



THE LEARNING PARTNERSHIP

Champions of Public Education across Canada

ePORTFOLIO POLICY SCAN

Final Report to:

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1. Executive Summary

This paper provides a context, background, and overview for the study of ePortfolio activity both in Canada and around the world.

An ePortfolio is a personal digital recording containing information about the individual. It often provides not only a credible record of prior learning but also a personal profile, containing information such as a collection of achievements and a reflection on the individual's learning and career.

The digital format facilitates sharing with others. It may be received by the people and organizations to which the owner has granted access.

An ePortfolio can use a mixture of media and services. For example, an ePortfolio could be a combination of text, photographs, and video, or it could be combined with an online service for assessment to provide accreditation of skills learned and/or courses taken.

ePortfolio activity can be arrayed along a continuum ranging from an unstructured personal blog to a skills-based Smart Card. Activity is happening in academic, public, private, and government organizations in Canada and around the world in:

- governments such as the province of British Columbia and the state of Minnesota
- post-secondary institutions in universities such as Trent, Concordia, and Purdue; and colleges such as Nova Scotia Community College
- education service providers such as the Centre for British Teachers
- organizations such as the Construction Skills Council of Canada, the Learning Innovations Forum, and the European Institute for E-Learning

Some of the consistent themes in the written and web-based sources reviewed are:

- ePortfolios support career transitions and access to employment internationally

- achievements described in ePortfolios need to be authentic and describe achievement over time
- descriptions of achievements must involve reflection
- users of ePortfolios are both the creators and processors of the document
- the ePortfolio is useful in Human Capital Asset Management for organizational development, asset mapping, and quality assurance

A number of key issues highlighted in this study include:

- authentication
- use of common language and standards
- ownership
- government roles and jurisdiction
- adult literacy
- linked sites
- first nations
- training
- equity of access
- promising human capital-related applications

Because the study of ePortfolios is a highly developmental, organic field with new issues emerging daily, this document provides a snapshot of current activity.

2. Overview

2.1 Background

This document reports on the findings of The Learning Partnership on the current usage of ePortfolios in different sectors including the policy/strategic issues related to its use to fulfill the requirements of the ePortfolio Policy Scan Project Contract No. 9752-05-0003 funded by Human Resources and Skills Development Canada (HRSDC).

The purpose of this work is to provide information on international and domestic ePortfolio developments, strategies, policies, initiatives, and related activities to produce an environmental scan on the state of ePortfolio. This includes a description of ePortfolios, related terminology, their use and context; a review of current literature and activity; identification of key informants and their area of expertise; a classification schema; exploration of promising human capital-related applications; and an identification of key policy issues for future discussion.

Because the study of ePortfolios is a highly developmental, organic field with new issues emerging daily, this document provides a snapshot of current activity to the beginning of October, 2005.

2.2 Context

Portfolios have long been used to represent a person's work. A portfolio provides concrete demonstrations of progress and accomplishments over time. Traditionally, however, communication and transmission of the portfolio's contents has been limited because of the bulky, concrete, object-based nature of the contents.

Based on electronic media and services, an ePortfolio is a personal digital record that may be received by the people and organizations to which the owner has granted access. The electronic format facilitates sharing, overcoming many of the limitations of tradition object-based portfolios.

The ePortfolios surveyed for this study can be arranged along a continuum from the unstructured personal blog to the purely factual record of qualifications and certifications.

Many individuals, institutions, and jurisdictions have embraced this tool with varying degrees of success; therefore, it is important to review this activity and its possible merits, including issues in human capital policy direction.

2.3 Definitions

Definitions of ePortfolios are as varied as the number of intended uses. In some cases, the ePortfolio is intended as a vehicle for personal reflection and growth; in others, it is intended to communicate qualifications to prospective employers. There are many variations between.

The **Learning Innovations Forum (LifIA)** has been a leader in ePortfolio activity in Canada. LifIA is a non-profit corporation registered under the Canada Corporations Act whose mission is to promote learning innovations as they benefit learners, organizations, and communities. LifIA has a global perspective with a Pan-American focus: membership and issues identification are encouraged from North, South and Latin America. LifIA also has a formal working relationship with the European Institute for e-Learning (EifEL).

This organization defines portfolios and ePortfolios as follows: ¹

Portfolio – A personal collection of information describing and documenting a person’s achievement in life experience and learning. There are a variety of portfolios ranging from ‘learning logs’ to extended collections of accredited evidence. Portfolios are used for many different purposes such as accreditation of prior experience, continuing professional development, or certification of competences. Tens of millions of people have already used some kind of portfolio.

¹ © 2004 The Learning Innovations Forum, LifIA.ca

ePortfolio – A portfolio using electronic media and services; a personal digital recording containing information such as personal profile and collection of achievements. An ePortfolio can be a combination of mixed media and services, for example, an ePortfolio combined with online services for assessment (i.e. accreditation). ePortfolios can be either off-line (e.g. smart card, DVD), online (e.g. personal profile repository), or a combination of both. They can be stand-alone media or interlinked through peer-to-peer. Whatever the format, an ePortfolio is owned by one person who has complete control over its content and access. What gives ePortfolios the edge over ‘traditional’ portfolios is the considerable increase in the number and quality of services that can be provided to individuals and the community. In order to make these services widely accessible, ePortfolios must comply with interoperability standards.

The **Québec Ministry of Education** defines ePortfolio as a personal digital collection of information, a reflection on one’s learning and career – a credible record of prior learning.²

Dalhousie University in Nova Scotia has an ePortfolio area available for faculty, students and staff members. It is provided as a private, secure space to record and reflect on learnings. Students are told that an ePortfolio is “a collection of your best work, constantly evolving.”³ It is continuously updated, demonstrating development of academic and personal skills that are transferable. Students are told that creating an ePortfolio involves collecting, selecting, and reflecting but that it is not a personal homepage. It can be used as a place to do personal exploration that will assist with life-altering decisions.

2.4 Terminology

One of the most difficult tasks is to appropriately label the concept embodied in the learning record. Labels are important, and words come heavily loaded with different connotations for

² Guy Fortier, Cégep á distance Ministère de l’ Éducation, Québec

³ Dalhousie University, My.eportfolio.dal.ca

different age groups, ethnic groups, regions of Canada, and all the labour market partners.

