



Project Report: Achieving Value for Money Kelowna and Vernon Hospitals Project



November 2008

Purpose of this Document

Before entering into a public Private Partnership, Partnerships BC works with its clients to undertake an analysis of the value for money expected over the life of the partnership. Value for money is a broad term that captures both quantitative factors, such as costs, and qualitative factors, such as service quality and protection of public interests.

Value for money is one of six key principles guiding public sector capital asset management in British Columbia. The others are:

1. Sound fiscal and risk management
2. Strong accountability in a flexible and streamlined process
3. Emphasis on service delivery
4. Serving the public interest
5. Competition and transparency

Since 2002, these principles have guided the B.C. public sector's approach to acquiring and managing assets such as bridges, roads and health care facilities. Ministries and other public bodies such as health authorities are encouraged to consider all available options for meeting their service objectives. Under the Province's Capital Asset Management Framework, options are analyzed and, after considering the qualitative and quantitative advantages and disadvantages of each, the one that overall best meets service delivery needs and makes the best use of taxpayers' dollars is chosen.

In some cases, the best option may be traditional procurement – where assets are purchased entirely with taxpayer supported finance and operated exclusively by the public sector. In other cases, agencies may find innovative ways to meet their service needs without acquiring capital assets. In all cases, agencies are publicly accountable through regular budgeting, auditing and reporting processes.

In all of its procurement processes, including public private partnership agreements, the Province is committed to a high standard of public disclosure to ensure accountability. This report describes the rationale, objectives and processes that led to the use of a public private partnership, and the need for the Kelowna Vernon Hospitals project, giving the public a clear sense of how and why the decision was reached to proceed with that option. It explains how value for money was measured and how it is expected to be achieved in the context of current market conditions. It compares key aspects of the final agreement to other options considered for the project. It also describes the benefits of the project as a whole.

For more on the Capital Asset Management Framework, go to www.fin.gov.bc.ca/tbs/camf.htm

For more on public Private Partnerships in B.C., go to www.partnershipsbc.ca

Partnerships BC in conjunction with the Interior Health Authority, is accountable for the contents of this report, including the reasonableness of facts, assumptions and professional opinions that have been presented.

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1. Executive Summary and Highlights

The Interior Health Authority (IHA) has established plans and secured resources to meet its goals and strengthen its role as a health care leader in British Columbia (B.C.) and to meet a number of challenges it faces. These include growing demand for modern, high quality health care and inadequate aging facilities.

As part of IHA's vision to build more patient care for the Southern Interior of B.C., the Kelowna and Vernon Hospitals (KVH) project includes a new Patient Care Tower at Kelowna General Hospital (KGH), a new University of British Columbia Okanagan (UBCO) Clinical Academic Campus and parkade at KGH, and a new Patient Care Tower at Vernon Jubilee Hospital (VJH), which will provide more state-of-the-art facilities and services to meet the growing needs for health care in the region.

The KVH project will be delivered using the public private partnership (PPP) delivery model. However, there are additional project elements that are required to support the KVH project, such as a site pre-load at KGH. These additional project elements will be procured using the traditional delivery model as a series of projects over the 2008-2012 timeframe.

The total project capital cost is \$432.9 million¹; the capital cost of project components being delivered using the partnership delivery model is fixed at \$382.8 million, and the remaining being delivered traditionally is \$50.1 million.

Procurement Decision

A thorough analysis of a variety of procurement options, including both traditional and partnership delivery methods, showed project objectives and patient needs can best be met by jointly procuring the projects at KGH and VJH and taking a Design Build Finance Maintain (DBFM) approach. Using this procurement method, the successful proponent designs, builds, finances and maintains the facilities.

Rigorous and Fair Selection Process

A rigorous and thorough competitive selection process was undertaken and resulted in the selection of Infusion Health – a consortium of companies, each with distinct roles and responsibilities – as the Preferred Partner. An independent Fairness Advisor confirmed the validity of the process.

Partnership Agreement Highlights

Under the PPP agreement, Infusion Health will build the new Patient Care Tower and UBC medical school building and parkade at KGH, and a new Patient Care Tower at VJH. Infusion Health is responsible for completing and commissioning the new facilities by December 3, 2009 for the medical building and parkade at KGH, May 30, 2011 for VJH and by August 13, 2012 for KGH.

The capital cost of the PPP project is fixed at \$382.8 million. Once construction is complete, Infusion Health will receive an annual service payment for 30 years. Part of the annual service payment is to repay Infusion Health for designing, building and financing most of the capital cost of the project, and part of the annual service payment is for services such as physical plant maintenance, including major repairs and replacement of building elements. Actual payments will be made monthly and contingent upon service performance, facility availability and service quality. Deductions will be made for non-availability of the facilities or failure to achieve defined service quality levels. For the first full year of operations the annual service payment is \$23.9 million (Fiscal Year 2013/2014), assuming no deductions.

Infusion Health will provide a range of non-clinical facilities management services, and IHA will continue to be responsible for providing all clinical services, as well as food services, portering, security and house-keeping.

IHA will own the site and the new facilities at KVH and VJH.

1. The total project capital cost increased from when the project was first announced in 2007. The factors that led to this increase are described in Appendix 1.

Project Benefits and Innovations

The KVH project is a major initiative for IHA and the Province, combining extensive upgrades at KGH and VJH into a single project to enhance patient care, improve patient outcomes and achieve efficiencies. The project delivers numerous benefits and innovations to best meet the health care needs of Okanagan residents while delivering value for money to B.C.'s taxpayers. The project features modern new facilities, equipment, services and supporting infrastructure at both sites. Highlights include:

KGH

- A new six-storey, 33,500 square-metre Patient Care Tower comprised of general clinics, day surgery, diagnostic services, renal dialysis services, and specialized services, as well as a rooftop helipad, and full integration with the existing hospital;
- Two shelled-in floors for future patient beds;
- A new two-storey, 3,200 square-metre UBCO Clinical Academic Campus building, housing a 180 seat lecture theatre, distance education rooms, clinical skills rooms and library;
- A new multi-level parkade; and
- A modernized emergency department with expanded facilities and services on the ground floor of a new Patient Care Tower.

