



**INFORMATION MANAGEMENT/INFORMATION
TECHNOLOGY AND THE VOLUNTARY SECTOR
- ENVIRONMENTAL SCAN**

March 31, 2001

Prepared For:

IM/IT Joint Table

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Executive Summary

Introduction

The Information Management/Information Technology (IM/IT) environmental scan identifies general trends, opportunities, and gaps that exist in the areas of information and communication technology for voluntary sector organisations.

This scan has two goals:

- ▶ It supports the IM/IT Joint Table in specifying the research hypotheses for the impending needs analysis
- ▶ It provides the initial view of key issues framing the program that Joint Table will develop to support the adoption and deployment of information management technologies in the voluntary sector.

PRA prepared a high-level literature review to understand the broad trends on IM/IT use in the voluntary sector and interviewed key informants who could comment broadly on the state of information technology and information management in the voluntary sector.

Findings from the literature review

Nonprofit organisations often report finding it difficult to devote the time required to technology-related projects. They often underestimate the time and costs associated with adopting these new technologies. At the same time, these groups often find it hard to allocate funding for IT projects, given other pressures. This may reflect a discontinuity between management and the voluntary board, or simply the fact that these groups often have few financial resources.

Securing external expertise often lies well beyond the resources of many groups, although some services are emerging that offer support for nonprofit groups. These include services such as matching volunteer experts to organisations needing expertise, or supporting low cost network set-up. Nonetheless, the literature argues that keeping abreast of technological changes presents an ongoing challenge for the voluntary sector.

A common perception is that a gap may exist between the private sector and the voluntary sector. It is essential to understand the intrinsic need for information management technologies. In the private sector, a small construction company or small retail firm may have only modest needs for IM/IT. At the same time, a voluntary group at the same scale (number of employees or volunteers) may in fact have a much greater need to invest in IM/IT, and the actual gap may be significant. It is important to compare voluntary sector activities with appropriate activities in the private sector such as business services, where the penetration of IM/IT is highest.



Special barriers faced by voluntary organisations include isolation from each other to discover what works, rural and remote locations with poor Internet access, and no training support. These barriers are also common to firms located away from large centres. The important point is that they constrain the possibilities for voluntary groups away from larger urban centres.

Results of the interviews

Most key informants represented larger umbrella groups that served many organisations and echoed many of the findings from the literature. They noted that voluntary organisations face a constant need to remain current with respect to IM/IT. For most groups that need to secure funding from government and private donations, the appropriate use of these technologies represents an important “competitive” advantage in securing financial support. They all affirmed IM/IT as offering important support for voluntary organisations.

Cost and access to expertise is a common challenge faced by voluntary organisations. The pace of technical change, complex technologies, and restrictions in funding mechanisms that limit the purchased of capital equipment are common barriers faced by voluntary organisations.

Key informants stressed that the voluntary sector is not monolithic, and that needs range from basic training for volunteer office staff to the installation of large networks. This diversity is an important feature, and has important implications for public policy and programming.

Potential approaches for government include:

- Funding hardware and software
- Co-ordinating volunteer technical expertise
- Funding technical services to assist voluntary sector management to make wise investments in IM/IT
- Extending the programs available to assist small businesses in adopting information technologies to the voluntary sector.

The table below outlines the current voluntary sector environment, and is useful for helping the IM/IT Joint Table to think about potential approaches.



Overview of conditions and needs that exist in the current environment

Conditions	<ul style="list-style-type: none">○ Variation in IT capacity among voluntary sector organisations○ Many organisations not connected or do not have access to a computer○ Those connected are bombarded with information○ Lack of unbiased help to decide which technologies most usefully enhance mission
Capacity	<ul style="list-style-type: none">○ Varies among organisations with or without staff○ Capacity affected by size and access to resources○ Depends on culture of organisation and comfort of leaders with technology
Supports or Relationships	<ul style="list-style-type: none">○ Funding restrictions do not allow for capital purchases or IT training○ Limited resources○ Discussions among associations or organisations that help charities and nonprofit organisations to bolster capacity
Participants involved	<ul style="list-style-type: none">○ Government○ Subsector umbrella agencies○ Volunteer agencies or individuals○ Vendors○ Donors
Activities	<ul style="list-style-type: none">○ Private or charitable funding for equipment, software, training○ Technical assistance by a few agencies○ Informal learning and information sharing○ Purchasing consulting advice and services
Resources	<ul style="list-style-type: none">○ Existing project funds○ Donations○ Membership fees○ In-kind donations



1.0 Introduction

The Information Management/Information Technology (IM/IT) environmental scan identifies general trends, opportunities, and gaps that exist in the areas of information and communication technology for voluntary sector organizations. An environmental scan supports an initial consideration of the trends influencing the application and deployment of information management and information technologies in the voluntary sector. This scan also outlines the complex forces and relationships that affect the use of information management technologies by the voluntary sector.

1.1 Purpose of the scan

This scan has two goals:

- ▶ It supports the IM/IT Joint Table in specifying the research hypotheses for the impending needs analysis
- ▶ It provides the initial view of the key issues framing the program that Joint Table will develop to support the adoption and deployment of information management technologies in the voluntary sector.

As a scan, this document identifies high level trends and areas that the IM/IT Joint Table may wish to explore. The needs analysis will offer detail and clarity on useful and necessary interventions to support the voluntary sector.

1.2 Methodology and outline of the report

Two information sources exist for this work. First, we prepared a high-level literature review to understand the broad trends on IM/IT use in the voluntary sector. Second, we interviewed key informants suggested by members of the Joint Table. This report presents findings from each research activity and concludes with some general observations.



A literature review and selected interviews form the basis for the conclusions.

It is important to state that information management and information technologies are wider than web and Internet-based solutions. They include the range of office software and hardware common to modern organizations. At the same time, most of the literature and awareness by those we interviewed concentrates on the Internet. Arguably, much of the current information technology focus is on the "Net," and this is where many see opportunity for introducing major organizational changes.



2.0 Findings of the literature review

The literature review (presented in its entirety in Appendix B) highlights several of the most common needs and barriers faced by the nonprofit and voluntary sectors as they adopt new technologies.

Voluntary organizations face a range of complex impediments to the adoption of information technologies

- ▶ Nonprofit organizations often report finding it difficult to devote the time required to technology-related projects. When they do, many appear to underestimate the amount of time required, and may under-invest in the technology.
- ▶ Nonprofits and voluntary groups also have difficulty allocating resources necessary for their projects. Voluntary sector managers and board members do not always see technology as contributing to the organization's ability to meet its stated goals.
- ▶ Success or failure of a technology project depends on the ability to disseminate it internally to executives, staff, sponsors, and consultants.
- ▶ Organizations need to have the resources required to keep up with technological change. It is costly to maintain the pace once an organization adopts modern technologies.
- ▶ Outsourcing is often just as expensive as hiring an in-house staff, restricting some groups' ability to purchase new technology. However, some nonprofit groups, such as Seattle's ONE/Northwest, are already finding ways to help like-minded organizations with free and low-cost technical assistance, such as free on-line software, matching volunteer experts with organisations needing services, and supporting low cost network set-up.
- ▶ A partnership with other nonprofits and voluntary organizations, such as sharing costs and resources, is reportedly a method that can help organizations adopt new technologies affordably.
- ▶ Some believe that a gap exists between the private and voluntary sectors in the adoption of IT. However, care



is required in asserting that such a gap exists. The scale of the organizations must be comparable, as must the sectors in which they operate. For example, small private retail operations probably have few needs for advanced information management, outside electronic cash registers and a fax. On the other hand, a small voluntary sector group that needs to build membership and extend its influence could have significant needs for IT. To measure the gap between private and voluntary sectors requires comparing voluntary sector use of IM/IT with relevant private sector activities such as business services.

- ▶ Most of the literature reviewed for this scan deals with nonprofit organizations in the U.S. and the U.K. Detailed case studies about the needs of and barriers faced by similar organizations in Canada and other small and medium-sized countries are still scarce. Given that both countries have embraced technology roughly to the same extent as Canada, one can infer that Canadian voluntary organizations face the same needs and constraints as their American and British counterparts.

Internal marketing of the benefits of IT may be more common in the voluntary sector than for private industry.

A continuing problem is that managers in the voluntary sector report difficulty in marketing the need for IT investment internally as well as externally to funders. In part, this may reflect an under-appreciation of how this technology may benefit the organization. It also may indicate the many competing demands on an organization's resources, and the need to use funding in direct service or fund raising. Finally, it may be the case that many in the voluntary sector have little direct experience with the potential for information technology in supporting organizational activity.

Voluntary organizations may confront barriers to obtaining current information on technology options, discovering what works best, and gaining access to the Internet.

Consultants specializing in IT applications for small organizations (voluntary and private) stress that maintenance costs raise the total resource commitment, and that a systems manager is essential once the organization reaches a critical size or becomes reliant on using large databases.

A common problem reported in the literature is that voluntary organizations are unable to keep up to date on technological changes. While this is common to all, voluntary organizations may encounter special barriers.



