

HALDIMAND COUNTY

POLICY No. 2006-04

Subject: GUIDELINES FOR REQUESTING, ASSESSING AND IMPLEMENTING TECHNOLOGY

Purpose:

To establish guidelines for requesting, assessing and implementing technology.

Policy:

Attached eight (8) pages forms Haldimand County Policy No. 2006-04.

Topical Index	Administration
Policy Number	2006-04
Short Title	Requesting, Assessing and Implementing Technology
SMT Approval Date	May 18, 2006
Council in Committee	Not applicable
Council Approval Date	Not applicable
Originating Department	Information Systems
Revisions	

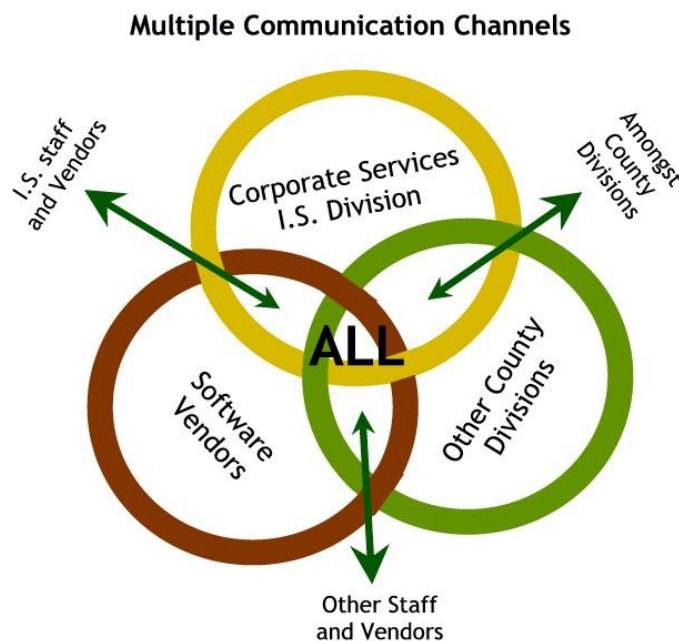
Guidelines for Requesting, Assessing and Implementing Technology

Overview

Technology is an integral part of Haldimand County. It has become much more than just computers sitting on desks – it now includes complex network systems, database servers, application servers, Internet servers, networked printers, PDA's (personal digital assistants), and telecommunications equipment. What was technology truth five years ago has changed and the old knowledge has to be unlearned to make way for new concepts and rules.

The Information Systems (I.S.) Division provides information technology guidance, support, advice and education to all Haldimand County employees and Council. The I.S. Division promotes the efficient and effective use of information technology and ensures the evolution of corporate computing and communications throughout the corporation.

Many steps are involved from the inception of new technology to the implementation and continued support. The role of County Divisions procuring new technology, implementing the technology and the continued support of the technology requires some definition. As depicted in the following diagram, multiple communication channels need to exist. Divisional staff utilizing specialized software will need to contact the vendors at times; I.S. staff need to know the specifications of the hardware / software; and all county divisions need to communicate to ensure that the corporate needs are met.



The following pages explain what the County wishes to achieve by identifying and describing the guiding principles for the efficient and effective use of technology and outlining the process for acquiring this technology.

Guiding Principles

To allow for efficient, effective use of technology, the following are guiding principles:

1. Integration of IT applications at every opportunity
2. Limit the diversity in the technology infrastructure
3. Develop skills in known tools before investing in new tools
4. Migrate to Internet enabled software applications
5. Ensure data and systems security and integrity

Integration of IT Applications at Every Opportunity

When investigating new technology, it is very important to think about how the technology can be integrated with other County applications and how data can be shared amongst multiple divisions. This is very important to eliminate duplication of effort, improve efficiencies, save time and money and ensure data collaboration across the organization. Identifying ways to utilize technology to automate processes that were once manual is extremely important.

Limit the diversity in the technology infrastructure

Standards are set for various components of the technology infrastructure including:

- Hardware: servers, workstations, printers, network equipment
- Operating system software: servers, workstations
- Office tools: word processing, CAD, mapping
- Back-end software: databases, support tools, security tools

The workload to support and maintain the County's technology increases with diversity. New technology must fit with existing infrastructure and adhere to standards in place.

Develop skills in known tools before investing in new tools

You can bring new initiatives to market more quickly by leveraging IT asset investments you've already made. The County currently owns over two-dozen software systems and applications. The existing systems must be assessed for usability whenever a new initiative involving technology comes forward.

