Department of Information Technology

Strategic Plan

Version 10.0

Revision History

Revision	Date	Reason for Revision	Updated by
3.0	8/8/2009	Update of 2006 Plan Radio System Update Internet/Intranet Update	Lori Pinz Woodie Smith Ed McCandless Bob Cuomo
4.0	3/3/2011	Update of 2009 Plan Internet/Intranet Update and Government Access Channel inclusion Inclusion of Back Up and Disaster Recovery Site Strategic Alignment with City Strategic Plan	Lori Pinz Bob Cuomo Woodie Smith IT Team
5.0	9/28/2012	Annual Review and Mission Statement Update	Lori Pinz
6.0	8/27/2013	Annual Review	Lori Pinz Brian Popp Woodie Smith Greg Robison Steve Podszus Bob Cuomo
7.0	10/21/2014	Annual Review and Incorporation of SWOT Analysis	Lori Pinz David Peterson Debra Hill Woodie Smith
8.0	8/17/17	Update	Lori Pinz Helena Smith Todd Mrotek Greg Robison Brian Popp Michael Clark
9.0	5/15/2019	SWOT Analysis Update	IT Team
10.0	7/22/24	Major Update	IT Team

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1. Executive Summary

The City of Pueblo strives to continuously implement 21st century technology by utilizing industry standards and best practices for our delivery of services. It is imperative that the City continues to leverage technology investments to improve, futureproof, and deliver services, but only after careful evaluation and analysis of our citizens' and community's needs.

To ensure that the City of Pueblo is successfully in meeting the needs of our community, the Information Technology Department's (I.T.) strategic plan focuses on providing quality network service and robust infrastructure, delivering excellence in our customer service for both internal and external customers, optimizing internal and external partnership opportunities, facilitating innovation and promoting out-of- the-box thinking to capitalize upon our strengths, improve our weaknesses, and reduce costs. Above all, we strive to implement IT solutions that are aligned with and meet the City's overall mission and goals.

CITY OF PUEBLO MISSION STATEMENT

We, the City of Pueblo, representing a community of diverse culture, character, and history:

- **Commit to upholding the City Charter, all City Ordinances, and the highest standards of conduct;**
- **Commit to promoting and enhancing the well-being and quality of life for Pueblo's residents, visitors, and businesses by providing excellent services in an efficient, respectful, and courteous manner;**
- **Commit to a model of professionalism that ensures respectful and complete consideration of all decisions and decrees; and**
- **Commit to strategic growth, all facets of economic development, and sustainability.**

This strategic plan will outline the current and future direction of the City of Pueblo's Information Technology Department including the technology direction, strategies, funding and management process requirements, and the technology recommendations for the next three to five years.

2. Information Technology Department Overview

The mission of the Department of Information Technology is to facilitate the seamless integration of technology solutions in a secure and cost-effective manner, provide support and maintain a reliable system and network infrastructure that enables City entities to provide superior customer service to our community and our citizens, and support the City's mission and goals by ensuring I.T. services and technology solutions align with the City's strategic plan.

To support our mission, we systematically and carefully evaluate, design, acquire, implement, and support modern technology solutions. There are several major technological advancements that have been implemented since the last revision of the IT Strategic Plan in 2019:

They include, but are not limited to:

- Replacement of the Police Department's Computer-Aided Dispatch and Record Management Systems.
- Implementation of a Real-time Crime Center including fixed license-plate readers and situational awareness cameras.
- Implementation of a City-wide door access solution with integration to the real-time crime center.
- Implementation of a new finance budgeting system with integration into the City's Enterprise Resource Planning system.
- Implementation of several on-line tools to ensure compliance with the State of Colorado's Accessibility Standards for citizens with disabilities following Web Content Accessibility Guidelines (WCAG) 2.1.

- Implementation of a new network segment for the Internet of Things including a microwave backbone for connectivity throughout the City.
- Redesigned the City's Internet website focus on accessibility.
- Implementation of multi-factor authentication City-wide.
- Implementation of a new online Open Records request system.
- Implementation of a new Boards and Commission system.
- Implementation of a new Work Order system.

As in all areas of the City, staffing in the I.T. department remains very lean. Cost control and leveraging technology investments are vital to the I.T. departments strategic plan; therefore, we are continuing the trend of selective outsourcing and partnership building to assist in supporting the City employees and Citizen Requirements.

3. Information Technology Strategic Focus

3.1. IT Policies

Inappropriate use of resources puts the City's network, systems, and services at risk from attack, and exposes the City to legal liabilities. The Department of Information Technology establishes and maintains IT Policies and Training services which provide employees, third-party contractors, consultants, and temporary employees with acceptable usage standards they are required to adhere to while accessing the City's technology resources. This is part of the overall strategy to promote trust among our citizens and reduce the risk of compromise and/or exposure.

Recommendations:

- Continue to update, expand, and revise IT policies and procedures as required.
- Continue to document and formalize internal IT policies and procedures. Maintain and update after each year, if possible, or as applicable.