Typical issues mentioned in the literature included the following:

- ▶ Nonprofit groups need to be able to communicate with each other to know what is working. Many voluntary organizations are not part of umbrella associations and can be isolated.
- ▶ The people who use the technology on a day-to-day basis need to have ongoing training to keep up with changes.
- ▶ Rural organizations and groups in smaller centres have found they lack reliable access to the Internet because of limited access to high-speed telephone lines, among other things.

The fact that many voluntary organizations have not invested in networks may reflect their smallness, since this form of office integration requires some degree of scale to warrant implementation. It may also reflect a bias by voluntary boards that this is a "frill" not needed by the staff. In fact, the general bias against technology by boards may be a reason why voluntary organizations might lag the private sector in the adoption of these technologies.

It is not clear that small and medium enterprises in Canada have adopted information technology (Internet) in significant numbers.

With respect to private sector use of information technology, a recent survey reviews adoption of Internet solutions by small and medium enterprises. A recent survey by the Canadian Federation of Independent Business finds that half of small and medium-sized enterprises are connected to the Internet. Highest use is among business services firms, while relatively few retail and construction firms use the web.¹ This illustrates that an information technology tool such as the Internet remains specific to sectors that can exploit its unique advantages. By far the most common use is e-mail, followed (distantly) by web pages used primarily for advertising. Relatively few firms in Canada are using e-commerce to sell and service clients.

¹ Mallett, Ted. "Virtually a reality: Results of a 1999 CFIB Survey on Internet Use Among Small and Medium-sized Firms," www.cfib.ca



3.0 Results of the interviews

The interviews validated many of the findings from the literature review. Key informants report that many voluntary organizations confront complex decisions, shortages of funds, and boards that are reluctant to invest in technology when service demands are pressing.

3.1 Who we interviewed

PRA interviewed 24 key informants, 21 of whom represented the voluntary sector (Table 1 on the following page provides details). In most cases, we spoke with executive directors of organizations or senior staff working with information technology issues. We also interviewed one of the co-chairs of the Joint Table for the IM/IT, and two representatives of the private sector.

Key informants represent several areas of the voluntary sector. In all cases, the organizations we contacted had paid staff. The organizations varied in terms of size, budgets, and staff. In most cases, the organizations interacted through various networks in their subsector, and worked with member organizations.



Table 1: Organizations contacted for the IM/IT environmental scan	
Organization	Main sector(s)
ALS Canada	Health
Big Brothers and Sisters of Canada	Children and Youth
Canadian Cancer Society	Health
Canadian Celiac Association	Health
Canadian Centre for Philanthropy	Services to charities
Canadian Childcare Federation	Childcare
Canadian Mental Health Association	Health
Canadian Movement for Literacy	Literacy
Community Foundations of Canada	Funding /granting
	Services to charities
Council of Canadians with Disabilities	Disabled
	Health
Disabled Women's Network	Disabled
	Women
	Health
Interfaith Immigration Council	Immigrant settlement
Manitoba Refugee Services	Immigrant settlement
Muttart Foundation	Funding /granting
	Services to charities
New Brunswick Environmental Network	Environment
Secretariat of Health Charities Council of Canada	Health
	Services to charities and nonprofit organizations
Thalidomide Victims' Association	Health
United Way of Toronto	Funding /granting
United Way of Greater Vancouver	Funding /granting
Volunteer Calgary	Services to charities and nonprofit organizations
YMCA Canada	Families, youth, and adults

About two-thirds (15 of 21) of respondents worked for umbrella organizations that represent many voluntary sector organizations. We selected these representatives for the overall perspective they offered on IM/IT developments within the voluntary sector as a whole. The organizations fell within the small and medium class (5 to 65 employees), and all operate within urban centres. Most of the organizations had budgets in excess of \$100,000 and several had large budgets well into six digits. These organizations drew their financial support from a wide range, including members fees, donations, and government. Those with a higher proportion of funding from members and donors appear to have more flexibility in acquiring technology compared to those that had a higher share of government funding. This may reflect the fact that much of government funding is project-oriented and limits



acquisition of capital equipment. The restrictions on public funding, namely the lack of "program" funding, is a common complaint of voluntary organizations about government support.

3.2 Use of information technologies

We asked organizations about their use of information technology applications. We defined *information technology* as the use of any sort of electronic tools to help manage, store, manipulate, transmit, or receive information. *Communication technology* refers to technology used to communicate with those inside and outside an organization.

Table 2 identifies the information technologies reported most frequently as being used by the voluntary sector organizations we contacted.

Table 2: Most frequently reported information and communication technology applications being used	
Newer technology	Older technology
E-mail Internet Website Information/publications posted on a website Online discussion groups Online resource centres	Fax Mail Voice mail Teleconference calls

A few organizations reported using video conferencing and personal organizers.

Most respondents discussed information technologies in the context of Internet-based approaches.

It is interesting that respondents did not associate the term "information technology" with standard office applications such as automated payroll, computerized accounting systems, or databases for donors/members. Again, we see a bias toward Internet solutions capturing information technologies.

However, over half the organizations reported that a combination of *traditional* and information technology is needed. Many of their member organizations and individuals they serve are not yet online, or in some cases do not even possess a computer. Much of the voluntary sector is not computerized, or is using old hardware and



software, and the need is for routine enhancements to improve basic office operations.

3.3 Use of technologies to manage daily operations

Most of the organizations we contacted are umbrella agencies or associations that are in constant communication with their members, the public, and governments. These voluntary sector organizations seek to improve the way in which they manage their communications. Respondents noted that the benefit is accessible and affordable access to information, which leads to better management.

In most cases, key informants see efficiencies in using information technology as helping them to undertake their goals. Others state that, *“there is no choice in the matter because organizations in today’s professional work environment are bombarded with technology. They must adopt it and harness it to succeed.”* These organizations do not want to be marginalized because they are not staying current. In addition, inter-organization rivalry is a common feature of voluntary sector fund raising, and most national and regional voluntary organizations are keenly aware that they need to use the most efficient and effective methods to gain their share of the donor dollar. Effective management of lists is also a need among advocacy organizations.

3.4 Factors affecting the use of information technology

Key informants identified many factors they believe affect the voluntary sector’s use of information technology. These become central guideposts for both the future planning by the IM/IT joint table and to frame the impending needs assessment. Most key informants noted that making investments in information technology is costly and that the majority of organizations, especially smaller ones, do not possess the resources to make this investment.



Table 3: Factors that affect the voluntary sector's use of information technology

- Limited funding to invest in information technology
- Size of an organization
- Many members or groups are not connected or do not have access to a computer
- Technologies change so rapidly that it is difficult to decide what to adopt
- Lack of skilled personnel and capacity of personnel
- Whether an organization has staff (in which case they most likely have a computer), and whether it relies solely on volunteers
- Multiple requests for different data and use of incompatible systems
- Restrictive funding requirements that do not permit the purchase of capital equipment or training
- Buy-in and comfort level of organization's leaders and vision for how they want to use IT to better fulfill their mandate
- Organizations underestimate the time and effort involved to implement IT projects
- Information overload (e.g., too many websites) and lack of appropriate search tools to help manage this information
- Misuse or inappropriate use of existing technology (e.g., access to a model but not using it) to help the organization achieve its goals
- Lack of formal technical assistance
- Limited IT training in the voluntary sector community

Key informants who work directly with charities and nonprofit organizations stressed that the leadership of voluntary sector organizations is instrumental in how an agency will use information technology to advance its mandate.

The voluntary sector faces incremental demands as government seeks partnerships and withdraws from service delivery. At the same time, they report increased demands from their client groups, more competition for resources, and cuts to core funding that limit capital investment.

3.5 Existing information management expertise

Key informants noted that smaller organizations rely on informal sources for information management expertise. Key informants stated that staff in these organizations, as well as in larger organizations, most often tends to be self-



taught. Most small organizations do not have a dedicated person on staff.

Larger organizations with 10 or more staff face the same problems as other organizations in the government and private sectors. Once an agency installs a local area network, it will require some technical assistance to maintain it. Organizations typically have staff assume this responsibility, or they contract this expertise. Very large organizations, such as the United Way or the YMCA, typically purchase information management expertise to develop customized database or Internet strategies.

Most key informants cautioned that the voluntary sector is not a monolithic entity, but a diverse sector that includes individual volunteers with no access to computers, as well as sophisticated agencies that have adopted innovative and wide reaching technologies. They caution that no one solution (i.e., portals) will help all organizations in the voluntary sector, and a diverse portfolio of interventions is needed.

3.6 Comparisons of the voluntary sector and the private/small business sector

About half the key informants commented on whether the voluntary and private small business sector face similar challenges in adopting appropriate information technologies. These key informants noted that private sector businesses would not hesitate to make investment in technology that would lead to efficiencies and profits. They believe the same philosophy is not present in voluntary sector organizations. Boards of directors are hesitant to invest in technology and to take dollars away from services.

The recent survey of small and medium-sized firms by the Canadian Federation of Independent Business mentioned above reveals that fewer than 50% of Canadian SMEs are connected to the Internet. For those that do participate in the Internet, increasing numbers are seeing that a website is important for marketing and communications. Business service firms are intensive users, while retail and construction firms report much lower rates of usage.