VJH

- A new seven-storey, 16,800 square-metre Patient Care Tower comprised of a new intensive care unit, a new expanded outpatient program, a separate outpatient (day procedure) entrance from upper parking lot, consolidated and centralized operating rooms, maternity and paediatrics ward with direct link to operating rooms;
- A modernized emergency department with expanded facilities and services with high visibility ground level access; and
- Two shelled-in floors for future patient beds.

KGH and VJH

- Provision of plant maintenance and related services for both new and existing facilities at KGH and VJH to be provided by the private partner. The private partner is accountable for building the new facilities and maintaining new and existing facilities in accordance with the terms of the Project Agreement.

Risk allocation

Under the traditional delivery model, project design, construction, operation and maintenance are rarely integrated and, as a result, the public sector retains significant risk. One of the key advantages of a PPP is the sharing of the burden of risk. For example, the public sector is better able to determine whether the design of a hospital meets a health authority's clinical functionality needs, and so retains that risk. Similarly, the private partner is better able to ensure the design will be cost-effective from an operational and maintenance perspective over the facility's lifecycle, and so accepts that risk.

Achieving Value for Money

Value for money is a broad term that captures both quantitative factors, such as costs, and qualitative factors, such as service quality. Partnerships BC looks at a broad range of factors in determining whether a project offers value for money to taxpayers, including comparison of the final agreement to other benchmarks – in this case, the expected results of a hypothetical traditional delivery model (public sector comparator), and the expected results of the actual partnership delivery model.

Partnerships BC and IHA analyzed the net present cost of the project and compared it to the net present cost of the public sector comparator. Together, Partnerships BC and IHA determined that the net present cost of the KVH project, delivered traditionally, is an estimated \$468.1 million. The final agreement with the private partner, Infusion Health, has a net present cost \$442.7 million. **Thus, using conservative assumptions, in financial terms, the negotiated deal is expected to achieve value for taxpayers' dollars of \$25.4 million.**

2. Project Background, Rationale and Objectives

Project Background

Both KGH and VJH are administered by IHA and play critical roles in health care delivery in the southern interior of B.C.

KGH is the Central Okanagan's primary acute care health facility and, along with the Royal Inland Hospital in Kamloops, is a tertiary referral hospital offering high-level, specialty medical care to the region's residents. Of the total hospital gross floor area, 69 per cent is over 30 years old, and the 15 per cent is 65 years old. The buildings were constructed over the 68 years from 1939 to 2000, with the exception of the new parkade completed in 2006. Examples of KGH's vital health services include emergency medicine, cardiology, oncology, paediatric chemotherapy, obstetrics and geriatrics. KGH also provides tertiary services for trauma patients, those with multi-systems failure, and patients requiring acute dialysis, vascular surgery, thoracic surgery and neurosurgery.

VJH was constructed in 1947 with numerous subsequent additions. It is one of four Service Area Hospitals in IHA, and one of two in the Okanagan Health Service Area, serving residents in Vernon and the North Okanagan with high quality, core medical and specialized surgical patient care. VJH provides a variety of valuable health services, including medicine and surgery, psychiatry, maternity and paediatrics.

While both KGH and VJH provide strong health care services to Okanagan residents, opportunities remain to better serve the expanding needs of the region. A January 2007 business case identified the pressures leading to the need for change and making the case for investment to replace and expand the aging infrastructure at both KGH and VJH. IHA identified the construction of two new Patient Care Towers at both KGH and VJH as the preferred solution. Project approval and funding was subsequently announced by the Province in May 2007. This step was followed by a two-stage procurement process which culminated in a signed project agreement with Infusion Health in August 2008.

The KVH project will be delivered using the Design Build Finance Maintain (DBFM) partnership delivery model, financed through contributions from IHA, the North Okanagan and Columbia Shuswap Regional Hospital District, the Central Okanagan Regional Hospital District, and debt and equity financing provided by the private partner. Other elements of the project required to support the KVH project will be traditionally procured as a series of projects over the 2008-2012 timeframe.

The focus of this report is to describe the project rationale, objectives and processes that led to the use of a public private partnership for the KVH project.

Project Rationale: The Need for Change

A team of architects, engineers, analysts, and representatives of IHA and Partnerships BC prepared a business case to consider major improvements to the hospitals. The business case articulates the overall broad project objective as the need to enhance patient care, improve service efficiency and patient flow, through building new state-of-the-art medical facilities that will incorporate the latest in global health care innovations and design. These new facilities will be fully integrated with the existing facilities at KGH and VJH, and will modernize and consolidate the delivery of outpatient services, and diagnostic and treatment services. These new facilities also include new emergency departments so that KGH and VJH can deal more effectively with emergency room pressures.

Specifically, the business case identifies several critical areas of need:

KGH

- Aging facilities: Nearly 70 per cent of KGH's gross floor area is over 30 years old, and 15 per cent is 65 years old. Configurations do not support efficient patient flows or staff workflows;
- Emergency Department capacity issues: The KGH Emergency Department is facing considerable pressure to accommodate rising demand, and the

existing layout is insufficient to handle increasing volumes. The current department's flexibility in dealing with a growing range of patient care issues has diminished since the facility was built 17 years ago;

- Demographic pressures: The population in the service areas is growing and aging, creating increased demand for services and driving the need for investment. Additionally, the pattern of use of the services is shifting to reflect increasing provision of outpatient and day-care services.
- Design and functional limitations: There are five distinct but physically connected buildings that make up the KGH site. The buildings are becoming less functional over time and have numerous constraints preventing the integration of modern clinical technologies and efficiencies; and
- Expansion constraints: The KGH site is fully occupied by buildings and parking facilities; however, many structures are single storey and low rise, offering opportunities to densify the site.

VJH

- Aging facilities: VJH is over 60 years old and facilities, including the emergency room, are outdated. Configurations do not support efficient patient flows or staff workflows;
- Demographic pressures: The population in the service areas is growing and aging, creating increased demand for services and driving the need for investment. Additionally, the pattern of use of the services is shifting to reflect increasing provision of outpatient and day-care services.
- Outdated surgical services: VJH has only four operating rooms, built in 1947, which cannot accommodate increasing volumes or new technologies;
- Limited Outpatient Services: Presently outpatient services are scarce and scattered throughout the facility creating operational inefficiencies. As well, the existing space limits expansion of outpatient care activities.
- Design and functional limitations: Emergency facilities are undersized and operating rooms and the critical and intensive care unit cannot accommodate growing patient volumes and new technologies. Fortunately, there is capacity for future building growth at the VJH site.

