

Information Technology Five Year Plan

2021 - 2026

IT DEPARTMENT OVERVIEW

The City of La Crosse Department of Information and Technology is responsible for driving global operations and delivering information technology services to the City of La Crosse. This entails directing all activities related to running and maintaining the City of La Crosse information systems enterprise-wide: technology infrastructure, public information systems including financial, payroll, police, fire and other key internal systems, communications systems, including emergency communications, server and desktop applications.

External Emails Sent and Received in 2019



1,200,000

SPAM Messages Blocked in 2019



400,000

City Website Visitors in 2019



305,192

(1,281,000 Pageviews)

Storage in Use



500,000+ GB

Citizen Service Requests Created in 2019



1117

Credit Card Transactions in Treasurers in 2019



3441

(\$382,322.00 Collected)

Help Desk Tickets Opened in 2019



4951

Department Staff



8.5 FTEs

Cameras Supported



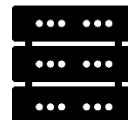
123

End User Technology Equipment Supported



1057+

Core Infrastructure Equipment Supported



127

End Users



540+

WHAT THE I.T. DEPARTMENT DOES FOR THE CITY

- We manage the City's Core Information Technology Infrastructure. This includes the City's networking, computing, storage and cyber-security systems. This is a mission critical function, as these systems have a direct impact on the safety of life and property within the City of La Crosse. This is a 24/7/365 function which we perform with a goal of 99.9% reliability.
- We manage the City's Communications and Collaboration systems, like the VoIP telephone system, public safety trunked radio system, email communications systems, and many of the collaboration tools used by City employees. These are all safety critical systems that we manage on a 24/7/365 basis and have a goal of 99.9% reliability.
- We manage the City's fiber network which connects many City facilities, the Wi-Fi system that provides both internal and public access, the City's local area network, and manage the City's connection to the wider world through the Internet. Again, these functions are all safety critical and are managed on a 24/7/365 basis and have a 99.9% reliability goal.
- We support and manage end user technology devices like laptops and computers, printers and scanners, TVs and projectors, security cameras, access control systems, building automation systems, mobile phones and tablets, and many other devices. We manage and oversee the procurement, deployment, support and disposal of all City technology hardware. And do so in an environmentally and fiscally responsible manner.
- We provide support for the City's many business applications:
 - **Munis** ERP system
 - **EnerGov** permitting, licensing and code enforcement software
 - **ePersonality** payroll and human resources management system
 - **TriTech** computer aided dispatch and Police records management system
 - **Zoll FireRMS** fire records management system
 - **RecTrac** parks and recreation management software
 - **MarketDrive** computer-assisted mass appraisal system
 - **SharePoint** collaboration and portal platform
 - **QAlert** customer relationship management system
 - **QContent** content management system (www.cityoflacrosse.org)
 - And about another 100 or so applications that are used by City employees to perform their day-to-day job duties.
- We manage the City's cyber-security infrastructure, protecting the City's valuable data and technology assets from both external and internal threats. We manage the availability and reliability of the City's Information Technology Infrastructure by providing for data backup and retention, offsite disaster recovery facilities and systems and technology related emergency management planning.
- We provide end-user help desk support during City business hours, and provide a 24/7/365 on call support functionality for critical support needs outside of City business hours.
- We serve as advisers and consultants to end-users on the ways to best utilize the City's Information Technology Infrastructure to achieve their goals in an efficient manner. We coordinate the cross departmental sharing of information, and manage systems that enable departments to coordinate those business processes that involve more than one City department.
- We advise departments on practices and procedures for managing their data, and provide the tools and resources to enable them to achieve their data management goals in the most efficient manner possible. We also provide the tools and processes that departments can use to comply with the state's open records laws.
- We provide the platforms and tools that City employees use to engage with the public. Our systems allow residents and visitors to interact with the City in the manner and using the platform of their choice. Furthermore, we foster a more open and transparent government by providing the tools that end user departments can leverage to share information with the public.
- We provide the tools and resources that end-users need to manage and analyze the vast collections of data that the City possesses. We also provide expertise and advice to answer complicated and compelling questions, through creative and scientific application of data analytics and business intelligence functionality.
- The City's Information Technology system is one of the most valuable assets that the City has, second only to its dedicated and hardworking employees. We support and sustain the mission of every other department in the City by providing them with the tools, resources and expertise that they need to leverage the City's Information Technology assets in the pursuit of their department's mission. Through this the Information Technology Department is truly the 'fiber' which holds the City together.