What this demonstrates is that it is probably not useful to compare the "connectedness" of a smaller voluntary organization with a larger private sector firm in creating a measure of the IT "gap" between the two sectors. The size/scope of voluntary organizations and their "market" within the voluntary sector are important determinants of the need for advanced IT solutions.

3.7 Respondents' perspective on potential roles for government in assisting the voluntary sector

The majority of key informants (three-quarters) commented on the Volnet. They indicated that the program is helpful to connect agencies that do not have a computer; however, they noted that the program is quite limited. Key informants had several suggestions for an appropriate role for government in assisting the voluntary sector to adopt information technologies.

These included:

- Funding for software and hardware needs.
- Using a consortium of voluntary agencies to provide expertise to charities and nonprofit organizations and to share or cluster resources, thereby making them more accessible to various members of different subsectors.
- Funding the voluntary sector to provide technical advice or tools to help leaders of voluntary sector organizations make decisions about which IT applications are most suitable and appropriate for them.
- Examining current tools developed for the private sector and adapting them for the voluntary sector audience.
- Encouraging umbrella organizations to continue to develop IT and organizational capacity.



- Making programs that are accessible to small business available to the voluntary sector. For example, the Student Connections Program should be enabled to assist voluntary sector organizations.
- Sharing information and making resources available on government websites with appropriate links to umbrella voluntary sector organizations.

In defining a role for the IM/IT, the Joint Table and federal government may also want to examine what provincial and territorial governments are doing in this area. For example, on March 23, 2001, the Ontario government announced several initiatives to support the voluntary sector as part of the International Year of Volunteers. Of particular interest is the program Making IT Work for Volunteers, which is a partnership between the Ontario government and the Information Technology Association of Canada for Ontario to increase the technological capacity of the voluntary sector. Making IT Work is intended to boost technological capacity of the voluntary sector through mentoring, awards of excellence, and capacity building workshops. These are all ideas supported by those we interviewed. Making IT Work is part of the program called Volunteer @ction.Online, which provides \$13.5 million over five years for the voluntary sector to work with the private sector and others in the community to enhance use of Internet technology and the World Wide Web.



4.0 Summary of main findings

Table 4 summarizes the main findings from the literature review and the interviews. The barriers partly reflect the unique character of the voluntary sector and partly reflect the problems all organizations encounter in managing new technologies.

Table 4: Barriers to effective implementation of information technology (in no particular order)
<ul style="list-style-type: none">• Restrictive program funding requirements from funders (e.g., no program funding) limits capital acquisition.
<ul style="list-style-type: none">• Size and limited resources of the voluntary organization affects its ability to purchase technologies or engage objective expertise.
<ul style="list-style-type: none">• Advanced Internet solutions, such as interactive websites, require high initial investment and substantial maintenance, and cause organizations to delay implementation.
<ul style="list-style-type: none">• Boards and management may not appreciate the potential for new technologies and under-invest in upgraded technology.
<ul style="list-style-type: none">• Some groups experience difficulty in assessing true needs and matching need to solution. Limited understanding exists about how to assess, acquire, and deploy information technology. Vendors are not unbiased.
<ul style="list-style-type: none">• Organizations underestimate the time required to implement technologies effectively. Management and boards are unfamiliar with these technologies.
<ul style="list-style-type: none">• Rural and remote locations offer poor Internet access, low levels of expertise, and less selection in software, equipment, and training. In this respect, voluntary sector groups are probably in the same position as private firms located in these regions.
<ul style="list-style-type: none">• The connectivity issue has been resolved in urban areas, but the problem remains to identify the optimum solution. In part, this reflects the continuing training problem that all organizations face when adopting advanced technologies.
<ul style="list-style-type: none">• The voluntary sector is diverse, with organizations at many different levels of need. Rather than a single solution, a portfolio is needed.

Table 5 (next page) presents a summary of the practices that respondents reported voluntary sector organizations were applying in Canada.



Table 5: Practices being adopted by the voluntary sector to adopt information technologies
<ul style="list-style-type: none"> • Work to obtain "buy-in" from executive directors and boards regarding importance of technology for helping organization
<ul style="list-style-type: none"> • Clearly identify link between information technology and efficiencies gained
<ul style="list-style-type: none"> • Accurate diagnosis of what the organization wants to achieve and how to use technology to do this (i.e., create a vision)
<ul style="list-style-type: none"> • Smaller organizations (e.g., a volunteer or associate of clients/staff) obtain expertise informally through volunteer experts
<ul style="list-style-type: none"> • Information management expertise is purchased by larger organizations (e.g., 10-20 people) either by employing someone in-house (e.g., LAN administrator), or purchased from third parties (e.g., specialized database)
<ul style="list-style-type: none"> • Some interesting practices in Canadian organizations mentioned by respondents include: <ul style="list-style-type: none"> - Video conferencing – ability to hold simultaneous workshops across cities, thereby lowering costs - E-mail to respond to overseas clients reduces telephone and mail costs - Providing directories or information online so they are cheaper to produce and access - Use of Internet to help voluntary sector organizations purchase goods cheaper or share resources required for online donations. This is the application of B2B and O2D (Organization to Donor) - Prepare grant applications to update equipment - Negotiate discounts from vendors (Microsoft) on software - Secure donations of computers - Promote technology to help disabled communicate
Source: Interviews

Finally, Table 6 presents some preliminary thoughts on approaches that the IM/IT Joint Table may wish to consider as it develops a program. These approaches should be explicitly tested in the needs analysis.

Table 6: Potential roles for government
<ul style="list-style-type: none"> • Create mechanisms for promoting information on best practices for information technology in the voluntary sector
<ul style="list-style-type: none"> • Create independent applications assessments to support the dissemination of unbiased, knowledgeable advice on technology solutions and training
<ul style="list-style-type: none"> • Provide technical expertise to voluntary sector organizations using a 1-800 number, website, and workshops
<ul style="list-style-type: none"> • Use a consortium of voluntary sector organizations to oversee technology solutions. Note that this is already occurring in certain sectors
<ul style="list-style-type: none"> • Create program funding to allow organizations to acquire capital providing funds for resources and equipment (directly or through projects)



5.0 Potential areas for action

Through the literature review and key informant interviews, we have identified some potential objectives for the IM/IT to consider in designing future programs and activities.

Given the limited budget for the IM/IT (about \$2 million per year), it will be important to focus on a few areas where the IM/IT wants to make an impact and to design its activities accordingly. It is not possible to address all the diverse needs of the voluntary sector. The focus should be on addressing the needs identified in this environmental scan and the needs analysis to be conducted this summer.

The diagram below outlines the current the voluntary sector environment, and is useful for helping the IM/IT Joint Table to think about potential approaches (see Table 7).

Overview of conditions and needs that exist in the current environment	
Conditions	<ul style="list-style-type: none"> ○ Variation in IT capacity among voluntary sector organizations ○ Many organizations not connected or do not have access to a computer ○ Those connected are bombarded with information ○ Lack of unbiased help to decide which technologies most usefully enhance mission
Capacity	<ul style="list-style-type: none"> ○ Varies among organizations with or without staff ○ Capacity affected by size and access to resources ○ Depends on culture of organization and comfort of leaders with technology
Supports or Relationships	<ul style="list-style-type: none"> ○ Funding restrictions do not allow for capital purchases or IT training ○ Limited resources ○ Discussions among associations or organizations that help charities and nonprofit organizations to bolster capacity
Participants involved	<ul style="list-style-type: none"> ○ Government ○ Subsector umbrella agencies ○ Volunteer agencies or individuals ○ Vendors ○ Donors
Activities	<ul style="list-style-type: none"> ○ Private or charitable funding for equipment, software, training ○ Technical assistance by a few agencies ○ Informal learning and information sharing ○ Purchasing consulting advice and services
Resources	<ul style="list-style-type: none"> ○ Existing project funds ○ Donations ○ Membership fees ○ In-kind donations



Table 7: Potential approaches for future IM/IT program(s)		
Needs identified	Objectives to consider	Suggested activities to achieve objectives
I. Support to help organization identify how to use information technology effectively		
<ul style="list-style-type: none"> • Difficult to assess true needs • Lack of unbiased advice on technological solutions • Too many choices; there is need to help select most effective technology for the organization 	<ul style="list-style-type: none"> • To identify unbiased sources of information to voluntary sector organizations for ascertaining practical technology solutions • To help increase the capacity of voluntary sector organizations to adopt effective information technologies to achieve their goals and efficiency in daily operations • To help voluntary sector organizations benefit from efficiencies obtained through information technologies 	<ul style="list-style-type: none"> • Clearinghouse of information • Website with hotlinks • 1-800 that can refer voluntary organizations to appropriate help • Provide contribution agreement to a consortium of organizations to assist the voluntary sector
II. Assistance in removing obstacles set up by funders		
<ul style="list-style-type: none"> • Many diverse reporting requirements from funders • Funders do not recognize cost of purchasing or implementing technology as part of projects 	<ul style="list-style-type: none"> • To help reduce the barriers faced by voluntary sector organizations • To interact with other federal government departments to identify ways to simplify interactions with the voluntary sector 	<ul style="list-style-type: none"> • Set up interdepartmental committee with mandate to examine and report progress on issues of interest (e.g., simplifying reporting requirements) • Serving as a link between the voluntary sector and government
III. Support to overcome challenges faced by the voluntary sector		
<ul style="list-style-type: none"> • Barriers such as size of organizations or lack of resources that impede access to information management expertise • Organizations underestimate the time required to implement technologies effectively 	<ul style="list-style-type: none"> • To identify resources and organizations that can assist voluntary sector organizations to assess information management expertise • To enable voluntary sector organizations to access skills required to better undertake their information technology goals 	<ul style="list-style-type: none"> • Grants and contributions to develop voluntary sector in key areas: <ul style="list-style-type: none"> - Funding to upgrade technology - Funding for workshops on technology planning - Funding training projects • Conferences to share information among voluntary sector organizations

In conclusion, there are many possible approaches that the IM/IT Joint Table will want to discuss when designing the IM/IT program component. As part of the needs analysis process, it would be useful to include a strategic planning session to discuss the advantages of the various approaches, including those already presented in the environmental scan and those identified after the needs analysis exercise is completed.



