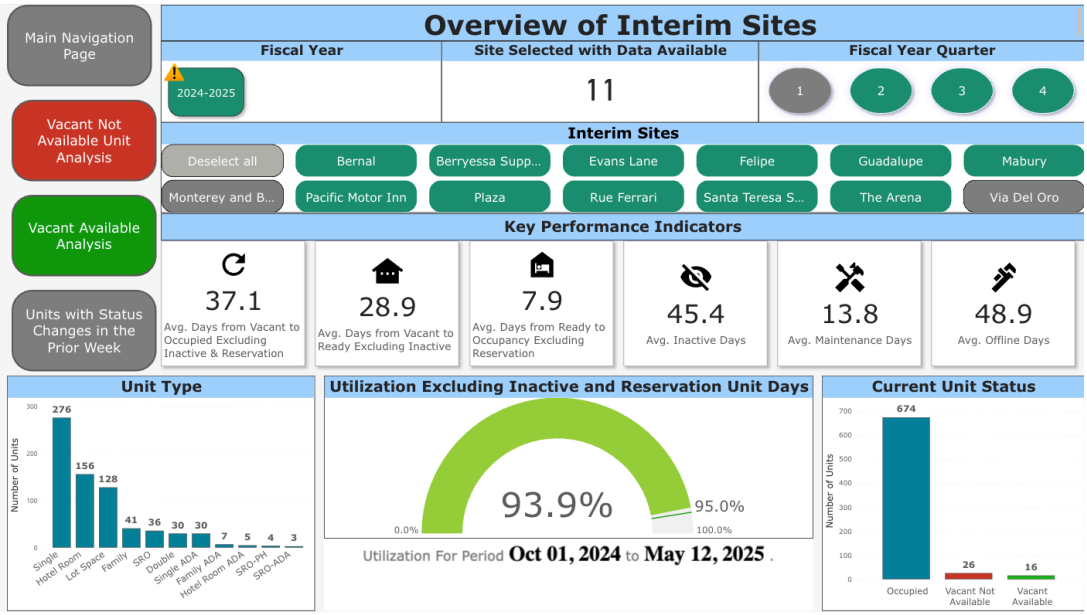

Figure 7. Housing Department's Emergency Interim Housing Site dashboard.supporting data-driven solutions.

The City has implemented a phased, crawl-walk-run approach to data strategy execution. In the crawl phase, the "Resident Impact Data Project" (RIDP) will serve as an initial initiative to assess key challenges and establish foundational insights. The RIDP supported the City to develop the Citywide Data Strategy through coaching and workshops in partnership with Johns Hopkins University Bloomberg Center for Government Excellence. Progressing to the walk phase, the City will prioritize the "Homelessness Data Consolidation Project" (HDCP) which aims to enhance coordination and of homelessness solutions across departments. In the run phase, the City will transition to building

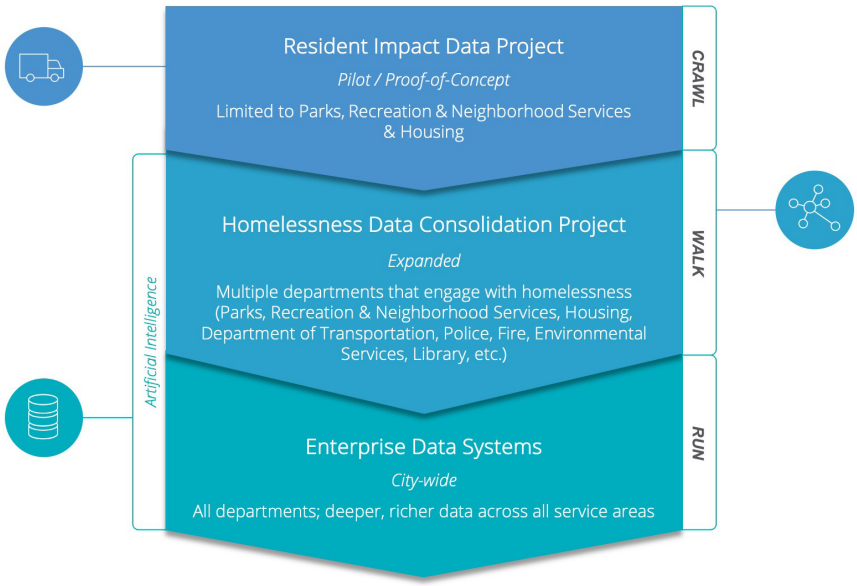

Figure 8. Crawl, Walk, Run approach—scaling from pilot data projects to city-wide AI-ready systems.

