



Information Technology – Legislative Committee Meeting

1.04.22

1. Review of Budget Status and Financial News
2. Information Security Officer Report
3. Shared Services – Updates
4. ITCS Department Overview
5. ITCS Upcoming Projects
 - a. DSS Migration
 - b. BOE Segmentation
 - c. Multi-Factor Authentication
 - d. Access Control
 - e. Storage Area Network (SAN) Upgrade
 - f. Mitel Switch and Voicemail Upgrade
6. Microsoft Office 365 Demonstration

Review of 2021 Budget and Financial News

A1680 – End of Year Operational Budget

FOR 2021 12								
ACCOUNTS FOR:	ORIGINAL	TRANFRS/	REVISED	YTD	ENCUMBRANCES	AVAILABLE	PCT	
A General Fund	APPROP	ADJSTMTS	BUDGET	ACTUAL		BUDGET	USE/COL	
A1680 Information Technology								
A1680 412702 Shared Services- I	-206,072	0	-206,072	-201,867.72	.00	-4,204.28	98.0%*	
A1680 412707 Shared Services- E	-78,000	0	-78,000	-47,080.52	.00	-30,919.48	60.4%*	
A1680 422280 Data Processing/Pr	-250	0	-250	-92.38	.00	-157.62	37.0%*	
A1680 424100 Rental Of County O	-5,000	0	-5,000	-4,950.00	.00	-50.00	99.0%*	
A1680 430891 SSG19 Local Efficie	0	-6,684	-6,684	-8,604.28	.00	1,920.38	128.7%	
A1680 510010 Full Time	503,072	-28,097	474,975	451,643.64	.00	23,331.11	95.1%	
A1680 520070 Chairs	0	171	171	170.79	.00	.21	99.9%	
A1680 520110 Desk	0	360	360	359.99	.00	.01	100.0%	
A1680 520270 M7674 Telephone Equ	0	40,000	40,000	.00	.00	40,000.00	.0%	
A1680 540040 Books	250	0	250	.00	.00	250.00	.0%	
A1680 540070 Car Maintenance	500	0	500	21.00	.00	479.00	4.2%	
A1680 540140 Contracting Servic	57,880	-9,412	48,468	40,417.31	.00	8,050.69	83.4%	
A1680 540140 M7674 Contracting S	0	192,368	192,368	.00	.00	192,368.00	.0%	
A1680 540140 SSG19 Contracting S	0	4,262	4,262	4,262.00	.00	.00	100.0%	
A1680 540180 Dues	150	0	150	.00	.00	150.00	.0%	
A1680 540220 Automobile Fuel	400	0	400	162.18	.00	237.82	40.5%	
A1680 540320 Leased/Service Equ	6,000	371	6,371	3,322.37	.00	3,048.83	52.1%	
A1680 540350 Office Equip Maint	40,800	720	41,520	34,272.61	.00	7,247.37	82.5%	
A1680 540390 Mileage Expense	150	0	150	.00	.00	150.00	.0%	
A1680 540420 Office Supplies	1,500	-531	969	939.61	.00	29.39	97.0%	
A1680 540480 postage	50	0	50	.00	.00	50.00	.0%	
A1680 540485 Printing/Paper	1,000	0	1,000	225.18	.00	774.82	22.5%	
A1680 540620 Software Expense	150,000	0	150,000	149,857.45	.00	142.55	99.9%	
A1680 540640 Supplies (Not Offi	4,000	10,000	14,000	4,779.15	.00	9,220.85	34.1%	
A1680 540640 SSG19 supplies (Not	0	2,422	2,422	.00	.00	2,421.90	.0%	
A1680 540660 Telephone	67,700	3,000	70,700	48,796.99	.00	21,903.01	69.0%	
A1680 540661 Telephone Maintena	24,500	2,427	26,927	22,490.87	.00	4,436.53	83.5%	
A1680 540733 Training/All Other	5,000	0	5,000	.00	.00	5,000.00	.0%	
A1680 581088 State Retirement F	52,299	-5,691	46,608	45,087.87	.00	1,520.13	96.7%	
A1680 583088 Social Security Fr	38,485	-2,149	36,336	34,339.01	.00	1,996.55	94.5%	
A1680 584088 Workers Compensati	11,025	-919	10,106	9,653.45	.00	452.80	95.5%	
A1680 585588 Disability Insuran	612	-51	561	535.05	.00	25.95	95.4%	
A1680 586088 Health Insurance F	152,306	-4,822	147,484	152,460.67	.00	-4,976.51	103.4%*	
A1680 588988 Eap Fringe	135	-11	124	114.80	.00	8.95	92.8%	
TOTAL Information Technology	828,492	197,734	1,026,226	741,317.09	.00	284,908.96	72.2%	
TOTAL General Fund	828,492	197,734	1,026,226	741,317.09	.00	284,908.96	72.2%	
TOTAL REVENUES	-289,322	-6,684	-296,006	-262,594.90	.00	-33,411.00		
TOTAL EXPENSES	1,117,814	204,418	1,322,232	1,003,911.99	.00	318,319.96		