APPENDIX A
RESULTS OF KEY INFORMANT INTERVIEWS



1.0 Findings from key informant interviews

This section presents the main findings from the key informant interviews. Each of the headings reflects a theme outlined in the interview questionnaire.

PRA interviewed a total of 24 key informants, 21 of who were representatives of the voluntary sector (Table 1 provides details). In most cases, we spoke with executive directors of organizations or senior staff working with information technology issues. We also interviewed one of the co-chairs of the Joint Table for the IM/IT, and 2 representatives of the private sector.

Table 1: Organizations contacted for the IM/IT environmental scan	
Organization	Main sector(s)
ALS Canada	Health
Big Brothers and Sisters of Canada	Children and Youth
Canadian Cancer Society	Health
Canadian Celiac Association	Health
Canadian Centre for Philanthropy	Services to charities
Canadian Childcare Federation	Childcare
Canadian Mental Health Association	Health
Canadian Movement for Literacy	Literacy
Community Foundations of Canada	Funding /granting
Council of Canadians with Disabilities	Services to charities Disabled Health
Disabled Women's Network	Disabled Women Health
Interfaith Immigration Council	Immigrant settlement
Manitoba Refugee Services	Immigrant settlement
Muttart Foundation	Funding/granting Services to charities
New Brunswick Environmental Network	Environment
Secretariat of Health Charities Council of Canada	Health Services to charities and nonprofit organizations
Thalidomide Victims' Association	Health
United Way of Toronto	Funding /granting
United Way of Greater Vancouver	Funding /granting
Volunteer Calgary	Services to charities and nonprofit organizations
YMCA Canada	Families, youth, and adults

Key informants represent several areas of the voluntary sector. In all cases, the organizations we contacted had paid staff. The organizations varied in terms of size, budgets, and staff. In most cases, the organizations interacted through various networks in their subsector and worked with member organizations.



1.1 Background information on voluntary sector organizations

Key informants described their organization and sector. Key points involved information regarding:

- ▶ *Mandate* – About 15 of the 21 voluntary sector organizations contacted are "umbrella" organizations that represent many members within a sector. Six of the organizations provide advice, services, and information directly to nonprofit organizations or charities. All six of these organizations reported increased focus on information technology in last few years.
- ▶ *Size and structure of organization* – All of the organizations have staff ranging anywhere from 3 to 65 employees. The majority had between 10 and 15 employees. All the organizations contacted had a board of directors made up of volunteers.
- ▶ *Location* – The organizations contacted were located in urban centres across Canada.
- ▶ *Budget* – The organizations contacted had budgets greater than \$100,000, although a couple did not have budgets that were much greater. Some organizations had budgets of a few hundred thousand dollars, while others had multi-million dollars budgets.
- ▶ *How organizations are funded* – Organizations received funding from several sources, including: government funds, member fees, and donations. Organizations such as the Canadian Centre for Philanthropy obtained their funds through member fees and other revenue. Organizations such as Interfaith Immigration Council and the Canadian Movement for Literacy obtained most of their funding from the federal government. Foundations and registered charities obtain a significant amount of their funding from donations. Organizations that obtained funds from donations or through member fees tended to report more flexibility in terms of spending on information technology needs compared to those that received government funding.



- ▶ *Membership* – Organizations dealt with both individual members and coalition groups that ranged from victims of a disease, organizations with staff, and organizations run solely by volunteers.

1.2 Technologies used

We asked organizations about existing information technology applications being used. We defined *information technology* as the use of any sort of electronic tools to help manage, store, manipulate, transmit, or receive information. *Communication technology* refers to technology used to communicate with those inside and outside an organization. This might include web design, video conferencing, wireless technology, and voice mail. However, most organizations did not distinguish among these and spoke about specific technologies being used by their organization or sector.

Table 2 identifies the technologies most reported being used by the voluntary sector organizations we contacted.

Table 2: Most frequently reported information and communication technology applications being used	
Newer technology	Older technology
E-mail Internet Website Information/publications posted on a website Online discussion groups Online resource centres	Fax Mail Voice mail Teleconference calls

Respondents reported that their organizations use a combination of what some referred to as older and newer communication technology. New communication technology includes e-mail, the Internet, and transactions through a website, while older technology refers to fax, mail, voice mail, and teleconferences. Over half of respondents reported that a combination of traditional and information technology is needed, because many of the member organizations and individuals they serve are not yet online, or in many cases do not even possess a computer.



Key informants also mentioned other approaches to communication and information management technologies.

- ▶ Two organizations mentioned the use of video conferencing to bring people together, and five use "Palm Pilots" to help organize their staff.
- ▶ Several respondents mentioned that their member organizations were interested in generating donations online. The two United Way organizations were involved in such initiatives.
- ▶ Agencies such as the Canadian Centre for Philanthropy and Volunteer Calgary indicated that many of their organizations used third parties to generate online donations such as www.CanadaHelps.org (a nonprofit agency) and www.Charity.ca (a private company).
- ▶ The Muttart Foundation provides direct technical assistance to voluntary sector organizations. This appears to parallel the work of Volnet.

It would be useful to perform an inventory of foundation and other public support for technical upgrading and training directed to the voluntary sector

It would be useful to perform an inventory of foundation and other public support for technical upgrading and training directed to the

- ▶ A few organizations, such as Volunteer Calgary, the Canadian Centre for Philanthropy, and private sector consultants offered advice and technical assistance to voluntary sector organizations. This assistance was geared to encouraging capacity building among voluntary sector organizations and their leaders, and may include information management.
- ▶ Few organizations discussed using databases or management information systems. For the largest, this is a given part of office support.
 - For example, the immigrant settlement agencies and the YMCA reported using databases to track clients for service delivery.
 - Community Foundations of Canada discussed integrating grant and donor tracking systems in the future, while Big Brothers and Sisters of Canada noted the use of a database for case management to track clients and mentors involved in the program.
- ▶ The extent of this information management should be assessed in the needs analysis surveys.

An inventory of office networking would be useful for the needs analysis.



- ▶ Some organizations mentioned that their computers were networked and that internal sharing of files and resources was possible. The extent of this information management should be assessed in the needs analysis surveys.

Table 3 provides examples some technologies adopted by organizations contacted.¹

Table 3: Some examples of how voluntary sector organizations are using technology		
Voluntary sector organization	Technologies reportedly used	Discussion
<p><i>Movement for Canadian Literacy</i></p> <p>www.literacy.ca</p> <p>National agency serving a coalition of provincial and territorial members. Its objectives include promoting literacy among Canadians.</p>	<p>E-mail Fax Website Conferencing system</p>	<p>The organization undertakes bulk distribution for communications and newsletters using e-mail, fax, and mail. Some members may not have access to computers and others' literacy skills are low, thereby impeding use. The organization also uses an electronic conferencing system whereby board members can vote or have input on an issue. They use a section of their website as a bulletin board where they post information relevant to members (e.g., minutes, reports) who access it using a password. Through the assistance of other agencies in the literacy field, they have their website maintained and updated and access to the conferencing system for free.</p>
<p><i>Canadian Centre for Philanthropy</i></p> <p>www.ccp.ca</p> <p>Association for charities including nonprofit and registered charities. Has some 1,200 fee-paying members. Serves diverse sectors.</p>	<p>Website E-mail Advice on to members on using technology Video conferencing</p>	<p>Over the past few years, the Centre has increased its use of communication technology to deliver services. For example, it previously published a directory of Canadian foundations and grants and wished to place it online. This needed to be belayed until sufficient numbers of members were able to use this technology. The directory is now available through online subscription, and access is password protected. The Centre conducted a survey of members to determine the level of computer use and whether they were ready to move to accessing materials online. Another interesting technology was the use of video conferencing to link symposium participants in Edmonton and Toronto in plenary sessions. It also reports that more members are asking questions about whether they should move toward developing internal capacity to generate donations online. The Centre developed a checklist for members wishing to move in this direction prior to deciding to develop such a capacity.</p>
<p><i>Canadian Childcare Foundation</i></p> <p>National organization works with 15 provincial and territorial organizations. Managing partner of Child and Family Canada. Has 8,000 members working as professionals in the field.</p>	<p>Website Resource centre/ clearinghouse online E-mail</p>	<p>As managing partner of Child and Family Canada, the Foundation maintains a website that serves as a clearinghouse of information for public and professional workers in the field. The site includes over 14,000 documents that are coded by various themes (e.g., poverty or child parenting). The Foundation uses a webmaster to maintain the site. Through Child and Family Canada, the Foundation also manages a site called WorkFamilyTips.com where parents can access childcare information.</p>
<p><i>Canadian Mental Health Association</i></p> <p>www.cmha.ca</p> <p>Work in health sector involving some 135 branches across Canada.</p>	<p>E-mail Website Internet</p>	<p>The Association is interested in using Internet technology and e-mail to communicate with its branches across Canada. Their website gets more than 200,000 hits a month and includes some 47,000 downloadable pages. The Association also posts information – the Internet Café – to provide branches with information. With limited resources to physically distribute materials, they have encouraged their branches to regularly visit the site to access information. Some 122 of the 135 branches are using services in this way.</p>
<p><i>Community Foundations of Canada</i></p>	<p>E-mail Website</p>	<p>Community Foundations of Canada combines established and newer information technologies. For example, annual reports and monthly</p>