comprehensive, citywide data practices, enabling scalable, long-term advancements not just within the City, but also with external partners. To support this effort, the City has identified three strategic data objectives, each supported by key initiatives designed to achieve meaningful outcomes aligned with the City's broader vision.

Foundational Principles

This data strategy is anchored in three core principles: Developing Data as a Service, Fostering Communities of Practice, and Measuring Impact. Together, these principles establish a strong data foundation for the City, enabling data to be integrated into organizational decision-making at all levels. This approach enhances operational efficiency, prepares the organization for future technological advancements, and strengthens public trust through greater transparency and community involvement.

An organization's progress through data readiness can be assessed along a developmental scale: As Needed, Developing, Defined, Managed, and Transformative. The framework below outlines this progression through the lens of foundational data principles, providing a view of the City's current state and path forward in its data journey.

Data Readiness Stages

Data Readiness Stages → / Principles ↓	As Needed Siloed data	Developing Emerging data practices	Defined Policies, metadata, quality controls established	Managed Integrated, governed, high-quality data	Transformative Data shapes strategic direction, civic innovation, and public trust
Develop Data as a Service	Reactive data use	Spreadsheets and limited dashboard	Established internal data platform, early self-service access	Fully functional internal data-as-a-service model	Community data-as-a-service model
Foster Communities of Practice	Informal sharing	Working groups	Formal cross-departmental communities of practice	Self-sustaining, collaborative communities of practice	Communities of practice influence strategy, policy, and foster collaboration
Measure Impact	As needed reporting	Basic program metrics	Metrics aligned with programs and tracked consistently	Data use regularly tied to performance reviews and outcomes	Measurable impact influences funding, priorities, and equity outcomes

Table 1. Data Readiness Stages from the lens of Foundational Principles. The City is currently in the Defined Stage, highlighted in yellow.

Data as a Service

Establishing Data as a Service (DaaS) involves operationalizing data to provide authorized City staff seamless access to data. A well-designed DaaS supports standardized data practices, builds trust in data, and breaks down departmental silos, enabling faster emergency responses, more informed policy decisions, and improved services for residents and businesses. It enhances transparency by facilitating public access to open data and reducing costs through streamlined data management. By providing accurate, up-to-date information across departments, DaaS promotes interagency collaboration, ensures efficient use of taxpayer funds, and supports data-driven governance, fostering community trust and civic engagement.

Three main components of a successful DaaS as identified by the City are:

Citywide Data Architecture

Goal: Establish a Citywide information management framework to support effective use of data for operational decision making.

The City will develop the "Homelessness Data Consolidation Project" (HDCP) architecture to identify gaps in current data processes and enhance overall data management. This platform will establish a centralized system to store data, or "data repository," with standardized storage solutions, role-based access controls, and data engineering solutions to streamline data integration. Additionally, a built-in anonymization framework will ensure privacy protection and compliance with Health Insurance Portability and Accountability Act (HIPAA), California Consumer Privacy Act (CCPA), and other regulatory requirements, supporting secure and ethical data use.

Citywide Data Standards

Goal: Establish standards and guidelines across all City departments around use of data, analytics tools, AI models and other data resources

Overcoming data silos will require the creation of standardized procedures for data collection, classification, profiling, retention, and sharing. The data architecture will help the City identify gaps and opportunities to implement standardized data management practices throughout the entire data lifecycle. This will ensure high data quality and prepare the data for effective use in shared applications, advanced analytics, and AI-based initiatives.

Effective Data Sharing

Goal: Set up protocols around the use of data to ensure all private and public data is kept secure when it is being stored or shared as needed.