3.2. IT Services

The I.T. Department is responsible for facilitating the implementation and support of the technology solutions employed by the organization, including maintaining data, system applications, voice, audio, video, and network infrastructure that enables City entities to provide superior customer service to our community and our citizens. It is our goal to provide excellent customer service to both our internal and external customers and to continually improve service.

Recommendations:

- Annually evaluate computer and software replacement policies. Adherence to policy is contingent upon available budget.
- Annually evaluate radio communication equipment replacement policy. Adherence to policy is contingent upon available budget.
- Recommend cost-effective and appropriate technology solutions to facilitate mission goals.
- Continue to procure energy efficient data equipment for deployment throughout the City network.
- Continually evaluate alternative desktop solutions to improve performance and user experience.
- Continually evaluate alternatives for software distribution methods. Wherever possible, utilize Windows-based or Cloud-based solutions for the various discrete applications supported throughout the City.
- Leverage technology to improve collaboration and improve workflow.
- Eliminate duplicative systems across the enterprise wherever possible.
- Communicate IT plans and actions to customers when applicable.
- Establish a prioritized budget for IT expenditures.
- Develop and implement strategic sourcing to ensure IT spending aligns with the City departments and Executive Leadership priorities.

3.3. Public Sector Hardware and Software Systems

The City's ERP (Enterprise Resource Planning) system is Tyler Munis, and Tyler Incode for the Municipal Court's case management system. The system consolidated many of the disparate systems used previously by various departments. Both Tyler systems are scheduled for a major update in 2024.

The City of Pueblo Police Department's (PD) Records Management and Computer Aided Dispatch systems are being updated to an on-premises browser-based systems in 2024. This system will have enhanced mobile capabilities for officers, integration with Tyler for payroll, integration with the new Real-time Crime Center (RTCC), and enhanced mapping and reporting capabilities. It can support multi-agency and multi-jurisdictional agencies and allows other City departments to stay connected to law enforcement data, including data from other cities, and counties. This functionality will continue to be shared with the Pueblo County Sheriff's Department and the Pueblo District Attorney's office. The Computer-Aided Dispatch system (CAD) handles dispatching and tracking calls for law, fire and AVL (Automatic Vehicle Locator) systems.

June 2024, PD soft-launched their RTCC by Genetec Security Center. Also implemented and integrated with the RTCC are fixed-location license plate readers, a gunshot detection system, as well as fixed and mobile situational awareness cameras. Integrations with the new CAD system, the City's enterprise-wide door access system, 3rd party, (i.e., local business security systems), and other systems have been implemented. Over the next 5-years, the RTCC's integration with additional outside systems, (i.e., drones, school surveillance, building maps, etc.), and will continually be expanded.

The in-car video systems installed in police vehicles are being updated with GETAC video systems. The new systems are capable of live upload to the cloud-based video management system through the vehicle modem. It is also capable of live streaming to the RTCC when needed. Many vehicles still have obsolete equipment which needs replacement. The PD continues to utilize cloud-based body worn cameras but is evaluating replacing their current solution to enhance integration between the mobile-device terminal, in-car, and body-worn video systems. The use of body-worn cameras continues to expand into other areas of the Police Department and has become a vital component of police response. All public-safety systems require multi-factor for CJIS compliance.

The City completed a full replacement of the mobile device terminals in all vehicles and retained the GETAC V110's in most vehicles. Because the GETAC products have been very reliable, PD elected to utilized GETAC F110s tablets for their Directed Investigations and Community Engagement (DICE) and Impact teams. All GETAC computers have a 5-year bumper-to-bumper warranty.

The PD utilizes Sierra and Cradle point modems and Absolute Secure Access to gain connectivity to the PD's RMS and other resources. Therefore, it is very important to quickly troubleshoot and identify reoccurring connectivity issues for the MDTs (mobile-device terminals). The City is able to proactively manage connectivity and application issues via both modem systems management tool and/or by using the Secure Access product.

Currently, the PD Communications Center provides dispatching services and support the City of Pueblo's Police and Fire Departments. Solacom's NG911 Guardian System meets all NENA i3 standards and provides the 9-1-1 call handling for all 9-1-1 calls into dispatch. NG911 capabilities, i.e., text-to and text-from 911, continue to expand as functionality expands. The Guardian system transitioned to SIP trunks in 2023 including the interface to Dispatch's call-logger. The dispatch center has also joined the Colorado ESINet system for enhanced response for calls of service.

The City will be implementing a new computer-aided dispatch system in November 2024. This system will have enhanced go and map options, notification, and messaging to and from officers, and Livestream capabilities to Dispatch.

The City of Pueblo's Fire Department Records Management System replaced Telestaff by Kronos with Image Trend's new scheduling and rostering system. This replacement enhanced reporting capabilities and streamlined payroll

processes easing the burden on Fire staff. Over the next few years, Fire will be participating in the implementation of Pulsura, a collaborative patient care program, utilized by local hospitals and emergency response.