Project Objectives

The KVH project is expected to best meet the health care needs of Okanagan patients while delivering value for money to British Columbia's taxpayers. Initiated by the IHA Board of Directors, the project aligns with the IHA vision *"to set new standards of excellence in the delivery of health services in the Province of British Columbia"*, and mission, *"to promote healthy lifestyles and provide needed health services in a timely, caring and efficient manner, to the highest professional and quality standards."*

Working with focus groups comprised of clinical and executive leaders, IHA established key project themes and planning principles for the design and operation of the new facilities, including:

- User-friendly, with particular acknowledgement of the needs of the elderly, who are both patients and visitors;
- Culturally sensitive, recognizing the needs of the large and diverse Aboriginal communities in the area and residents of non-Canadian heritage; and
- Non-institutional, using natural light and lighting, colour, sound, and way-finding measures to support an attractive, comfortable environment for patients, staff and visitors.

Facilities and operations must also:

- Be efficient, optimizing the use of staff and technology and providing opportunities for reduced hospitalization now and in the future;
- Be healthy and safe "green" buildings to support better health outcomes, improve environments for staff and patients, and maximize energy efficiency;
- Recognize the synergies for patients and staff, fostering patient independence and the opportunities for consultation across disciplines; and
- Be ready for the future, providing adequate capacity, flexibility and technological infrastructure to maximize opportunities for health improvement and patient and staff satisfaction in the years ahead.

Hospital-specific objectives include:

KGH

- Consolidate, expand and modernize outpatient services and programs currently dispersed throughout KGH;
- Increase capacity and functionality of outpatient services;
- Establish a clinical academic centre at KGH;
- Provide a dedicated renal outpatient/day unit;
- Increase surgical capacity and provide modern operating rooms with new technology and sufficient space; and
- Provide a fully reconfigured, larger emergency department.

VJH

- Consolidate and modernize outpatient services;
- Expand and modernize emergency department services to meet demand and provide appropriate levels of care;
- Modernize operating rooms and increase capacity to meet growing patient needs;
- Expand and modernize Intensive Care and Coronary Care Unit facilities to address the needs of an aging population;
- Modernize maternity and paediatric services; and
- Expand and modernize central sterilization rooms.

The Project Scope

The project scope includes:

- A six-storey, 33,500 square-metre Patient Care Tower at KGH comprised of general clinics, a day surgery, outpatient services, renal dialysis services, and specialized services, as well as a rooftop helipad, a bridge link to the existing hospital, a two-storey, 3,200 square-metre UBCO Clinical Academic Campus and parkade;
- A modernized KGH emergency department with expanded facilities and services on the ground floor of a new Patient Care Tower;
- A seven-storey, 16,800 square-metre Patient Care Tower at VJH, including outpatient services, an emergency department, an intensive care/cardiac care unit, a maternity/paediatrics centre, a surgical suite with operating and recovery rooms and central supply areas, and infrastructure to accommodate future expansion capacity; and

- Full site facilities management, meaning the private partner is responsible for managing physical plant maintenance across both sites, providing a seamless integration of fully functioning systems at both old and new KGH and VJH facilities over the term of the Project Agreement. These services include Physical Plant and Facilities Maintenance, Utility Management, Help Desk, parking lot and ground maintenance.

Public Health Care Delivery

All medical and clinical services will continue to be provided under the universal, publicly funded health care system, consistent with the Canada Health Act. Patients will use Care Cards to obtain service, as in other public health care facilities in B.C., and will not pay for health care services that are medically necessary and covered by the Medical Services Plan.

Procurement Options Analysis

As part of the procurement planning process, and consistent with the Capital Asset Management Framework, both traditional and partnership delivery models were considered. IHA, with assistance from Partnerships BC, selected the following procurement models for comprehensive analysis during the business case phase:

Design-Bid-Build (DBB): Using a DBB model, an architect would be retained by the owner to develop a detailed design (working drawings) for the facilities. Once the working drawings are complete, a tender call for a construction contract would be issued. The lowest qualified price would be selected and an industry standard fixed price construction contract would be used. The construction contractor would take responsibility for constructing the building to the specifications detailed in the working drawings developed for the owner by the architect. The owner would remain responsible for design errors and omissions and monthly progress payments to the contractor, whereas the contractor is responsible for all construction errors.

Once the building is completed, the owner would take possession and maintain and operate the asset for its

entire lifespan. The owner would retain key design and construction risks e.g., schedule, construction cost, and lifecycle maintenance costs. Since separate parties design, build and maintain the facility, cooperation between consultants and contractors can be less than ideal, and the opportunities for truly integrated design, construction and maintenance are not maximized.

Individual Procurement Design-Build-Finance-Maintain (DBFM): In this process, the owner would set out specifications, invites competitive proposals to design, build, finance and maintain the asset, and then remits an annual service payment to the private partner after the asset is delivered. The private partner would be responsible for designing, building and commissioning the facility, arranging the project financing for its portion of the capital cost, providing facilities management services and conducting life-cycle maintenance, and meeting defined hand-back requirements at the end of the project term.

Jointly Procured Design-Build-Finance-Maintain (DBFM): Under this option, the Kelowna and Vernon projects would combine in a single procurement. It is assumed that project design, proposal receipt and commercial negotiation would take place simultaneously, leading to a single contract award. Precise project construction sequencing is determined between the owner and the private sector partner to optimize costs while meeting the owner's specific milestone needs.

The business case analysis indicated that the two hospital projects should be procured using the DBFM model. Further, the analysis indicated that the two projects should be procured jointly as the best option. By jointly procuring the KGH and VJH projects as a single, larger project, it was expected that procurement timelines would be streamlined and economies of scale would be realized in terms of procurement, construction and operating costs. The combined effect of these economies was expected to improve the value for money proposition over procuring the Kelowna and Vernon facilities separately. Moreover, the combined project offered the potential of greater market interest, resulting in a more robust competition. This view was supported by formal market sounding.