Some considerations include:

- Is it a Skills Passport, the term used by the Confederation of British Industry in the UK? Does the word “skills” encompass all that a person has achieved or acquired?
- Is it a Learning Passport, the term used by former HRDC Minister Lloyd Axworthy and by the Corporate - Higher Education Forum? What does “learning” mean?
- Is it a Skills Portfolio? Does this create confusion with portfolio development as it relates to PLAR?
- Is it perhaps “a cumulative record of achievement” or a “human capital account”?
- Is it a Life Work Portfolio, the term used by the Oklahoma Department of Vo-Tech?
- What about Career Passport, the label used by HRDC in Canada Prospects: Canada’s Guide to Career Planning 1995/1996?
- How about Learning Passport and Planner, as in a proposed project at HRDC?
- What’s wrong with calling it an individual profile, resume, dossier, curriculum vitae?⁴

3. Review of the Literature

Because this is an emerging field, there are currently few journal articles available on the subject of ePortfolio. Most available documentation can be found in websites. A list of websites consulted for this paper can be found in Appendix A: Consultation and Sources.

Many school districts, colleges, universities, and professional associations are using ePortfolios with some providing templates. There are also now some commercial vendors such as eportaro, Ingeniux, and Avenet who sell products and services to support ePortfolio development and provide an enterprise level ePortfolio software system. Communities of

⁴ CLFOB Learning Record Background, p35

users such as the Student Portfolio Architecture and Research Community (SPARC) are emerging as well who share ideas, templates and potential uses.

There are some very consistent themes in all the written and web-based sources reviewed.

Among these themes are:

- ePortfolios support career transitions and access to employment internationally
- achievements described in ePortfolios need to be authentic and describe achievement over time
- descriptions of achievements must involve reflection
- users of ePortfolios are both the creators and processors of the document
- in Human Capital Asset Management, the ePortfolio is useful in organizational development, asset mapping, and quality assurance

An excellent analysis of human resources development policy goals is provided in the paper “*Linking Adult Literacy and relearning*” written by Dr. Kathlyn Chang Barker for the ABC Canada Literacy Foundation. This analysis discusses the links between the ePortfolio and:

- human resources development
- life-long learning
- prior learning assessment
- education and training at all levels

More detailed information from the literature reviewed is embedded into the following sections of this paper.

4. Survey of Current Activity and Developments

This section provides an overview of current activity and developments. Most of the projects found occur in the education and government sectors. Although there is work being done by associations, such as The European Institute for e-Learning, the Electronic Portfolio

Consortium, and IMS Global Learning Consortium, evidence of ePortfolio work in the private sector was not forthcoming. For a more detailed, definitive study, a larger research project would be required.

4.1 International

Currently, in both Europe and the United States, there is significant ePortfolio activity. Much of this activity is at the post secondary education and/or at the State government level.

The following overview demonstrates some of the initiatives occurring in the United States and Europe. Determining issues and concerns is challenging because in such a new field, little consistent or objective assessment has been conducted.

The **Electronic Portfolio Consortium**, or ePortConsortium, is an association of individuals from 45 countries and more than 500 higher education and IT commercial institutions who are interested in the development of academic ePortfolio software systems and the establishment of standards for such systems.

This group is working on a complete “Handbook of Research on ePortfolios” to be published by Idea Group, Inc., in March 2006. Over 80 authors from around the globe have contributed their expertise to the project. ePortConsortium also has an electronic portfolios white paper available on their website that represents the collaborative effort of members of 16 selected academic and corporate institutions to discuss the opportunities and challenges of ePortfolio systems.

Also on a world-wide scale is the **IMS Global Learning Consortium** whose mission is to support the adoption and use of learning technology worldwide. IMS is a non-profit organization that includes more than 50 contributing members and affiliates from every sector of the global e-learning community. They include hardware and software vendors, educational institutions, publishers, government agencies, systems integrators, multimedia content providers, and other consortia. The Consortium provides a neutral forum in which members

with competing business interests and different decision-making criteria can collaborate to satisfy real-world requirements for interoperability and re-use. IMS also develops and promotes the adoption of open technical specifications for interoperable learning technology.

4.1.1 United States

Purdue University in the U.S. has built the Indiana@work ePortfolio project whose goal is to have an ePortfolio account for every Indiana citizen and company in order to connect job seekers and jobs. Their long-term goal is to have free lifelong ePortfolio services for every citizen from kindergarten to post-retirement.⁵ This will provide a lifelong web-identity for every state citizen.

The **State of Minnesota** has become a strong advocate for ePortfolio use and has built a statewide infrastructure which provides software and storage space that serves 31,000 registered users to date. The state has hired a Chief Certification Officer (CCO) to attend to issues of authenticity and policy. In this example the individual owns the ePortfolio. The State collects only the owner's name, address and email address in order to avoid issues of privacy. Minnesota is reputed to be the best U.S. example of an ePortfolio project supporting "lifelong learning, i.e., learning in the workplace, family and community."⁶ Users in Minnesota range in age from 16 to 66 years with a mean age of 35. Women use it more than men and users tend to be more educated than other citizens as a whole. Minnesota's research shows that users identify new uses for their ePortfolio as they proceed. This expanded functionality of ePortfolio is seen as evidence that it is doing what it was designed to do, i.e., to promote and support life-wide and lifelong learning.

Darren Cambridge of **George Mason University** has conducted research that has identified the stages in development and use of users:

Stage 1: Experimentation Stage

Users try out different ways of representing themselves:

⁵ Ali Jafari, Indiana University

⁶ Darren Cambridge, George Mason University

- by “bouncing off” of real audiences
- through “being out there” to imagined public audiences
- through content structures (categories, subcategories, prompts)
- by being able to make changes easily
- by experimenting with multiple uses

Stage 2: Living document

When ePortfolio reaches maturity, it becomes a “living document”:

- changes are made regularly, but not continuously, to keep the ePortfolio up to date
- the ePortfolio has “layers” that address a range of audiences and purposes
 - the ePortfolio author becomes an audience through reflection; and
 - transformative revisions are only attempted in reaction to major life changes, such as going back to school or entering the job market

4.1.2 Europe and the United Kingdom

There is much ePortfolio activity in Europe and the UK as well.

The **British** government has announced a strategy to give all citizens an online personal learning space by 2008. In addition, there is a performance management project using ePortfolios for teachers. The **Center for British Teachers** has designed and developed for the Department of Education and Skills an online tool to enable teachers to take a more strategic view of their career and continuing professional development.⁷

At the **University of Wolverhampton**, there is an ePortfolio system called PACE – Personal Academic Career and Employability. This project encourages planning and development activity by students. Student ePortfolios include the following framework:⁸

- My thoughts

⁷ Tony Hudson CFBT

⁸ www.wlv.ac.uk

- My achievements
- My abilities
- My meetings
- My experiences
- My action plans
- My files

This online ePortfolio includes logs and learning journals as well as online curriculum vitae functionality. It allows easy updates, maintenance, and facility for regular review.