¹ We selected 12 organizations that provided details about their particular agency from which to feature a range of practices or information technology being used.



Table 3: Some examples of how voluntary sector organizations are using technology

Voluntary sector organization	Technologies reportedly used	Discussion
<p>www.community-fdn.ca</p> <p>Membership organization for 110 independent community foundations across Canada. Association provides programs, training, conferences, and does advocacy work.</p>	<p>Technical advice Internet strategy</p>	<p>newsletters are mailed. They also use e-mail to distribute information and make announcements online. They have a members' section on their website. The organization wishes to use the Internet more effectively in the next few years, and has developed an Internet strategy that they estimate will cost about \$1.7 million to implement over the next 3 years. The strategy is quite comprehensive and consists of two parts: 1) build the capacity of the national organization and better position the movement; and 2) work in partnership with member foundations to enhance use of the Internet, and to provide tools, training, and support. Several foundations collaborated to develop the strategy, which includes online discussion areas for members, enhanced resource library, electronic newsletter, professional organizational development programs (e.g., use technology to enable mentoring), integrated systems across foundations to do work (e.g., donor and grant tracking systems), and tools for members (e.g., web in a box to help create a website on your own). An important element of the strategy is promotion to members and increasing their ability to operate as foundations. Information technologies are central to this capacity building.</p>
<p><i>Disabilities Women's Network</i></p> <p>Promotes voice of women with disabilities. Undertakes advocacy and consultation with the federal government.</p>	<p>E-mail Website Fax Conference calls</p>	<p>The Disabilities Women's Network uses e-mail and the Internet to manage information and communication with members. The Network hosts an electronic discussion line and maintains a website with information for other organizations and members. The organization also uses conferences and faxes to communicate with members. Some member groups do not have access to a computer or access to obtain information online, so there is still a need for the latter technologies.</p>
<p><i>Muttart Foundation</i></p> <p>www.muttart.org</p> <p>This is a private granting body with some \$3.5 million per year in funds. Serves Alberta, Saskatchewan, the Northwest Territories, and Yukon.</p>	<p>Website Mail E-mail Technical assistance Video conferencing facility</p>	<p>Since 1995, the Foundation has had specific funding guidelines in place that provide funding to many organizations and have improved information technology use in the sector. The Muttart Foundation has provided some 138 IT grants totalling \$1.3 million over the past year. Over the past few years, it has provided technical assistance to over 300 organizations. Charities submit proposals to meet their needs, ranging from small requests of \$2,000 to larger ones of about \$150,000. Last year, many proposals were to help organizations with Y2K preparedness. The majority of agencies submitting proposals are upgrading equipment, buying new software, or eliminating old software that does not work. The Foundation also provides technical assistance directly to organizations, and has a technician on staff to answer questions. Training is also often part of the funding proposals received.</p>
<p><i>New Brunswick Environmental Network</i></p> <p>www.web.net/~nben/</p> <p>Has 79 member groups in the province and is affiliated with the Canadian Environmental Network. Facilitate information sharing.</p>	<p>E-mail Website</p>	<p>The New Brunswick Environmental Network has 3 websites that it maintains and a full-time webmaster on staff. All three sites are hosted on Web Networks Canada, an organization that provides Internet solutions to nonprofit organizations and also helps them to develop national Internet connectivity. The first website is called Fax Action and enables member volunteer groups to use the site to compile a fax to send to provincial politicians. Another site is the online magazine <i>Elements</i> that can be accessed by members and the public. The last site is called NBEN's Environmental Network and posts information for members, "what's new" features, and services available to members. The Network decided in 1995 that it needed a long-term strategy to make communication among a network of members more accessible and affordable. Through a provincial grant, the Network was able to obtain modems for most of its members and provide some training. About 80% of its members access information online.</p>



Table 3: Some examples of how voluntary sector organizations are using technology		
Voluntary sector organization	Technologies reportedly used	Discussion
<p><i>Thalidomide Victim Association</i></p> <p>www.thalidomide.ca</p> <p>Serves survivors of thalidomide and provides an association for victims who are members. Educates the public and undertakes advocacy work.</p>	<p>E-mail Website Teleconference Fax Mail</p>	<p>Formal communication occurs through e-mail. The organization still prints and sends out newsletters by mail. Their members are disabled and many have special needs (e.g., disability cassettes for the blind) that are not always conducive to using e-mail or the Internet. The organization posts articles on their website. Recently they started using ICQ, a free service that allows select groups to chat online. Multiple screens are used to identify participants and to keep track of the dialogue. The organization also secured computers for its members through a private donor, and is in the process of trying to secure Internet services for members.</p>
<p><i>United Way of Greater Toronto</i></p> <p>www.uwgt.org</p> <p>Confederated fundraiser that raises and allocates funding among community-based agencies.</p>	<p>Website E-mail Internet Online transaction and donations</p>	<p>The United Way is interested in using Internet technology to raise money and to reallocate it amongst member agencies receiving funds. The United Way's strength is raising money in the workplace, and they are building on this using technology. For example, as part of a company's annual campaign, a donor will receive an e-mail asking for a contribution. They will then be brought to a bank site, which verifies their credit card information and authorizes payment. The site also provides tax information and details about what the money donated can do to help others. Handling transactions online is believed to be an effective tool for reducing administrative costs. There are future plans to access government and company online systems to further access employees who donate.</p>
<p><i>Volunteer Calgary</i></p> <p>www.volunteercalgary.ab.ca</p> <p>Promotes volunteerism and recruitment. Connects people with volunteer opportunities. Training in several areas, and makes learning tools available to organizations.</p>	<p>Website E-mail Advice on to members on using technology</p>	<p>The organization is involved in discussions about technology and capacity building in the sector. Volunteer Calgary provides training and consultation on a number of areas including screening volunteers, recruiting volunteers online, partnering with business, readership development, and motivating organizations' capacity to get online and to use technology effectively. The organization aims to make a variety of tools available for organizations that fit well with how organizations operate in today's environment. They are examining how to create training products that can be used by member organizations learning at their desks (e.g., e-seminars).</p>
<p><i>YMCA of Canada</i></p> <p>www.ymca.ca</p> <p>Provides programs for families, youth, and adults. Interacts with YMCAs across Canada.</p>	<p>E-mail Database systems Electronic library Internet Intranet Website</p>	<p>The YMCA has a communication system that includes internal and external e-mail. In the past few years, there has been more discussion about technology and strategic directions for the organization. At one point, there was a North American proposal to integrate the management information systems of all YMCAs. This is an ambitious and complex endeavour, which was put on hold. Currently, there are some 20 YMCAs in Canada that do share common data. YMCA database systems deal with members and participants, as well as registration for services. Common data is to help in designing and changing programs to meet its clientele's needs.</p>

1.3 Technologies to manage daily operations

Most organizations contacted are umbrella agencies or associations that are in constant communication with their members, the public, and governments. These voluntary sector organizations sought to improve the way in which they manage their communications. They noted that the benefit of doing so is more accessible and affordable means to information. Other agencies noted that their members are located in communities across Canada, and information technology helps to bridge those distances. Some organizations, especially smaller ones, reported that they have observed considerable cost savings on telephone and mail expenses by using e-mail. Many key informants noted that e-mail with



unlimited access is relatively cheap and affords them the ability to send out information very inexpensively.

Other organizations note that because there is such a vast quantity of information and great demand for it, there is limited time to devote resources to send out materials. In these cases, they are moving toward a web-based model where the organization posts information on their website and members retrieve it online. This works in cases where most member organizations are connected to the Internet. This strategy is also to counter e-mail fatigue, as many members complain that they receive too much e-mail. Other agencies counter this by using traditional communication methods such as fax or mail, especially in cases where their members are not connected to the Internet or do not have computers.

