

Detailed Planning Proposal
Creation of a Canadian Virtual Health Library (CVHL)

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1 Introduction

The proposed Canadian Virtual Health Library (CVHL) is a national network of health libraries collaborating to deliver services to health professionals¹ and to realize efficiencies through resource sharing. The CVHL creates value and contributes to improved health care and health promotion by making readily accessible, high quality health information and evidence universally available to Canadian health care practitioners and health professionals for decision-making, policy and program development, research, continuous learning and professional development. The CVHL contributes to the effective and efficient operation of Canada's health care system by ensuring equitable access to health information and by optimizing the use of resources through coordination of existing services across the country.

The CVHL will operate a virtual network, an inter-organizational collaboration of existing health libraries, information and knowledge networks, non-profit organizations, and professional associations across Canada. The plan proposes a phased approach, starting with a group of partners and gradually adding members and expanding services in response to demand from clients and as revenue permits. The program will initially be funded by a mix of public and private sector resources, with a goal of self-sustainability in three years, and be administered by a coordinating office.

The CVHL will have two core components, a bilingual health information portal for Canadian health professionals and coordination of a national licensing program for electronic health information resources.

The bilingual web portal will provide easy access to resources by health professionals. The portal would link to member libraries and information networks, and other key national information portals and repositories. The portal will be the gateway to the labyrinth of resources available through the network - recognizing user access rights regardless of the entry point, providing context and tools to guide users to the most relevant information. Among other services, providing access to licensed databases and e-resources, links to relevant open access health sciences web sites, current "hot topics" literature syntheses, e-forms for making information requests, training and resource guides. Health professionals will be able to access the portal through their home institution or through membership in a participating professional association.

The national health information licensing program will coordinate and administer Canada-wide licenses to a core set of health information resources (also referred to as 'content') on behalf of private and public sector libraries, and knowledge and information service providers who choose to participate in the CVHL. The program will target licensing of a set of core health information content that will be accessible via the portal to all Canadian health professionals. National joint licensing will ensure the availability of health information consistently across the country, fill gaps where little or no content is currently provided, expand and complement the electronic information resources currently available and realize improved value for money through economies of scale and common procurement.

The Canadian Health Libraries Association / Association des bibliothèques de santé du Canada (CHLA/ABSC) has completed Phase 0 of Canada Health *Infoway's* (CHI) investment project lifecycle. An environmental scan of international and Canadian virtual health library initiatives, a feasibility study to assess the viability and potential for long term sustainability of the proposed CVHL, and a readiness

¹ The target client groups for CVHL services are physicians, nurses, pharmacists, allied health professionals and health administrators, program planners, public health researchers and community health workers.

assessment to determine the state of preparedness of the projects' stakeholders to proceed to the next phase were completed.

This document presents a proposal to implement the CVHL, together with the other founding Partners. .

2 Project Scope and Objectives

The following diagram presents an overview of the process and activities undertaken and proposed for development of the entire project.



Figure 1: CVHL Development Process

The Feasibility Study concluded that with appropriate funding, the project as envisaged is viable. The Readiness Assessment indicated that the projects' proponents are ready to proceed to detailed design and planning for the development of the virtual portal and for the development of an information content strategy.

The Feasibility Study and Readiness Assessment recommended that Canada Health Infoway help advance the formation of the CVHL. The focus of this Phase is to engage with additional identified funding Partners to establish a network organization, to conduct detailed business and technology planning, and to prepare launch plans. Specifically, to

1. Participate on the CVHL Board/Steering committee to lead the establishment of the network and identify a Project Leader to work full time on implementation of the CVHL. The Project Leader would be a paid position, reporting to the Board, or the chair(s).
2. Develop:
 - 2.1. A funding strategy which will include identifying members' contribution of resources including funds/content/services; allocating resources to investigate and secure future sources of funding, business development opportunities and/or prepare bids; including a comprehensive search of funding resources and actively pursuing different options
 - 2.2. A process for identifying new potential stakeholders and a strategy to ensure involvement of all potential Partners/stakeholders,
 - 2.3. A definition of the operating principles and processes. A strategy for evaluating CVHL outcomes, effectiveness and value for money, and formal plans to involve clients and up-to-date beneficiary/user consultations.

3 Approach

The CHLA/ABSC proposes to organise the work in Phase 1 in three streams of activity scoped as follows:

Stream One: Stakeholder Engagement and Network Formation

Stream Two: Technology Strategy (CVHL Portal Design), and

Stream Three: Content (Information Resource) Development Strategy

Project Plans for each stream can be found in Section 9 of this Proposal. The work will be carried out by three teams comprised of both contracted and stakeholder resources. Each team will have its own project plan and project manager. Coordination between the three streams will be managed by the overall Project Leader.