Wales has become a large supporter of the ePortfolio process, providing capacity to three million citizens and discussing ePortfolio issues with respect to citizenship, eGovernance and medicine.

The University of Newcastle in partnership with three other UK universities initiated the *Managed Environments for Portfolio-based Reflective Learning Integrated Support for Evidencing Outcomes* in October 2002 to integrate ePortfolios as an integral tool for medical students to manage their professional development needs throughout the span of their career.

The **European Institute for E-Learning (EIFEL)** is a European professional association dedicated to the support of the continuing professional development of individuals and the transformation of organizations who wish to enter into the knowledge economy and society.

EIFEL has recently proposed that one of Europe's goals should be to have an ePortfolio for everyone by 2010. EIFEL has codified the principles and guidelines for Europortfolio, a pan-European digital portfolio. For reference, the text of the ePortfolio Memorandum of Understanding has been included in Appendix C. The objective is to provide an open and flexible European qualifications framework including a quality assurance mechanism based on criterion-based assessment rather than a sliding scale of ranking system.

The **European Portfolio Initiative Coordination Committee (EPICC)** attempts to coordinate ePortfolio initiatives and promote interoperability. Its intent is to make Europe a world leader in the field of ePortfolio activity in all sectors of education and training. The committee's goals are to:

- Craft a European ePortfolio vision and strategy statement through the signature of a Memorandum of Understanding by all concerned stakeholders. This statement will lead future development and practice and will position Europe as a leader in ePortfolio technology and practice.
- Develop a network of professionals and organizations involved in ePortfolio initiatives, a European ePortfolio Consortium to promote collaboration and harmonization of approaches among ePortfolio stakeholders.
- Define European ePortfolio functional requirements, globally, but also for the different communities and language groups through the collection of profiles.
- Ensure the interoperability standards of ePortfolio
- Adopt demonstration platforms to explain how ePortfolio standards can be implemented. This demonstration will examine issues identified by EPICC e.g. reference platforms and Open Source; and
- Compose ePortfolio White Papers addressed to governmental, policy, and adopter groups to help promote the take up of ePortfolio efforts in education, lifelong learning and social inclusion.

EPICC partners represent potential ePortfolio stakeholders from individuals to public authorities and include large numbers of European Countries.

4.2 Canada

Campus Canada⁹ is an agency of the Federal Government that focuses activity on employees in the workforce and adult learners who are preparing to enter the workforce. Campus Canada's ePortfolio provides service to organizations and employees involved in workplace

⁹ Campus Canada www.campuscanada.ca

training. The portfolios help employees to develop skills in assessing what they know and to explore possibilities and directions open to them as lifelong learners.

Campus Canada offers the following services to institutions, organizations, employers and adult learners:

- Organizations
 - access to new learners
 - the ability to customize program offerings
 - facilitation of credit transfer and recognition of prior learning assessments
 - streamlining of admission and registration services
 - success to unified and up to date records of learner accomplishments
- Institutions
 - documentation tools
 - support of human resource processes
 - profile of post-secondary credit equivalencies
- Employees and Adult Learners
 - a place to organize all of the learners academic experiences, formal and non-formal
 - tailored resumes reflecting the learners unique qualities
 - creation of multiple portfolios to suit different references

Campus Canada has a detailed legal agreement users must agree to in order to receive a User ID and password. The agreement also sets out regulations regarding privacy, copyright, trademark and linked sites. For reference, the complete text of Campus Canada's Terms of Use has been included in Appendix B.

A number of Canadian provinces have started developing ePortfolio concepts and practices with some practitioners becoming international leaders in the area. Space does not permit a thorough review of all these projects but the following is a summary of some of the more prominent endeavors.

4.2.1 British Columbia

The **Learning Innovations Forum (LifIA)** based in Vancouver is a not-for-profit association dedicated to learning innovation and quality. The ePortfolio is used to support members' continuing professional development and the assurance of competence in all aspects of education, training, learning and development.¹⁰ Dr. Kathlyn Chang Barker, Chair of LifIA, has written extensively on the creation and use of ePortfolios. It is LifIA's mission to promote ePortfolios for every Canadian citizen by 2010. LifIA works with Avenet, a company headquartered in St. Paul Minnesota, which has created a multimedia web site for the creation of ePortfolios.

LifIA has taken a leadership role with the launch of a project to research and develop a strategy for an ePortfolio system for skilled immigrants to Canada. By March 2006, LifIA will produce:

- a comprehensive environmental scan of the current state of ePortfolio use in the workplace for skilled immigrants and in related training and HR institutions in Canada and beyond
- research-based conclusions about the feasibility and advisability of an ePortfolio system in various industries and employment environments
- a strategy for creation and implementation of an ePortfolio system and associated tools for immigrants and their potential employers across Canada

The government of **British Columbia's** policy is that by 2006 all students leaving high school will have a portfolio. The portfolio can be paper-based or electronic. It will cover six areas:¹¹

- Arts and Design
- Community Involvement and Responsibility
- Education and Career Planning
- Capability Skills

¹⁰ Chang Barker, Kathryn "Linking Adult Literacy and elearning" 2005

¹¹ www.beed.gov.bc.ca/graduation/portfolio/

- Information Technology
- Personal Health

Paul Stacey of **BC Campus** reports that there has been strong acceptance of the pedagogical values of this approach. Many school districts had already adopted this approach before the government generalized it so there is some variety of standards and practices. There is now a provincial cross-sector ePortfolio working-group who are attempting to coordinate efforts, frameworks and standards.

Tech BC is interested in using high-school graduates' ePortfolios to decide on university and college access. Issues of privacy and access are of great concern as is whether or not a common infrastructure is necessary.

4.2.2 Ontario

Some very early work has begun in the Labour Market and Training Division of the Ontario Ministry of Training, Colleges and Universities. This work is based on a training management system and apprenticeship registration. Officials in the Division state that there is no demand for ePortfolios and privacy issues are of great concern so the work is proceeding slowly. They believe that a major application will be in the assessment of credentials for foreign trained professionals.

Little formal activity exists at Ministry, Board, or school levels. Most ePortfolio use is experimentation by interested individuals. A membership survey recently conducted by the **Catholic Principals Council of Ontario (CPCO)** discovered an assortment of views. The majority of respondents were not aware of ePortfolio. Of those who were, a sample of comments follows:

- “ePortfolios will soon be a major source of information when applying for a position. Everyone using them should know who has access and what may or may not be done with the information.”