The benefits of a joint DBFM procurement are:

- Innovation in design and construction;
- Transfer of construction period risks to the private sector;
- Transfer of operating period risks to the private sector;
- Expected construction cost efficiencies;
- An additional one percent capital (construction) efficiency allowance;
- Savings in overhead running costs for both the private sector and the public sector partners; and
- Opportunities for standardization in design across sites key to the pursuit of efficient and safe working practices.

Partnership Delivery Model

The partnership delivery model is designed to capture the strengths of both the public and private sectors, recognizing that private companies have always played an integral role in delivering public infrastructure such as bridges, highways and hospitals. Partnership agreements build on that history and clearly delineate areas of responsibility for both sectors over the life of a long-term, performance based agreement. The partnership delivery model has successfully been used to deliver health care and transportation infrastructure projects.

A PPP can provide better value for taxpayers' dollars, transfer risk to the private sector and add value through design and private sector innovation for projects with certain attributes. It ensures greater accountability for performance because ongoing payments by the public sector are conditional on the private partner continuously meeting performance standards.

The partnership model harnesses the respective strengths of the public and private sectors, and builds on the success of existing health care PPPs such as acute care hospitals, cancer centres, and long-term care and outpatient facilities. As well, the model clearly delineates areas of responsibility over the life of a long-term, performance-based agreement.

3. Competitive Selection Process and Results

Objectives

Three key objectives guided the KVH project competitive selection process:

1. Select a qualified, experienced partner to design, build, finance and maintain the facilities;
2. Implement a fair, timely and competitive procurement process; and
3. Achieve value for money.

The winning proponent, Infusion Health, was selected via a two-stage procurement process, including a Request for Qualifications (RFQ) and a Request for Proposals (RFP). Three teams responded to the RFQ and all three proponent teams were identified as having the development, construction and financial capacity to undertake a project of this size and complexity. Therefore, all three proponents were selected to participate in the RFP stage.

The table below lists the members of each of the proponent teams:

RESPONDENT	LEAD DESIGN	CONSTRUCTION	FINANCING	FACILITIES
Infusion Health	Stantec Consulting Ltd.	Graham Design Builders	Bilfinger Berger Project Investments SCA and John Laing Investments Ltd.	Black and MacDonald Ltd.
Okanagan Health Solutions	IBI + HDR Health Care	Acciona Dominion, Joint Venture (Acciona Infraestructuras, S.A.) (The Dominion Company Inc.)	Babcock & Brown Canada ULC and Acciona, S.A.	Honeywell Ltd. (Canada)
Plenary Group	B+H Architects	Stuart Olson	Plenary Group	Johnson Controls

The RFP invited the proponents to submit proposals to design, build, finance and maintain the KVH project. A draft Project Agreement was issued with the RFP; during bilateral/collaborative discussions proponents had the opportunity to identify issues or provisions for amendment. These collaborative discussions covered three broad areas: design and construction, commercial/legal and facilities management.

Below is the outline of the competitive selection process and the timeline of key steps in the process:

PROCUREMENT STAGE	TIMING	OUTCOME
Request for Qualifications (RFQ)	May 7, 2007 to June 4, 2007	The project was marketed locally, provincially and nationally. Submissions from three respondents were evaluated and three proponent teams were announced September 25, 2007: <ul style="list-style-type: none"> • Infusion Health • Okanagan Health Solutions • Plenary Health
Request for Proposals (RFP)	September 25, 2007 to March 13, 2008	The three proponents submitted proposals. This stage included bi-lateral, collaborative discussions with proponents.
Preferred Proponent Selected	May 8, 2008	After evaluation of the proposals, Infusion Health was selected as preferred proponent.
Project Agreement Finalization	Financial close achieved August 20, 2008 following negotiations between the project team and Infusion Health	A Project Agreement was signed by IHA and Infusion Health.
Project Development to Service Commencement	UBCO Clinical Academic Campus and parking facility: 2008 to 2009 VJH-Patient Care Tower and Treatment Building: 2008 to 2011 KGH-Patient Care Tower: 2008 to 2012	Detailed design and construction commences on the KVH project, with delivery expected as indicated.

RFP Process and Evaluation of Proposals

IHA appointed an Evaluation Committee which, with the assistance of area-specific Evaluation Teams, evaluated proposals using the evaluation criteria and the evaluation procedure as set out in the RFP. The Evaluation Teams consisted of individuals with specific expertise who were selected based on their ability to assist the Evaluation Committee with the evaluation.

There were three broad categories of evaluation criteria:

- Design and Construction
- Facilities Management
- Financial and Commercial

Evaluation Teams were assisted by individual technical experts who were appointed by the Evaluation Committee to provide critical technical advice. These technical experts specialized in a variety of industry specific areas, including: architecture, structural, civil, mechanical, electrical and geotechnical.

Following a rigorous evaluation process, the Evaluation Committee issued a report recommending Infusion Health as the Preferred Proponent. This recommendation was approved by IHA's Project Board.

Fairness Advisor

A Fairness Advisor, Joan M. Young of Heenan Blaikie LLP, monitored all evaluation activities and completed a fairness report that was presented to the Interior Health Authority's Board of Directors, prior to final ratification.

In the report, the Fairness Advisor noted that, ***“My impression was that the overall procurement process was open and transparent, in that the proponents received both a fair opportunity to bid on the project and that their proposals were fairly assessed.”***

Project Agreement Finalization and Financial Close

Among the significant accomplishments of the KVH project is how expeditiously the Project Agreement was completed, taking just 16 months from the RFQ issue date on May 7, 2007 to Financial Close on August 20, 2008.

Competitive Selection Costs

The cost of the competitive selection process is factored into the Value for Money analysis. The total competitive selection cost for the KVH project from approval of the business case to Financial Close is \$6.9 million, including partial compensation to unsuccessful proponents (\$800,000 in total). Other competitive selection expenses include the cost of developing output specifications, preparing procurement documentation, obtaining advice from external advisors, and preparing a project report.

Procurement Best Practices

As a centre of PPP procurement expertise, Partnerships BC continues to develop best practices. Partnerships BC continually transfers knowledge and experience gained from past projects to others, to improve efficiency and quality, and to streamline and expedite the procurement process to save time and money for the public sector. Partnerships BC is represented on the steering committees for all PPP projects to ensure the application of sound governance principles and best practices. For example, the use of certain procurement documents across health care projects, including the KVH project, has resulted in the reduction of certain procurement-related costs. Procurement expertise is shared with ongoing knowledge transfer between projects in the various sectors.