A well-designed data infrastructure, supported by robust data standards and practices, will enable seamless information sharing within the City and create opportunities for broader data sharing. This will foster enhanced collaboration both within the City and with its external partners.

Foster Communities of Practice

The City aims to developand grow the understanding of data by educating staff and the community. To achieve this, the City will establishdata standards while continuing to learn from each other and brainstorm new and innovative methods.

Build Data Skills

Goal: Increase the number of City staff who use data analysis to inform their work.

Successful implementation of a data strategy depends on its widespread adoption across the organization. As the City develops its data infrastructure and standards, it is essential to equip staff with the necessary skills to effectively utilize these resources. Through the Data Program and other educational initiatives, the City will increase awareness, conduct trainings, and develop proficiency in foundational data skills, ensuring that employees can leverage data-driven insights to enhance service delivery and maximize the value of the City's data resources.

Promote Data Best Practices

Goal: Publicize and share data successes with the City, City Council, and community to demonstrate its value and build trust.

Through programs like the Data Upskilling Program, the City will continue to promote standardized data practices and use of centralized data infrastructure across all staff levels, demonstrating its impact on operational efficiency and service delivery. Additionally, the City can enhance community engagement by developing data tools and publishing data stories, fostering transparency, increasing public awareness, and soliciting community feedback to further strengthen and refine its data practices.

Share Knowledge and Expertise

Goal: Encourage data sharing within and across internal and external stakeholders and partners by making it low-cost, low-risk, and valuable.

Building domain expertise, sharing knowledge, and standardizing practices across the City and its partners will strengthen interdepartmental and interagency collaboration. These efforts will foster strong and collaborative relationships, improving coordination, driving innovation, and creating a more coordinated effort to enhance public services and drive meaningful community impact.

The City will continue to leverage its open data portal[3] to demonstrate how the City uses data to inform decisions and policies through data stories while also providing access to raw datasets to promote transparency and foster engagement with the community across multiple levels.

Figure 9. Multi-department collaboration at the City's Emergency Operation Center.

3 https://data.sanjoseca.gov/

Measure Impact

Focusing data governance on measuring impact establishes a strong foundation for performance management. It enhances accountability and transforms data into actionable insights, enabling effective evaluation of programs and policies while guiding continuous improvement and strategic adjustments.

As part of the City Manager's Foundational Strategic Support Focus Area, Driving Organizational Performance, the City has worked with each City Service Area (CSA) to improve performance management by updating the various measures reported within the operating budget. The two main reasons for this modernization are:

- The CSA performance management framework has not been updated in over 15 years, during which dynamic economic, environmental, and social priorities have changed dramatically, requiring a refresh to reflect a contemporary context; and
- While the City of San José's CSA framework is considered a national best practice, it was initially designed around program and service performance ("how well?" and "how much?") and did not include a method to track the results ("what impact?"). A high-performing local government must measure program, service performance, and community impact.

Advancing the foundational work to establish data as a service and fostering communities of practice through a performance management lens enhances its relevance and impact, aligning data practices with measurable outcomes and strategic goals. This approach not only strengthens accountability but fosters greater adoption across the organization.

Embed use of Data across all City Service Areas

Goal: Expand the use of advanced data techniques in providing data for monitoring and evaluating services and programs.

With a shared foundation of data, the City can continue to improve CSA Dashboards and Focus Area Scorecards providing up-to-date information on key City issues, allowing staff, City Council, and community members to engage in more informed and meaningful conversations about policies and budget. In order to see historical developments, residents will no longer have to read through lengthy Council memorandums or documents. This foundation can allow for a deeper dive into City Service Areas through interactive dashboards, allowing the community to track performance for core services and programs under each CSA.