- “A waste of time and money. At the end of the day, will anyone really use them? If not, why bother?”
- “Stringent criteria would have to be in place to protect the owner from malicious intent.”
- “I used an ePortfolio myself as I applied for the principalship.”
- “As my school is an e-Learning school, students often use ‘eFolios’ as a way of displaying work. Some teachers we had interviewed from the University of Ontario have brought ePortfolios with them. Most new teachers bring a paper portfolio. I personally have a paper portfolio but would like some in-service on ePortfolios.”
- “Paper and ePortfolios should be treated as equal as long as the intent of the portfolio is not to show how good or creative one is with the use of technology but to provide the viewer with the criteria-based purpose or intent of the portfolio, i.e., employment skills and history. An ePortfolio also should not distract from or diminish the value of a paper portfolio unless the creativity and skill in the use of technology is a criterion for candidate for selection.”

4.2.3 Québec

In the province of Québec, Guy Fortier of the **Ministry of Education** (Adult Education Policy Division) is engaged in the development of a province-wide skills directory with the intent to have an ePortfolio for life for every citizen by 2010. The “e” advantage, he says, is enriching the ePortfolios’ contents through multi media, providing mobility, managing the accreditation process, providing information elements, and enabling lifelong use.

Many elementary and high schools in Québec already have ePortfolio systems in place and are free to set their own standards, practices, and policies. They have thus far funded this activity from their own budgets. They also have different platforms which need to be integrated in order for use for entry into post-secondary education and the workplace.

Concordia University’s Faculty of Education has an ePortfolio project in place and is concerned with the issue of how to get teachers to want to use an ePortfolio.

4.2.4 Nova Scotia

Some very promising and successful ePortfolio work is taking place at **Nova Scotia Community College** (NSCC). NSCC, where every student must have a portfolio to graduate, calls itself the ‘portfolio college’. The portfolio may or may not be “e”. The portfolio method of articulating learning is of benefit to students, institutions, and employers but the focus at NSCC is on student use of the portfolio as a tool for reflection and planning. It is important according to curriculum consultant Stephen Parsons to maintain the integrity of the process and the reflection.

The **Nova Scotia Department of Education** is considering an ePortfolio as a record of learning for all students from grade 7 onward. Issues of technical interoperability are of concern here as in all other jurisdictions surveyed. For them, the important question is how can this information be transferred seamlessly from one sector to another and eventually to Human Resource records?

Mr. Parsons describes ePortfolio development as an iterative process for the creator and notes that the process will be different for each learner. The amount of personal reflection included will also vary. He says that it is important not to view ePortfolios outside of their obvious relationship to Learning Object repositories (databanks of small learning modules) and e-learning generally.

Also in Nova Scotia, **Dalhousie University** has a ‘my.ePortfolio’ project which their web site explains to students as follows:¹²

A Portfolio is a collection of your best work. Constantly evolving.

A Portfolio is an ongoing process. From the beginning your first year until graduation and beyond, students can develop their portfolios by selecting entries that show development of academic, personal and transferable skills. Creating a portfolio involves: collecting, selecting, and reflecting.

¹² <http://channelcontent.dal.ca/porfolio>

Dal's ePortfolio Tool

Dal's ePortfolio tool is not for creating personal web pages. It is a workspace with presentation features that allow for collaboration on professional and academic work.

In working on your ePortfolio, keep the following guidelines in mind:

- An ePortfolio is not something you complete overnight. It is a slow, steady process.
- Be clear and thoughtful in your use of language.
- Use language which demonstrates your growth toward educational and professional goals.
- Use language that is appropriate to a broad public audience of potential readers. You should not use obscene or intolerant language, offensive graphic or video images inappropriate for university discourse.
- Only give out contact information about other people with their permission. This also applies to using photographs of friends, family, or classmates.

4.2.5 Smart Cards

At the opposite end of the continuum is the skills-based Smart Card. Similar to a credit card, a Smart Card stores information on an integrated microprocessor chip located within the card. The 'smart' capability provides an efficient, portable and secure means for verifying and transferring data such as skills credentials and levels.

The Construction Skills Council of Canada has adopted this technology to support workers' mobility.

A complete description of the use of Smart Cards can be found in the article CLFDB Learning Record Backgrounder on the FuturEd website at www.futured.com

5. Key Actors

The following chart contains a sample selection of key actors in different sectors. For a more complete list, see Appendix A: Consultations and Sources.

ACADEMIC	PUBLIC/GOVERNMENT	PRIVATE/NOT FOR PROFIT ORGANIZATIONS
Purdue University	State of Minnesota	LIFIA
George Mason University	Government of Wales	Construction Skills Council of Canada
Centre for British Teachers	European Portfolio Initiative Co-ordination Committee	
University of Wolverhampton	European Institute for E-Learning	
B.C. Campus	Government of British Columbia	
Concordia University, Montréal	Ministry of Training, Colleges and University, Ontario	
Nova Scotia Community College	Québec Ministry of Education	
Dalhousie University	Nova Scotia Department of Education	
Trent Faculty of Education		

6. Classification Schema

ePortfolio activities range along a continuum from the personal blog to a skills-based Smart Card. The following chart provides an organizer to classify the activities detailed in earlier sections:

SECTOR	ELEMENTARY	SECONDARY	ASSOCIATIONS	FACULTIES OF EDUCATION	POST-SECONDARY	FEDERAL GOVERNMENT	INTERNATIONAL	EMPLOYERS
PURPOSE	Document and reflect upon own learning and skills Document authenticated skill achievement	Document and reflect upon own learning and skills Document authenticated skill achievement	Document and reflect upon own learning and skills Document authenticated skill achievement	Document and reflect upon own learning and skills Document authenticated skill achievement	Document and reflect upon own learning and skills Document authenticated skill achievement	Document authenticated skill achievement Consistent description of skills and skill levels	Document and reflect upon own learning and skills Document authenticated skill achievement	Document authenticated skill achievement
USER GROUP(S)	Province of Québec	Province of B.C.	LifIA EifEL IMS Global	Trent Concordia	NSCC Dalhousie UBC Faculties of Education	Campus Canada (prior learning assessment and portfolio development for individuals)	United Kingdom Minnesota	Construction Skills Council of Canada
CREATOR	Individual	Individual	Templates created only – provided to support creators	Individual	Individual	Individual	Individual	Individual with support of association

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SECTOR	ELEMENTARY	SECONDARY	ASSOCIATIONS	FACULTIES OF EDUCATION	POST-SECONDARY	FEDERAL GOVERNMENT	INTERNATIONAL	EMPLOYERS
ACCESS	Under discussion	Likely post-secondary institutions		Individual shares with professors to discuss personal learning Individual sends to prospective employers	Individual shares with professors to discuss personal learning Individual sends to prospective employers	Individual sends to prospective employers	Individual shares with professors to discuss personal learning Individual sends to prospective employers	Smart cards taken by individual to employers to verify skills and support job mobility

7. Common Elements, Concerns and Policy Issues

Policy issues and debates abound in the new field of ePortfolios. Jurisdictions and institutions are proceeding quickly, investing time, products, and resources in infrastructure, so it is timely to grapple with common issues. To view an example of how one national organization has addressed these issues in their terms of use, see Appendix B: Campus Canada Terms of Use.

