Canada today is at an inflection point. For the first time since its founding, Canada’s prosperity can be challenged by any nation.

Historically, prosperity comes from having an advantage in a sector that dominates commerce in a particular era. Commercial advantage changes with the times; in 1867, Canada and a handful of western nations had material resources which gave them an edge in the ‘age of manufacturing’. In the past 150 years, these countries have enjoyed a global trade superiority based on raw materials and the technology to manufacture goods: iron ships, steam power, mass manufacturing. This gave them an edge in trading around the world.

Today by contrast two-thirds of global GDP is created in the service sector. To take India as an example, 62.6% of its GDP comes from its service sector—a sector in which it creates a “constructed advantage” not from raw materials but from the skill of its workforce in developing value based on brain-power.

Given that people around the world have the same human potential, commercial advantage in this borderless resource is bestowed by training and education. A nation with adequate focus on education will rise dramatically. India’s huge investments in education are paying off, as digital commerce allows it to compete for outsourcing work in other knowledge-based economies. In fact, to accelerate this process, one-third of India’s service economy is directly employed in the digital sector itself, by the Information Technology sector.

The rise of this digital era has allowed all nations to compete against each other based on knowledge and mental skill. Digital is pervasive; today, five out of every six people in the world own a mobile communications device—a device that can also serve as a bank, an information-access portal, an employment station, an entertainment player, and a means of self-expression.

Digital Literacy drives commerce in all successful countries in a borderless digital world. It underlies the 70+ per cent of the Canadian economy that is in the services sector. Digital Literacy is the fundamental requirement for effective participation in the world’s economy; it is the aquifer giving life to the knowledge-age work force. It can be acquired, polished, and wielded as a competitive weapon.

“Digital technologies are ubiquitous, enabling all sectors across the economy to be innovative, productive and competitive. The Internet and the proliferation of digital information and communications technologies (ICT) have given rise to new products and services—changing the way we live. The way our children learn and study, how we communicate with each other, how medical professionals keep us healthy, how we conduct research and how we conduct business across all sectors—all have been fundamentally transformed by digital technologies.”

—Improving Canada’s Digital Advantage, Strategies for Sustainable Prosperity

“Digital technology is the single biggest lever for productivity and competitiveness across every sector of the economy. It will underpin the majority of future job creation in Western economies, and the export of global technology services and world-class content offers substantive opportunities for wealth generation.”

—Digital Britain: Skills Assessment for the Digital Economy
Canada needs to ask itself whether it is prepared to answer this challenge with a call-to-action of appropriate measure: with an investment of the energy and resources adequate to create the world’s most Digitally Skilful nation.

This White Paper has been created to engage organizations concerned with Canada’s prosperity, in the subject of Digital Literacy. This White Paper contains:

1. Executive Summary
2. Need for a Digitally Skilful Canada
3. Vision for a Digitally Skilful Canada
4. Call to Action

Definition

In this Paper, Digital Literacy is taken to mean the ability to locate, organize, understand, evaluate, and create information using digital technology for a knowledge-based society. It involves a working knowledge of current high-technology, and an understanding of how it can be used. Digitally literate people can communicate and work more efficiently, especially with those who possess the same knowledge and skills. They can acquire more information and knowledge. They can speed up the response of companies to commercial opportunities, extend academic research more deeply and quickly, and exchange best practices with global colleagues.

Through their leadership, they can raise the overall levels of digital literacy throughout society.

It should be stressed that Digital Literacy means more than skill in the Information and Communications Technology sector. Participation in a digital economy requires digital literacy across every sector. It involves a sufficient working knowledge of current digital usage that citizens can function in their daily lives using digital media. Digitally literate people can communicate and work more efficiently, especially with those who possess the same knowledge and skills. While not everyone is going to need a high level of digital literacy, Canada will need to ensure that its workers and the general population have a high base level of digital literacy on which to build.

“Our goal for Canada is to have a world-leading digital economy; to be a nation that creates, uses and supplies advanced digital technologies and content to improve productivity across all sectors.”

—Improving Canada’s Digital Advantage, Strategies for Sustainable Prosperity

“From social networks to commerce to the workplace, digital skills are becoming increasingly important to all Canadians. The ability of Canadian businesses to innovate and position themselves along the global value chain will depend heavily on having access to workers with the appropriate skills. Through our policies and programs, Human Resources and Skills Development Canada is taking steps to make sure that Canadian businesses can attract and retain the workers they need. Preparing Canadians for the economy of tomorrow will require a range of integrated and targeted efforts coordinated across government, industry and educational partners.”

