# THE CITY OF Fitchburg

**INFORMATION TECHNOLOGY**

## ANNUAL REPORT 2021

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# INTRODUCTION

For the I.T. Department, 2021 was an opportunity to become accustomed to the new normal that is the result of the global pandemic. We are spending time supporting teleworking needs for a large number of staff, something we never even considered just two years ago.  We're no longer thinking about replacing desktop computers because any new computer we purchase will be a laptop which comes with its own set of challenges.  For every initiative, or every request, our response must include a consideration of how any proposed solution will impact those who are working remotely. Mobility is at the forefront of everything we're doing today.

At the same time, 2021 was also a return to some sense of normalcy.  We were able to implement a new firewall system which was planned for 2020 but was delayed due to Covid.  We installed upgrades to major systems such as the telephone system and we deployed new security enhancements such as multi-factor authentication for our Office 365 environment.  We built new OnBase processes and embarked upon a refresh of the City's web site.  We replaced servers and upgraded applications for our MPSIS partners and we continued to move critical equipment out of our City Hall building and to the OneNeck datacenter for better fault tolerance and security. We also responded to more than 2,200 requests for assistance from staff.

In the following pages you'll be able to review some of the highlights of our year in I.T.  All I.T. staff would agree that we're as busy as ever supporting the City and yet the list of things we still want to achieve grows larger every day.  We're proud of our accomplishments in 2021 and look forward to the coming year.

*Matth T. P/l*

Matthew Prough
Information Technology Director

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**Mission Statement**

*The mission of the City of Fitchburg Information Technology Department is to provide high-quality, secure, and cost-effective information systems and services to all City departments through excellent customer service, continuous improvement, innovative problem-solving, and adherence to industry best practices.*

# DIVISION OVERVIEW

The Information Technology Department is a division of the Administration Department and currently includes five full-time staff. The Department manages a large variety of information technology systems and services used throughout the City as well as in five area police departments through the MPSIS Consortium.

The first responsibility of the I.T. Department is to provide technology support for City staff, and this is the primary responsibility for our Support Specialists. All I.T. staff are also assigned ongoing projects to implement new systems as well as to maintain and upgrade existing servers, equipment, and applications.

The division also manages and maintains the MPSIS network and services which supply critical law enforcement systems to the police departments in Fitchburg, Middleton, Sun Prairie, Verona, and Monona. MPSIS allocates funding that provides those services and fully funds the Law Enforcement Data Analyst position.

## Division Staff

| Name | Title | Years of Service |
|------|-------|------------------|
| Matt Prough | Information Technology Director | 17 |
| Eric Kersten | Network Administrator | 5 |
| Rob Kadonsky | Information Technology Support Specialist | 3 |
| Michael Chavez | Information Technology Support Specialist | 1 |
| Stan Howard | Law Enforcement Data Analyst | 5 |

## Impact of the Global Pandemic

Year two of the Covid 19 pandemic saw the I.T. Department continuing to support telework across the entire organization. Equipment was purchased and installed in several conference rooms to make virtual meetings easier to accomplish when there are both virtual and in-person attendees. All computer replacements in 2021 were laptops vs. desktop computers to ensure staff have the necessary tools to work remotely when necessary.
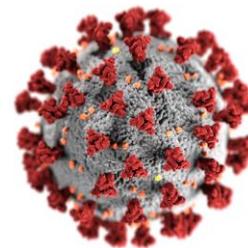
While the global supply chain issues caused problems with computer replacements, other work was completed to enhance our telework systems including a new firewall to provide remote access and enhancements to the security of our systems that can be accessed remotely. Much of this work prepares the city for this new normal.

# 2021 MAJOR PROJECTS

## Firewall Replacement

The City's main firewall is the device that creates a barrier between our internal computer networks and the internet. It is the most critical security device on our network as it protects the City from the constant threats present on the internet. The firewall also provides City staff with the ability to connect to our network from a remote location and is critical to the success of our telework program.

Our previous firewall was due to be replaced in 2020 but that replacement was postponed by one year due to the pandemic.  It wasn't prudent to replace the firewall at a time when many city staff were first learning to connect and work remotely.

In early 2021 I.T. staff began the process of researching and identifying the best solution to replace a Sophos firewall that had been in use for four years and in the end identified a solution from Palo Alto Networks as the best option for the city.  The Palo Alto firewall was implemented in July 2021 and was the result of a very complicated and technical project to replace one of the most critical components of our network.

This project was a great success and enhances the City's network security posture. Continued support from the Mayor and Council resulted in the necessary funding allowing us to implement a firewall widely considered to be best in class and continues a focus on information security.

## Login Security Enhancements

The new firewall was configured to require multi-factor authentication when connecting to the VPN.  We elected to use the Microsoft Authenticator to provide the second factor for VPN connections which means that when staff attempt to connect to the VPN they first must enter their network username and password, and once that's successful they will be prompted to approve the login via the authenticator app on their phone or via a phone call.