List of IT Supported Applications and Systems

This list is not a complete list of all the applications supported by the IT Department, it is only meant to be representative of the 100s of different applications managed by the IT Department.

Arbitrator	3DIssue	Adobe Creative Suite	Antivirus	APS	ArcGIS	Aristotle
AutoCAD	BillMaster, WEGSARS	BOSS	Camera Copy	Carlson Survey	CCure	Citrix
City Website	CityLaw	Cisco	Computrace	CrossMatch	Deep Freeze	Dropbox
EnCase	EnerGov	ePCR	Exchange Server	Fire RMS	FirstWatch	FORE!
FuelMaster	Gasboy	GCS	Genetec	Heart Start/Event Review	Highline	HydroCAD
Incode	Laserfiche	Legistar	Lynx Panic System	Manage Engine	MarcNX	Market Drive – Assessor CAMA
Message Archiver	Microsoft Office	MorphoIDent	Motorola Body Cams	Munis	Olympus Dictation	Panasonic In-Squad Camera System
PDF Converter	Peachtree	Polk City Directory	QAlert	QScend	RecTrac	REI – Bus Surveillance
Remote Access – Cisco VPN, Netmotion	Rightfax	ScanSnap	SharePoint	Server OS	SPAM Filter	SQL Server
Survey Monkey	T2	Telestaff	Time.ly	TraCS	Trafficware	TriTech – Vision Mobile, Vision RMS, Vision CAD
Tyler Cashiering	Tyler Content Management	Unitrends	UPS Worldship	Venus	VMWare	VoIP
	Web Filter	Windows	Wireless	Zetron		

5 YEAR INFORMATION TECHNOLOGY DEPARTMENT PLAN

- Acquire, enhance and maintain the technology needed to facilitate improved collaboration between city employees and between city departments.
 - Focus on GIS¹. Continue to map the City's assets. Acquire and implement a total asset management system.
 - Use IoT² to provide a fleet that is connected to answer questions like "where is my snow plow, and where has it been" or "where is my bus."
 - Assist our end users to be more mobile. Provide equipment and training to those areas that will see a benefit to the mobility and data at their fingertips
 - Promote enterprise-wide applications and the sharing of data between all agencies.
- Provide the technology needed to improve the ability of the city to communicate with citizens, to provide city services via the internet, and to support open and transparent government.
 - Providing the citizens with online access to most services.
 - Online calendars for my recycling dates, garbage dates. Subscriptions to calendars to be notified of events around the City.
 - Providing a full 311 service. This includes alerts city wide users can sign up for any alert the City might provide. Having districts setup for these alerts.
 - Promote open government for our Citizens to feel more connected to their government.
- Ensure that the City's technology infrastructure is secure, reliable and agile in an ever-changing technology landscape.
 - Acquire hardware and software that rank among the leaders in the industry, as balanced by their compatibility with the City's infrastructure, and by the resources needed for support.
 - Continue to focus on investments to increase the security and resiliency of the City's Technology Infrastructure: DR³ Site, Cybersecurity, Data Retention and Backup policies.
 - Stay current with core infrastructure that we use, as balanced by their compatibility with the City's infrastructure, and by the resources needed to stay current.
 - Implement policies on power saving to assist with our green initiatives.
 - Leverage cloud-based technology to reduce costs for things like backups, long term archiving and other appropriate cloud workloads.
- Attract, develop and retain Information Technology staff that are able to implement the City's IT Strategic Plan.
 - Continuously improve communications within Information Technology in order to support our mission.
 - Provide industry leading tools and solutions for use by Information Technology staff, in order to enable them to provide world class support to City end-users.
 - Review the IT organizational structure in order to provide support to customers in the most responsive manner.
 - Place a high priority on training in order to make better use of technology and improve customer service.
- Participate in projects with other units of government that are mutually beneficial and ensure that the City's technology infrastructure aligns with the City's green initiatives.
 - Installing fiber throughout out City streets to become connected with all our assets and other agencies to provide better services to our citizens.
 - Implement policies on power saving to assist with our green initiatives.
 - Continue to recycle and auction old hardware in an environmentally and fiscally responsible manner.