Stream One: Stakeholder Engagement and Network Formation.

The findings and recommendations of the Readiness Assessment clearly indicate the requirement to fully engage stakeholders, identify founding Partners and obtain the broad-based commitment of potential members to the development of the CVHL. As part of the transition phase immediately following Phase 0, major stakeholders in the "Government and Research" and "Professional Association" sectors were approached (a list of stakeholder sectors and organizations can be found in Annex A of the Feasibility Study and Readiness Assessment).

To date, a major funding Partner, the Canadian Institutes of Health Research (CIHR), has indicated the potential for multi-year funding upon successful completion of their granting process. That funding is proposed to be:

- \$400,000 for Year 1
- \$200,000 for Year 2
- \$100,000 for Year 3

The Canadian Nurses Association (CNA) and the Canadian Association of Occupational Therapists have together committed \$4,000 for the first year of operations. The Canadian Partnership Against Cancer

(CPAC) has offered to promote the CVHL through their communication vehicles and, upon implementation of the CVHL, to commit the funding they currently invest in their content sources to the CVHL (a \$50,000 value). Finally, the Canada Institute for Scientific and Technical Information (CISTI) has offered to house the CVHL.

In order to fully implement the CVHL, the Feasibility Study estimated that an annual minimum operating budget of \$570,000 was required, primarily to support staffing, as facilities are committed from CISTI and content will be leveraged from member providers (e.g. health sciences libraries, information service providers, library networks), who have for some time indicated their support for the initiative.

This Proposal is to seek the remaining Year 1 funding (i.e. \$170 – 200,000) from Canada Health *Infoway*. Engaging additional stakeholders will involve the development of a more detailed Engagement and Communication Strategy (ECS), building on that developed during the transition phase following Phase 0. The ECS describes the plan to identify key Partners and stakeholders and defines the value propositions that will attract the commitment and future ongoing funding from stakeholder groups. This stream of activity will also involve development of the detailed governance model, funding strategy, and hiring of the Project Leader.

Stream Two: Technology Strategy (CVHL Portal Design)

The key component of the CVHL service strategy is an information web-based information Portal through which clients will access CVHL-provided information sources and links to resources and services throughout the country. The portal will be bilingual, customizable to individual preferences and enable real-time access to a librarian. Portal functionality will include an authentication mechanism capable of recognizing individual access rights and directing the user to appropriate resources, regardless of the location of the resources or the user.

The focus for stream two is the detailed design of the web portal solution and, in particular the specification of the authentication solution. The work will involve identification and assessment of technologies and solutions in use by provincial and regional networks, requirements gathering, solution design, and application development strategy, cost estimates for development and ongoing maintenance and implementation plan. The Canada Institute for Scientific and Technical Information (CISTI) has committed a part-time information technology staffing resource gratis, and recommended that this person leverage any additional CISTI staff resources required, to enable building of the portal.

An important aspect of the work will be the identification of technical standards and integration requirements and opportunities with the Electronic Health Record systems.

Stream Three: Content (Information Resource) Development Strategy

The CVHL will coordinate and administer (identify, negotiate, procure) Canada-wide licenses to a core set of health information resources on behalf of private and public sector libraries, and knowledge and information service providers who choose to participate in the CVHL. A list of suggested titles is contained in Annex B of the Feasibility Study and Readiness Assessment. In April 2009, a proof-of-concept license arrangement was negotiated with Wiley, the publisher of the Cochrane Library of evidence-based resources. The Public Health Agency of Canada (PHAC) provided one year behind-the-scenes funding for it, the result of which is that the Cochrane Library is available to all Canadians free of charge until December 2009.

The focus for activity in stream three is detailed definition and planning for the acquisition of additional licenses for electronic information resources. The work will include requirements gathering, definition of information resource selection criteria, financial analysis, development of the negotiating strategy,

procurement plan and preliminary schedule. A plan for content deployment will be developed and integrated into the technology strategy.

4 Service Delivery Model

The CVHL will virtually link local and provincial library services to enable tailored, rapid response for health professionals at the point of need, and to ensure equitable access to a core set of evidence-based information resources throughout the country. In addition, the CVHL will work in partnership with professional associations and non-profit organizations that have developed portals, resources and tools to facilitate access to the core information resources for their members. CVHL will enhance the visibility and accessibility of these services and resources and assist in ensuring that licensing and resource sharing agreements provide the best possible value for all health professionals.