It is a best practice to use multi-factor authentication for access to any public facing network resource.  Since our Palo Alto firewall can utilize the Microsoft Authenticator app it was logical to then use that same system to provide the multi-factor authentication for our Office 365 environment.  Over a period of weeks in the fall of 2021 I.T. configured and deployed multi-factor authentication for all City staff for Office 365 which significantly enhanced the security of our email system.
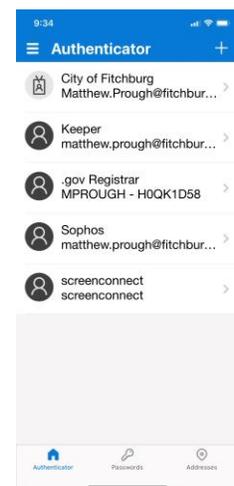
The I.T. Department appreciates the patience shown by City staff as we rolled out these new features.

## Self-Service Password Reset

The 2021 budget included funds for enhanced Office 365 licensing that made multi-factor authentication easier to implement and use for staff.  Another item that came with that licensing was the ability to enable self-service password reset.  This is functionality that is long overdue and which makes our password process much more efficient.



All city staff can now reset their own network password should they forget their password or be locked out of the network.  The reset process is available from the internet and simply requires the use of the Authenticator discussed previously or correct answers to pre-configured security questions.  Self-service password reset is especially useful for those staff who don't work traditional office hours when I.T. staff are available to assist.

## Phone System Upgrade



For the first time since the phone system was installed in 2017 the I.T. Department, working with our system vendor, installed an upgrade to implement new features and security components. A single phone system serves every City building and therefore upgrades are complex and can be impactful to the entire organization. This upgrade went extremely well with no downtime and little impact to staff.

As part of the upgrade the I.T. Department also explored the replacement of the City phone service provider as the original three-year contract was expiring.  After a quote process we were able to save almost 66% per year on phone service costs, approximately $12,000, and made that switch as part of this project.

Finally, we also took this opportunity to re-align the locations where our phone service connects to the city.  We now have phone service at both our OneNeck location and at Fitchburg City Hall.  We are able to fully operate the phone system even in the event that service at one of those two locations is unavailable.

## SCADA Network Migration and Security

The I.T. Department worked with Utility staff in 2021 to perform an upgrade of the Utility SCADA system which is the system Utility staff use to manage the City water system.  These upgrades are a routine process done every few years to keep the system up to date and to obtain new features.



As part of this upgrade process I.T. and Utility staff also worked together to implement additional security features and controls to better protect the SCADA system and the City's water infrastructure.

## OnBase Projects

The I.T. Department continued to build and deploy custom data management and workflow solutions utilizing the City's OnBase content management system. In 2021 those projects included the development of an employee reimbursement form to better capture reimbursement information and provide a workflow process for reimbursement requests from employees. Previously those requests were submitted using the same payment request form that is used for all other invoices.

Additionally, staff developed an employee onboarding process that begins with the H.R. department. Once an employee accepts a position with the City, H.R. completes an onboarding form which is then routed to the necessary staff who create accounts, install equipment, add the new employee to payroll, and other items necessary prior to a new employee's start date. Work on this process will continue into 2022 as we streamline the system to provide a better onboarding experience for everyone.

## Web Site Refresh

I.T. Department staff initiated a project in 2021 that includes staff from every department with the goal of refreshing our web site with a new look and feel. The existing contract with our web site provider entitles us to a refresh every five years. The refresh is not intended to be a complete rebuild or reorganization of our web site but rather is intended to provide a new look for the site and to take advantage of more modern web site elements such as mobile device responsiveness.

The web site refresh group worked throughout the second half of 2021 on the project and is planning for the new site to be online in the first part of 2022. Every department has a presence on the site and is critical to the success of this project. Each department manages their portion of the site and the links and data they include on their pages.
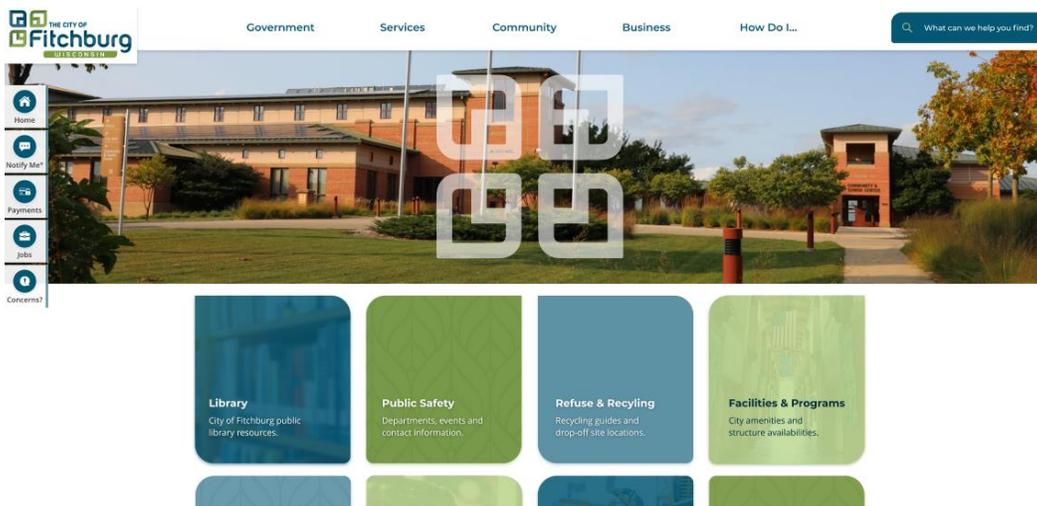
# I.T. SUPPORT OPERATIONS