Larger organizations are using information technology to manage client information or to track donors and grants.

In most cases, key informants see efficiencies in using information technology as helping them to undertake their goals. Others state that, "*there is no choice in the matter because organizations in today's professional work environment are bombarded with technology. They must adopt it and harness it to succeed.*" These organizations do not want to be left behind or marginalized because they are not staying current.



1.4 Factors affecting the use of information technology

Key informants identified several factors that they believe affect the voluntary sector's use of information technology.

Table 4: Factors that affect the voluntary sector's use of information technology

- Limited funding to invest in information technology
- Size of an organization
- Many members or groups are not connected or do not have access to a computer
- Technologies change so rapidly that it is difficult to decide what to adopt
- Lack of skilled personnel and capacity of personnel
- Whether an organization has staff (in which case they most likely have a computer), and whether it relies solely on volunteers
- Multiple requests for different data and use of incompatible systems
- Restrictive funding requirements that do not permit the purchase of capital equipment or training
- Buy-in and comfort level of organization's leaders and vision for how they want to use IT to better fulfill their mandate
- Organizations underestimate the time and effort involved to implement IT projects
- Information overload (e.g., too many websites) and lack of appropriate search tools to help manage this information
- Misuse or inappropriate use of existing technology (e.g., access to a model but not using it) to help the organization achieve its goals
- Lack of formal technical assistance
- Limited IT training in the voluntary sector community

Most key informants noted that making investments in information technology is costly and that the majority of organizations, especially smaller ones, do not possess the resources to make this investment.

Several key informants indicated that many of the voluntary sector member groups or individuals they serve are not connected to the Internet or often do not have a computer; therefore, it is still necessary to adopt more traditional means of communication such as mail, telephone, or fax. A few believed that more must be done to ensure all Canadians, especially marginalized groups, have access to a computer, much like they do a telephone.

Whether a voluntary sector agency is formally organized (has paid staff) or unorganized (uses predominantly volunteers) also affects its ability to adopt information technology. Organizations with paid staff will typically have reached a scale that requires regular interaction with other groups, and therefore



are required to meet minimal information technology standards, such as having a fax or using e-mail. On the other hand, volunteers often undertake work in the evenings, and unless they have access to a computer at home, they will not be in a position to purchase one.

Key informants who work directly with charities and nonprofit organizations commented that the leadership of voluntary sector organizations is instrumental in how an agency will use information technology to advance its mandate. Some leaders have a vision, while others are not comfortable with technology. Organizations such as Volunteer Calgary and the Canadian Centre for Philanthropy are becoming more involved in developing tools to help enhance the leadership and organizational capacity of voluntary sector organizations.

Voluntary sector leadership is often part-time. Boards are typically comprised of those who are volunteering their time. Even though these boards may have business experience, individual members may have little experience with current management tools. In other cases, board members may be removed from the problems faced by staff, and may be unsympathetic to the need to "divert" resources from service delivery to organizational and management improvements.

Several key informants noted that the voluntary sector faces incremental demands, as government seeks partnerships and withdraws from service delivery. At the same time, they report increased demands from their client groups, more competition for resources, and cuts to core funding that limit capital investment.

Organizations also face constraints of remoteness and inappropriate uses of technology. These complaints are common to the private sector as well. For example, e-mail has increased the circulation of "spam" and nuisance messages. Like all who are "connected," those voluntary sector organizations that have invested in Internet capacities find the burden of e-mail significant.

1.5 Existing information management expertise

For our purposes, we have defined *information management* as expertise on how to manage information using a variety of technologies (e.g., individuals or companies that provide information services or develop software, project management skills, programming and database skills, etc.).

Key informants noted that smaller organizations rely on informal sources for information management expertise. A small agency will rely on a student, existing administrative staff, board members, volunteers, other agencies, or friends of the agency who can help and have some computer skills. Key informants stated that staff in these organizations, as well as larger ones, most often tends to be self-taught. Most small organizations do not have a dedicated person on staff.

Larger organizations with 10 or more staff face the same problems as other organizations in the government and private sectors. With a larger staff, it is more efficient to connect computers and share resources to avoid chaos (e.g.,



staff waiting to print or to get online is inefficient). Once an agency installs a local area network, it will require some technical assistance to maintain it. In these cases, organizations either have someone on staff doing this on a part-time or full-time basis, or they purchase this expertise.

Very large organizations with multi-million dollar budgets, such as the United Way or the YMCA, will often purchase information management expertise to develop customized database or Internet strategies.

Key informants representing organizations that work directly with charities and nonprofit organizations indicate there is a need to develop tools that leaders of organizations and staff can further use to self-learn.

1.6 Available resources to assist voluntary sector

Key informants noted there are some resources available to the voluntary sector, such as websites on various areas. However, they note that unbiased objective information on how to use information technology does not exist. One respondent summed up as follows: *"There are lots of websites out there, but nothing helps you think strategically about how to use those websites."*

About five key respondents discussed the notion of portals, and voiced two concerns about them.

- First, they believed that voluntary sector organizations already helping charities and nonprofit organizations should be involved in their development. They expressed the opinion that the voluntary sector is somewhat disillusioned with the Partnering with the Voluntary Sector for the Benefit of Canadians Initiative, simply because few funds have found their way to the voluntary sector. They also believe that voluntary sector umbrella agencies are best positioned to promote these resources to their members.
- Second, key informants noted that without competent and objective expertise on using information technology and capacity building in organizations, many groups are still not in a position to take advantage of a portal. To create an Internet solution presupposes that the "client" is in a position to use this tool.

Most key informants cautioned that the voluntary sector is not a monolithic entity, but a diverse sector that includes individual volunteers with no access to computers, as well as sophisticated agencies that have adopted innovative and wide-reaching technologies. They caution that no one solution will help the voluntary sector, and that there are different means to help different components of the sector.

Key informants had mixed feelings on whether their particular organization was leading or lagging in the adoption of appropriate information technologies. Some (regardless of size) felt they were leaders, while others expressed that they were not using technology to the level they would like.



1.7 Gaps between the voluntary sector and private/small business sector

About half of the key informants commented on whether the voluntary and private small business sector faced similar challenges in adopting appropriate information technologies. Those who did not respond felt they did not know very much about the private sector.

In terms of comparing small or medium-sized organizations with the same number of staff, most key informants believed there are many similarities between the two sectors. Each organization likely has limited resources, is bombarded with information overload, faces competition for resources and skilled staff, and faces some of the same demands from government (e.g., tax information).

However, key informants noted that private sector businesses would not hesitate to make investment in technology that would lead to efficiencies and profits. They believe the same philosophy is not present in voluntary sector organizations. Boards of directors are hesitant to invest in technology and to take dollars away from services. They also note that government, the public, funders, and donors also have the attitude that the voluntary sector should “*remain in the basement and make the best use of older computers.*” They noted that these attitudes do more harm than good. For example, organizations that are using old machines run into many difficulties when running software and attempting certain applications.

1.8 Potential roles for government in assisting the voluntary sector

The majority of key informants (three-quarters) commented on the Volnet. They indicated that the program is helpful to connect agencies that do not have a computer. However, they noted that the program is limited. The biggest limitation noted was that umbrella organizations cannot apply to obtain resources for their members.

Key informants had several suggestions for what is an appropriate role for government in assisting the voluntary sector to adopt information technologies.

These included:

- Funding software and hardware needs.
- Facilitating reporting requirements and encouraging use of compatible information systems among government departments and the voluntary sector organizations that report to them.
- Encouraging simple language communication to meet the needs of the various clients served by the voluntary sector (e.g., disabled).
- Facilitator role with other government departments to develop less restrictive funding guidelines (e.g., allow project funding to include capital purchases).
- Using a consortium of voluntary agencies to provide expertise to charities and nonprofit organizations and to share or cluster resources,



thereby making them more accessible to various members of different subsectors.

- Funding the voluntary sector to provide technical advice or tools to help leaders of voluntary sector organizations make decisions about which IT applications are most suitable and appropriate for them.
- Examining current tools developed for the private sector and adapting them for the voluntary sector. Key informants stated that government should not re-invent the wheel.
- Encouraging umbrella organizations to continue to develop IT and organizational capacity. Some key informants noted that government is not “a deep connector” with the voluntary sector, and many organizations mistrust the government. They believe it is more effective to rely on subsectors as collectors and disseminators of information.
- Providing funds for access to IT training.
- Making programs that are accessible to small business available to the voluntary sector. For example, widening the scope of the Student Connection Program to assist voluntary sector organizations.
- Sharing information and making resources available on government websites, with appropriate links to umbrella voluntary sector organizations. This includes posting good stories, where different voluntary sector organizations explain how they used IT to enhance their mission.



APPENDIX B
LITERATURE SCAN



1.0 Introduction

This literature review highlights several of the most common needs and barriers faced by the nonprofit and voluntary sectors as they adopt new technologies.