Operations and Activities

The CVHL will have a National Coordinating Office (NCO) whose role will be to:

In Years 1 to 3:

Coordinate core content licensing:

- Coordinate and negotiate purchase and funding agreements to leverage existing investments, maximize group buying power, and avoid unnecessary duplication of resources; collaborate with existing libraries, resource centers, associations and agencies to develop and enhance content; and establish standards and protocols for e-resource selection, licensing and access.

Manage the information portal:

- Design, implement, operate and maintain a bilingual portal through which the NCO, local, regional and specialty libraries and health professionals can access and share information; develop an interface and navigation tools that consolidate and provide for easy identification, access to and retrieval of open access resources; and an authentication mechanism for licensed resources.

Develop strategies to support knowledge translation, to encourage the application and integration of new research results into health care policy development and delivery.

In Year 4:

Coordinate network activities

- Identify and leverage existing local and regional resources to ensure equitable national access, supporting local and regional libraries, facilitate the development of common service standards and coordinating service improvements
- Provide core library services to supplement those services provided locally, and for those individuals with no other recourse, including literature search and question and answer services; document delivery services, training programs and curricula to support literature search, retrieval and appraisal skills; support the development, publication and

distribution of literature reviews and syntheses of available evidence on key issues and will conduct user needs assessments, usability tests and service evaluations

5 Assumptions

Canada Health Infoway is willing to participate as a founding Partner and to participate on the CVHL Board

There are no legal impediments to establishing a CVHL organisation.

The CVHL will not require the collection of personal information that would be subject to privacy legislation. In the event that it is discovered that such information is required, a Privacy Impact Assessment will be conducted.

6 Constraints and Dependencies

The success of the project will depend upon:

- The willingness of CHLA/ABSC members and other committed stakeholders to provide team resources, information and expertise as required.
- The timely availability of stakeholder decision-makers and authorised representatives to participate in consultations.

7 Proposed Governance and Staffing Model

CHLA/ABSC and the founding Partners will comprise the Board/Steering Committee of the CVHL and will direct and oversee its activities. Those stakeholders who have financially contributed less than \$5,000 may be invited to sit on a Working/Advisory Group of the CVHL Board, as may others whom the Board determines it is important to involve.

A Project Leader will be assigned full time and will be responsible for managing the work in Stream One, and to oversee, coordinate and integrate the work of the other two streams. The Project Leader will have experience in facilitating the formation of multi-agency network organisations, significant project management experience and knowledge of the services and technologies involved in the acquisition and delivery of electronic information, and knowledge of the Canadian health care and public health systems.

A Project Manager will be assigned full time to manage the work in Stream Two. The project manager will have significant experience in information technologies as well as the design and development methods related to the work, project management experience and the ability to manage a team of individuals located throughout the country.

A Project Manager will be assigned full time to manage the work in Stream Three. The project manager will have knowledge and experience in selection and procurement of electronic health information, facilitation

skills, license negotiation strategies, project management and the ability to manage a team of individuals located across the country.

A Project Coordinator, reporting to the Project Leader, will be assigned full time to administer, coordinate, track and prepare progress reports on the work of the three streams, facilitate communications and support the Project Leader in organising stakeholder consultations and manage project funds.

Project teams with the appropriate skills will be identified by participants.