2 Year Departmental Major Action Items

- Complete deployment of EnerGov for integrated city-wide permitting, licensing and code enforcement
 - Expand Citizen Self Service and eReviews to all permitting and licensing processes
 - Expand usage of iGWorkforce mobile applications
- Complete PCI Certification for the City
- Develop an Information Technology Emergency Operations Plan
- Expand usage of online forms and workflow processes
- GPS Vehicle Tracking for City owned vehicles
- Asset Management and GIS Mapping of all City assets and infrastructure

¹ Geographic Information System






² Internet of Things






³ Disaster Recovery

CITY OF LA CROSSE INFORMATION TECHNOLOGY HARDWARE

End User Technology Devices

Current Inventory and Procurement Schedules

		<u>Desktops</u>	<u>Laptops</u>	<u>Police Squad Terminals</u>	<u>Fire Rig Terminals</u>	<u>Tablets</u>
						
Current Inventory		345	100	25	10	26
		<u>Replacements</u> <u>Additions</u>	<u>Replacements</u> <u>Additions</u>	<u>Replacements</u> <u>Additions</u>	<u>Replacements</u> <u>Additions</u>	<u>Replacements</u> <u>Additions</u>
Expected	2021	85 5	25 6	24 -	- -	13 4
Replacements	2022	86 5	26 6	- -	- -	14 4
and Additions	2023	87 5	27 6	- -	10 -	15 4
	2024	88 5	28 6	- -	- -	16 4
	2025	89 5	29 6	- -	- -	17 4
	2026	90 5	30 6	- -	- -	18 4
Replacement Lifecycle		5-6 yrs.	4-5 yrs.	4 yrs.	4 yrs.	2-3 yrs.
Comments		Addition of 2 nd and 3 rd Monitor increases cost.	Also includes cost of docking stations and monitors.	Replaced as one large batch, in order to ensure single common model for support purposes.	Replaced as one large batch, in order to ensure single common model for support purposes.	The city is seeing an explosive growth in tablets being deployed as more and more departments move to provide their employees with greater ability to work while out in the field.

		<u>Desk Phones</u>	<u>Printers</u>	<u>Projectors</u>	<u>Scanners</u>	<u>Televisions/ Monitors</u>
						
Current Inventory		288	192	8	33	30
Replacement Lifecycle		As Needed	As Needed	As Needed	As Needed	As Needed (6-7 yrs.)

End User Technology Purchases


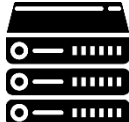




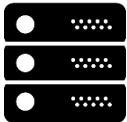
2021	2022	2023	2024	2025	2026
\$100k	\$200k	\$200k	\$200k	\$200k	\$200k

Lifecycle and Replacement Policies

The IT Department implements a comprehensive lifecycle policy for managing end user technology equipment, this includes things like purchasing warranty's for new equipment to cover the expected life of the item, recycling out of warranty equipment to other non-critical areas within the city, and auctioning off old equipment to offset the cost of purchasing new equipment.

Infrastructure Technology Devices

These devices need to be replaced within their replacement lifecycles because of vendor support and lifecycle policies and the critical nature of this equipment.

	<u>Core & Distribution Switches</u>	<u>Storage</u>	<u>Access Switches</u>	<u>Firewalls</u>	<u>Routers</u>	<u>Wireless Access Points</u>	<u>Physical Servers & Appliances</u>
							
Current Inventory	4 sets	7 sets	46	4	3	36	16
Replacement Lifecycle	4-5 yrs.	4-5 yrs.	4-5 yrs.	4-5 yrs.	4-5 yrs.	4-5 yrs.	4-5 yrs.
Average Replacement Cost	\$28k to \$50k	\$250k to \$350k	\$4k	\$18k	\$10k	\$1k	\$6k - \$50k
Comments	Must be bought in sets of 2 for redundancy.	Must be bought in sets of 2 for redundancy.					