Consistent, objective, longitudinal study is needed to answer the following questions:

- What is really working?
- In what areas does ePortfolio work best?
- What is the return on investment?
- What is the productivity gain?
- What is the efficacy of ePortfolio as a tool?

Other common elements, concerns and policies issues are detailed in the sections that follow.

7.1 Authentication

All professionals engaged in ePortfolio work agree that authentication (attesting to the accuracy of the statement) must be assured if the ePortfolio is to be useful to the creator and the receiver. In educational institutions, professional associations, and human capital asset management in business and government, the quality of authentication and skills assessment is of the utmost importance. There may be value in a reflective personal journal but the skill and credential description is essential for the processors of this information. In areas of Prior Learning Assessment, the authentication and demonstration of skills is critical.

Common standards for authentication are also important for institutions such as Faculties of Education seeking accreditation and/or to place candidates in jobs. The directed response template of ePortfolio adheres to established standards, criteria, and benchmarks. Practitioners say also, however, that it is important not to let standardization lock out innovation.

To substantiate and support skills descriptions, standards of citation and correct use of others' material are important for users and receivers.

7.2 Common Language and Standards

An important goal of ePortfolio is portability of a life-wide and lifelong record of skills. This goal cannot be achieved if common language definitions, standards, and frameworks are absent. It is urgent that these issues be debated before institutions and jurisdictions are too far down the road with their own systems and may be reluctant to alter their process. Practitioners from across the country have begun to define these standards but it is important to support and continue to build this community to encourage innovation, to maintain consistency, and to respond to commercial opportunities.

Technical interoperability is an issue of much concern and debate. Some believe that a common infrastructure is not necessary but clearly portability will require some commonality to enable access and communication among schools, colleges, universities, workplaces, and governments. Users and receivers must be able to access appropriate information and communicate with each other across jurisdictions.

There are more technology issues which need consideration; however, it is more likely that technology solutions will follow policy directions. The physical format and technical form must respond to the functions required.

If the ePortfolio is to be widely adopted and successful, it is important to create consumer oriented consensus-based industry quality standards for the ePortfolio. Dr. K. Barker has written a discussion paper on this issue¹³ based on a dialogue with international organizations including:

- Association for Media and Technology in Education in Canada
- Canadian Association for Community Education
- Canadian Association for Distance Education

¹³ ePortfolio Quality Standards Discussion Paper, Futures Inc. September 2003

- Canadian Education Association
- Canadian eLearning Enterprise Alliance
- Canadian Society for Training and Development
- Commonwealth of Learning
- European Institute for E-Learning
- Licef, TéléUniversité
- Human Resources Development Canada
- Industry Canada

Standards need to acknowledge the many different uses of ePortfolio:

- individuals can use portfolios for applying for entrance to education or employment, for career planning and development
- educators use portfolios as a form of assessment, and as alternative achievement records
- students and artists use portfolios to highlight their capabilities
- employers use portfolios to recruit the right employees, manage individual and team capabilities
- trainers use portfolios to identify skill gaps and target appropriate skills upgrading

In 1997, the Canadian Labour Force Development Board (CLFDB) undertook a study of the “electronic learning record” and concluded that, in order for an ePortfolio to make a contribution to increasing the effectiveness, efficiency and equitability of a labour force development system, it must include an instrument (format, content), a process (access, development, maintenance) and a utility for all the labour market partners that meet minimum standards for effectiveness, efficiency, and equity.

Under the leadership of FuturEd Inc., the CLFDB created recommended national ePortfolio standards to address the following Human Resources Development policy goals:

- The ePortfolio should list and describe skills and knowledge in a way that is recognized and respected by all the labour market partners.
- The ePortfolio should have the capacity to be a complete inventory of skills and knowledge acquired by the individual regardless of where they were acquired.
- An individual should develop and own his/her ePortfolio. Some people may require informed assistance to achieve this. The use of the ePortfolio and any changes to it should be completely controlled by the individual.
- The content of the ePortfolio should be current, accurate and verifiable.
- The ePortfolio should allow flexibility to accommodate unique or industry-specific skills.
- The ePortfolio should follow a standardized format. The ePortfolio content and format should link to existing and developing labour market exchange systems.
- The ePortfolio and its development process should be relatively simple and straightforward.
- The development and use of the ePortfolio for any and all Canadians should be barrier-free; that is to say, social identity, disability and geography should not be barriers to individuals.
- The development and content of an ePortfolio should be bias-free.
- An ePortfolio should not create barriers; for example, a person who does not have an ePortfolio is not discriminated against for the lack of one, or for the skills revealed.¹⁴

In summary, proposed standards generally include:

- accuracy and adequacy
- accessibility to technology, affordability, language and accommodation for persons with disabilities
- privacy
- employer awareness
- balance in ownership

¹⁴ From the Regas University ePortfolio Comparison Features

- diversity in delivery modes
- interrelationship of categories
- user self reliance¹⁵

7.3 Ownership

If jurisdictions, in the long term, provide free, multifunctional, ePortfolio service for all citizens, then the issue of public versus private records must be resolved. For example, the state of Minnesota as described earlier collects only name, address, and email addresses of users in order to protect the privacy of citizens. This may not be a binary issue but rather one where guidelines are developed regarding what information is public, what should stay private and what should be the responsibility of the citizen to grant access.

There is agreement that the ownership of the ePortfolio must belong to the individual. Indices and schema for access are needed. Some have suggested that an integrated student number across the country would support integrity and also ease privacy and access. Many groups are also addressing the issues of intellectual property and digital rights management. Clearly, if the individual owns the ePortfolio, the individual also owns the contents.

7.4 Government Roles and Jurisdiction

This set of policy issues is certainly the most complex and the resolutions are very important. Compromises among jurisdictions will need to occur to ensure quality consistent authentication, verification, portability, and equity. Government leadership is needed to avoid social exclusion here as in other programs.

Canadians have dealt with jurisdictional issues of country-wide importance for a long time and have worked out some excellent compromises. It is necessary for an ePortfolio provision to allow for local contextualization of widely agreed upon theory, standards and policies. A

¹⁵ CLFDB Learning Record Backgrounder p. 28

series of connected e-solutions will need to be created to address these issues in the context of Canadian political realities.