Vernon Jubilee Hospital Patient Care Tower Emergency Entrance

4. The Final Project Agreement

Project Costs

The project capital cost of the KVH and VJH facilities, to be delivered using the partnership delivery model, is fixed at \$382.8 million.

Profile of the Private Sector Partner

Infusion Health KVH Ltd. team has a significant presence in B.C., and is well represented locally for this project with offices in Kelowna and Vernon, B.C. Bilfinger Berger Project Investments Inc. and John Laing Investments are the joint lead developers and equity investors in Infusion Health KVH Ltd., and will jointly manage the project company, which also includes Graham Design Builders, Stantec and Black & McDonald. The members of the Infusion Health team are:

Bilfinger Berger Project Investments Inc. Bilfinger Berger Project Investments Inc. is the arm of Bilfinger Berger AG, a German company, responsible for the development, investment and management of concession projects throughout North America. From its North American headquarters in Markham, Ontario, and offices in Vancouver, B.C., Bilfinger Berger Project Investments Inc. is active in the transportation and social infrastructure partnership markets. The company has raised \$2 billion of capital for infrastructure in Canada as consortium leader and sole equity investor in the Kicking Horse Canyon Phase 2, Golden Ears Bridge, and Calgary and Edmonton Ring Roads projects.

John Laing Infrastructure is a specialist owner, operator and manager of public sector infrastructure assets in the United Kingdom and internationally, with Canadian activities headquartered in Toronto, Ontario, with an office in Vancouver. John Laing has approximately \$4 billion of investments on its balance sheet and is seeking growth in Canada. In February 2007, John Laing is the private partner for the Abbotsford Regional Hospital and Cancer Centre and the Gordon Leslie Diamond Health Care Centre in Vancouver.

Graham Construction and Engineering Inc. is part of an employee-owned, family of companies offering general contracting, project management, design-build and construction management services from offices across Canada and the Central and Pacific Northwestern United States. In B.C., the company has branch offices in Kelowna and Vancouver.

Stantec provides professional design and consulting services in planning, engineering, architecture, surveying, economics and project management. The company provides support to public and private sector clients in a diverse range of markets in the infrastructure and facilities sector at every stage, from initial concept and financial feasibility to project completion and beyond. Their services are offered through approximately 9,000 employees operating out of more than 125 locations in North America, including over 650 employees in B.C. from six offices.

Black & McDonald Ltd. is a Canadian company, established in 1921, providing expertise in technical construction and maintenance services to North America and selected global markets. Black & McDonald maintains offices throughout Canada, including Vancouver, B.C. with over 3,500 employees. Black & McDonald Ltd. has been a leader in the field of facilities maintenance and operation for 25 years.

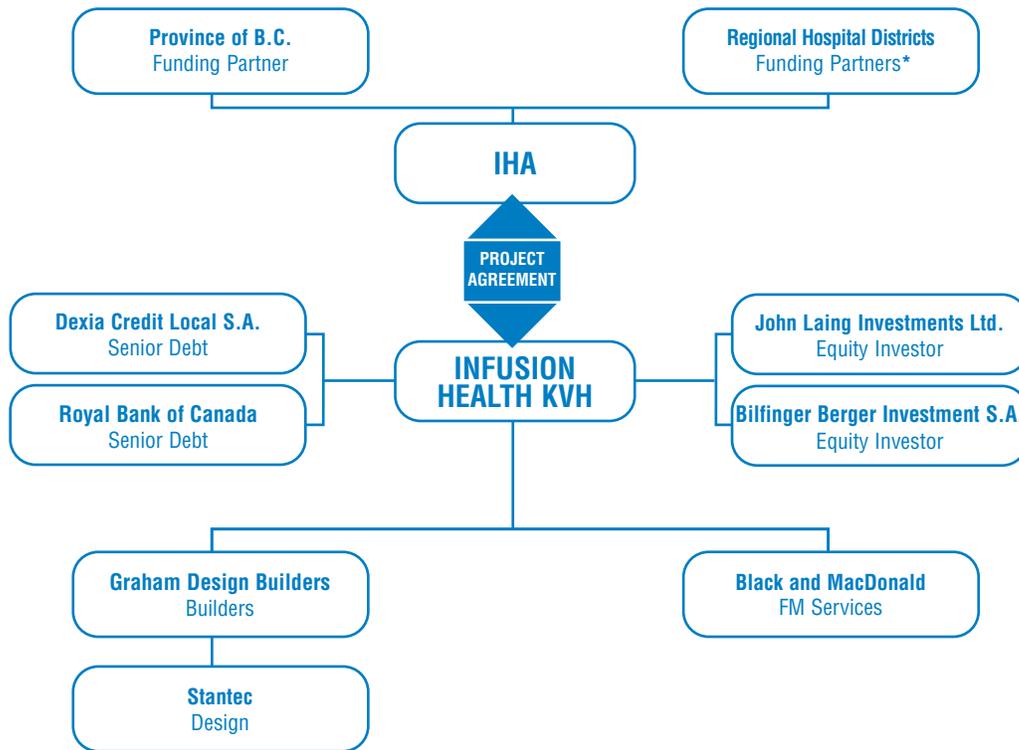
Royal Bank of Canada (RBC) and **Dexia Cr dit Local** will provide senior funding for the project. RBC provides personal and commercial banking, wealth management services, insurance, corporate, investment banking and transaction processing services on a global basis. RBC employs more than 70,000 full and part-time employees who serve more than 15 million personal, business, public sector and institutional clients through offices in Canada, the U.S. and 46 other countries. **Dexia Cr dit Local** is a European bank with more than 36,500 employees in 39 countries, including a branch in Canada where it has led various major infrastructure financings over the past three years. Dexia has one of the highest credit ratings in the banking industry.