For storage – we purchase what we forecast we will need for 4 years out. However, the City’s storage demand has experienced explosive growth due to things like video storage, body and squad cameras and 7-year mandatory retention periods for most of our data. The unexpected scale that storage requirements have grown, has meant that we have underestimated the storage needed by the city. Due to the rapidly changing nature of the technology industry and the pervasive impact that technology has on everything the city does, we expect that the demand for IT services, and storage in particular, will continue to grow at the phenomenal rate it has done for the last 4 years.

Infrastructure Technology Purchases

2021		2022		2023	
Network Equipment		Network Equipment:		Servers & Appliances:	
Access Switches (x6)	\$24k	DR Site Core Switch	\$50k	Web Filter	\$7k
Rack Switches (x4)	\$15k	DR Site Internet Router	\$10k	Network Equipment:	
		Access Switches (x6)	\$24k	Distribution Switch	\$28k
		Rack Switches (x2)	\$10k	Access Switches (x6)	\$24k
		Servers & Appliances:		Wireless Access Points (x38)	\$35k
		Email Filter	\$6k	Storage & Backup Equipment:	
		Storage & Backup Equipment		Backup System	\$220k
		City Hall SAN Array	\$300k		
Total = \$39k		Total = \$400k		Total = \$314k	
2024		2025		2026	
Servers & Appliances:		Network Equipment:		Storage & Backup Equipment:	
City Hall Virtualization Servers	\$70k	City Hall Firewall	\$18k	Video Storage Array	\$350k
DR Site Virtualization Servers	\$70k	DR Site Firewall	\$18k		
Storage & Backup Equipment:		Access Switches (x6)	\$24k		
DR Site SAN Array	\$300k				
Network Equipment:					
Access Switches (x6)	\$24k				
Total = \$464k		Total = \$60k		Total = \$350k	