## 2021 Summary

The primary responsibility of the I.T. Department is to support all City staff.  We are first a customer service department.  One of the primary methods by which we do this is answering requests for assistance from staff.  Each staff request for assistance is logged in the helpdesk ticket system.  Those tickets track the nature of the issue, the steps taken by I.T. staff, and the final resolution.

Helpdesk tickets are created for a wide variety of reasons but are always the result of a direct request from staff. Examples of requests received and logged in the ticket system are password resets, new user setups, software issues, and hardware problems.  Not included in the chart below are all the projects that I.T. staff work on when not responding to requests for assistance such as computer replacements, the implementation of new systems or services, software or hardware upgrades, operating system patching, and other tasks that arise.

The number of tickets submitted in 2021 rose slightly from 2,173 in 2020 to 2,253 in 2021, an approximately 4% increase over the previous year.  This continues a trend of relatively stable ticket numbers over the past few years even as the number of staff increases as does the complexity of the systems and services.  The I.T. Department continues to improve the management and control of computers, peripherals, and software to prevent issues from occurring and to lessen the need for staff to request assistance from I.T. on a regular basis. Technology in use is also more mature and operating systems and applications are more stable and supportable. Ideally as the total number of City staff continues to increase, these factors will keep the current requests constant throughout the upcoming years.

### Tickets By Location

| | # | % |
|---|---|---|
| City Hall | 1333 | 59.17 % |
| Community Center | 9 | 0.40 % |
| Evidence Building | 1 | 0.04 % |
| Fire Station #1 | 37 | 1.64 % |
| Fire Station #2 | 15 | 0.67 % |
| Fire Station #3 | 14 | 0.62 % |
| Library | 58 | 2.57 % |
| Maintenance Facility | 29 | 1.29 % |
| Middleton | 5 | 0.22 % |
| Monona | 1 | 0.04 % |
| Park Shelter - Huegel | 1 | 0.04 % |
| Park Shelter - McKee | 7 | 0.31 % |
| Police Department | 606 | 26.90 % |
| Senior Center | 112 | 4.97 % |
| Sun Prairie | 18 | 0.80 % |
| Verona | 7 | 0.31 % |
| Grand Total: | 2253 | |

# MPSIS

### Overview

MPSIS (which stands for Multi Jurisdictional Public Safety Information System) was established in 2003 by the Police Departments in Fitchburg, Middleton, and Sun Prairie to purchase and share a police records management system.  From that original goal the system grew much larger and today includes a number of shared systems including dispatch software, mobile software for the police vehicles, and digital dictation.  A major component of the system is the server and network infrastructure required to house the shared systems.  The Verona and Monona Police Departments joined MPSIS seven years ago which results in an organization that supports more than 280 users across five locations.

### MPSIS Server Migrations

I.T. manages a database server environment for each MPSIS agency for their TraCS and TiPSS databases.  In 2021 all five database servers were consolidated onto one large SQL server to better utilize the resources we have available.  Additionally, each agency has an MPSIS server that contains files and applications for that agency, and those servers were migrated to new servers and operating system to ensure they remain up to date.

### TraCS System Upgrades

TraCS is a system used by all five agencies to create traffic accident reports and to issue citations.  In 2021 the I.T. Department assisted each agency with an upgrade of that system to the new web services model which provides a much better process for officers on the street to create and submit their TraCS forms.  Each agency utilizes it's own TraCS application and database and the process to complete these upgrades spanned the entire year.  By the end of 2021 all agencies except for one were utilizing the new web services version of TraCS.

### MPSIS Network Changes

2021 saw several major changes and upgrades to the MPSIS network to provide better resiliency and security.  The first was to implement a fiber backup connection to the Dane County 911 Center.  All five MPSIS sites connect to Dane County for critical communication and dispatch systems and this link provides a second, backup connection for better resiliency.

During 2021 I.T. also moved critical equipment out of City Hall and into the OneNeck datacenter.  Both the BadgerNet connection, which provides access to state and federal law enforcement databases, and the core firewall that connects all five sites together were moved to OneNeck for security and fault tolerance purposes.