FOR 2021 12								
	ORIGINAL	TRANFRS/	REVISED	YTD	ENCUMBRANCES	AVAILABLE	PCT	
	APPROP	ADJSTMTS	BUDGET	ACTUAL		BUDGET	USE/COL	
GRAND TOTAL	828,492	197,734	1,026,226	741,317.09	.00	284,908.96	72.2%	
** END OF REPORT - Generated by Loveland, Jeremy **								

H1680 – End of Year Capital Budget

FOR 2021 12								
ACCOUNTS FOR:	ORIGINAL	TRANFRS/	REVISED	YTD	ENCUMBRANCES	AVAILABLE	PCT	
H Capital Fund	APPROP	ADJSTMTS	BUDGET	ACTUAL		BUDGET	USE/COL	
H1680 Information Technology								
H1680 430970 SSG19 State Aid - C	0	-21,206	-21,206	-8,857.71	.00	-12,348.75	41.8%*	
H1680 520620 Software Expense	0	33,922	33,922	33,922.37	.00	.00	100.0%	
H1680 521090 Computer	30,000	1,866	31,866	24,810.29	.00	7,055.41	77.9%	
H1680 521090 SSG19 Computer	0	21,206	21,206	17,706.99	.00	3,499.47	83.5%	
TOTAL Information Technology	30,000	35,788	65,788	67,581.94	.00	-1,793.87	102.7%	
TOTAL Capital Fund	30,000	35,788	65,788	67,581.94	.00	-1,793.87	102.7%	
TOTAL REVENUES	0	-21,206	-21,206	-8,857.71	.00	-12,348.75		
TOTAL EXPENSES	30,000	56,995	86,995	76,439.65	.00	10,554.88		

FOR 2021 12								
	ORIGINAL	TRANFRS/	REVISED	YTD	ENCUMBRANCES	AVAILABLE	PCT	
	APPROP	ADJSTMTS	BUDGET	ACTUAL		BUDGET	USE/COL	
GRAND TOTAL	30,000	35,788	65,788	67,581.94	.00	-1,793.87	102.7%	
** END OF REPORT - Generated by Loveland, Jeremy **								

TIOGA COUNTY, NEW YORK

Microsoft Office Comparison

December 7, 2021

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Microsoft offers two flavors of its Office productivity suite: the subscription-based Office 365 and the on-premises editions of Office 2019 / 2021. This document is intended to provide an overview of these two offerings to assist in the decision of whether to continue Tioga County's existing model (on-premises) or to migrate to a subscription-based model.

What Do the Terms "On-Premises" and "Cloud" Mean?

In general, "on-premises" refers to software purchased on a per-license basis and installed on individual computers. It's the traditional approach to software. You buy a license and you download the install software. You install the software according to the license terms – in the case of Office, you have to purchase a license for each computer you want to install the software on. Traditional Microsoft Office products, like Office 2019 or 2021, fall under the on-premises umbrella.

The cloud or subscription version of a product refers to software as a service (SaaS), which is essentially software licenses that you purchase and use on a subscription basis. As long as you pay your subscription fee, you get to use that software in accordance with the license terms. You typically get all software updates – from small bug fixes and security patches all the way up to major new releases – for as long as you subscribe.

