



2021 Business Plan & Budget

Information Technology

Prior Year Accomplishments

Economic Prosperity & Innovation

The Information Technology department continued with the management of “SMARTnorthumberland”, the County’s digital strategy. This year’s focus was on the development of a Broadband Strategy that will govern high-speed access investments in the County, on establishing a digital literacy program for staff and for our residents, and on technology innovation initiatives such as meeting room upgrades, mobile application development and the rollout of new collaborative software solutions.

Sustainable Growth

The Information Technology department strives to ensure that backend technology supports are effective and sufficient to support ongoing organizational and community growth in a manner that is cost effective and value driven. Examples of 2020 accomplishments in this area include:

- Management of the technical aspects of the implementation of “Bang the Table” – an online engagement platform.
- Continued work towards the implementation of HRIS – a new cloud-based HR solution
- Continued work on website updates to ensure AODA WCAG 2.0 compliance by Jan 1 2021
- Network upgrades including an upgrade to the OAFVC connection, Wi-Fi at the POA office, and optimized redundancy of our main internet connection
- An upgrade to our Great Plains financial solution
- Deployment of a remote work solution to allow staff to continue to work through COVID-19
- Replacement of the Paramedics Toughbook fleet
- Management of the technology requirements for the Campbellford Shared Base project
- Continued involvement in the GPL rebuild
- Continued attention to and investment in IT security and cybersecurity solutions and best practices



In addition to the above, broadband connectivity in the County is essential to sustainable growth. Work on the development of a Broadband Strategy aims to address these challenges.

Thriving & Inclusive Communities

The Information Technology department actively participates on the Ontario Health Team Northumberland by co-leading the development of the digital health strategy to support the initiative. Having managed the technical aspects of the Town Hall event, work continues with focus on providing digital solutions to our Paramedic and Long Term Care services. The digital strategy aims to be inclusive by design and offer opportunity to all members of our community.

Leadership in Change

The Information Technology department provides managed IT services to 3 member municipalities and both local police services. Through these relationships, IT chairs the Inter-Municipal IT Working Committee (IMITWC) that focuses on working closely with its member municipalities to identify opportunities to be collaborative in nature. In 2020, the IMITWC completed IT security assessments of 5 member municipalities, created high-level remediation plans, and pursued opportunities around cost sharing an IT Security specialist resource and the development of organizational IT Security funds. The SMARTnorthumberland digital strategy lays the framework and plans to lead a technology-backed initiative in the County to better realize the opportunities that newer technology can bring to our County workplaces, County service delivery, and within the community.

2021 Service Objectives & Initiatives

Economic Prosperity & Innovation

The Information Technology department will continue to work towards improving its internal capabilities to better support the County's lines of business with the goal of providing and demonstrating business value and identifying and implementing technology-based efficiencies. The digital strategy implementation will continue and will focus on those items that will bring economic prosperity to the community. Special focus will be given to implementing the Broadband Strategy which aims to identify proactive opportunities for investment in broadband capacity in the County. Tech innovation opportunities will be actively pursued as the County gains in prominence as a tech-friendly location and collaborative opportunities will be explored as the digital strategy moves forward in its goal of creating a more intelligent community.



Sustainable Growth

Ensuring that technology keeps pace with the demands and expectations of our lines of business and opportunities as they present themselves, the Information Technology department will continue to build a responsive, efficient and secure technology infrastructure. Internal initiatives to be pursued include:

- Aggressive adherence to state of good repair and best practice IT infrastructure initiatives
- Fine-tuning and optimizing the remote access and work solution to allow staff to be fully independent and connected to the resources they need when working remotely
- The Audio/Visual equipment in our meeting rooms will be upgraded to a more modern, robust and easy to use solution
- The Council chambers will be updated to allow for Live streaming of both regular and hybrid Council meetings
- Solutions will be implemented and managed to allow all public documents to meet AODA AA compliance
- The Office 365 solution will be leveraged with additional components to facilitate a more tech-collaborative work environment

In the community, the following initiatives will be pursued:

- Implementation of the County's Broadband strategy
- Continued pursuit of digital literacy activities for our residents
- A participatory budgeting solution for the 2022 budget
- Continued investment in tech innovation opportunities

Thriving & Inclusive Communities

Continued involvement with the Ontario Health Team Northumberland towards the development of a digital health strategy will continue to be of prime importance. Enhancement of the website e-service delivery options will continue with the goal of providing an online alternative for all County interactions – a true omni-channel service delivery model. And continued digital strategy implementation activities to ensure equality and inclusivity in technology initiatives in the County.