—The Honourable Diane Finley, Minister of Human Resources and Skills Development

Note: Minister Finley’s quote taken from “Improving Canada’s Digital Advantage” Consultation Paper

1. EXECUTIVE SUMMARY

Building largely on the Canadian programs designed in the 1990’s—programs that put Canada into the forefront of digital access in fields like mobile communications, through deregulation—many nations have developed digital strategies that promise to develop workforces that are “digitally skilled”.

There are three forces that are driving this global interest in Digital Literacy:

1. The rise of global digital competence;
2. The expansion of the service sector; and
3. The increasing need for Digital Literacy to provide workforce flexibility.

Canada needs to return to a “take control” attitude in public and private-sector treatment of this issue. Upgrading of skills needs to be done at a fundamental level, to ensure that the whole population is digitally skilled.

ICTC believes that Canada should lead with a bold goal, and set follow-through tasks to ensure that we achieve it.

ICTC is proposing that Canada become the most Digitally Skilled country in the world, with a no-one-left-behind approach. We should set a goal of achieving this within five years.

To do this, Canadians have to pull together, realize the challenges and offer solutions to stay on the prosperity path. If Canada is to once again take the lead in the achievement of Digital Literacy, as it did in the development of the digital telephone exchanges and cross-country digital networks, we will have to move quickly and comprehensively. There is room for participation by every kind of group, and every group should have an interest in the process. This is not solely a workforce issue.

This is the time when Canada’s workforce should become a “high tech aquifer”, filling the needs of industry, government and academia, and creating leadership for other nations. Both internally and globally, this is Canada’s best chance to unite all the divides and lead the way with its Productivity Opportunity.

2. NEED FOR A DIGITALLY SKILLFUL CANADA

Being in the vanguard of the transformation into a global digital economy is a matter of economic life or death. In countries as disparate as America, Denmark and New Zealand, there is a race underway to become the world leader in knowledge-based industries. Descriptions of these efforts can be found at the end of this section.

The importance of Digital Literacy is being pushed to the top of Canada’s agenda by three critical forces:

2.1. The rise of global digital competence;
2.2. The increasing need for workforce flexibility; and
2.3. The expansion of the service sector.

“Canadian businesses, institutions and individuals must have the skills needed to adopt and apply digital technologies with confidence…”

—Improving Canada’s Digital Advantage, Strategies for Sustainable Prosperity

2.1 The Rise of Global Digital Competence

The entire globe is now undergoing the most momentous economic and social change in 150 years. The change was initiated by the impact of literacy and within the past 20 years—by skills in the digital world.

In 1800, developed countries like Canada were measurably better off in terms of life expectancy and income than the emerging nations such as India and China. As literacy spread in China and India after the Second World War, they rapidly began to catch up in both health and wealth. With the rise of Digital Literacy in those countries, they are able to compete even more successfully across the borderless realm of digital commerce with high-income countries. For the first time in 150 years, Canada will be competing in a world of equals!

By 1930, thanks to advantages in raw materials and manufacturing, the western nations (in orange and green) had made significant progress.

With the rise of the digital economy, all nations began to rise, becoming richer in health and wealth. See: www.gapminder.org

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6. For the full version of the charts see www.gapminder.org “The Health and Wealth of Nations – “200 Years That Changed the World”.
As measured by one higher-education standard, in fact, emerging countries are solidly overtaking the Western nations:

![Doctoral Degrees in Engineering, US (Citizens) and Asia](chart.png)

**Literacy** itself has long been recognized as an essential ingredient in the workplace. There is a correlation between literacy and wage levels in Canada. A Statistics Canada study indicates that each additional year of education a person receives is worth 8.3 per cent on their paycheque. Using an annual base salary of $30,000, this amounts to an additional $2,490 per year. The nine million Canadian adults who have a low level literacy are about twice as likely to be unemployed. A rise of one percent in literacy scores relative to the international average is associated with an eventual 2.5 per cent relative rise in labour productivity and a 1.5 per cent rise in Gross Domestic Product (GDP) per person.  