Recommendations:

- For all non-public system requests, evaluate Tyler's functionality prior to starting a procurement process for a new/disparate system. If a disparate system is deployed, cloud-based or on-premises integration to Tyler must be addressed, where applicable.
- Conduct discovery sessions with departments to build a mutual understanding of business needs and requirements before invoking a procurement process for a new system or application.
- Continue to streamline technology purchasing processes enterprise-wide by acquiring new systems through cooperative purchasing agreements. Assign an IT project manager to all major IT projects.
- Continue modernization efforts of applications and systems ensuring City services are delivered as effectively and efficiently as possible.
- Monitor and remain focused on emerging technologies to support modernization efforts and streamline business processes enterprise wide.
- Upgrade Tyler Incode to Incode 10.
- Complete the implementation of the new Police Department Computer-aided dispatch/Record Management Systems.
- Expand the Internet of Things network, focusing on cybersecurity, smart-devices, RTCC, and any other technologies required by any of the City's smart-initiatives.
- Upgrade remaining PD in-car video systems as funding allows.
- Implement a new system for Fire's DOTS program.
- Create an Artificial Intelligence (AI) Governance Committee by the end of 2025.
- Carefully evaluate (AI) functionality embedded with any system update or upgrade.
- Complete a strategic roadmap, AI policies and risk assessment for AI Governance by the end of 2025.

3.4. Document Imaging

The City utilizes three different imaging systems. Filebound is the imaging system deployed across all City departments which houses historical information and non-Tyler system related documents. Tyler TCM manages all documents related to information stored in Tyler Munis and Tyler Incode. The City Clerk's office uses LaserFiche which also has a web-based component allowing online access to City Ordinances and Resolutions.

The City upgraded its agenda and meeting management and Open Record request systems in 2023 utilizing CivicClerk and JustFOIA. CivicClerk improves departmental collaboration on agenda creation and management without the need for paper and improved the note taking and creation process during a meeting. JustFOIA automates the request process from request to final payment for anyone requesting documents under the Open Records Act. Prior to JustFOIA a CORA request was handled through emails, and hardcopies.

Recommendations:

- Continue to expand on-line services enterprise-wide focused on automating manual processes to improve service delivery, citizens interactions, and self-help capabilities.

3.5. Specialized applications

Just as the City has specialized departments, the City has requirements for several specialized applications. There are several engineering or transportation-related applications that are not "mainstream" but are nonetheless essential to City Staff. Currently, the I.T. Department installs such applications on an ad hoc basis, which does not allow for even cursory testing or comparison with similar products that may be a better fit for the user.

Recommendations:

- Continue to follow formal procedure for evaluating and securing specialized software for inclusion within the City Standards including the end-user responsibilities for installing, testing, and securing, and supporting such specialized software.

3.6. E-mail and Office Applications

The City has standardized on Microsoft products including Microsoft O365, a cloud-based subscription solution for e-mail and other Office products. There are other non-Microsoft products that the City has standardized upon, but generally, this is not the case in areas where Microsoft offers a good solution. Examples of this include publishing and antivirus software.

City employees, if authorized, can check their e-mail and calendars from any Internet connection (at home, on vacation, etc.). I.T. has installed and currently maintains VPN (virtual private network) access into the City's network allowing employees complete access to City resources outside of O365.

Recommendations:

- Continue current methodology.

3.7. Data Center and Personal-Computer Environment

3.7.1. Server Environment

The City's datacenter houses much of the City's technology. This data center has surplus power including a generator backup and energy efficient cooling to ensure an optimal operating environment. The datacenter supports a very strong virtualized server environment utilizing VMWare Cloud Foundation. The City server environment is housed on several HP Nimble and Alletra all-flash and hybrid storage devices which supports 95% of the City applications and storage needs. Dell servers are utilized when stand-alone computer is necessary.

The City's main DMZ environment uses Microsoft's Hyper-V virtualization platform; however, with the recent addition of the RTCC, City I.T. is implementing its first hyperconverged infrastructure using Microsoft's Azure Stack HCI to support the RTCC and IoT (Internet-of-Things) environments.

Recommendations:

- Research, test, and determine if an alternative solution to our VMWare environment is necessary due to the rising costs of VMWare due to the Broadcom acquisition by mid-2025.
- Replace VMWare environment with alternative solution, if necessary, by the end of 2026.
- Evaluate and conduct a cost-benefit and performance analysis for Azure Stack HCI has an alternative to VMWare Cloud Foundations by the end of 2025.
- Improve reporting of events on servers and add those events to the 24/7 monitoring.

3.7.2. Desktop Computers and Mobile Devices

The City is a Dell shop for all desktop computers. However, as mobile devices become mainstream the desktop landscape will be changing. City IT now supports Microsoft Surfaces as well as, Apple and GETAC devices. The City standardizes on a Windows-based devices but will support Apple devices as needed.

The City has implemented Blackberry Technology and Microsoft Intune for mobile device management. The City no longer supports BYOD (Bring Your Own Device) due to new state laws surrounding Open Records Requests and changes in CJIS compliance.