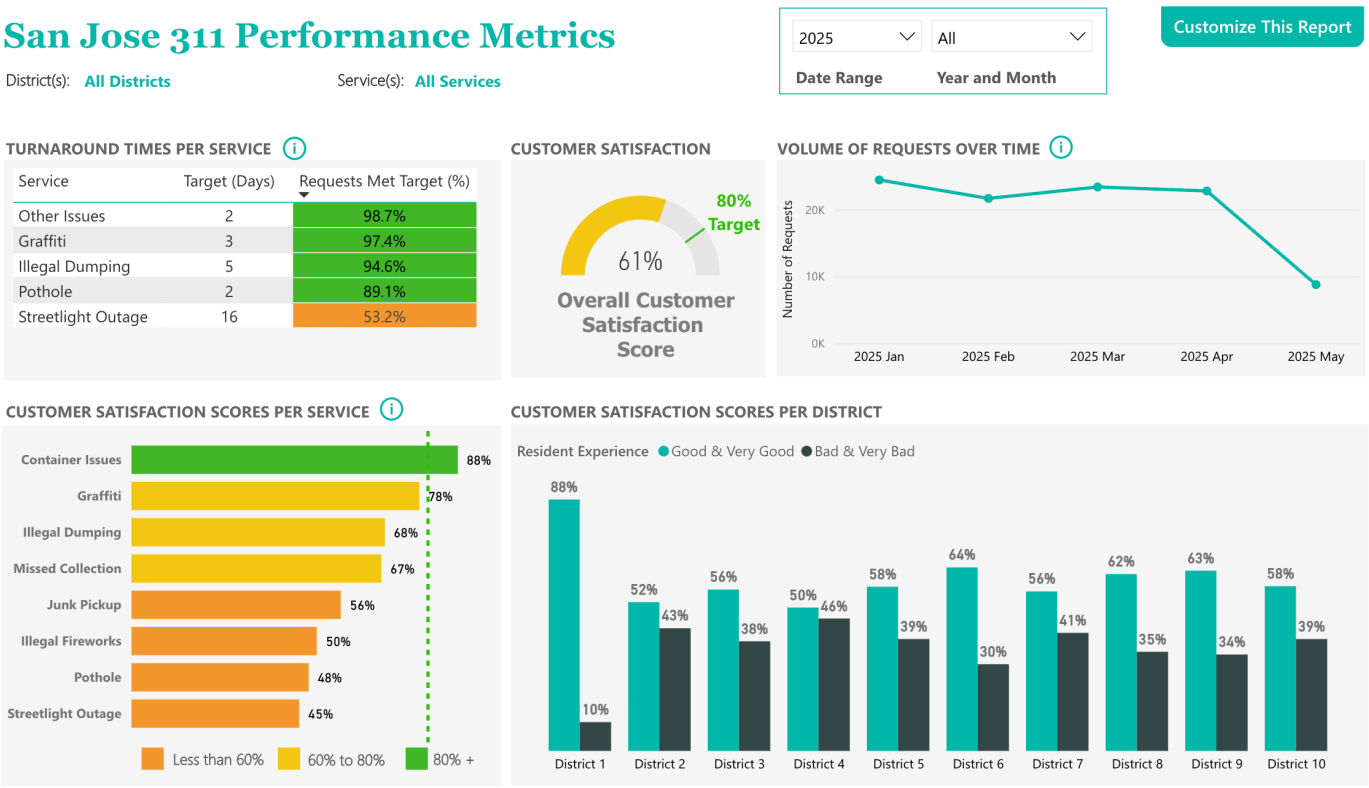

Figure 10. Example interactive dashboard: San José 311 Dashboard from May 12, 2025 via www.sanjoseca.gov/311.

Improve Data Reliability

Goal: Establish standards around collection, sharing, management, and usability to build a more meaningful data foundation.

Standardized data practices ensure consistency, accuracy, and traceability throughout the data lifecycle. By establishing clear protocols for data collection, classification, and usage, these standards enable more efficient data sharing and integration across departments and agencies. In addition, data standards help make sure that data is reliable, well-maintained, and fit for use in decision-making, performance tracking, and service delivery.

Build Community Trust through Data

Goal: Develop and implement data practices to support transparency and accountability with the community.

Standardized data practices play a critical role in building community trust, fostering greater confidence in the City's policies and actions. Sharing high-quality, standardized data—along with clear explanations of how it informs public services—helps the community understand government priorities, monitor progress, and engage in informed conversations. Ultimately, these practices reinforce the City's commitment to transparency, equity, and evidence-based governance, strengthening the partnership between the government and the communities it serves.

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