Canadian children from coast to coast are measured from Primary/Kindergarten to Grade 12 on their level of literacy. Prior to the 21st century, literate defined a person’s ability to read and write, separating the educated from the uneducated. The foundation for the workforce became entwined with its fundamental ability to communicate effectively. With the advent of a new millennium and the rapidity with which technology has changed society, the concept of “literacy” has assumed new meanings. With the rise of information technology, the very definition of what it means to be “literate” has changed. This is because the digital medium covers much more than words—it embraces all forms in which knowledge or meaning can be expressed.

Putting information into digital form touches music, film, art, audio, and other formats. The various media using digitally-based expression can be found in almost every profession and activity, from athletes who use digital motion capture to improve their performance to industrial designers, entertainers, resources and service workers, and social networkers. In some sectors the impact of digital media has in fact created the sector itself, such as the computer gaming industry, which brings in more revenue than traditional movie entertainment. In other sectors, digital capability means the difference between being a player and not being in the game at all, such as financial services. Other sectors are not yet as committed to digital as this, but digital is making inroads everywhere. In fact, there is no instance where the impact of digital is shrinking—it is on the rise across the board!

The ability to work in digital media is having an effect on Canada’s continued ability to have an affluent workforce that can compete on a global level. This digital imperative means employment, creative growth, global access, and new horizons.

The need for Digital Literacy will only grow more acute as computing power increases and costs decrease. Few areas of modern life will be unaffected by Information Technology. To a degree unmatched even by Literacy, the need for Digital Literacy will be pervasive. To function as a citizen, to operate machinery, to create a product or service…all these actions will be intermediated by a computer or computer interface.

The exponentially increasing speed of computers is making their capabilities rise; as they become equivalent to increasingly “higher” systems, computers will be involved more and more in human decision-making and activity. The need for digital literacy is only beginning.


To take an example from the otherwise staid auto sector, a new car today is likely to have 100 million lines of software code. Ninety per cent of the innovation required to create the car will go into the ICT portion of the vehicle. Experts say that within a few years, most of the cars on the road will have the majority of their value determined by the information services that flow to the car, and from the car. This combining of the ICT and Auto sector affects one million Canadian workers, in a sector that is expected to grow more than 20 per cent a year for the coming three to five years—if Canada has the workforce with the digital knowledge to take advantage of it.

2.2 The Increasing Need for Workforce Flexibility

The Canadian workforce needs Digital Literacy in order to retain flexibility and mobility of career and job openings. A worker who is digitally illiterate today is a worker condemned to ever-shrinking choices of employment.

The shrinking of job opportunities among the digitally illiterate is mirrored by a shortage of digitally apt employees for employment opportunities. Employers have consistently reported difficulty in recruiting skilled ICT workers. Despite a downturn in ICT employment since mid-2008, skills shortages continue in some areas and will become more pronounced in the next ten years as industry demand increases, technology advances, older workers retire and ICT university graduation rates decline. In some occupations, especially those requiring a university education, evidence suggests that shortages will persist because of a fundamental shortfall in the supply of qualified workers compared to projected employer demand. Increasing the supply of local graduates for these occupations and attracting more international talent will be important elements of the solution.

However, in many cases, ICT skill shortages are more related to workers not possessing the right combination of specific training and experience required by Canadian employers, such as Digital Literacy, rather than a lack of formal qualifications.

Changes in the digital economy are raising concerns that a digital literacy divide is emerging, where some groups are falling behind in their skills and have less access to new technology. This is of particular concern because future effective participation in the labour market will be closely linked to Digital Literacy.

In the face of today’s pressures to reintegrate displaced workers from sectors such as automotive, the need to provide the foundation-stone for success in terms of digital training, is crucial.

The Danish Technological Institute produced an in-depth report based on a variety of International Digital Literacy initiatives. The report identified the way in which Digital Literacy initiatives were implemented, including the workforce:

- Nearly half the initiatives were implemented by public organisations in collaboration with social partners and associations (46%). In addition, unions and industrial organisations run a significant share of initiatives by themselves (17%).
- Three in four initiatives involve standard computer course material (75%), but a substantial minority includes aspects developed to fit around the work process too. This consideration is probably also why a third of the initiatives, more than in any other group, offer e-learning modules (33%).
- Initiatives with courses aimed at producing new content as well as with community and innovation driven content are practically non-existent (8 and 4% respectively).