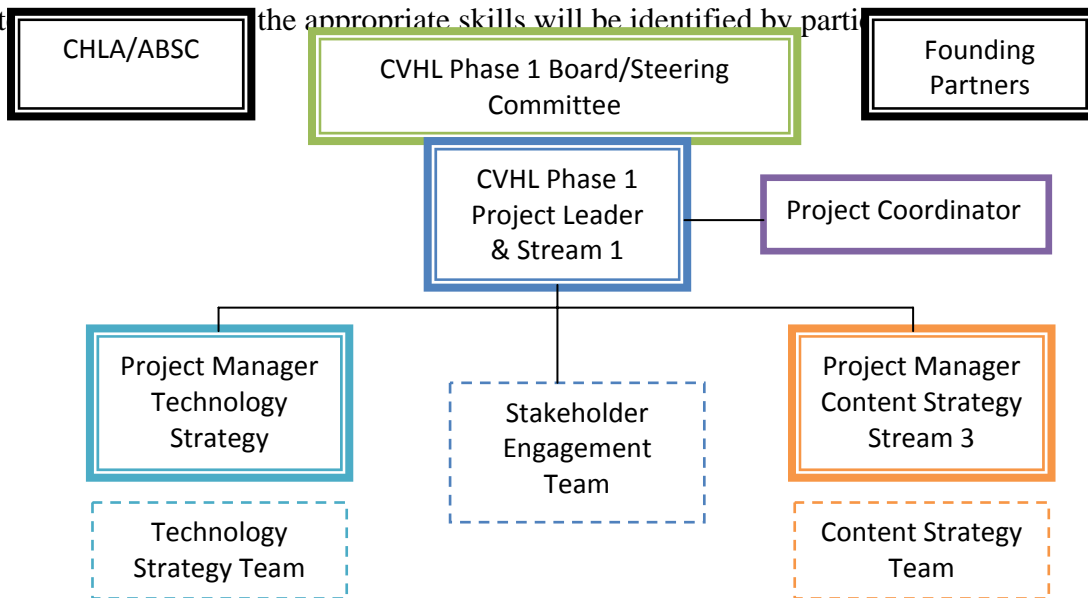


Figure 2: Project Team Structure

8 Project Plan with High Level Proposed Timelines

ID	Task Name	Duration	Start	Finish	3rd Quarter			4th Quarter			1st Quarter			2nd Quarter			3rd Quarter		
					Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug
1	Stream 1: Stakeholder Engagement and Business Planning	88 days?	Tue 9/1/09	Thu 12/31/09															
2	Governance	88 days?	Tue 9/1/09	Thu 12/31/09															
3	Develop Governance Model	14 days?	Tue 9/1/09	Fri 9/18/09															
9	Develop Stakeholder Engagement Strategy	15 days?	Mon 9/14/09	Fri 10/2/09															
15	Refine/Define Funding model	11 days?	Mon 10/5/09	Mon 10/19/09															
21	Validate Governance Model	5 days?	Mon 9/21/09	Fri 9/25/09															
24	Governance Documentation	16 days?	Mon 9/28/09	Mon 10/19/09															
29	CVHL Facility	21 days?	Mon 10/19/09	Mon 11/16/09															
34	Hire Project Leader	14 days?	Tue 9/1/09	Fri 9/18/09															
37	Develop CVHL performance measures	34 days?	Mon 11/16/09	Thu 12/31/09															
41	Operations	36 days?	Mon 11/2/09	Mon 12/21/09															
42	Hire Project Managers	10 days?	Tue 12/1/09	Mon 12/14/09															
45	Develop a 3-5 year integrated business plan	36 days?	Mon 11/2/09	Mon 12/21/09															
66	Stream 2: Information Technology Strategy (Web Portal Design)	120 days?	Mon 1/4/10	Fri 6/18/10															
67	Initiation	50 days?	Mon 1/4/10	Fri 3/12/10															
68	Identify project sponsor	21 days?	Mon 1/4/10	Mon 2/1/10															
73	Create project planning team	20 days?	Mon 1/4/10	Fri 1/29/10															
75	Engage planning team	20 days?	Mon 1/4/10	Fri 1/29/10															
79	Create high-level portal specifications, including those associated with EHR integration	20 days?	Mon 1/4/10	Fri 1/29/10															
80	Identify portal branding and look-and-feel	20 days?	Mon 1/4/10	Fri 1/29/10															
81	Engage portal developer	27 days?	Mon 1/11/10	Tue 2/16/10															
86	Develop detailed configuration (conceptual, logical, and physical) design and functional specifications	18 days?	Wed 2/17/10	Fri 3/12/10															
88	Develop Portal usage measures	8 days?	Wed 2/17/10	Fri 2/26/10															
90	Execution	59 days?	Mon 3/15/10	Thu 6/3/10															
91	Hardware and Software	59 days?	Mon 3/15/10	Thu 6/3/10															
96	Create and communicate project status/progress	5 days?	Mon 4/26/10	Fri 4/30/10															
97	Operations documentation	40 days?	Mon 4/5/10	Fri 5/28/10															
101	Evaluate portal prototype	11 days?	Mon 4/26/10	Mon 5/10/10															
105	Deployment	26 days?	Mon 5/10/10	Mon 6/14/10															
106	Deploy portal	5 days?	Mon 5/10/10	Fri 5/14/10															
108	Develop a support solution	10 days?	Mon 5/17/10	Fri 5/28/10															
111	Engage stakeholders and content owners	10 days?	Mon 5/31/10	Fri 6/11/10															
112	Conduct training	10 days?	Mon 5/31/10	Fri 6/11/10															
113	Portal launched	1 day?	Mon 6/14/10	Mon 6/14/10															
114	Close	3 days?	Wed 6/16/10	Fri 6/18/10															
115	Conduct project debrief and Lessons Learned	3 days?	Wed 6/16/10	Fri 6/18/10															
116	Close project and terminate developer agreement	1 day?	Fri 6/18/10	Fri 6/18/10															
117	Stream 3: Content Development (Health Information Resources) Strategy	261 days?	Tue 9/1/09	Tue 8/31/10															
118	Initiation	49 days?	Tue 9/1/09	Fri 11/6/09															
119	Identify project sponsor	1 day?	Fri 9/4/09	Fri 9/4/09															
120	Create Project Charter and Project Plan	44 days?	Tue 9/1/09	Fri 10/30/09															
130	Seek Sponsor and Board validation/approval of Charter and Project Plan	5 days?	Mon 11/2/09	Fri 11/6/09															
131	Project Charter and Plan approved	1 day	Fri 11/6/09	Fri 11/6/09															
132	Execution/Acquisition	95 days?	Mon 2/1/10	Fri 6/11/10															
133	Acquire content	36 days?	Mon 2/1/10	Mon 3/22/10															
141	Plan content deployment	60 days?	Mon 3/22/10	Fri 6/11/10															
149	Deployment	52 days?	Mon 6/21/10	Tue 8/31/10															
150	Deploy content on portal	40 days?	Mon 6/21/10	Fri 8/13/10															
154	Engage and communicate with stakeholders	5 days?	Mon 7/26/10	Fri 7/30/10															
155	Conduct training	10 days?	Mon 8/2/10	Fri 8/13/10															
156	Content launched	1 day?	Tue 8/31/10	Tue 8/31/10															
157	Monitor and analyze portal usage	1 day?	Tue 9/1/09	Tue 9/1/09															
158	Close	17 days?	Mon 8/9/10	Tue 8/31/10															
159	Hand-over to team leads	10 days?	Mon 8/16/10	Fri 8/27/10															
160	Develop Board communication criteria	5 days?	Mon 8/9/10	Fri 8/13/10															
161	Close project phase	1 day?	Tue 8/31/10	Tue 8/31/10															