7.5 Adult Literacy

Adult literacy and workplace literacy are related to the Essential Skills Occupational Profiles, which have become the basis for a number of tools for workplace learning. There are today a growing number of online services for adult literacy learners, tutors, and program organizers.

In adult literacy, Portfolios and ePortfolios can be learning tools, assessment tools, and records of achievement. The ePortfolio is motivating for learners in that it focuses on what the person can do rather than what they cannot do, as measured by standardized tests.¹⁶

EPortfolios are linked to the mastery of key skills:

- working with others – ePortfolio provides a collaborative environment providing opportunity for sharing resources and giving and receiving feedback
- literacy and information literacy
- numeracy
- learning to learn – planning and self-management of learning.

As in all learning, the important question in adult literacy is, “What is the purpose of the ePortfolio?” The answer is the mixture of process and product. The process of learning is change: an increase in skills and knowledge. The product is improved skills and knowledge.

In order to maximize the use of human resources, the ePortfolio is an important tool. An ePortfolio can be enormously useful in assessing and gaining recognition for skills and knowledge gained outside Canada. For those trained in Canada who wish to upgrade their skills, the ePortfolio helps assess what is already known and what additional learning is

¹⁶ Barker K.C. “Linking Adult Literacy and elearning” A national study for ABC Canada Literacy Foundation, 2005

needed. This allows students to study only what is needed rather than taking full courses and credits over again.

7.6 Linked Sites

Many ePortfolio sites contain links to other, related sites. However for any sites accessible by hyperlink from an ePortfolio site, providers do not take responsibility for the nature or reliability of these sites. It is usual practice to deny affiliation or endorsement by the sponsoring entity and the sponsoring entity does not govern the users relationship with the linked site. Issues such as privacy and data collection¹⁷ on linked sites need to be discussed.

7.7 First Nations

The ePortfolio is able to capture and value traditional knowledge and culture. FuturEd is working on the development of an eParfleche (pouch or carrying case) for Aboriginal youth.¹⁸

7.8 Training

Much of the activity is taking place in academic organizations such as schools and universities. Therefore, training of creators is occurring in those venues.

The training of receivers and processors of ePortfolios would be expected to take place within the institutions and/or corporations. This would likely be led by the local Human Resources departments.

FuturEd has developed a guide to help consumers make an informed choice among ePortfolio tools and services. The complete document entitled “Consumer Guide to ePortfolio Tools and Services” may be viewed at www.futured.com

¹⁷ For an example of a user Terms of Use which addresses these issues See Appendix 3

¹⁸ <http://www.modlat.ca/presentations/making%20it%20click/lambert>

7.9 Equity of Access

If this is to be a government-mandated, publicly-funded initiative, it would need to follow the government's equity guidelines to ensure equitable universal access.

7.10 Costs

There will be costs associated with implementing a national strategy for ePortfolios. If the Government decides to proceed with a national strategy, funds will need to be allocated for the development of:

- pilot projects and further study to test feasibility
- policies
- standards of practice
- IT issues such as common interface and interoperability standards
- marketing and communications strategies and materials to foster take up
- advisory committees and other groups to help implement the strategy
(meetings/teleconferences etc.)
- staffing model to manage the initiative

Other expenses would include hiring and paying staff to manage the initiative, and expenses such as office space, telephone, and supplies.

8. Promising Human Capital-related Applications

It is often difficult for employers to recognize human resource capacity already in their workforce. Effective tools are required to determine skills and knowledge of the existing workforce. An ePortfolio can be an effective tool to enhance productivity and maximize resources because it can include the description, understanding and appreciation of existing skills.

The ePortfolio may be used to match people to the new jobs in the enterprise and also help with planning for training and career development to reach goals both for the organization and the individual.

Individuals can add to their skills base by deliberate (i.e. formal) learning. An ePortfolio may be a means to record learning and translate this learning into specific skill descriptions.¹⁹

In the paper “The ePortfolio and Human Capital Accounting”, a FuturEd White Paper by Dr. K. Barker, a complete description of Human Capital Accounting (HCA) is provided. The HCA is an OECD-recommended means of improving the efficiency of human capital investment and utilization. The OECD concluded that public policy should focus on the development of better signals for competence, validation accounting and financial reporting.²⁰

Human Capital is “the knowledge that individuals acquire during their life and use to produce goods and services or ideas in market or non-market circumstances.”²¹ OECD emphasizes the productive capacity arising from knowledge and the improvement of methods of identifying, measuring and presenting information about the human resources in an organization. The ePortfolio provides expediency to the achievement of these goals and supports improvements to the consistency of human capital acquisition, measurement, accounting and valuation on a global basis.

¹⁹ Barker K.C. ePortfolio and Adult learning, 2005

²⁰ Measuring What People know: Human Capital Accounting for the Knowledge Economy (OECD,1996)

²¹ Ibid, p. 22

The concept of HCA, according to OECD, is also directly related to return on investment (ROI) in education and training. It is common practice in most countries to make budgetary decisions on funding for compulsory schooling based on the assumption that the social and economic benefits outweigh the costs. It is necessary, therefore to have a method of assessing human capital. HCA, ROI, PLA (prior learning assessment) and ePortfolio are all connected in reducing the risk of investing in human capital and making skill assessment simpler and less expensive.

With regard to HCA and Labour Relations, the challenge is being able to apply contract law to investments in human capital. For example, a firm may be encouraged or required to invest in training, but the reciprocal obligation of the employee to acquire additional human capital is not equally enforceable. The question is posed: “Will firms negotiate contracts that recognize the achieved and validated competence assets of workers?” The OECD concludes that a method of overcoming this problem is to provide market type incentives to labour by attaching value to the acquisition of human capital, i.e., by enabling both employers and employees to internalize the costs and benefits of investment in human capital acquisition.

The OECD has acknowledged Prior Learning Assessment as a promising area of innovation which provides growing potential “to turn measurement into evaluation as new labour market practices are combined with reform, education financing and closer ties between learning institutions and the workplace.”²²

9. Considerations for Future Policy Directions and Further Study

If governments intend to provide ePortfolio strategies to all citizens in Canada, the following questions need to be answered:

- Should the Government take leadership for a national ePortfolio strategy, or allow pockets of disconnected development?
- If a national ePortfolio strategy is not developed, will Canadians be left behind in a global economy where Europeans and others are developing such strategies?

²² Ibid p 59

- Do governments agree that there should be a lifelong ePortfolio for every citizen?
- Do the benefits of a national ePortfolio strategy justify the costs?
- How is governmental jurisdiction and responsibility for program delivery and funding determined?
- Is this service included in the move towards eGovernment and eGovernance?
- How will training issues be addressed?
- How will the answers to these questions shape the structure and governance of ePortfolio provision and use?
- How will ROI be measured and productivity gains be studied?