- ▶ Non-profit organizations often report finding it difficult to devote the time required to technology-related projects. When they do, they often underestimate the amount of time required.
- ▶ Nonprofits also have difficulty raising the funds necessary for their projects, as outsiders don't always see technology as contributing to the organization's ability to meet its stated goals.
- ▶ Success or failure of a technology project depends on the ability to market it to executives, staff, sponsors, and consultants. Organizations report that the main difficulty in marketing projects is in impressing on others the need for technology and the good it can bring.
- ▶ Organizations need to have the resources required to keep up with technological change: communication with other organizations, ongoing training, and access to infrastructure, such as updated data communication lines.
- ▶ Partnerships with other nonprofit and voluntary organizations, such as sharing costs and resources, can help organizations adopt new technologies affordably.
- ▶ Outsourcing is often just as expensive as hiring an in-house staff, restricting some groups' ability to purchase new technology. However, some nonprofit groups, such as Seattle's ONE/Northwest, are already finding ways to help like-minded organizations with free and low-cost technical assistance.

Most of the literature deals with nonprofit organizations in the U.S. and the U.K. Detailed case studies about the needs of and barriers faced by similar organizations in Canada and other small and medium-sized countries are still scarce. Given that both countries have embraced technology roughly to the same extent as Canada, one could safely project that Canadian organizations would face the same needs and constraints as their American and British counterparts.



A 1999 survey of 52 nonprofit organizations by the Washington, D.C.-based Progressive Technology Project found the following to be the leading barriers and needs faced by the sector, and the most common ways of solving technological problems.¹

Table 1: Barriers, needs, and problem-solving techniques identified by nonprofit organizations (Progressive Technology Project, 1999)	
Category	% (n=52)
Barriers	
Lack of new equipment and hardware	61%
Lacking necessary skills, understanding or training to use systems	58%
Prohibitive cost of equipment, training and services	24%
Lack of time	20%
Needs	
Hardware, software and other equipment	73%
Access to communications technology (Internet, phone and fax capabilities)	51%
Capacity building through training or skills improvement	44%
Strategic plan to implement technology	18%
Problem-solving	
Rely on outside consultants and services	52%
Using undertrained in-house staff	35%
Volunteer or in-kind assistance	30%
Note: Respondents could choose more than one answer. Totals may sum to more than 100%.	



2.0 Barriers faced by the non-profit sector in adopting technology

2.1 Time and financing are scarce resources

A 1999 series of case studies prepared for the National Telecommunications and Information Administration branch of the U.S. Commerce Department reported that non-profit organizations often found themselves running short of time on their technology projects. Among the causes of the delays:

- ▶ Difficulties adapting new technologies to existing systems
- ▶ Time lost during upgrades, such as the installation of new data lines
- ▶ Unexpected use of time to purchase and set up new equipment.ⁱⁱ

The report added that these delays routinely led to problems elsewhere, such as loss of faith in the project.

The Commerce Department report also added that organizations “underestimated the time implementation tasks would require.” This was a problem faced by Andrea Temkin of the Community School of Music and Arts in Mountain View, Calif. In a case study prepared by the U.S. Center for Excellence in Nonprofits, Temkin explained that her staff had difficulty using computers to simplify the school’s bookkeeping.

“We didn’t realize how much time it would take to fully understand how to use the system effectively. It wasn’t built into the timeline, and resulted in what I now see as misplaced frustration with the software developer,” Temkin said.ⁱⁱⁱ

Time was also identified as a problem in a 1999 survey of 52 small- to medium-sized ‘grassroots groups’ by the Washington-based Progressive Technology Project: one-fifth of respondents cited a lack of time as a barrier to using technology.^{iv}

The same survey found that 24% of respondents identified *the prohibitive cost of equipment, training, and service* as a barrier to technology use. This problem stems from the fact that non-profit organizations report having difficulty raising funds for technology because outsiders don’t see computers and software as contributing to the organization’s goals.



Difficulty in raising funds is a contributing factor to another problem faced by nonprofits: staffing. A 1999 U.S. Commerce Department case study of 12 nonprofit organizations found that understaffing, turnover, and difficulty finding qualified staff had hampered eight projects. At the time of the study, qualified IT workers were in short supply, and nonprofits said they were unable to compete with the high salaries offered by the private sector.^v

"I would encourage nonprofits to sell their proposed technology investments on the basis of how they will improve people's lives," Steve Downs, director of the U.S. Commerce Department's Telecommunications and Information Infrastructure Assistance Program (TIIAP) explained in a 1999 interview with Philanthropy News Network Online.^{vi}

"Focus less on the technology and more on the outcomes you expect to effect," Downs explained.

A 1999 study by Dr. Eleanor Burt and Prof. John Taylor of Glasgow Caledonian University revealed that nearly all of the 366 nonprofit organizations surveyed purchased their technical hardware, choosing to lease or acquiring through donation in a minority of cases, as the following table shows.^{vii}

Method	% of organizations (n=366)
Purchase	97%
Donation	28%
Lease	5%
No Response	1%
Note: Respondents could choose more than one answer. Totals may sum to more than 100%.	

On his company website, California-based technology consultant John Kenyon offers non-profit organizations several pieces of advice on budgeting:

- ▶ Once maintenance, technical support, upgrades, and other ongoing costs are included, the total cost of owning a computer system is typically about 2.3 times the initial purchase cost: a \$3,000 system will cost at least \$7,000 to maintain.
- ▶ Training people to use the system correctly improves productivity and gives you a better idea of what can or cannot be done with the technology you have.



- ▶ An organization with more than 10 people or reliant on a database should have a Systems Administration working at least part-time.
- ▶ Having an ongoing relationship with a consultant is less expensive and produces better results than hiring contractors on a case-by-case basis.
- ▶ Have a disaster plan ready, and back up data at least once a month. “If you’re not backing up, you’re asking for trouble.”^{viii}

2.2 Marketing the project

Much as non-profit organizations reported having difficulty obtaining funding for their projects because computers and databases aren’t readily seen as contributing to the organization’s goals, they also report similar difficulties getting both insiders and outsiders interested in projects.

Experience has shown that lack of funding and indifference goes hand-in-hand. Of 12 projects examined by the U.S. Commerce Department, seven were hindered by lack of interest from stakeholders and intended users. Reasons for the lethargy included inexperience with technology and a resulting inability to see how their jobs would be made better as a result; loss of faith in the project; or frustration with attracting the administrative and political support needed to succeed.^{ix}

At times, disinterest remained a problem even after new technology was put in place. Even where enough financing had been secured to install computers, networks, and software, six projects examined by the Commerce Department reported difficulty getting staff or other users to use the technology. In some cases, users were unaware of what was available, or unwilling to commit to it. Frustration with ongoing problems or inadequacies also played a role, as did outright resistance to change.^x

The Benton Foundation, a Washington-based organization devoted to exploring how to use communications to solve social problems, distributed a questionnaire to non-profit sector representatives at a 1996 conference. The verbatim from the questionnaires confirmed the findings of the Commerce Department report:



- ▶ “[We had] difficulty getting people to understand the need for support in telecommunications”
- ▶ “[There is] little understanding...of the technology among policymakers”
- ▶ “Some people refuse to see what good [technology] can do for them.”^{xi}

Persuasively marketing projects is of vital importance to overcoming leading barriers to the adoption of technology, which includes obtaining and retaining expertise, covering expenses, and obtaining equipment. A 1999 study by Boston College’s John G. McNutt and Katherine M. Boland of the United Way of Camden County, New Jersey found these and other marketing-related factors to be serious obstacles, as Table 3 shows.^{xii}

Table 3: Reported sources of resistance to electronic advocacy		
Source of resistance	Number of respondents (n=48)	%
Expertise	31	65%
Expense	27	56%
Equipment	21	44%
Universal access	18	38%
Space	6	13%
External resistance	6	13%
Internal resistance	3	6%
Staff resistance	2	4%
Management approval	1	2%

Note: Respondents could choose more than one answer. Totals may sum to more than 100%.

2.3 Nonprofits need to be able to keep up with technology

Nonprofit organizations have often found themselves looking on with a degree of envy at the amount of funding available in the commercial sector allowing companies to keep up to date with software and hardware – funding to which few nonprofit organization have access. Scarce funds give nonprofits little incentive to upgrade, meaning that organizations continue to use technology long after it has become obsolete in private industry.

This reality did not deter U.S. philanthropist Paul Brainerd from emphasizing at a 1999 technology conference in Seattle that nonprofit organizations must stay abreast of technology to thrive.^{xiii}



Technology, Brainerd said, has been instrumental in helping businesses to operate effectively, because it provides the best way of ensuring that all departments operate efficiently and communicate with each other.^{xiv}

Various sources have suggested ways of helping organizations keep up with technology:

- ▶ Nonprofit groups need to be able to communicate with each other to know what is working. As a Benton Foundation report stated, “[P]ublic interest groups operating on the national scene often aren’t aware of techniques being refined in localities, while others serving relatively small areas don’t know how large-scale applications could be adapted to meet their needs.”^{xv}
- ▶ The people who use the technology on a day-to-day basis need to have ongoing training to keep up with changes. A complaint repeatedly heard is that there is little time for people to familiarize themselves with changes coming in quick succession.
- ▶ Organizations cannot keep up to date if they don’t have access to the infrastructure they need. Rural organizations have found they lack reliable access to the Internet because of unsuitable telephone lines, among other things. Others found that having an office or building wired for a network is more expensive and time-consuming than expected, causing delays.