Key Terms of the Project Agreement

Agreement Structure

The private sector partner has incorporated a single purpose entity, Infusion Health KVH, to enter into the project agreement and undertake the project. Infusion Health is responsible for the entire cost of the design, construction, operations and lifecycle maintenance of the Kelowna and Vernon facilities as defined in the Project Agreement. Infusion Health has been granted an exclusive license to undertake the construction of the project, and then a non-exclusive license to provide the services as defined in the Project Agreement.

The organization chart below depicts the relationship between the signatories to the final Project Agreement.



* North Okanagan Columbia Shuswap Regional Hospital District* Central Okanagan Regional Hospital District

Design and Key Features

Infusion Health is responsible for all aspects of the design, construction and commissioning of the new facilities. Project deliverables for KGH include a new six-storey, Patient Care Tower featuring a new emergency department four times larger than what is currently available, combined and consolidated outpatient services into one facility, provide modern operating rooms, appropriate links from the centre to the existing hospital, a rooftop helipad and two shelled floors for future inpatient beds; a multi-level

parkade; and a two-storey UBCO Clinical Academic Campus featuring 180 seat lecture theatre, distance education rooms, clinical skills rooms and a library. At VJH, Infusion Health is responsible for construction of a new seven-storey Patient Care Tower featuring outpatient centre space; maternity and paediatric units; surgical services; emergency department; cardiac care unit services; intensive/critical care unit; and two shelled floors for future inpatient beds.

Refinancing:

In the event Infusion Health refinances the initial senior debt amount (except in a limited number of specified circumstances, the purpose of which, in broad terms, is to ensure the continuance of the project rather than to receive a financial benefit), the resulting gain will be shared on a 50-50 basis between the public and private sectors. This also applies where equity is converted to senior debt on more favourable terms to those in place at Financial Close.

Construction Schedule

Infusion Health is responsible for completing and commissioning the following three project phases: KGH-UBCO Clinical Academic Campus and parkade by December 3, 2009; VJH Patient Care Tower by May 30, 2011; and KGH Patient Care Tower by August 13, 2012.

Ownership

IHA owns the KGH and VJH sites and facilities.

Facilities Management Services,

Infusion Health is required to provide facilities management services for the new facilities as well as for existing facilities at both KGH and VJH throughout the term of the Project Agreement. Management services for existing facilities will commence before completion of the new facilities.

Infusion Health is responsible for delivering the following Facilities Management services:

- General management services;
- Physical Plant services (facilities management, including life cycle requirements);
- Help desk services;
- Utility management services;
- Parking services; and
- Environmental and sustainability services.

Equipment

Infusion Health is responsible for designing and constructing the KGH and VJH facilities to accommodate specified equipment. IHA assumes the price and procurement risk for the majority of the specified equipment. Infusion Health coordinates the installation of equipment.

Term of the Contract

The Project Agreement term is 34 years. This includes a construction period and 30 years of operation from service commencement of the final phase (KGH Patient Care Tower), which is scheduled to be August 13, 2012. The contractual expiry date remains fixed regardless of when service actually commences – for example, any construction delays reduce the operating period while early delivery extends the operating period. At the end of the Project Agreement term, the facilities must be returned to IHA in the specified hand-back condition.

Performance-Based Payment Principles

Once construction is complete and occupancy permits are in place, IHA is responsible for paying Infusion Health annual service payments for 30 years. IHA is responsible for making monthly payments to Infusion Health based on performance, facility availability and service quality. Infusion Health’s performance will be continuously monitored throughout the operating period based on key performance indicators, and IHA may make deductions from the monthly payments if Project Agreement standards are not met.



Vernon Jubilee Hospital Patient Care Tower Interior

Adjustments to Payments

Annual service payments may be adjusted to reflect specific circumstances as defined in the Project Agreement, including:

- **Indexation:** A proportion of the annual service payment is fixed. Another proportion will increment annually in line with the Consumer Price Index (CPI). Finally, a proportion of the ASP, representing underlying labour costs, will increment annually in line with movement in a bundle of relevant collective agreement settlements.
- **Energy:** The annual service payment may be adjusted if Infusion Health fails to meet defined energy consumption targets for the facilities.
- **Change in Law:** If there is a discriminatory change in law, the annual service payment may be amended to leave Infusion Health in no better or worse position than if the change had not occurred.
- **Compensation Events:** If an event occurs that warrants compensation of Infusion Health, the amount may be provided by adjustment to the annual service payment.
- **Insurance:** Insurance during the construction and operational period will be placed with the Province's Health Care Protection Plan.

Risk Allocation Summary

Under the traditional delivery model, project design, construction, operation and maintenance are rarely integrated and, as a result, the public sector retains significant risk. One of the key advantages of a PPP is the sharing of the burden of risk. For example, the public sector is better able to determine whether the design of a hospital meets a health authority's clinical functionality needs, and so retains that risk. Similarly, the Private Partner is better able to ensure the design will be cost-effective from an operational

and maintenance perspective over the facility's lifecycle, and so accepts that risk. Some risks are shared, such as a relief event like an earthquake or flood. For every shared risk the project agreement stipulates how the risk will be allocated; for example, by providing thresholds for each party's responsibility for a certain risk. In the event of a difference in interpretation of the risk allocation, the dispute resolution mechanism applies.

The following table provides an overview of risk allocation for the project:

RISKS RELATING TO:	PUBLIC (IHA)	PRIVATE (INFUSION HEALTH)
Design and Construction		✓
Financing		✓
Schedule		✓
Maintenance		✓
Commissioning		✓
Lifecycle capital		✓
Lifecycle capital-existing	✓	
Geotechnical		✓
Systems and civil works integration		✓
Utility volume		✓
LEED ² Gold certification		✓
Ownership	✓	
Program delivery/ decision-making	✓	
Legislative change	✓	
Existing site conditions	✓	
Utility unit costs	✓	
Force Majeure	✓	✓
Changes in law	✓	✓
Relief event (e.g. fire)	✓	✓
Excusing event (e.g. police shut down facility)	✓	✓