Canada can take advantage of the concepts and initiatives already in place by a variety of European countries.

2.3 The Expansion of the Service Sector

A new realization is becoming top-of-mind in the U.S., Japan and some European countries: while the production of hard goods is important, national prosperity heavily depends on increasing productivity in the service sector. This affects Digital Literacy, because jobs in the service sector depend more heavily on Digital Literacy—and the Service Sector is now responsible for 70 per cent of our GDP and 76 per cent of our employment. Even within the manufacturing sector, one of the most promising areas for growth is the addition of services.

The rise of the service sector relative to agriculture and industry means that Canadians are more exposed to the borderless digital economy. Claude Legrand, Centre of Excellence in Innovation and Management, 2009.
Canada’s service sector is Services (ICTS)—a field in which Canada has momentum and national advantage. ICTS has the potential to make Canada a global economic centre. Global competition in the framework of a service economy competition could be good for Canada because:

- The Canadian ICTS sector is growing fast. Average annual growth rates since 1997 have been higher than those for the overall economy both in terms of GDP (8 versus 3.4 per cent) and employment (3.2 versus 2.1). Comprised of nearly 32,000 companies, this sector employs close to 600,000 people and contributes $133 billion in revenues to our economy;  
- Productivity impacts are quickly felt. Improving productivity in the service sector takes much less effort than improving productivity in (e.g.) manufacturing. To obtain a 7.5 per cent increase in Canadian productivity by enhancing manufacturing productivity, one would have to increase manufacturing productivity by 50 per cent (because manufacturing is only responsible for 15 per cent of GDP). Clearly a tall order. To obtain the same productivity boost of 7.5 per cent through the service sector, one would need to increase service sector productivity by only 12 per cent—difficult, but not the same order of magnitude;  
- The service sector is recession-resistant, with a longer lag time built in regarding economic trends;  
- Canada’s service economy is not as heavily dependent on American trade as other sectors. Half of Canadian service revenues are made selling to other countries. ICTS services are digital, without borders. Global purchasers treat Canadian service companies as equally competent with American rivals, so there is no in-bred disadvantage to being Canadian;  
- Canada’s population, representing the “world in miniature”, has major global market connectivity advantages over rivals like India or China; and  
- Canada has the touchstone of prosperity for the ICTS sector: a well-educated workforce.  

The ‘price of admission’ for this opportunity, however, is Digital Literacy. The ‘service sector opportunity’ that arises from an otherwise well-educated workforce, is diminished if the workforce does not have adequate Digital Literacy.

Digital Literacy in Other Countries

Global Recognition

In 2003, the World Summit on the Information Society (WSIS) in Geneva affirmed the need for Digital Literacy in the 21st Century, on a global level. Since the WSIS released its consensus report, momentum has been building globally for standardization and assessment of Digital Literacy. Countries including the United States, Denmark, and New Zealand, have Digital Literacy initiatives in place.

The United Nations, Organization for Economic Cooperation and Development (OECD), and many other international policy agencies have already formed task forces focused on the importance of ICT indicators and Digital Literacy. The European Union Expert Group has stated that Digital Literacy is an essential preparation for life today and that “the inability to access or use ICT has effectively become a barrier to social integration and personal development” (DG Information Society and Media Group, 2008, p. 4).  

It is imperative for Canada to address Digital Literacy through government-sponsored initiatives to not only improve productivity at a national, organizational and business level, but to extend social and personal benefits to all Canadian citizens. Many European countries now use standardized ICT literacy assessment metrics as benchmarks for employment.

It is necessary for Canada to recognize the need to both create and follow a standardized system to measure Digital Literacy in its workforce. For a strong, globally competitive ICT sector, it is essential that Canada have a sufficient quantity of ICT workers, spread appropriately across occupations and geographical regions. To match the needs of employers, workers will need to have the right skill sets and experience.

Many Digital Literacy initiatives, especially in Europe, have included the formal certification of acquired skills, but have mainly focused on maintaining and utilizing standard course material in computer and Internet use. E-learning initiatives targeting the majority of the population have been common in recent years. Nearly half of the initiatives address people with a poor education and training background, the unemployed, the disabled, the elderly, young people at risk, women, rural and urban development areas, and ethnic minorities, or trying to help individuals in criminal or otherwise illegal environments.