Desktop computers and laptop operating systems are kept current to ensure the computers are up to date with the latest security fixes and patches. The City has converted about 80% of its fleet to Windows 11. It is anticipated, the remaining 20% will be replaced, as they do not meet the minimum requirements for Windows 11, before Windows 10 end-of-support date. To facilitate the upgrade, I.T. leverages Windows update and the application System Center. System Center allows IT to manage systems and create specific upgrade packages to allow the seamless upgrade of windows 10 devices.

Recommendations:

- Expand the use of our Intune MDM (Mobile Device Management) licensing for mobile devices to control costs and reduce BlackBerry annual support and maintenance fees. This is an on-going goal.
- Replace BlackBerry with Microsoft Intune enterprise wide by the end of 2027, if possible. This will reduce the need to support and pay annual support costs for two MDM systems.
- Research and implement Apple DEP (Device Enrollment Program) to provide additional tools to control and protect mobile devices by the end of 2025.
- Continue to enforce Hardware and Software standards that will allow limited I.T. resources to perform tasks in an efficient and effective manner as possible.

3.8. Printing strategy

The I.T. Departmental standard for printers is:

- HP Lasers (networked).
- Minolta or Canon multifunctional network copiers.
- Printers are assigned via Active Directory organizational units and augmented with specific installations as required.

3.9. GIS Strategic Plan

GIS services and data resources are managed within the I.T. Department through the GIS Division. The GIS Division currently comprises of two (2) FTEs and one (1) part-time employee. GIS centric applications continue to be implemented in the City, and the need for additional staff is growing. GIS staff work closely with every department of the City. Additionally, staff routinely collaborates with several regional partners including Pueblo County, Pueblo Regional Building Department, and the Pueblo Board of Water Works to support the exchange of accurate mutually beneficial information. The GIS Division is responsible for developing and supporting all GIS data vital to maintaining efficient and effective day-to-day business operations. Our goals for the next 1-5 years are as follows:

Recommendations:

- Send all GIS staff to attend the annual ESRI all user-conference in San-Diego, California to continue to develop required staff skills necessary for supporting a fully operational next-generation ready enterprise GIS solution.
- Assist and support map-based software implementation for various City Departments.
- Continue development of Python scripts to streamline reoccurring tasks and processes performed by the GIS Division to improve efficiency.
- Update physical property addressing policies and regulations to adopt new standards and create mechanisms to better monitor and track mixed land-use issues.
- Continue preparation for the implementation of ProPhoenix as the new Computer Aided Dispatch (CAD) system used by the City's Emergency Dispatch Cell.
- Continue to improve and add additional capabilities to ESRI maps used by the Real Time Crime Center (RTCC) operators.
- Further align and integrate GIS infrastructure with critical business systems of the City. Increase data mining capabilities and interoperability with new consolidated and streamlined relational database management records

systems (RDBMS). Standardize all next generation map systems and data development utilizing ESRI software and data formats to maximize information system interoperability and integration where and when able to do so.

- Support the implementation of ArcGIS Indoors into the City's GIS framework. This will involve the initial setup of our ArcGIS Indoors environment that will support the Public Works Department in their management and maintenance of City assets.
- Prepare for the implementation of modernized National Spatial Reference System (NSRS) as it completes its adoption by the Federal Geodetic Control Subcommittee (FGCS). This adoption will also impact the State of Colorado's State Plane Coordinate System layout that will not only impact GIS software, but any software and application reliant on geolocation capabilities.
- Continue to pursue and fully integrate next-generation easy to use GIS and mobile mapping friendly software and physical hardware infrastructure. Further work to adapt data resources and systems to support efficient public works asset management and increased analytical public safety needs.
- Research amending or establishing new resolutions or ordinances of the Pueblo Municipal Code updating authoritative mapping and land-surveying requirements.
- Continue to establish and maintain new memorandums of understanding (MOUs) and or IGAs for GIS 'data sharing' with regional governmental partners including, but not limited to: Pueblo Board of Water Works, Pueblo West Metropolitan District, Pueblo Conservancy District, and the State of Colorado Governor's Office of Information Technology GIS Department, Black Hills Energy Corporation, and Xcel Energy Corporation.

3.10. Network and Security

The City's network backbone is comprised of its own fiber optic cable, franchised fiber, and leased Lumen services. The City's fiber infrastructure provides connectivity for 100% of the City's departments and provides connectivity to several County offices through joint partnerships. The City owns all the rights-of-way necessary for this campus-like implementation. Additionally, the City has access to much of the existing underground conduit for specific City purposes. It also has the rights necessary to use utility poles throughout the City if the use is for some clearly defined municipal services. The City's fiber backbone has expanded tremendously with over 150 miles of fiber aerially or underground. The City's fiber network topology has evolved from a "star" topology and has been positioned to provide a redundant and highly available "ring".