Migrate to Internet enabled software applications

Wherever possible, Internet enabled or "browser" based software should be chosen to keep pace with emerging technologies in the Internet area.

Ensure data and systems security and integrity

Security, privacy and liability are important issues. It is critical to ensure that new technology will not compromise security and system integrity. When implementing technology, associated security risks must be determined and assessed. Since the nature of information technology is dynamic — undergoing constant changes, updates, and new technology — new opportunities for unauthorized access or security breaches often occur on a daily basis. Ensuring system security and integrity is a high priority.

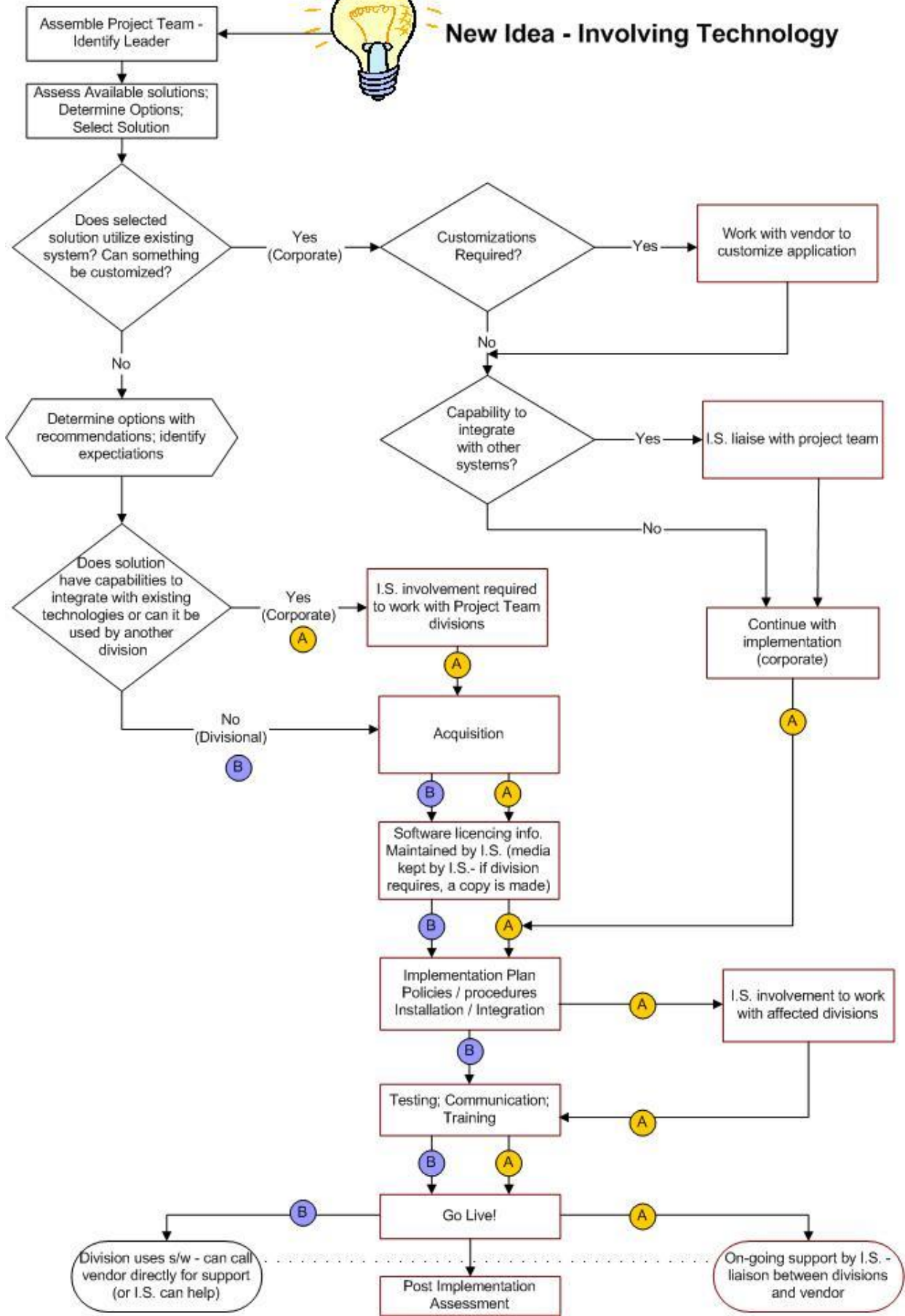
Process for New Technology or Changing Existing Technology