15. CSLS, 2008.  
Other Case Studies – A Review of Foreign Digital Strategy Campaigns

United States

Digital Literacy Initiatives have been at the forefront of American news in 2010. The U.S. Federal Communications Commission proposed a National Digital Literacy Corps to help U.S. residents get online as part of a national broadband this month. 18

In the United States, a wide range of business, government, and research organizations are calling for students of all ages to enhance their digital literacy as an integral part of essential and critical 21st century life. The digital divide is evident with a gap that exists based on geographical location, socio-economic status, and availability of ICT and broadband technology capabilities, and the understanding of how to apply and use the technologies once they are available. While significant steps have been made to bridge some of the digital literacy gaps, there remains a significant lack of a coherent and sustainable national public policy that will encourage support and understanding of the importance of 21st century skills for education and the workforce. 19

The FCC is also proposing new funds to improve the digital training efforts at libraries and community centers. In addition, it will also look at launching an online training program for all the people who are seeking to improve their digital literacy. 20

Research from the U.S. Department of Commerce suggests that the adoption of information technologies needs to be developed together with worker training and revised workplace practices to yield productivity gains. The study identified the need for companies to be a part of the plan to retrain employees on how to use new technologies most efficiently to realize higher productivity gains. 21

Denmark

The National IT and Telecom Agency in Denmark commissioned the Danish Technological Institute to analyse information and communication technology (ICT) skills in its population. The analysis was carried out in order to inform future policy measures on the state of its workforce’s ICT skills. The analysis contained a description of the population’s ICT skills and an evaluation of these skills in light of future needs; an examination of the overall economic benefits of improved ICT skills in the population, and; an analysis of the barriers and an evaluation of these skills in light of future needs; an examination of the overall economic benefits of improved ICT skills in the population, and; an analysis of the barriers and an evaluation of these skills in light of future needs; an examination of the overall economic benefits of improved ICT skills in the population, and; an analysis of the barriers and an evaluation of these skills in light of future needs; an examination of the overall economic benefits of improved ICT skills in the population, and; an analysis of the barriers

The analysis pointed to a range of target areas for the enhancement of the Denmark’s ICT skills, based on an overall balanced estimation of which target groups have the greatest needs and of where the most substantial benefits could be obtained for individual target groups and for society as a whole. On the basis of survey results, the population can be divided into four skills groups:

- Persons at level 0 have never used a computer
- Persons at level 1 (“weak skills”) score from 0-40 on a scale from 0-100
- Persons at level 2 (“moderate skills”) score from 41-70
- Persons at level 3 (“good skills”) score from 71-100 22

A number of significant barriers were identified that must be overcome in order to improve the ICT skills of persons with no or weak skills. Lack of interest and lack of perceived need for ICT skills are two of the most significant barriers that future efforts must overcome. People with the lowest ICT skills levels are those who feel the least need to improve their work-related ICT skills—and this is also true of those who are employed. 23

Public focus groups indicate that very generalized and traditional awareness campaigns and standard information are not very effective tools for increasing the population’s ICT skills. It is especially important that efforts targeting persons with no or low ICT skills take place as much as possible in these persons’ own contexts—often a workplace—where they can be better motivated to improve and to increase use of their ICT skills. 24

New Zealand

Computing NZ Ltd, set up by the NZ Computer Society, brought the ICDL (International Computer Driving Licence) and e-Citizen Qualifications to New Zealand several years ago to assess its population and effectively improve productivity and efficiency, and their assessment tools are now used in a range of schools and businesses throughout the country.

In 2006, New Zealand’s labour productivity ranked 22nd out of 30 countries in the Organization for Economic Co-operation and Development—about 25 per cent below the OECD average and 30 per cent below the level of Australia. 25

Many leaders in New Zealand’s ICT sector believe that New Zealand’s workplace productivity can only be improved when the Government accepts the need for an internationally aligned, long-term and widely coordinated campaign to resolve its problems. 26

24 Danish Institute of Technology, 2008.
3. **VISION FOR A DIGITALLY LITERATE CANADA**

The ICTC’s role is to create a diverse, prepared and highly educated Canadian ICT industry and workforce. ICTC is mandated to be a catalyst for change, pushing for innovations that will help develop the quantity and quality of the ICT professionals needed to maintain and improve Canada’s position as a leader in the global marketplace. In pursuit of this mandate, ICTC will:

- Present a vision for a Digitally Literate Canada;
- Suggest a Program for comment;
- Adopt the tools it has used successfully in past programs, to realize its vision; tools that include standards development, labour market intelligence, and career pathways for the Canadian ICT industry, educators and governments; and
- Forge partnerships that will add momentum and value.