Policy development would also need to respond to specific questions such as:

- In Canada, what is “the problem” that a Learning Record, given all that we know about it, can address? What are the policy options or alternatives, in addition to a Learning Record, that address this problem? Is a Learning Record the best policy option?
- In Canada, what is “the problem” that a Learning Record, should address? What are the underlying values and assumptions of the problem and the “solution”? What are the implications and potential outcomes of this policy option?
- What would a Learning Record policy look like? Who has responsibility to develop and implement such a policy? How does it meet the following criteria?
 - Will the policy action result in a net gain in socioeconomic efficiency and can those who gain compensate the losers?
 - Will the policy action result in at least one person being better off and no persons being worse off?

- Will the policy action result in a gain in welfare for the members of society who are worst off?
- What is the current “policy” guiding the development and implementation of a Learning Record in Canada?

ePortfolio use is embedded in a complex set of national and provincial public policy issues.

Examples of these may be:

- changing responsibilities for training and labour market management
- national standards and standard setting
- national unity
- technological innovation
- economic globalization
- credential verification
- a lifelong learning culture
- human resources development²³

In order to contribute to the effectiveness, efficiency and equality of labour force development, ePortfolio policy must respond to the above questions and issues.

The ePortfolio must also make a positive contribution for labour market partners without having a negative effect on any partner. The labour market partners include: employers, workers and learners, providers of education and training products and services, accrediting and regulatory bodies and society represented by federal, provincial and territorial governments.²⁴

²³ CLFDB Learning Record Backgrounds, P35

²⁴ Barker, K.C. The portfolio and HRD Policy Goals. FuturEd White Paper, September 2003

10. Conclusions

As this brief overview of ePortfolio usage in Canada and around the world demonstrates, this method of communicating lifelong experiences and learnings is gaining awareness, particularly in the education and skilled labour sectors.

Although it is difficult at this stage to determine success in current ePortfolio activity due in part to the lack of consistency in design, purpose, and assessment, many organizations and governments have formulated and adapted their own ePortfolio programs with mixed outcomes. It would be valuable to have a broad assessment tool for these activities to define best practice and measure effectiveness for creators and users over the long term. Such a study would also address the question of whether potential benefits including ensuring that Canadians are not left behind in a global economy, justify the cost.

There are many commercial opportunities for ePortfolio frameworks. However, technical issues such as definitions of digital artifacts, interoperability, and open source versus proprietary platforms need to be addressed. Technical solutions must respond to the needs of the users.

To date, the most important use ePortfolio is a tool to help learners and those with whom they wish to share their accomplishments. It will, however, be necessary to engage in long term study to see if ePortfolios will become embedded in Canadian society.

APPENDICES

Appendix A

Consultations and Services - Individuals

Brown, Gerry	Association of Canadian Community Colleges
Cambridge, Darren	George Mason University
Carliner, Saul	Concordia University
Chang Barker, Kathryn	LifIA
Crowther, Ingrid	Athabaska University
Dodds, Ted	University of British Columbia
Donkers, P	Campus Canada
Geoghesan,	Microsoft Canada
Fortier, Guy	Government of Québec Department of Education
Hawkins, Lois	Alberta Learning
Hudson, Tony	Centre for British Teachers
Jafari, Ali	Indiana University
Kelders, Nellie	Catholic Principals Council of Ontario
Muirhead, Bill	University of Ontario Institute of Technology
Nicolle, Barry	CELEA
Parsons, Stephen	Nova Scotia Community College
Pinet, Richard	University of Ottawa
Porter, David	BC Campus
Rossiter, Jamie	CANARIE
Williams, Simon	Deputy Director and Education Marketing Coordinator, Education Marketing Unit, Department of Foreign Affairs and International Trade, Government of Canada
Shulman, Norm	Office of Partnership for Advanced Skills
Schamm, Phil	Ryerson University
Stacey, Paul	BC Campus
Stewart, Walter	SIGI Canada
Wise, Diane	Ontario Ministry of Training, Colleges and Universities

Consultations and Services - Businesses

ePortaro
Microsoft Canada
Minnesota Satellite and Technology
Nuventure
Task Stream

Consultations and Services – Websites

<http://www.beed.gov.bc.ca/graduation/portfolio>
<http://blogfolios.oh.ubc.ca/ePortfolios/>
<http://channelcontent.dal.ca/portfolio/>
<http://www.eportconsortium.org/>
<http://ePortfolio.research.iat.sfu.ca>
<http://eportconsortium.org/>
<http://electronicportfolios.com>
<http://efolio.project.mnscu.edu/>
<http://www.teachernet.gov.uk/development>
<http://www.teachers.work.co.nz/archive>
<http://www.theospi.org>
<http://www.wlv.ac.uk>
<http://www.yorku.ca/careers/eporfolioblog.html>

Consultations and Services - Papers and Articles

The Future of the ePortfolio - The Future with the ePortfolio. PowerPoint presentation at the World Future Society, Chicago 2005

Introducing the ePortfolio: The New Management of Learning presentation
Educating The Reflective Practitioner, SCHÖN, D., San Francisco: Jossey Bass Publishers, 1987

Papers from the FuturEd site:

- The Digital Learning Record (ePortfolio) Background Paper
- The Electronic Learning Record, an ePortfolio Environmental Scan: Assessment and Management of Skills and Knowledge
- The Electronic Learning Record: Assessment and Management of Skills and Knowledge - ePortfolio Research Report
- The ePortfolio and Human Capital Accounting
- The ePortfolio and HRD Policy Goals
- ePortfolio Quality Standards Discussion Paper
- ePortfolio Services for Adult Basic / Essential Skills - report for ABC CANADA
- ePortfolio Quality Standards 2004
- Consumer's Guide to ePortfolio Tools and Services

Appendix B

This document can be found at <http://campuscanada.ca/new/index.php?t=7&pcid=5&pid=39>

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Appendix C: European Memorandum of Understanding

Memorandum of Understanding: ePortfolio for all

The scope of the Europortfolio Memorandum of Understanding (MoU) is to set out the principles and guidelines that will govern the co-operation of the Parties hereto concerning Europortfolio, a Pan-European digital portfolio consortium promoting research and take-up on the ePortfolio.

Preamble

The worldwide emergence of the ePortfolio is transforming our current views on learning technologies. For the first time in the relatively short history of learning technologies we see the rise of a technology dedicated to valuing and celebrating the achievements of the individual, from nursery school to lifelong and life-wide learning, a technology providing a key link for individual learning, organisational learning and territorial learning (learning regions and cities). While some countries and regions are already providing the infrastructure required to offer ePortfolio access to all citizens, other regions and countries are considering it, and others have yet to discover its possibilities.