The McNutt/Boland study revealed that e-mail, discussion lists, and faxes are the most commonly used or planned technologies among 48 U.S. nonprofits surveyed, as the following table shows.^{xvi}



Table 4: Reported use of technologies among nonprofit organizations		
Technology	Number of respondents (n=48)	%
Fax	47	98%
E-mail for internal coordination	44	92%
Conference calls	38	79%
E-mail for external coordination	35	73%
Sending e-mail to decision makers	35	73%
Distribution list	31	65%
Discussion lists	29	60%
Policy discussion lists for policy research	27	56%
Teleconferencing	19	40%
Policy web sites for policy research	17	35%
Volunteer recruitment	13	27%
Newsgroups	8	17%
Online survey	8	17%
Internet Relay Chat	6	13%
Online fundraising	6	13%

Note: Respondents could choose more than one answer. Totals may sum to more than 100%.

These findings suggest that keeping up with technology requires nonprofits to have reliable access to telephone lines and newer data transmission technologies, such as DSL Internet connections. Rarely a problem in cities, this is sometimes a barrier to rural nonprofits. Internal e-mail also requires access to a local network, which poses difficulties for both urban and rural nonprofits operating from older buildings needing to be wired from scratch.^{xvii}

These barriers were illustrated by the 1999 U.S. Commerce Department report, noting that many rural projects found the physical infrastructure to be either incompatible with their needs or simply nonexistent. In some rural areas, nonprofits had to coordinate their projects with several independent telephone companies offering inconsistent rates and Internet support. This became a serious barrier to nonprofits trying to cover a large area because of the extra time and expense required.^{xviii}

2.4 Partnerships help make projects work

A number of case studies have found that the success or failure of a project is often attributable to how well partnerships work. Partnerships can be as simple as an alliance with another organization, or the relationship a nonprofit organization has with the consultants it hires.



Some partnerships have worked very well for all concerned:

- ▶ The Independent Charities of America uses a secure server to receive online donations on behalf of numerous U.S. charities, helping donors find a charity appropriate to their interests.^{xix}
- ▶ The Minneapolis United Way announced in 1999 that it was spending \$715,000 to help selected agencies develop technology plans. The assistance includes installation and training help, hardware purchase grants and up to 10 packages of Microsoft Office or Windows software for each agency.^{xx}
- ▶ Family Service Mid-Peninsula, a nonprofit organization in Palo Alto, Calif., was able to afford expensive upgrades by teaming up the Adult and Child Guidance Center in San Jose and Family Services of San Mateo County to share expenses. Through resource sharing and joint planning and fundraising, the three organizations saved a total of \$433,000.^{xxi}

Some have not worked as well:

- ▶ Communication must be maintained between partners, or the results can be messy: “The clinics which we are working with originally indicated that they had computers which could be used for the project. However, once the project was funded (at half the original proposed budget), two of the three clinics indicated that either they didn’t have the equipment or it could not be used for the project.”^{xxii}

The 1999 U.S. Commerce Department study of 12 nonprofit organizations and their projects funded by the department’s Telecommunications and Information Infrastructure Assistance Program (TIAP) found that partnerships sometimes floundered on the basis of one party’s organizational structure or the relationship that developed between the two. The most common problems cited included misunderstandings of their respective roles and responsibilities, the types of services to be provided to end-users, and the ultimate goals of the project.^{xxiii}

The report also suggested that partnerships and funding are more sustainable if several ‘best practices’ are used:

- ▶ Conducting a needs assessment, to assure that the intended users will embrace and use the technology



- ▶ Conducting an upfront feasibility study to assure that the approach can be implemented as planned
- ▶ Involving stakeholders and users in the planning and implementation processes
- ▶ Integrating technology into ongoing activities, so that it is seen as a tool for doing something useful
- ▶ Collecting data demonstrating and publicizing the project's benefits
- ▶ Putting partnership agreements into writing, providing a guide for implementation, and committing all parties to the project's success
- ▶ Defining specific and measurable objectives showing how technology will affect the workplace and the community.^{xxiv}

2.5 Ongoing technical support is needed by the nonprofit sector, but often too expensive

A 1997 Association Trends survey by the American Society of Association Executives (ASAE) found that non-profit organizations regularly find themselves in a bind: while the cost of acquiring resources like computers and software is going down, the costs associated with using them are rising.

Of 1,185 responding associations, the median percentage of association income spent on acquiring technology declined from 38% in 1993 to 29% in 1996. However, the savings often ended up being used to pay staff to maintain the equipment: between 1994 and 1996, the median salaries of management information system (MIS) directors rose 23%, according to ASAE's Association Executive Compensation Study.^{xxv}

Outsourcing, however, can turn out to be just as costly as hiring in-house staff to maintain technology. The Association Trends survey found that 37% of respondents have no MIS staff, and thus rely on consultants to provide such services. Among the outsourcers, 77% are concerned about how much money they are losing on the websites, and 61% are similarly concerned about web maintenance losses. The corresponding figures for those associations with a technical staff on hand were only 23% and 39% respectively.^{xxvi}



The evidence suggests that companies having internal support staff are in a much stronger position to take up new technologies. A study of 366 British voluntary organizations by Dr. Eleanor Burt and Prof. John Taylor of Glasgow Caledonian University found that about 55% employed at least one IT developer. Those organizations with technological development staff were twice as likely to operate an intranet, one and a half times as likely to use internal e-mail, and four times as likely to offer electronic mutual support or self-help groups. Organizations with in-house staff were considerably more likely to offer additional services, as shown below.^{xxvii}

Service	With IT development staff (n=204)	Without IT development staff (n=162)
External e-mail	73%	59%
Internal e-mail	60%	40%
Home-working available to staff	43%	25%
Electronic information provision to stakeholders	39%	30%
Use of technology to erode functional boundaries within organization	25%	14%
Geographical relocation of function	18%	7%
Electronic communication with stakeholders	10%	5%
Electronic Decision Support Systems	8%	2%
Electronic mutual support or self-help groups	4%	1%
Electronic participation in decision-making	3%	2%

Note: Respondents could choose more than one answer. Totals may sum to more than 100%.

The Burt/Taylor report suggests that electronic networking using servers and e-mail is becoming more common among nonprofit organizations. It would logically follow that this is, and will continue to be, the area in which nonprofit organizations need technical support, as Table 6 shows.^{xxviii}

Technology	% reporting (n=366)
Desktop computers	98%
Server technology	69%
External e-mail	67%
Portable computers	65%
Internal e-mail	52%
Intranets	46%
Teleconferencing	19%
Call centres	5%
Video conferencing	2%
Extranets	2%

Note: Respondents could choose more than one answer. Totals may sum to more than 100%.



The same report shows that having IT staff readily available will become more of a necessity as organizations continue to expand their internal networks. Currently, about one-third of the surveyed organizations have at least 95% of their PCs networked, with this expected to eventually apply to three-fifths of those organizations, as Table 7 shows.

Networked PCs	Current level (at time of survey) (n=366)	Planned level (n=366)
25% or less networked	13%	6%
25-50% networked	15%	6%
51-75% networked	9%	7%
76-95% networked	13%	14%
96-100% networked	35%	59%
No response	16%	8%
Total	101%	100%

Note: Totals may sum to more than 100% due to rounding

But how do non-profit and voluntary sector organizations achieve these benefits if they cannot afford either an in-house staff or a consultant? Some in the sector are finding ways:

- ▶ Several U.S. for- and non-profit organizations are in the process of developing the Nonprofit Technology Enterprise Network, a proposed 'online co-op' welcoming all nonprofits, which would act as a marketplace for organizations to buy, sell, and share resources and expertise.^{xxix}
- ▶ Helping.org, a partnership between the AOL Foundation and eight non-profit organizations, refers other nonprofit organizations to technical help providers specializing in assisting the voluntary sector, and offers advice on how to hire and work with consultants if necessary.^{xxx}
- ▶ ONE/Northwest, a Seattle-based conservationist group, specializes in providing affordable technical support for like-minded organizations, including free online software-use courses, matching technologically experienced volunteers with organizations needing their services, and offering low-cost network infrastructure setup.^{xxxi}



The 1999 Wired For Good technology survey of 216 California nonprofit organizations shed further light on the technical support needs of this sector, finding that ongoing maintenance and support and staff training are in high demand.^{xxxii}

Table 8: Technical assistance needed by nonprofit organizations in California's Silicon Valley (<i>Wired For Good</i> survey, 1999)	
Service needed	% (n=216)
Ongoing maintenance and support	62%
Training for staff	62%
Technology planning tools	28%
Installation of computer hardware	20%
Installation of computer software	9%
Note: Respondents could choose more than one answer. Totals may sum to more than 100%.	



3.0 Endnotes

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