The cloud can also refer to apps and services that live entirely online. Webmail services are one example – you use them exclusively through the web browser as opposed to installing an additional piece of software. These services are sometimes free, but they'll often come in paid versions as well. Paid services usually operate as subscriptions – you can use them for as long as you pay.

Many subscriptions offer both cloud (web) versions of products and installed versions that work seamlessly when you have connectivity. This is the case with Office 365.

Depending on the Office 365 plan, you can access Office apps that you can install on up to five devices, including your computers and mobile devices. In addition, you can access an array of online services, like the web version of Outlook, Office Online (versions of Word, Excel, and so on that you can use in your web browser), and OneDrive.

The online apps and desktop apps work with each other, too. For example you can create a document using Word for Mac, save it to your OneDrive, then continue working on it using Word Online.

Choosing the Right Option

There are numerous factors to consider when it comes to deciding which Office product to choose – up-front cost, maintenance, upgradability, you name it. In this section, we break down some of the defining characteristics of both Office 365 and Office 2019/2021.

Office 365

Flexible licensing options: Microsoft offers several different Office 365 plans, and we can choose the right for our needs.

All Office 365 plans provide access to email, online file storage and sharing, the Office Online web apps and some additional features to allow for collaboration across our staff. Some plans also include access to Office Apps for Windows, macOS, Android, and iOS. Additional features are available as well, depending on the plan.

We can also mix and match plans to suit the needs of our specific staff members.

Simplified management and maintenance: Office 365 includes features to help manage the organization's Office users so we can easily add, remove, and administer Office 365 accounts. Some Office 365 plans include Microsoft Enterprise Mobility + Security, a collection of tools to help simplify data security and user management across devices.

Office 365 plans also include OneDrive document storage, as well hosted email. With hosted email, Microsoft will store our email so we don't have to operate and maintain our on-premises Exchange server. OneDrive storage provides a single space to store documents easily and securely, share and collaborate with colleagues, and access documents from anywhere.

Subscriptions based on users, not computers: With Office 365, we request subscriptions – also known as “seats” – for each Office 365 user within our organization. Each user can work from their installed desktop version of Office or their online version. Users can also install Office on up to 5 devices (including home devices). This way, they can work securely, from any device they prefer.

This is a departure from the traditional approach of Office 2019 / 2021, where we request licenses that are tied to a particular computer.

Office 2019 or 2021

Pay once, use forever: Unlike Office 365 plans, which you pay for on a monthly basis, an Office 2019 or 2021 license is perpetual. Once you purchase it, you can use Office in accordance with the license terms for as long as you like. This is a more affordable option.

We will get updates for as long as Office 2019 / 2021 is the current release of Office. We'll also continue to get important security patches for a period of time after Office 2019 / 2021 is discontinued.

The downside is we will have to pay to purchase the next major Office release. Also, after a certain number of years, Microsoft no longer provides security and bug fixes for older versions of Office. Also, we have to manually manage any security patches and bug fixes.

Consistency across our organization: Opting for a single edition of Office 2019 across Tioga County may simplify our Office deployment since we'll only have one edition to update and maintain.

Less integration with cloud services: While Office 2019 / 2021 apps can integrate with Microsoft cloud services like OneDrive, the experience isn't quite as seamless. For instance, you can save a file to a personal OneDrive account, but you won't get access to the Office Online web apps. You also won't be able to work across devices as smoothly as you can with Office 365.

Add apps as you need them: If an app, like Microsoft Access, isn't included in the Office 2019 / 2021 edition that we purchase, we can easily purchase licenses for those apps as needed.

The Cloud is Where Things Are Going

The trend is clear: The tech world is moving toward cloud-based software, complete with all the pros and cons that such software brings. Adobe, for instance, has moved most of its product line toward cloud-based offerings, with Adobe Creative Cloud and Adobe Document Cloud.

Microsoft released its newest version of its perpetual licensing Office 2021 on October 5, 2021. Support for this version is five years, which is 5 years shorter than previous perpetual licensing options such as Office 2016 and Office 2019. Microsoft limits features of its perpetual licensed software to encourage users to subscribe to their cloud-based software. This is mainly due to the continuous revenue stream.