1. Identify Need (Conceptualization)
 - Need for new technology or a change in a current technology
2. Assemble Group of Necessary Stakeholders (Project Team / Team Leader)
 - Division identifying need
 - Information Systems
 - Other divisions affected (especially if integrating with other systems)
3. Assess Available Solutions (Research & Development)
 - Determine if the County has an existing system that will meet the needs (see section A – Existing Systems)
 - If no solution exists internally, assess other solutions through vendor fairs, conferences, Internet searches, site visits, Requests for Information (RFI), Requests for Proposals (RFP), etc.
4. Determine Options with Recommendations
 - List pros and cons of options
 - Obtain vendor price quotes (if required)
5. Select Best Option and Submit Business Plan or Justification
 - Adhere to guiding principles
 - Identify expectations
6. Receive Approval to Proceed Including Funding
 - Council Report if required
 - Budget for new initiative if required
7. Acquisition (see Section B – Acquisition and Registration of Software / Technology)
8. Implementation
 - Implementation plan
 - Create policy and procedures if required
 - Installation / Integration with other systems (see Section C – Installation of Software)
 - System testing (must be complete before going “live”)
 - Communication campaign – information about why the technology is being implemented outlining benefits, etc.
 - Training
 - Support / On-going Maintenance (see Section D – Support / On-going Maintenance)
9. Post Implementation Assessment
 - Were expectations met?

The following flowchart outlines the above process for acquiring new technology or changing existing technology:



New Idea - Involving Technology



Section A – Existing Systems

Types of software systems the County currently utilize include:

- *Corporate database systems* – Oracle and Microsoft SQL databases – applications include Vailtech (financial system); StarGarden (Human Resources Management System – HRMS); WorkTech (work order / asset management); CityView (property management system); Horizon (library circulation system); NetLoan (library); CLASS (facility booking / program registration); Microsoft Exchange (e-mail, calendaring, contacts)
- *Specialized database systems* – applications include ProFuel (bulk water usage); ACRPlus (Land Ambulance); MedECare (Grandview Lodge resident tracking software); IDT (Grandview Lodge staff scheduling software); Total Traffic Control (content filtering software for Internet and e-mail); Stone Orchard (cemetery software); AutoScale (waste management); NetMon (network monitoring software)
- *Specialized desktop software* – software includes AutoCAD, AutoDesk MAP, Land Development, ERSI ArcEditor (GIS related); AutoDesk Survey; EpiSuite (software to produce name “badges”); Adobe Creative Suite (PhotoShop & Illustrator for Apple Macintosh used by Tourism)
- *Standard desktop software* – Microsoft Office including Word, Excel, PowerPoint; Internet Explorer; Acrobat Reader, etc.

There are some very fundamental differences between the above types of systems. One key difference is software that accesses a back-end database vs. software that allows users to create individual files. Another fundamental difference is multi-user versus single user access. Typically the corporate or specialized database applications will allow more than one user to access the data at any given time.

The degree of involvement for the Information Systems Division increases for database driven applications as well as multi-user applications because network resources and security must be set up to allow these systems to operate. When utilizing database driven applications, the capability to integrate to other systems increases.

Information Systems Division involvement decreases somewhat for specialized software if it is only used by one person in one division and does not integrate with any other systems. Although Information Systems Division staff will help support these types of systems, the divisional user may contact the vendor directly, ensuring that I.S. is kept apprised of any correspondence.

Section B – Acquisition and Registration of Software / Technology

All software (and other technology items) acquired by Haldimand County should be purchased through the Information Systems Division (with the exception of fax machines and copiers as the Support Services Division is responsible for these). Software acquisition channels should be restricted to ensure that Haldimand County has a complete record of all software that has been purchased for Haldimand County computers and can register, support, and upgrade such software accordingly. This includes software that may be downloaded and/or purchased from the Internet. This also applies to other technology purchases such as hardware. In order to manage the County's networks and systems, it is important to have this function handled centrally. This will also allow the I.S. Division to be notified of any software upgrades so they can be assessed and implemented if necessary.

Hardware and software will be received by I.S. to complete registration and inventory requirements before installation. Software must be registered in the name of Haldimand County. Due to personnel turnover, software should never be registered in the name of the individual user. Information Systems will maintain a register of all the organization's software and will keep a library/database of software licenses. The register must contain:

- a. Title and publisher of the software;
- b. Date and source of software acquisition (Vendor information)
- c. Location of each installation as well as the serial number of the hardware on which each copy of the software is installed;
- d. Existence and location of backup copies; and
- e. The software product's serial number.