In order to provide the means for the ePortfolio to achieve its highest potential, Europortfolio will promote innovative practice and technology, and encourage the adoption of technical standards that will enable interoperability, between various ePortfolio systems and with other information systems. Interoperability will be the key to maximizing the number and quality of services offered to ePortfolio owners.

The Partners hereby agree as follows

General Principles

The following principles are adopted:

- The scope of Europortfolio is to achieve the goal “ePortfolio for all”, to make Europe the most competitive knowledge economy by 2010.
- To achieve its goal, Europortfolio will establish a European network of ePortfolio practitioners and will work in close cooperation with national and international organisations beyond Europe.
- Europortfolio will contribute to the development of open specifications and standards and will promote certification and compliance programmes.
- Europortfolio will encourage research into, and take-up of the ePortfolio in all dimensions of lifelong and life-wide learning.
- Europortfolio is open to all organisations committed to ePortfolio research, practice and technological development.

Mission

The mission of Europortfolio is to:

- **Promote innovative practice and technology**; use of the ePortfolio as one of the foundations of a learning economy and society. The link between the different dimensions of learning: individual, organisational, and community learning, based upon a lifelong and life wide repository and celebration of achievements.
- **Contribute to the definition of technical standards**; ensuring interoperability between ePortfolio and ePortfolio-related technologies and services.
- **Establish a reference platform** implementing state of the art standards in order to provide a benchmark and a test facility.
- **Update current occupational standards of competence** to promote the use of ePortfolios as a foundation for forward-looking practice in the fields of education, training, human resource management and development.
- **Provide support to, and co-ordinate, European initiatives** with other national and international initiatives, sector-specific or cross-sector; facilitate the exchange of information among all the stakeholders involved in ePortfolio and ePortfolio-related initiatives; encourage European and international co-operation
- **Mobilize the human, financial, operational and technical resources** required to achieve its mission and create the conditions for a self-sustainable consortium

Contributing Members and Signatories

Organisations can join as Signatory or as a Contributing Member (Member)

Euro portfolio Contributing Members and Signatories are organisations, public, private and voluntary. Although only organisations can join Europortfolio, individuals who are interested in contributing to Europortfolio may do so by joining one of the Europortfolio Member organisations.

A Member or a Signatory may resign from membership of Europortfolio at any time. No refunds of prior investments will be made in such cases. Only members in good standing will be able to use the services provided by the consortium.

Benefits for Contributing Members and Signatories

Europortfolio provides the environment and support services to create and develop communities of practitioners organised per sector, theme or research domain. Europortfolio organises conferences (international and national), seminars, leads and contributes to European and international projects.

Europortfolio <i>Contributing Members</i> benefits	Europortfolio <i>Signatories</i> benefits
<ul style="list-style-type: none"> ○ full access to the Europortfolio knowledge base (standards and draft specifications, working papers, conference proceedings, tools, products, etc.) ○ support in using and implementing the outcomes of Europortfolio activities, products and services in their own organisation and communities ○ register their staff on the Europortfolio developers network and special interest groups (privacy, competencies, etc.) ○ contribute to and orientate the activities and work in progress on standards and standards-related issues in collaboration with standard (CEN-ISSS, ISO, etc.) and specification bodies (European IMS, HR XML, etc.) ○ contribute to the strategic direction of Europortfolio and influence future developments, elect representatives to the Europortfolio Steering Committee and Technical Board ○ receive full recognition for their involvement in all Europortfolio publications, activities, and presentations related to the public release and dissemination of Europortfolio activities and documents ○ use the Europortfolio logo to demonstrate their support of the goals of Europortfolio and for their own marketing 	<ul style="list-style-type: none"> • privileged access to ePortfolio information – newsletter, portal, partner search • privileged access to pilot programmes and events

Membership fees and resources

The fee for Europortfolio Contributing Members is:

- National or regional authorities, networks or organisations: 10,000 €
- Organisations with a turnover greater or equal to 5 million € 5,000 €
- Organisations with a turnover less than 5 million € universities, school districts: 1,500 €

In addition to Membership fees, the Consortium will contribute to the generation of additional resources to support projects for its Members that will result in a valuable and tangible contribution to the Europortfolio objectives through:

- response to call for tenders
- organisation of conferences or seminars.
- facilitation of the provision of services or products linked to ePortfolio

Management

Europortfolio operates as a consortium of partners linked by a consortium agreement.

The Steering Committee will control and monitor the management of Europortfolio and define the orientation of its policies. Before the first General Assembly, which will be held by the end of 2005, it has the power to nominate new Steering Committee delegates among the Members.

Europortfolio will also eventually include:

- An Advisory Committee to identify the needs of, and disseminate the results to, regional, national, European and international networks, other national or international ePortfolio consortia (several consortia already exist outside of Europe).
- A Technical Board to coordinate all technical activities, profile existing specifications and standards, and set up and monitor operations of the Europortfolio workgroups and pilot programmes.
- Working Groups, Special Interest Groups and National Committees to facilitate the identification of needs and dissemination of Europortfolio outcomes at a national, regional or sectoral level.

The task of the Secretariat is initially delegated to EIFEL, the co-ordinator of the Consortium, who will provide the support services to the Consortium, during the initial period of the Consortium. CETIS will chair the Technical Board.

The steering committee may decide to transform Europortfolio into a legal entity.

Founding Members

The Founding Members of Europortfolio are:

EIFEL, the European Institute for E-Learning, which is at the forefront of the ePortfolio movement in Europe, has as mission to support the continuing professional development of individuals and the transformation of organisations in order to enter the knowledge economy and society.

European Schoolnet: its mission is to help develop learning opportunities for young people across Europe through communication and information exchange at all levels. Its constituent members are 26 ministries of education, the European Commission, and ICT industry partners.

CETIS, the Centre for Technical Interoperability Standards, has already carried out a considerable amount of work on ePortfolios and represents UK Higher and Further Education on international educational standards initiatives such as IMS Global Learning Consortium, CEN/ISSS, IEEE, and ISO.

European IMS, a non-profit Dutch foundation established by IMS Global to promote standards and specification-based e-Learning in Europe.

Obligations

The signing of this Memorandum of Understanding does not constitute any legal rights or obligations other than the obligation by both parties to negotiate in good faith on the objectives of this Memorandum.

Agreements to that effect shall be negotiated separately and accepted by the legal representatives of the parties to this Memorandum.

The MoU should be signed on behalf of an organisation or company by an authorised representative empowered to sign such documents and morally bind the signatory organisation.

MoU Version 1.0, October 2004