9 Detailed Project Activities, Tasks and Deliverables

9.1 Stream One: Stakeholder Engagement and Network Formation

Objectives: To engage stakeholders, complete the detailed planning work required to establish the legal entity to operate the CVHL and develop a three year business plan.

ID	Task Name
1	Stream 1: Stakeholder Engagement and Business Planning
2	Governance
3	Develop Governance Model
4	Research models
5	Develop roles, responsibilities, and authority of the Board
6	Identify and define committees and sub-committees
7	Define roles, responsibilities, and authority of committees and sub-committees
8	Governance Model documented
9	Develop Stakeholder Engagement Strategy
10	Refine and/or identify and document stakeholder categories
11	Develop composition/membership
12	Develop and/or refine communications plans
13	Develop and/or refine value propositions
14	Stakeholder engagement strategy developed.
15	Refine/Define Funding model
16	Define membership model and strategy
17	Define membership categories and funding expectations
18	Define composition/membership
19	Define responsibilities, authority, and funding
20	Membership model and strategy developed.
21	Validate Governance Model
22	Validate and gain consensus
23	Governance Model validated/approved and operational.
24	Governance Documentation
25	Validate and refine the CVHL Vision and Scope
26	Develop by-laws and policies
27	Create high-level operating policies
28	Governance documentation reviewed and/or developed.
29	CVHL Facility
30	Identify requirements
31	Research options and locations
32	Negotiate and secure contract
33	Facility contract signed
34	Hire Project Leader
35	Develop position description, responsibilities, authority, and accountability statements
36	Project Leader hired
37	Develop CVHL performance measures
38	Develop metrics to monitor Board, Finance, and Project Leader performance
39	Monitor and analyze metrics
40	Performance metrics developed and operational

41	Operations
42	Hire Project Managers
43	Develop position description, responsibilities, authority, and accountability statements
44	Project Managers Hired
45	Develop a 3-5 year integrated business plan
46	Business Plan
47	Validate and refine business plan
48	Board validation/approval
49	Business Plan approved and operational.
50	Fund Raising/Financial sustainability plan
51	Develop plan
52	Board validation/approval
53	Fundraising plan approved and operational.
54	Implementation Plan
55	Develop detailed plans
56	Board validation/approval
57	Implementation Plans approved.
58	Communications and Training Plan
59	Develop plans
60	Board validation/approval
61	Communications and Training Plans approved
62	Launch Plan
63	Develop plan
64	Board validation/approval
65	Launch Plan approved

9.2 Stream Two: Technology Strategy: CVHL Portal Design

Objective: To prepare detailed design and implementation plans for the development of the CVHL portal, including the authentication solution and options for integration with EHRs.