**Vision for a Digitally Literate Canada**

ICTC’s vision is to ensure that all Canadian workers have a Digital Literacy capability equal to or exceeding the demands of their occupations, to provide an aquifer that allows Canada to grow in the digital age.

This vision is in line with ICTC’s mandate to develop the quality of professionals needed to improve Canada’s position as a leader in the global marketplace.

While this is a workplace-centric vision, ICTC does not discourage the pursuit of larger scope, socially based goals for Digital Literacy, by those organizations with the mandate to effect that change. ICTC invites those organizations to add their visions to the foundation of a digitally literate workforce.

The benefits of pursuing the vision include:

- Reversing Canada’s productivity slide down the OECD charts;
- Improving the productivity of Canadian business, especially in the Small and Medium-Sized Business category;
- Enhancing the effectiveness of spending in other programs such as innovation and stimulus funds;
- Providing the catalyst for innovation; and
- Developing a cadre of people with the skills to move quickly into any knowledge-work position.

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**Program to Attain a Digitally Literate Canada**

The ICTC and its allies will strive toward a program that allows Canadians to achieve skills upgrading at a fundamental level. While identifying the need for Digital Literacy in the ICT sector, the format for categorizing Digital Literacy should apply to all sectors. Digital Literacy capabilities should have a defined measurement similar to the way in which bilingualism is categorized at various levels of efficiency across the nation.

Defining Digital Literacy along occupational lines allows a workable matrix to be constructed, to give measurable values for basic digital literacy that encompass:

<table>
<thead>
<tr>
<th>Reading text</th>
<th>Oral communication</th>
</tr>
</thead>
<tbody>
<tr>
<td>Document use</td>
<td>Working with others</td>
</tr>
<tr>
<td>Numeracy</td>
<td>Continuous learning</td>
</tr>
<tr>
<td>Writing</td>
<td>Thinking skills</td>
</tr>
<tr>
<td>Computer use</td>
<td></td>
</tr>
</tbody>
</table>

The program will build on many elements, which can include, but not be limited to, these steps:

1. **Create a Reference Scale on which to show Digital Literacy:** The scale could run from “Knowledge of basic keyboarding” to “Avatar-Type Digital Competence”. It would be the Digital Literacy equivalent of proficiency in literacy. The idea would be to create a standard the could be used across all occupations. Simplistically, a scale needs to be accepted that defines (e.g.) “Level 1…Level 5” degrees of Digital Literacy.

2. **Define the levels of Digital Literacy required for occupations:** Occupations in the workforce would then be plotted using the above “Digital Literacy Proficiency Scale”. An accompanying exercise would establish the benchmarks for Digital Literacy levels in each of the different occupations. It is accepted that different occupations have different skill level needs. Goals for these benchmarks would be set high enough that attaining the goals would put Canada at the top of the Digital Literacy race in all occupations.

3. **Programs would be defined and executed:** With partners in industry, academia and the consulting sector, programs would be delivered that would educate the workforce by occupation and bring them to the right level of Digital Literacy.

4. **Establish basic Labour Market Information:** Work needs to be done to define the size of the problem, building on HRSDC’s database and ICTC’s essentials skills definitions.

5. **Turn the information into Sector-specific Targets:** Not all sectors start with or need the same levels of Digital Literacy. A charting or “reference map” needs to be created to show which sectors are lagging in which areas.
6. **Decide on priority sector for first work:** Identify an industry and set up the path to success.

7. **Define partners:** Resources need to be marshalled for cooperative action, including industry.

8. **Set the curriculum:** Work with business and academic experts to develop the agenda for teaching skills at various levels.