Leadership in Change

The provision of managed IT services to member municipalities will continue and opportunities to work more closely with our member municipalities pursued. Collaborative projects like the IMITWC IT Security program will continue as funding opportunities will be pursued so to be able



to fund necessary security enhancements and work on the SMARTnorthumberland initiative will continue focusing on:

- Modernizing the workplace and transforming County lines of business
- Addressing broadband challenges
- Facilitating digital literacy opportunities in the County

With the addition of the Records Management function into the IT department, we will support and grow this function to meet the needs of the County.

Long Term Plan & Strategic Objectives

Economic Prosperity & Innovation

1. To address broadband challenges in the County through a coordinated, well thought out investment strategy
2. To create a more intelligent workplace and community, a SMARTnorthumberland, by introducing and making use of newer technologies
3. To use technology as an investment vehicle to attract innovation-minded businesses and professionals

Sustainable Growth

1. To ensure that remote work technology solutions meet the needs and requirements of staff
2. To ensure that the County IT infrastructure (people, tools, and processes) are present to support and ensure organizational success
3. To continue to actively pursue state of good repair and best practice initiatives with respect to IT infrastructure
4. To safeguard the privacy and security of County data and information

Thriving & Inclusive Communities

1. Ensure an effective omni-channel service delivery model for the County.
2. Continued emphasis on community benefit from technology initiatives and enhancements
3. Continue to support Northumberland's Health Team from a digital health perspective



Leadership in Change

1. Continue to provide, grow and enhance the quality of the IT managed services to promote a shared service approach
2. Continue to pursue collaborative opportunities using technology for the benefit of the County
3. Manage the County's Records Management function

2021 Issue Paper

Windows Server Upgrades

Purpose

The purpose of this issue paper is to request funding to upgrade the Windows Server operating systems currently in use by Northumberland County.

Background

The County is currently licensed to run Windows Server 2012 R2 in its data centre. This operating system version will be reaching its End of Life on January 10, 2023. With new solutions being implemented in the data centre that require newer versions of Windows Server, licensing has become complicated and unnecessarily costly due to differing versions. 2022 will be a large project year for the IT department and it would be more feasible to upgrade the server operating systems in 2021.

Consultation/Options

There are two options available with respect to Microsoft licensing.

Option #1: Perpetual Licenses

These licenses are purchased once and used until the software becomes End of Life. At this point it no longer receives critical security upgrades and should not be used in production scenarios. Perpetual licenses are cheaper, but since there are no free, guaranteed upgrades, large project upgrades, like this one, must be undertaken to keep the infrastructure secure. With this option, significantly more IT resources are required to keep the infrastructure updates and secure since any new servers brought online are locked to the version of Windows Server purchased with the perpetual license. Perpetual licenses are generally capital purchases.

Option #2: Software Assurance

These licenses are subscription-based licenses, and as such tend to be operating expenditures. These licenses include guaranteed, free updates at any point in time. Thus, through normal operations, if upgrades or new licenses are required, they are available on demand. From an infrastructure point of view, this makes maintaining and upgrading the Windows Server infrastructure, and retaining license compliance, an easier task. With this option, significantly



less IT resources are required to keep the infrastructure updated and secure as any new servers brought online can be done so with the latest Windows server operating system available at the time.

Financial Impact

Due to its flexibility and ease of administration, IT is recommending that Council approve Option #2 (\$90,728,55).

2021 Estimated Purchase

Option 1: Perpetual	\$	51,888.82
Option 2: Software Assurance (3-year term)	\$	90,728.55

To demonstrate ongoing costs and future cost savings, the following chart depicts the cost to perform a similar upgrade in the future.

Ongoing Upgrade Costs

Option 1: Perpetual (every @ 4 years)	\$	51,888.82
Option 2: Software Assurance (every 3 years)	\$	38,839.73

The cost of this upgrade will be funded through the County levy.

Risk Considerations

Maintaining a supported Windows Server infrastructure is essential for the secure and efficient operations of the IT infrastructure and is required by the Cybersecurity insurance provider.

Impacts to Member Municipalities/Partners

No direct impact. Some of the solutions that support the IT work that is done for the member municipalities runs on Windows Server solutions.

Included in 2020 Long Term Plan: YES

An upgrade of the Windows Server infrastructure is included in IT's 10-year infrastructure plan.

2021 Issue Paper

IT Security Specialist Position and the Creation of a Cybersecurity Fund

Purpose

The purpose of this Issue paper is to request the addition of a new FTE Security Specialist position to address the cybersecurity in the County and to create an operating fund to invest in cybersecurity products and solutions.