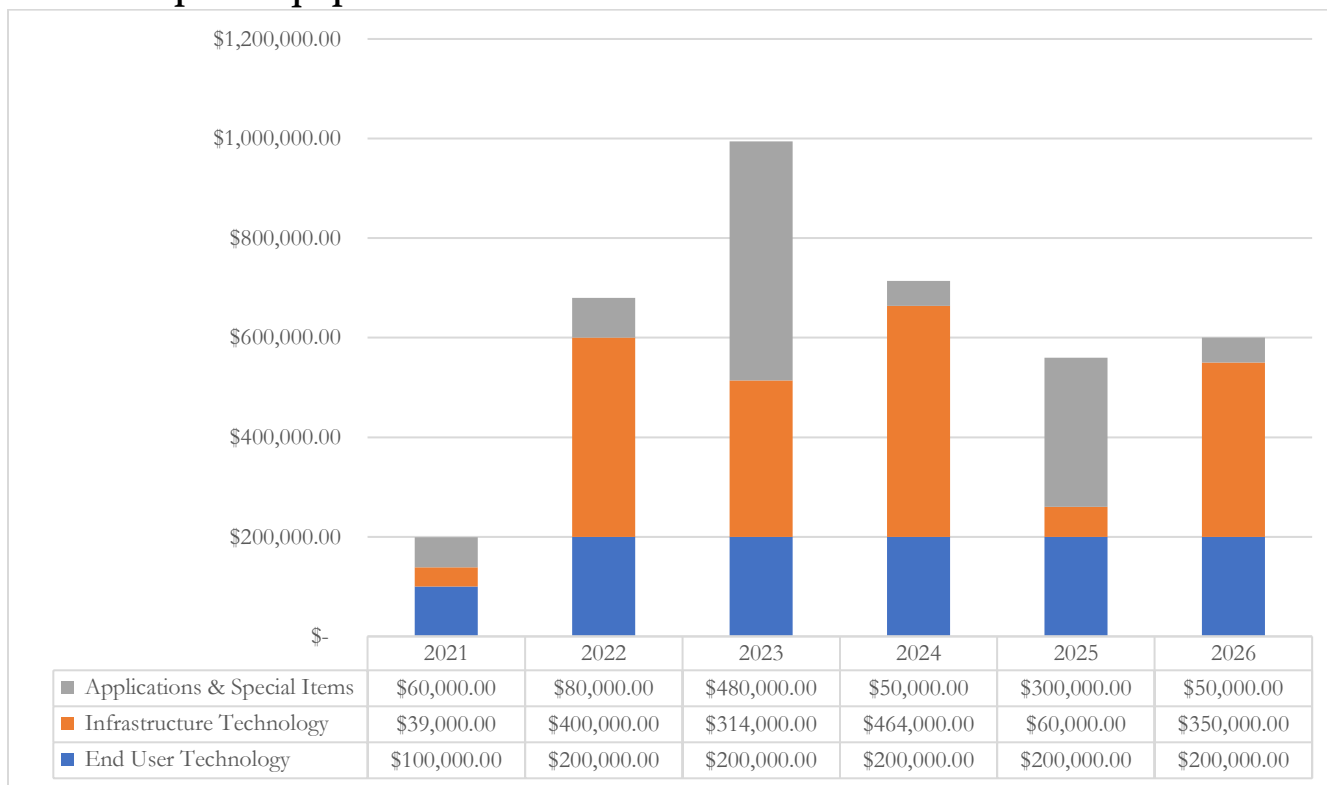
Applications and Special Purchases

2021		2022		2023	
Security System Enhancements	\$30k	Security System Enhancements	\$30k	Security System Enhancements	\$30k
Planning Dept. Plotter	\$10k	Security System Replacements	\$50k	Security System Replacements	\$50k
Tyler Incident Management	\$20k			VoIP System Upgrade	\$350k
				IoT Vehicle Locator Technology	\$50k
Total = \$60k		Total = \$80k		Total = \$480k	

2024		2025		2026	
Security System Enhancements	\$30k	Network Power Backup System	\$250k	Security System Enhancements	\$30k
IoT Vehicle Locator Technology	\$20k	Security System Enhancements	\$30k	IoT Vehicle Locator Technology	\$20k
		IoT Vehicle Locator Technology	\$20k		
Total = \$50k		Total = \$300k		Total = \$50k	

Additional consideration will need to be given to the City's P25 Digital Trunked Radio System maintenance and upgrades.

Overall Capital Equipment Plan



FUTURE CLOUD SERVICES

With the rise of cloud services and the software-as-a-service (SaaS) model the City will need to make some long-term decisions about how it will pay for these types of services. Traditionally software might have been purchased for a large up-front cost that was usually funded through the Capital Budget, and the small yearly maintenance fees funded through the IT Department's Operating Budget. Cloud/SaaS services on the other hand are generally billed as a yearly subscription fee and relate to the number of users or amount of a service that the City will use in the year. There is no longer a large up-front purchase cost that can be paid for using the Capital Budget. Additionally, the larger yearly subscription fees will put further pressure on an already tight IT Department Operating Budgets.

These services do offer many advantages over traditional self-hosted software services. They reduce the management and operational burden on IT Department staff to support these applications. They reduce the necessary infrastructure that the city must purchase to support these applications. They are generally quicker to be updated and receive new features and bug fixes quicker than traditional software. Finally, several vendors, notably Microsoft, have strongly hinted that the future of their services will be their Cloud/SaaS offerings, and that their self-hosted solutions will not receive the same attention from them as their Cloud/SaaS offering. Some examples of future Cloud/SaaS services that the City is considering or will need to consider over the next couple of years are listed below.

- Microsoft 365 Government Pricing (also known as Office 365): \$150k/year
- Cybersecurity: \$100k/year
- ArcGIS Online
- Surveillance Video Storage in the Cloud

There are also many specialized Cloud/SaaS solutions that are currently being used or in the process of being considered by end Departments to meet specific business needs of theirs. The City will also need to consider how those are to be funded along with the more general cloud services listed above.