We use network segregation methodology to provide traffic control and optimize performance. As funding allows the data and voice network is implemented with SPBM (Shortest Path Bridging) and 10GIG topology for voice and data back up and redundancy. The SPBM protocol allows for edge programming eliminating cross network administration reducing staff time and provides a robust platform to accommodate transport for today's emerging technologies. As the City has a fully converged network with data, voice, and multimedia traffic being pushed across it, this SPBM assists with reducing staff time, simplifies device configurations that, despite the City's small I.T. staff, allows I.T. to build out the voice and data network within a well-designed architecture. I.T. utilizes a network access control solution to control device access for both our wired and wireless networks.

Extreme equipment is the standard of choice for the City's network infrastructure. This standardization allows for a flexible, responsive, and stable network that we can manage and easily modify parameters through Extreme's embedded tools. Extreme's platform allows the City to utilize software define networking to improve stability, security and to reduce infrastructure costs.

Currently, the City uses Fortinet, Ubiquity, and arriving soon Extreme wireless infrastructure. Event collection has been optimized to ferret out specific threat-types. CityNext-generation malware detection software, Ransomware protection, Extended Detection and Response, and managed threat-detection monitoring services are deployed throughout the City to thwart zero-day threats, crypto or ransomware-attacks, and to record threat behavior (which processes were used, which other systems were reached out to, what artifacts were created, etc.) should malicious code make it onto a system. Vulnerability scanning, both in terms of patches/updates and in terms of system configuration, has been layered by employing multiple products. The City has employed shortest path bridging as a means of shielding core assets. TAA (Trade Agreement Act) appliances and extensive secured Wi-Fi is deployed. We adopted an always on/off the LAN (Local Area Network) policy for City devices. Devices are configured to always be on the LAN (via VPN) or always off the LAN. An enforced VPN keeps other devices LAN-safe wherever they roam. The City continues to harden

infrastructure and to maintain as many layers of defense as possible to mitigate security exposure. Improved auditing remains a key goal for 2024.

Recommendations:

- Continue to expand the wireless access points to meet the City's needs as funding allows;
  - Implement WIFI and video surveillance for Parks and Recreation by the end of 2026.
- Expand NAC (Network Access Control) City wide by mid-2026.
- Implement and expand the IOT network, as necessary and as budget allows, to encompass all IoT needs. This is an on-going goal.
- Continue to expand our Software Defined Networking strategy as budget allows.
- Improve threat detection and eradication to detect, mitigate, and isolate compromised systems. This is an on-going project.
- Actively keep abreast of the ever-evolving threat landscape.
- Continue to expand City fiber City as needed and for stability/redundancy.
- Continue implementation of a zero-trust model for network security. Full implementation of this model will be based upon available funding and staffing.
- Integrate monitoring of all endpoints (servers and workstations) into a combined SIEM (Security Information and Event Management) so all compute devices are monitored 24/7 through Managed Detection and Response by the end of 2025.
- Implement policies and procedures around the use of generative AI and obtain licensing for utilizing CoPilot for Government workspace by mid-2025.
- Provide secure access to the SCADA system at the Water Reclamation Facility to enable real-time support in troubleshooting issues with SCADA devices by the end of 2025.
- Add monitoring for changes in firmware on network devices by mid-2025.

3.11. Telephone System

The City utilizes Avaya IP office for its phone system. All sites are now capable of VoIP (Voice over Internet Protocol); however, digital, and analog capabilities are still utilized in some areas due to functional requirements or poor wiring. All City departments are on the telephone system. We have yet to integrate the new system with our Microsoft O365 for unified communications. This is due to some special services we provide via the phone system that makes integration difficult. In the next several years, the IT department will need to evaluate replacing the current phone system and will evaluate the potential for unified communications within our environment.

Recommendations:

- Evaluate replacement of phone system.
  - Including the potential for unified communications, by the end of 2026.

3.12. Disaster Recover and Backup Site

3.12.1. Backup System

The I.T. department uses Veeam and Exagrid as its backup and archiving solution for City data**.** The system utilizes three Exagrid units for back-up and replication of the main City servers and data. Backups occur on a predefined schedule. In the event data on a main server, or user data, needs to be selectively restored due to data corruption or accidental deletion, the appropriate backup data is copied from the Exagrid to the target server or user container. In the event of a major server failure, the backup data from the Exagrid can be restored to a replacement server in a matter of a few hours. The Exagrid appliances are located at an off-site location, where they are not likely to be simultaneously subjected to the same perils as the main data center (for example: fire, tornado, flooding, acts of terrorism, etc.). Implementation of generator power for the disaster recovery site was completed in 2024.

The goal of this robust backup strategy is for the City to be able to restore business critical data to rebuild or replace servers in the event of main server failure, as stipulated, in our Business Continuity goals. This offsite location is home to the City's DR (Disaster Recovery) site and houses an Exagrid for replication of the Data Centers Exagrid. The DR site houses many of our redundant mission critical systems; however, additional power improvements are necessary to ensure up-time during an event.