Office 2021 vs. Office 365 Comparison

Feature	Microsoft Office 2021 Perpetual	Office 365 Subscription
Microsoft Word Desktop App	X	X
Microsoft Excel Desktop App	X	X
Microsoft PowerPoint Desktop App	X	X
Microsoft Outlook Desktop App	X	X
Microsoft Publisher Desktop App	X	X
Microsoft Access Desktop App	X	X
Microsoft OneNote Desktop App		
Exchange Online		X
SharePoint Online		X
OneDrive for Business		X
Microsoft Teams Desktop App		X
Office Web and Mobile Apps		X
Microsoft Planner		X
Power Apps		X
Power Automate		X
Microsoft Forms		X
Microsoft Sway		X
Microsoft Stream		X
Exchange Online Protection		X

Feature Descriptions

Microsoft Word Desktop App

Microsoft Word is a word processor. That's an application to format, manipulate, save, print or share a text based document. Microsoft Word is arguably the most popular word processor on the planet. The desktop app is installed on the physical computer and all processing occurs using the physical computer's resources (memory and processor).

Microsoft Excel Desktop App

Microsoft Excel is a commercial spreadsheet application. It features the ability to perform basic calculations, using graphing tools, create pivot tables and create macros, among other useful features. Excel allows users to arrange data in order to view various factors from different perspectives. The desktop app is installed on the physical computer and all processing occurs using the physical computer's resources (memory and processor).

Microsoft PowerPoint Desktop App

Microsoft PowerPoint is a presentation software that allows users to create engaging presentations that consist of individual pages, or slides, which may contain text, graphics, sound, movies, hyperlinks, and other objects. PowerPoint enables users to add animation and effects to slideshow elements. Presentations can be printed, displayed, notated, and navigated by the presenter. The desktop app is installed on the physical computer and all processing occurs using the physical computer's resources (memory and processor).

Microsoft Outlook Desktop App

Microsoft Outlook is an email client designed to operate as an independent personal information manager. In our configuration, Outlook works in conjunction with Microsoft Exchange Server for group scheduling, email and task management. It manages email, calendars, contacts, tasks, to-do lists, and documents or files on the hard drive. The desktop app is installed on the physical computer and all processing occurs using the physical computer's resources (memory and processor).

Microsoft Publisher Desktop App

Microsoft Publisher is a desktop publishing application. In contrast to Microsoft Word, where the focus is on the text composition and proofing, Microsoft Publisher is focused on the design and layout of pages. Publisher can be used to create a wide variety of publications, from business cards and calendars, to newsletters and greeting cards. The desktop app is installed on the physical computer and all processing occurs using the physical computer's resources (memory and processor).

Microsoft Access Desktop App

Microsoft Access is a Database Management System (DBMS) and is made to store and manage vast quantities of data in a form that makes it easy to retrieve and use in different applications. While Excel users type directly into their spreadsheets, Access databases are manipulated with pre-made forms and queries. The desktop app is installed on the physical computer and all processing occurs using the physical computer's resources (memory and processor).

Microsoft OneNote Desktop App

Microsoft OneNote is an application that is designed for research, note-taking, and information storage. Similar to apps like Evernote and Dropbox paper, it allows you to store text and images in free-form documents which you can keep private or share with others. The desktop app is installed on the physical computer and all processing occurs using the physical computer's resources (memory and processor).

Exchange Online

Exchange Online is the cloud version of the on-premises Exchange Server, and email server from Microsoft. Exchange Online is a hosted email solution with business-class capabilities. With this service, users can access their emails, contacts and tasks regardless of where they may be working. This would eliminate the requirement to maintain an on-premises Exchange Server thus reducing maintenance and budget overhead. Since Exchange Online is a hosted service all processing occurs using Microsoft's server farm resources. There are no on-premises resource requirements.

SharePoint Online

Microsoft SharePoint Online is a collection of cloud- and web-based technologies that makes it easy to store, share and manage digital information within an organization. SharePoint Online also allows collaboration with external users, such as vendors or customers. SharePoint Online is the foundation for other collaborative features such as Power Automate and Microsoft Forms. Since SharePoint Online is a hosted service all processing occurs using Microsoft's server farm resources. There are no on-premises resource requirements.