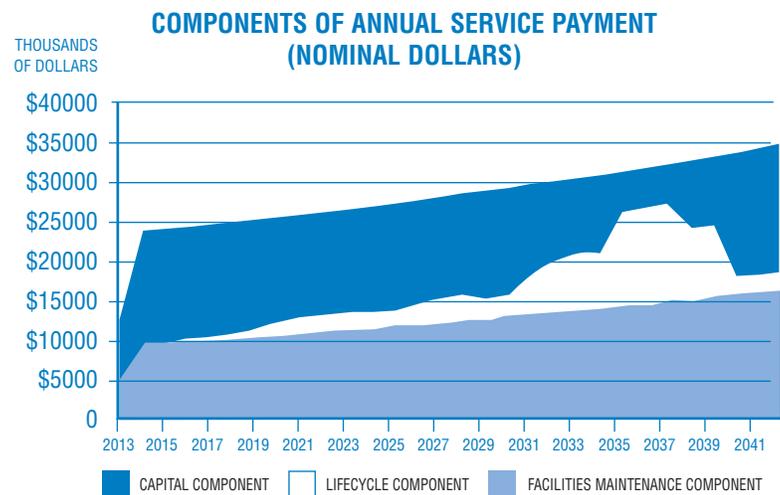
This risk allocation is supported by the following provisions in the Project Agreement:

- IHA begins making performance-based payments to Infusion Health only when an independent certifier confirms that the conditions for service commencement have been achieved.
- The expiry date of the Project Agreement is fixed, so any delays in completing construction will reduce payments to Infusion Health, providing a strong incentive for timely completion.
- Provisions are in place for payment reductions if Infusion Health does not meet agreed upon standards for facility operation and maintenance.

Financial Summary

IHA is responsible for making monthly payments to Infusion Health based on performance, facility availability and service quality. For the first full year of operations the annual service payment will be \$23.9 million (FY 2014), assuming no deductions.

The graph (to the right) demonstrates the anticipated annual service payment stream to Infusion Health over the term of the Project Agreement. The graph is expressed in nominal dollars, which assumes 2.5 per cent annual inflation for facility management services. Payment projections assume no penalties and no deductions.



Accounting Treatment

When the government began entering into PPP agreements, there was little in the way of guidance on accounting treatment for PPPs. The cost of the total contract was known; however, for accounting and reporting purposes, it was unclear how much of the total project cost should be allocated to capital costs and how much toward operating expense.

Previously, reporting on the capital cost of PPPs focused on construction costs as the means of allocating the contract amount between capital costs and operating expenses. The Office of the Comptroller General has established accounting guidelines for PPP projects which clarify that the costs allocated to capital must also include items such as interest during construction and project management costs. The total project capital value of \$432.9 million reflects this accounting treatment.

5. Ongoing Project Agreement Monitoring

The Project Agreement with Infusion Health includes checks and public interest safeguards to ensure project delivery, performance and high quality standards. Monitoring spans every phase of the project, from Financial Close through design and construction and operations and maintenance over the term of the agreement. There are a number of major phases in the project-monitoring schedule, with roles and responsibilities assigned to project participants at each stage.

Self Monitoring by the Partner

The project agreement is designed in a manner to motivate the partner to ensure delivery, performance and high standards of quality given the monetary consequences of not achieving these requirements.

Design and Construction Phases

IHA will oversee activities in this phase through its role as members of the Design and Construction Committee. Partnerships BC will provide support during these phases. In addition IHA representatives conduct monthly inspections and have full access to the construction site, drawings and specifications and report their observations to IHA. In addition, a site liaison official is responsible for proactively ensuring patients, visitors and the community are kept up to date and engaged on current and future project activities, including those involving clinical impacts, patient and vehicle flows, parking issues, and other matters.

Operations and Maintenance Phase

The Project Agreement stipulates that IHA must assign a representative to serve as a member of the Operations and Maintenance Joint Committee over the 30-year term of the partnership. The committee is a formal forum where parties consult and cooperate on all matters related to the facility during the operational term.

Project Reviews

IHA and the Ministry of Health Services are responsible for designing and conducting full project reviews in years 15 and 26 of the operational term.

Long Term Project Agreement Review

Partnerships BC will work with IHA and the Ministry of Health Services to design a process for reviewing the Project Agreement at appropriate intervals such as five, 10 and 15 years from the start of operations. The review process will enable the Province to establish whether the Agreement is functioning as intended, and whether the expected benefits have been realized.

Role of Project Office

IHA has established a Project Office responsible for leading project oversight and monitoring efforts. An experienced Project Officer, along with experts in design and construction, clinical services, facilities management services, and technical requirements, will serve full-time roles in the Project Office. The Project Office is responsible for reporting to an executive steering committee on all aspects of the KVH project, and is required to adhere to a detailed Project Implementation Plan based on Project Management Institute best practices.

To facilitate its mandate, the Project Office has access to key IHA departments, including Facilities; Design and Construction; Purchasing; Financial Management; Strategic Business Development; Risk; Human Resources and executive committees.

6. Project Benefits and Innovations

The design of the new facilities for the KVH Project combines global best practices in health care with Infusion Health’s design innovations and industry experience. The designs and features include:

KGH

- Modernized emergency department quadruple in size, with ground level accessibility and ambulance garage;
- New operating rooms;
- Two additional shelled-in floors for future inpatient beds;
- Concentration of day procedures in one large, new comfortable area for an optimal patient experience;
- Full integration with the existing hospital;
- Separate building to house UBCO Clinical Academic Campus, including a 180-seat lecture theatre.
- A new rooftop heli-pad;
- A new parkade;
- Vacated space in the existing emergency department and outpatient clinic leaves space for future patient care developments; and
- Medical student on-call rooms and lounge area within the Patient Care Tower.

VJH

- Expanded and modernized emergency department with high visibility ground level access;
- Consolidated and centralized new operating rooms;
- New maternity/paediatrics ward with direct link to operating rooms;
- Two shelled-in floors for future patient beds;
- Separate outpatient (day procedure) entrance from upper parking lot and new expanded outpatient program;
- Expanded and modernized facilities to provide a better patient experience and improved patient flows;
- Full integration with the existing hospital;
- New and more efficient central sterilization services;
- New ambulance garage; and
- Vacated space in current hospital will leave space for other programs and services.



Kelowna General Hospital Patient Care Tower Main Entrance

Facilities Maintenance

Full site facilities management is a further key feature of the KVH project, meaning the private partner is responsible for managing physical plant maintenance across both sites. Physical plant maintenance is a critical component of the partnership because it ensures the private partner is accountable for the provision of physical plant maintenance and related services for all facilities at both KGH and VJH, and for constructing and maintaining facilities in accordance with the Project Agreement.