Recommendations:

- Continue to expand and relocate mission critical systems to the City's backup site in the event of a major catastrophe. Continue to follow encryption standards across the network by verifying the status of BitLocker and by making sure it's enabled on all equipment that utilizes hard drive storage. This is an on-going goal.
- Develop a tertiary backup location by the end of 2027.
- Complete additional power improvements are necessary to ensure up-time during an event.

3.12.2. Data Archives

Archives are achieved by replication of the Data Center Exagrid to the Exagrid located at the DR site.

Recommendations:

- Continue with existing archive strategy.

3.13. Digital Presence

3.13.1. Digital Government Maturity Model

The Gartner Digital Government Maturity Model is a valuable tool for governments to evaluate and enhance their digital capabilities. This model outlines the various stages of digital maturity and guides organizations on their digital transformation journey. The stages for this model are:

- **Initial Stage:** The digital presence is minimal at this stage, and more digital efforts are needed.
- **Developing:** Basic digital processes are in place but must be more cohesive. Efforts to improve and integrate these processes begin.
- **Defined:** Digital processes become more organized and aligned with organizational goals.
- **Managed:** Digital initiatives are well-organized, with regular monitoring and optimization to ensure alignment with objectives.
- **Optimized:** At this stage, digital services are highly advanced, continuously improved, innovative, and quantitative feedback.

Based on the Digital Government Maturity Model, the City of Pueblo is continuously making efforts within the optimization stage. In the next few months to a year, implementation of an AI chatbot service, digital web-based forms, and real time updates by two-way text alerts will enhance user experience. The speed to which the city will be able to employ these advanced multi-channel features will be constrained by budget and staffing.

3.13.2. Website and Mobile Apps

The City website (www.pueblo.us) is hosted by CivicPlus, a 3rd party e-Government Company specializing in website development and content management for local, county and state governments. The web site is Section 508 WCAG 2.1 AA, 2.2 AA compliant. It was redesigned in November 2023 along with IOS and Android mobile apps to enhance user experience, citizen engagement and website mobility. The content management system allows the City to disperse the ability to manage content of departmental pages to content providers across the organization. This allows IT staff to focus on development and outreach efforts. This has been a very economical arrangement since the City's IT department is too understaffed to support a Web server or the accompanying software. CivicPlus

specializes in website development for local government and focuses on interactive citizen-focused engagement tools including a solid connection with social media sites.

Recommendations:

- Leave the responsibility for managing all the City's Web initiatives within the Information Technology department, to ensure adherence to Section 508, WCAG 2.1 AA and 2.2 compliance and maintaining a unified Web look and feel.
- Continue to update the mobile apps with redesigns of City's website.
- Continue with the strategy that the media System division oversees all accessibility to ensure that our digital content is complaint and accessible.
- Create and maintain a Website Accessibility Plan as required by the State of Colorado's HB 21-1110 by the end of 2025. Update plan annually or as required by compliance changes.
- Monitor Federal and State compliance standards and implement WCAG 2.2 Title II Regulations by the end of 2027.
- Continue the strategy of making departments responsible for the currency and quality of the material published on their presence withing the City's website.
- Continue departmental processes aimed at obtaining fresh and updated content for the City websites.
- Continue to utilize CivicPlus as our hosting and content management system provider.
- Support economic and revitalization efforts for the City of Pueblo by depicting the positive, "feel-good" aspects of our local government and community.
- Continue to pursue and expand e-Government services focusing on citizen engagement, transparency, open data, and online services and communications as applicable.
- Continue to provide 24 x 7 streaming of Government Access Channel.
- Implement post-production closed captioning of the Government Access Channel by the end of 2025 or as funding allows.
- Improve transparency while maintaining network security by leveraging new technologies and existing Web resources.
- Expand the website team by 1 FTE to keep up with the growing demand of online services and information by end of 2026.
- Expand the area of Internet based services to reduce manpower requirements for Public Services that can be offered via the Internet.

3.13.3. Social Media

The integration of social media tools is a necessity of any good government website. Integration provides the platform that allows citizens to interact and collaborate with their City government along with the ability to retrieve governmental information and data. Implementing social media gives citizens the ability to engage with their government on a 24 x 7 basis.

Many of the City departments rely heavily on the use of social media to market services, promote events, publish alerts, and engage citizens. For example, the Pueblo Police Department (PPD) uses Facebook and Twitter to post pictures of wanted criminals, to ask for assistance on criminal activity, and to alert citizens to crimes in progress. They use YouTube to post training videos for both internal and external employees. Almost every department in the City utilizes a social media site to disseminate information.

Recommendations:

- Facilitate the use of social media to improve citizen engagement through more productive dialogue that is timely, responsive, and relevant.
- Create and consolidate all relevant videos to our YouTube channel.
- Evaluate and utilize Social Media analytical tools to monitor the citizens engagement and improve our social media channels out reach.

- Continue the social media strategy for two-way communication.
- Continue to monitor social media posts to ensures that our content is compliant with our Colorado and Federal web accessibility standards.