OneDrive for Business

OneDrive for Business is online storage space in the cloud that's provided for individual licensed users in an organization. Use it to help protect work files and access them across multiple devices. OneDrive lets you share files and collaborate on documents, and sync files to your computer. OneDrive, like SharePoint is a critical collaborative foundational tool for the Microsoft 365 Suite. Implementation of OneDrive for Tioga County users would reduce on-premises storage requirements thus reducing maintenance and budget overhead. Since OneDrive for Business is a hosted service all processing occurs using Microsoft's server farm resources. There are no on-premises resource requirements.

Microsoft Teams Desktop App

Microsoft Teams is the hub for teamwork in Microsoft 365. The Teams service enables instant messaging, audio and video calling, rich online meetings, mobile experiences, and extensive web conferencing capabilities. In addition, Teams provides file and data collaboration and extensibility features, and integrates with Microsoft 365 and other Microsoft and partner apps. The desktop app is installed on the physical computer and all processing occurs using the physical computer's resources (memory and processor).

Office Web and Mobile Apps

Office Web and Mobile Apps is an online version of the Microsoft Office suite that provides global access to Microsoft Office applications. Rather than being installed on a user's computer, Microsoft Web and Mobile apps are hosted and executed at Microsoft's data centers. Microsoft Web and Mobile apps provide access to office productivity applications including Excel, Word, PowerPoint, OneNote and Teams. These applications execute entirely over the Internet and

require no installation at the client end as long as the client is running a supported web browser. Mobile apps are available for both iOS and Android.

Microsoft Planner

Microsoft Planner is an intuitive, collaborative task management tool that enables people to plan, manage, and complete task-based initiatives. Users assign and manage tasks on a Kanban board using task cards, which they can populate with various important plan information, such as due dates, status, checklists, labels, and file attachments. Planner integrates with several Microsoft solutions, including Microsoft Teams. As a web-based tool, Planner is accessible from anywhere and available as a mobile app for both iOS and Android.

Power Apps

Power Apps is a suite of apps, services, and connectors as well as a data platform that provides a rapid development to build custom apps for your business needs. Using Power Apps, you can quickly build custom business apps that connect to your data either stored in the underlying data platform (Microsoft Dataverse) or in various online and on-premises data sources (such as SharePoint, OneDrive, SQL Server, and so on).

Power Automate

Power Automate is used by over 350,000 organizations to automate business processes and tasks. Power Automate is a no-code/low-code drag and drop solution that allows users to create workflows to automate repetitive tasks and business processes. The app is available on desktop, mobile, and Microsoft Teams, and as a browser app.

Microsoft Forms

Microsoft Forms is an application which allows you to create shareable surveys, quizzes and polls in minutes. Forms tracks participant responses, providing real-time results and analytics for your survey. Microsoft Forms integrates with other collaborative tools in the Microsoft 365 suite. Since Microsoft Forms is a hosted service all processing occurs using Microsoft's server farm resources. There are no on-premises resource requirements.

Microsoft Sway

Sway is a new app from Microsoft Office that makes it easy to create and share interactive reports, personal stories, presentations and more. With Sway, there's no need to spend lots of time formatting. Its built-in design engine takes care of making your creation look its best. Since Microsoft Sway is a hosted service all processing occurs using Microsoft's server farm resources. There are no on-premises resource requirements.

Microsoft Stream

Microsoft Stream is an Enterprise Video service where people in our organization can upload, view, and share videos securely. Microsoft Stream is a secure video service so you can manage who views your video content and determine how widely to share within your organization. Microsoft Stream works well with other Microsoft 365 apps like Teams, SharePoint and OneNote. Since Microsoft Stream is a hosted service all processing occurs using Microsoft's server farm resources. There are no on-premises resource requirements.

Exchange Online Protection (EOP)

Exchange Online Protection is the cloud-based filtering service that protects organizations against spam, malware, and other email threats.

New York Counties Currently Using a Microsoft Enterprise Agreement for Microsoft 365

Broome County

Oswego County

Tompkins County

Saratoga County

Washington County

Schenectady County

Schoharie County