- An integrated single physical plant maintenance service on each site;
- Consistent standards and services across the whole of both sites;
- A single help desk service for physical plant maintenance services;
- A single set of operational policies and processes across the sites; and
- Clarity of accountability for systems and services present throughout all buildings such as the fire alarm system, nurse call system, pipe work, and other systems.



Kelowna General Hospital Patient Care Tower

7. Achieving Value for Money

Value for money is a broad term that captures both quantitative factors, such as costs, and qualitative factors, such as service quality. Partnerships BC looks at a broad range of factors in determining whether a project offers value for money to taxpayers, including comparison of the final agreement to other benchmarks – in this case, the expected results of a hypothetical traditional delivery model, and the expected results of a hypothetical partnership delivery model.

Financial value for money is the difference between the net present cost of the annual service payments that will be paid to Infusion Health over the life of the Project Agreement and the expected net present cost of the capital cost, facility management and operating costs, lifecycle maintenance costs and transferable risk costs included in the reference project.

Based on the above, it was determined that the net present cost of the KVH project delivered traditionally is an estimated \$468.1 million. The final Project Agreement with the private partner, Infusion Health, has a net present cost of \$442.7 million. **Thus, using conservative assumptions, in financial terms, the final Project Agreement is expected to achieve value for taxpayers' dollars of \$25.4 million.**

The significant factors in creating this value for money include joint procurement; efficiencies from integrating the design, build and finance teams; and efficient transfer of risk.

Net present cost figures above were developed using a discount rate, which represent the cost of capital over time taking into account factors such as inflation and interest rates. The discount rate used for the calculation of value for money is 7.8 per cent. Sensitivity analysis of the discount rate showed that the net present cost of the Project Agreement would have been approximately \$21 million less than that of the public sector comparator if the discount rate was 50 basis points lower, and about \$29.3 million less if the discount rate was 50 basis points higher.

	Final Agreement	PSC
Capital Costs (includes RHD and IH)		\$256.9M
RHD and IHA Contribution to Capital Cost	\$178.6M	
Lifecycle Costs		\$44.8M
Facility Maintenance Costs		\$113.8M
Risk Adjustment	\$1.2M	\$33.5M
Competitive Neutrality Adjustment (includes GST, insurance and public sector procurement costs)	\$9.3M	\$19.1M
ASP Payment to Infusion	\$253.6M	
Total	\$442.7M	\$468.1M
Cost Differential	\$25.4M	
Percentage saving from PSC	5.7%	

NOTE: all numbers are NPC discounted at 7.8%

Additional Qualitative Benefits

As a result of the robust and competitive process to select a Private Partner to deliver the KVH project, there are a number of additional qualitative benefits that contribute to achieving value for money. These additional benefits are summarized below:

- *Stand-alone UBCO Clinical Academic Campus:* The private partner proposed an innovative new free-standing facility to house a UBCO Clinical Academic Campus at KGH. The school features a 180-seat lecture theatre, distance education rooms, clinical skills rooms and a medical library. The UBCO Clinical Academic Campus will serve as a centre for medical learning excellence and will enhance the status of KGH as a teaching hospital. This stand-alone solution was not an opportunity conceived of within the IHA Team prior to private partner participation through the DBFM model. In addition, the new facility and parkade will be delivered sooner than originally planned;
- *Physical Plant maintenance whole site, including existing and new facilities:* Physical plant maintenance is a critical component of the partnership because it ensures the private partner is accountable for the provision of physical plant maintenance and related services for all facilities at both KGH and VJH in accordance with the Project Agreement;
- *Competition and innovation:* The competitive nature of the bidding process encourages the private partner teams to develop innovative and cost effective solutions in all aspects of the project from design, construction and through to operations;
- *Schedule and cost certainty:* The private partner is only paid once the facility is available for use, thereby providing a financial incentive to complete the project on time and within budget;
- *Integration:* Because the private partner is responsible and accountable for the design and construction, long-term maintenance and rehabilitation of the facility, there are opportunities and incentives to integrate these functions in order to optimize performance of the facility over the duration of the project agreement; and
- *Lifecycle maintenance:* The private partner is responsible and accountable for ensuring the new facilities (not applicable to existing site facilities) are maintained and rehabilitated over the duration of the Project Agreement, with financial penalties for non-compliance.



Kelowna General Hospital Patient Care Tower

Appendix 1 – Project Changes

The KVH project team was able to identify and incorporate several improvements to the project during the planning, design and implementation phases following approval of the original business case in 2007. There are a number of factors that have resulted in additional benefits for Okanagan residents and taxpayers, while ensuring the project remained cost-effective and represents value for money for taxpayers. Changes include:

- Procurement Schedule: The release of the RFP was delayed by about four months;
- Project Schedule: The KGH construction schedule was extended by nineteen months and the VJH by seven months due to the complexity of buildings and challenging site conditions;
- Market and project pressures resulting in increased project cost:
 - o Rising cost of construction materials
 - o Increasingly tight labour market
 - o Increased size and capacity of facilities necessary to accommodate growing needs
 - o Requirement to pre-load KGH site due to soil conditions
 - o Added code requirements at VJH
- LEED Gold Certification: A new provincial policy was introduced in September 2007 requiring all major provincial capital projects to achieve LEED Gold certification;

- Facilities changes:
 - o The addition of a new, two-storey building, 3,200 square metre UBCO Clinical Academic Campus at KGH, housing a 180 seat lecture theatre, distance education rooms, clinical skills rooms and a library;
 - o A new multi-level parkade at KGH;
 - o The installation of two shelled floors for future patient beds at both the KGH and VJH Patient Care Towers, as well as expanded floor plates to accommodate site complexities and links to existing buildings and building profiles; and
 - o Enlarged floor plate for the third to sixth floors of the VJH Patient Care Tower to accommodate future capacity increases.

The project was originally announced in the spring of 2007 of a capital value of \$200.1 million. In September 2007, the capital value was revised to \$251.1 million. As a result of the changes described above, the final total capital cost has increased by \$181.8 million.



Kelowna General Hospital Patient Care Tower Ambulance Entrance