It is the policy of Haldimand County to respect all computer software copyrights and to adhere to the terms of all software licenses to which Haldimand County is a party.

Section C – Installation of Software

Installation of software or other technology will be done by I.S. staff, or if a vendor is required to be on-site to for installation, an I.S. staff member will be present to give the vendor access to the computer / network for the installation. Most user logins do not have the necessary permissions to install software on the local computer nor do users have the necessary rights to folders on the network to set up the data files.

If possible, software should be installed to a network drive. ALL corresponding data files / databases MUST be stored on the network servers to ensure data is backed up. Servers have hardware redundancy; therefore, in the unfortunate event of a server hard drive failure, data is not lost. Standalone computers do not have this redundancy. Information Systems staff will help determine the best location to store the data and ensure permissions are set up for specified users. Customizations and set up to the software for data to be integrated with other corporate systems must be done with assistance from I.S. to ensure files are located on the network in the appropriate locations, integration files are correct, etc. The integration of software systems is a key principle to be followed. The project team will identify the type of integration required. “Custom” programming may be required to create integration files. The Manager of Information Systems will act as the liaison between the vendor and the project team to ensure the data being exported / imported is in the required format, is valid and is tested prior to going into “production”. This is extremely important to ensure data integrity.

Once software is installed, the original media will be kept in a safe storage area maintained by the I.S. Division. If required, a backup copy of the software can be made to store on-site (with the division using the software). Note: if software requires re-installation, I.S. must be notified to assist to ensure everything is set up correctly. Typically users do not have the security “rights” to install software. Often, when software fails, the problem is not the software, but is related to the hardware, thus a software re-installation would not remedy the problem.

User manuals, if provided, will reside with the key user of the software. Providing documentation to the key users will help enable staff to become more self-sufficient, productive, and optimize their use of technology. Typically this type of document is available electronically through the software’s help system.

Information Systems is responsible for the County’s network resources including the access and security of data. In order to be accountable and to ensure the legality and integrity of data and systems, I.S. needs to be involved with all software or hardware installations. In case of a PC hardware failure, or the upgrade or replacement of a computer, I.S. staff requires the information to re-install and set up any “specialized” software to ensure downtime for end users is kept to a minimum.

Network monitoring software has the capability to notify I.S. staff immediately of problems with software and hardware, many times before systems or software “crash”. The use of network monitoring software allows the I.S. Division to be proactive and allows for improved service levels.

Section D – Support / On-going Maintenance

When purchasing new software, it is common to purchase yearly software support or software maintenance. Typically these fees allow a designated user(s) to call the vendor for support and also allows for software updates and upgrades. Having the maintenance contracts handled centrally by the I.S. Division will ensure that updates and upgrades available are assessed and implemented if required. Budgeting for the costs of on-going maintenance currently is done through the I.S. budget for the majority of applications including more specialized software such as AutoCAD software.

For software of a specialized nature, designated users can contact the vendor directly for support of issues regarding the day-to-day operation of the software or can contact I.S. staff for help. For corporate applications, key contact people (typically I.S. staff) are identified to contact the vendors. All communications to vendors should be copied to I.S. staff to be aware of issues.

All problems related to the installation, set-up, or integration of software must be reported to Information Systems staff to help resolve. The reasons for this are the same as above in Section C.

Those who are trained to install system or application software upgrades and understand the implications and risks associated with these activities rarely reside outside the Information Systems Division. There is often an assumption that 'I can do it on my home PC, so I can do it just as well on my business PC'. However, business systems are more complex and interlinked than home machines, and thus unskilled users who attempt to upgrade system or application software often generate support issues or worse yet, lose or corrupt data.

Information Systems is responsible for the delivery of Information Technology to meet the growing needs of staff, council and residents of the County. In order to do this, communication is critical. It is very important that all divisional staff work together to ensure there is technology in place to help ensure the municipality can function efficiently and effectively.

Information technology is becoming considerably more complex than the historical solutions used in the past. Within a typical Information Systems department, specialists are required to architect all components of the infrastructure and integrate the many business applications. Skilled resources are also required to troubleshoot problems as and when they arise.

For example, when troubleshooting system performance issues, a wide skill set is required to determine if it is a network, server, workstation, database, or an application problem. Similarly, from a software implementation perspective, configuring and maintaining packaged application software requires a different skill set than building custom software. Information technology professionals and the business users need to work together to redesign business processes as part of the software implementation projects.