Background

In 2019, the IMITWC (Inter-Municipal IT Working Committee) decided to dedicate the next two years towards addressing Cybersecurity challenges in our respective organizations. A consultant was hired to conduct high level security assessments of our organizations and present a plan for remediating these issues. These assessments are complete. The IMITWC committee had decided to approach this in two ways:

1. Ask their respective Councils to approve the creation of a Cybersecurity fund
2. Ask their respective Councils to cost share an IT Security specialist resource

Consultation/Options

Unfortunately, two of the member municipalities have dropped out of this plan making it unfeasible for the remaining three municipalities to continue.

The second option was for the remaining member municipalities to continue to proceed with the first goal, to secure a cybersecurity fund, with their own organizations. The second goal, the IT Security Specialist, would be hired by Northumberland County and made available as needed, on a cost recovery basis to any member municipality requiring the expertise.

Financial Impact

Cybersecurity Fund

The Canadian Centre for Cybersecurity indicates that organizations in Canada spend on average, 13% of its total IT budget on security. Deloitte, in a survey of financial institutions, found that 12% of the IT budget was spent on Cybersecurity. Analysis of the 2020 IT budget



indicates that the County spends 7% of its IT budget on cybersecurity. An investment of **\$50,000** annually will increase the percentage to 9% and afford the IT department the opportunity to make strategic investments in cybersecurity solutions.

IT Security Specialist Resource

The IT Security Specialist will be a new role within the organization. This position does not currently exist in the County and will need to be created and evaluated. It is estimated that this new position will be rated at the (F) wage salary grade. The base salary for this position is **\$94,275** (including benefits) with the top rate at **\$117,831** (including benefits).

There exists the potential for this position to assist any of the member municipalities through a cost recovery model that may result in returned revenue for the County.

Note: To reduce the impact on the County Levy for 2021, the Cybersecurity Fund request will be delayed until 2022 and the IT Security Specialist Resource will be hired in mid-2021.

The total impact of this issue paper is **\$58,915.50** (assuming top rate) and will be funded through the County levy.

Risk Considerations

Cybersecurity continues to be the number one challenge for IT organizations. The impacts of a breach can be wide and far reaching. Recent evidence of breaches in Ontario municipal organizations indicate that recovery costs in the neighbourhood of \$250,000 and recovery time averaging around 3 weeks. The non-financial effects of cybersecurity breaches include regulatory penalties and reputational and brand damage.

Impacts to Member Municipalities/Partners

There exists an opportunity for our member municipalities to leverage off the IT Security Specialist resource through a cost recovery model.

Included in 2020 Long Term Plan: YES/NO

Plans for increased commitments for cybersecurity have been discussed and deliberated for the last 2 years. This Issue Paper is the culmination of those plans.



2021 Issue Paper

Technical Support Analyst Position - CPS

Purpose

Note: This issue paper is conditional dependent on approval by the Cobourg Police Services Board to increase technology support hours.

The purpose of this Issue paper is to request the addition of a new FTE Technical Support Analyst position to address the growing needs of the Cobourg Police Service. The nature of these services includes computer, server, network, and telecommunications administration and management, service desk and tier 2 enhanced technical support, and lifecycle management of the technology infrastructure and assets.

Background

The Cobourg Police Services (CPS) is currently contracted for 140 hours a month with Northumberland County for the provision of IT services. With the recent expansion of their CIR unit and upcoming major security and infrastructure projects, it was projected that a greater, dedicated IT presence would be required for this partner to meet their IT needs. The CPS has agreed and obtained board approval to increase the contract to 250 hours a month.

Consultation/Options

In consultation with the CAO and with the CPS Police Chief, it was determined that the current workload for IT technical support in the Cobourg Police Service was inadequate to meet their growing needs. The Police Chief has taken this request to the Police Board for approval.

Financial Impact

This position will be fully cost recovered and there will be **no impact to the County levy**.

The shared services agreements stipulate that the costs for providing the service should be based on a cost recovery model.

The Technical Support Analyst position is evaluated as a salary grade E. The base salary for this position is **\$84,953** (including benefits) with the top rate at **\$104,143** (including benefits).



Risk Considerations

Without the addition of the permanent staff complement, Northumberland County will not be able to effectively meet the IT needs of the Cobourg Police Service resulting in slower delayed IT service delivery which will jeopardize our reputation as an IT service provider.

Impacts to Member Municipalities/Partners

There are no impacts to member municipalities. The Cobourg Police Service will benefit from the additional resource.

Included in 2020 Long Term Plan: NO

This request is the result of a recent increase in tech support requirements and is not included in the 2020 long term plan.