ID	Task Name
66	Stream 2: Information Technology Strategy (Web Portal Design)
67	Initiation
68	Identify project Sponsor
69	Create project Charter and Project Plan
70	Estimate budget
71	Sponsor and board validation/approval
72	Project charter and plan approved
73	Create project planning team
74	Document planning team structure and reporting
75	Engage planning team
76	Create portal Governance structure and policies
77	Sponsor validation
78	Portal governance structure and policies validated and operational
79	Create high-level portal specifications, including those associated with EHR integration
80	Identify portal branding and look-and-feel
81	Engage portal developer
82	Develop RFP and vendor evaluation criteria
83	Communicate RFP
84	Review responses
85	Developer engaged
86	Develop detailed configuration (conceptual, logical, and physical) design and functional specifications
87	Specifications developed
88	Develop Portal usage measures
89	Develop measurement strategy and integrate with portal design
90	Execution
91	Hardware and Software
92	Develop detailed requirements
93	Purchase, install, and test
94	Develop security and authentication solutions
95	Hardware and software installed and operational
96	Create and communicate project status/progress
97	Operations documentation
98	Develop portal policies
99	Request portal development documentation from developer
100	Develop end-user training materials
101	Evaluate portal prototype
102	Testing
103	Planning team approval
104	Prototype approved
105	Deployment
106	Deploy portal
107	Final build testing
108	Develop a support solution
109	Document support needs
110	Support solution developed
111	Engage stakeholders and content owners
112	Conduct training
113	Portal launched
114	Close
115	Conduct project debrief and Lessons Learned
116	Close project and terminate developer agreement

9.3 Stream Three: Content (Information Resource) Development Strategy

Objectives: To define the requirements, selection methods and scope of CVHL content; to develop negotiation strategy and procurement plan.

ID	Task Name
117	Stream 3: Content Development (Health Information Resources) Strategy
118	Initiation
119	Identify project sponsor
120	Create Project Charter and Project Plan
121	Create project planning team
122	Develop a content procurement plan and schedule
123	Develop content selection requirements and criteria
124	Create content specifications requirements
125	Develop a procurement plan for Year 1
126	Develop high-level procurement plans for subsequent years
127	Estimate budget
128	Estimate Year 1 content pricing
129	Estimate content pricing for Years 2 and beyond
130	Seek Sponsor and Board validation/approval of Charter and Project Plan
131	Project Charter and Plan approved
132	Execution/Acquisition
133	Acquire content
134	Develop negotiation strategy
135	Identify preferred contract purchasing terms
136	Contact content vendors for pricing estimates
137	Evaluate estimates
138	Perform options analysis
139	Seek Sponsor and Board validation of options
140	Content approved and purchased
141	Plan content deployment
142	Develop content deployment strategy
143	Create prototype portal
144	Test prototype
145	Develop stakeholder communications strategy
146	Develop end-user training materials
147	Develop content development policies
148	Identify structure and processes for ongoing content maintenance
149	Deployment
150	Deploy content on portal
151	Load final content
152	Test final content
153	Integrate with other work stream activities
154	Engage and communicate with stakeholders
155	Conduct training
156	Content launched
157	Monitor and analyze portal usage
158	Close
159	Hand-over to team leads
160	Develop Board communication criteria
161	Close project phase

10 Cost Estimates

Stream	Item	Estimate	Total
1. Stakeholder Engagement and Network Formation			220,000
	Professional Services		
	Project Lead	100,000	
	Project Coordinator	60,000	
	Workshop Facilitator	10,000	
	Researcher (funding)	25,000	
	Legal Services	3,000	
	Materials (communications, translation services)	5,000	
	Travel & Telecommunication	17,000	
2. Technology: CVHL Portal Design			245,000
	Professional Services		
	Project Manager	90,000	
	Business Analyst	80,000	
	Web Designer	50,000	
	Architect	20,000	
	Travel & Telecommunication	5,000	
3. Content Development			105,000
	Professional Services		
	Project Manager	70,000	
	Consultant	30,000	
	Travel & Telecommunication	5,000	
TOTAL			\$570,000