3.13.4. Government Access Channel and Public Information

The Information Technology Department is responsible for assisting with, and in some instances, managing the City's dissemination of public information on-line, via media outlets, and broadcasted over the Government Access Channel, Pueblo 17. The City partners with Pueblo Community College for all broadcasting needs including program scheduling and content creation such as public service announcements. The City is able to broadcast in high definition. However, we must work with the Public Access Channel provider to move to a high-definition channel.

Recommendations:

- Continue to add fresh content to our government access channels. This is an on-going goal.
- Produce future content in high-definition format as funding allows.
- Continue to expand and improve the quantity and quality of public information distribution from the City. This is an on-going goal.
- Continue to partner with the Department of Public Affairs on the dissemination and creations of public information. This is an on-going goal.

3.14. Video Conferencing

The City uses Teams and Zoom for video conferencing eliminating the need for IT support and reducing security concerns associated with hosting our own video conferences. We reduce risk and cost while taking full advantage of opportunities to expand face-to-face collaboration. Further, City Council and Board and Commission meetings utilize Zoom and Televic for their videoconferencing and voting needs. Televic is working on functionality to provide remote voting capabilities with integration into Council Chambers audio/visual and broadcasting systems. However, the remote voting capabilities are clunky at best. The City has refrained from using the remote voting capabilities of the Televic system but is working with the vendor to improve the functionality for future use. Should Televic successfully meet the requirements for remote voting, the I.T. Department will be able to eliminate the need for two-conferencing systems to be used to conduct any meetings from City Council Chambers that utilize the voting system.

Recommendations:

- Work with Televic to stabilize the remote voting functionality for City Council and Board and Commission meetings by the end of 2025.
- Continue to utilize Zoom and Teams enterprise wide as budget allows.
- Continue to use this functionality.

3.15. I.T. Work Orders and Asset Management

The Department of Information Technology previously utilized Microsoft Access databases for the entering and tracking of workorders and computer equipment for the City of Pueblo. At the end of 2023, the I.T. department procured Zendesk for the City's new work order system. Zendesk went live for City employees to access and enter workorders though the City's website in May of 2024. Asset management continues to be tracked in an access database but the I.T. department is looking to implement a new system that integrates with Zendesk and expands the capabilities of Zendesk and the new asset management system.

Recommendations:

- Continue to expand Zendesk's workorder capabilities by allowing users to open support tickets by email or phone call by end of 2025.
- Research and implement an asset management system that integrates with Zendesk by end of 2025.
- Continue to maintain the computer inventory for the City. Proactively monitor on a continual basis the end-of-support of server and pc operating systems. This is on-going.

3.16. Radio Communications Equipment and Infrastructure

The City partners with the State of Colorado to provide radio services for all City departments. Public-safety and non-public departments utilizes the State's DTRS (Digital-Trunked Radio System) to transmit and receive radio communications. The City's tower sites house the equipment that supports the State's simulcast system for this region. The City will continue to cooperate and remain on the Statewide Radio System unless it becomes cost prohibitive, or State legislation prohibits our use of the system.

The City's portable and mobile radios have been funded for decades through CSEPP (Chemical Stockpile Emergency Preparedness Program) through FEMA (Federal Emergency Management Agency). The CSEPP program ended in February of 2024, and it is now the responsibility of the City to fund replacements or new radios through other funding sources. The City's current inventory will support our needs into 2026/2027. Further, the Radio Communications Division is capable of repairing and supporting the city's radio equipment extending their use past end-of-life.

City I.T. is strategically implementing the foundation to prepare for migrating away from the State's DTRS should that ever become necessary. However, the DTRS is experiencing heavy radio traffic in this region, and to assist the State in expanding their resources, City I.T. is researching its own radio system to off-load non-public safety radio traffic from the DTRS.

Recommendations:

- Continue to utilize the State of Colorado's DTR (Digital Trunk Radio) system as long as feasibly possible.
- Explore and implement a non-public safety radio system to offload non-public safety radio traffic from DTR.
- Evaluate and pilot test mobile and portable radio replacement options for public and non-public safety prior to update prior to 2026 or 2027 to control costs.
- Evaluate using Next-Generation radios to enhance texting and video to the mobile radio displays by the end of 2026/2027.
- Expand our point-to-point microwave system to create a ring topology for redundancy and/or implementation of city-owned radio system by the end of 2028.

4. IT Staffing

The I.T. Department currently consists of 21 regular employees and 7 temporary employees. Local college interns and temporary employees are utilized to assist regular employees.

All areas of I.T. are understaffed and the IT department currently has 1 vacant position which has been unfunded due to budget constraints. The number of customers utilizing technology continues to grow as well as the extent of and dependence on technology.

Most City I.T. employees cross over into other areas of expertise, some more often than others. One of the FTEs normally supporting Networks and Servers routinely supports the fiber-optic infrastructure activities, which falls under Radio Communications. This happens often and the many scenarios of crossover are too numerous to go into detail. The break-down of FTE counts in section 6.1 represents the approximate number of people supporting the service area and may not be an actual count of FTEs.