**Steps to Realize the Program**

A suggested sequence of activities, for discussion by partners, could act as a framework for the enactment of a full Digital Literacy program:

- The creation of a pilot program of instruction in Digital Literacy;
- The testing of the program in a workplace environment;
- The subsequent establishment of a nationally recognized definition for Digital Literacy;
- The establishment of national standards for Digital Literacy that are Canadian specific and internationally recognized;
- The integration of Digital Literacy Standards that support and reinforce Essential Skills in the workforce, as defined by Human Resources and Skills Development Canada;
- The integration of the Digital Literacy standards into the I-Advance© Recognition System;
- The development of a strategy for maintaining and revising the Digital Literacy Standards, as technology evolves over time.  

Initiatives already in place by private sector companies are an asset to future government initiatives and pilot projects. Successful platforms in relation to Digital Literacy training can be taken into consideration in the development of a National strategy for Digital Literacy.

By way of example, in 2006, a Toronto-based not-for-profit community employment services agency called JobStart, opened a new Computer Learning Training Centre to address the growing need for technology skills in the workplace. The centre was made possible by a Microsoft Unlimited Potential (UP) grant. The UP grant allowed JobStart to introduce free technology skill development workshops to their low income clients, providing them the technical and software skills required to compete in today’s job market.

**Forge Partnerships**

Various partners across the Canadian advanced technology sector, including HRSDC, would be invaluable in setting up the program and providing resources.

Many Canadian companies and individuals have recognized the need to embrace technology in order to remain competitive in a global marketplace, and hence, recognize the new skills investments needed to be made at all levels and in a range of industries. Digital Literacy is necessary for most Canadians, from the information systems analyst looking to develop highly-specific skills related to cloud computing to the retail sales assistant who needs basic Digital Literacy upgraded in response to new system demands.

Natural partners for the project include:

- Federal Government
- Provincial Governments
- First Nations organizations
- Associations
- Educational Institutions
- Private Sector Companies

Examples of organizations that are prime candidates include:

- Canadian Advanced Technology Alliance (www.cata.ca)
- Canadian Coalition for Tomorrow’s ICT Skills (www.ccict.ca)
- Certiport (www.certiport.com)
- HRSDC (www.hrsdc.gc.ca)
- IBM (www.ibm.com)
- Information Technology Association of Canada (www.itac.ca)
- International Computer Driving License (www.icdl.ca)
- Microsoft (www.microsoft.com)

**Success**

Success from this initiative can be identified and measured when the Canadian population is fundamentally aware of the various levels of Digital Literacy required for specific jobs. When job advertisements display that a “Digital Literacy Level-5 or equivalent” sign is displayed and effectively understood, we will have achieved a level of success. At an overall level, the success of a Digital Literacy campaign will be evident in an over-all increase in Canada’s productivity and skill-set.

27. HRSDC, 2010.
4. CALL FOR ACTION

A goal of this White Paper is to act as a seed crystal for the assembly of partners and resources to effectively eliminate the problem of Digital Illiteracy.

Federal funding will be necessary to create a pilot project to bring provinces on-board to form an agreement on preferred training in Digital Literacy. We urge and support the creation of a fund for a “Centre for Digital Literacy”, with a co-centre concentrating on the industry side in a “Centre for Productivity Through Digital Literacy,” to oversee the appropriate training facilities and research required to bring this initiative to fruition.

Canada has long taken its responsibilities to the global community very seriously. The U.S. estimates that there are still about one billion illiterate adults in the world today—and two to three times that number who would be considered “digitally illiterate”. If Canada can help point the way to the eradication of digital illiteracy in our own country, then we can offer the world a pattern for prosperity. We can help others open up a new set of opportunities for themselves.

As digital technologies continue to expand exponentially across the globe, they can raise unprecedented horizons for achieving greater educational and economic success—for those equipped to grasp the tools.

The Government of Canada has the opportunity to secure a competitive workforce through Digital Literacy programs. There is global pressure as other nations grapple with their own Digital Literacy campaigns. ICTC’s initiative has the potential for Canada to excel in the realm of Digital Literacy assessments, to bring forth change at both a national and international level.

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About ICTC

The Information and Communications Technology Council (ICTC) is a not-for-profit sector council dedicated to creating a diverse, prepared and highly educated Canadian ICT industry and workforce. ICTC is a catalyst for change, pushing for innovations that will provide standards, labour market intelligence, career pathways and immigration initiatives for the Canadian ICT industry, educators and governments. We forge partnerships that will help develop the quantity and quality of ICT professionals needed to maintain and improve Canada’s position as a leader in the global marketplace.