I.T. services fall into 5 major areas:

Technical Support

- Helpdesk Support
- PC Hardware installation and repair
- PC Software installation and support
- Networks – Fiber and copper network infrastructure
- File and Application Server support
- Security and Business Continuation – Perimeter protection, exploit protection, event analysis and access monitoring
- Telephone system support – analog, digital and VoIP
- Video Conferencing and Audio/Visual equipment
- Mobile Device management, support, and repair
- Wireless Communication management and support
- Door Access and video surveillance
- Printer Support

Application System Support

- 3rd party application software and hardware systems support
- GIS development, application integration and support
- Limited mobile application development
- 3rd Party integrations
- In-house application development and ongoing enhancements/maintenance
- Imaging system support

Radio Communications Division

- Mobile and base radio communications installation and repair
- Radio Tower management
- IoT microwave backhaul system administration and management
- Fixed-location license plate readers and situational awareness cameras
- Fiber optic infrastructure management, implementation, repair, and support

Project Management and I.T. Administration

- Project identification used to determine the organizational technological needs of the City.
- Management of project implementation, quality standards and budget control
- Departmental Oversight and Executive Leadership

Media Systems Division

- Responsible for design, development, and monitoring of the content of the website.
- Primary point of contact for digital accessibility
- Web site development and operation
- Responsible for other third-party web applications
- Responsible for multi-media production such as live streaming content and post-production for Channel 17 and social media channels.
- Social Media management, support, and acceptable use

4.1. Technical Support

I.T. has 7 FTE's and 1 temporary employee assigned in this area. This group deployment, Help Desk support and maintenance to over 800 desktop computers, 225 notebook computers, 300 servers (physical and virtual), 295 I-devices and numerous miscellaneous peripheral devices.

- There are 3 FTE and 1 temporary assigned to desktop support. Desktop and notebook computers require rebuilding or replacement depending on the severity of the failure. Imaging the computers and pushing the software allows I.T. to return PCs to the customers in less time and with a more standardized approach than loading individual patches and upgrades requires. Phones and tablets also pass through for similar issues or setup.

- 3.5 FTE in this area are responsible for implementing security policies, protecting computers from malicious cyberspace attacks by keeping antivirus and firewalls up-to-date, and actively monitoring unauthorized attempts to access the City's network. Staff is also responsible for setting up authorized access to the City's network from other agencies and internal customers needing remote access to the network.

- 5.5 FTEs and 1 temporary employee assigned to this area are responsible for expanding and maintaining the electronic network infrastructure, application software and associated servers. This includes managing the design of the fiber optic network as well as back up installation. The servers include those that support the Public Safety system data and software applications, general and application specific shared folders and email. 1 of the FTEs has the responsibility for maintaining the City's O365 environment.

4.2. Application Systems Support

I.T. has a 6 FTE's and 2 temporary employees. These FTEs generally specialize in areas of support such in-house database systems development, GIS system development and support, Web services development, and 3rd party application system acquisition and ongoing support.

4.3. Radio Communication Division

I.T. has 4 FTEs and 1 temporary employee assigned to Radio Communication Systems. These FTEs are responsible for installing and maintaining the City's mobile radios, fixed licenses plate readers, situational awareness cameras, and associated centralized equipment, antennas and towers that are used by public safety and non-public safety departments like Parks and Recreation and Public Works. This includes three Digital Trunked Radio sites, with interconnecting microwave systems that are capable of up to 90 days of self-sustained power, and an emergency Police and Fire Dispatch center with fourteen dispatch positions. The Radio Communication division is also responsible for the installation and maintenance of the City's fiber network infrastructure, installation, repair, and support for City AVL systems, in car video systems utilized by the police department, and automated alerting system for the Fire department.

4.4. Project Management and I.T. Administration

- 2.5 FTEs assigned to project management for City technology projects.
- 1 FTE, the Director, is assigned to the overall management of the department.
- 1 FTE is acting as Interim Assistant IT Director and also fulfilling the role as a Sr. Network Administrator
- 1 temporary employee is assigned the administrative duties in the department.

4.5. Media Systems Division

I.T. has 2 FTEs and 1 temporary employee assigned to the Media Systems Division. These FTEs are responsible for the design, development, and content monitoring of the city's websites. They are responsible for assuring compliance with Federal and State accessibility guidelines as well as enforcing these guidelines, as appropriate, with 3rd party applications and integrations. This division also creates video content for the City's Government access channel,

Channel 17, which is also streamed on the city's website. Digital Presence and Transformation is lead, managed, and supported by this division.

Recommendations:

- Invest in I.T. resources and training to sustain and improve upon the excellent customer service that is expected by internal customers.
- Fill open unfunded positions as soon as possible.

5. Plan Revision

This plan should be reviewed and updated annually. The City's Information Technology Department should coordinate the process of gathering new requirements and proposing new recommendations, based on the input solicited from the user community.