



Value for Money Assessment

University of Ottawa Heart Institute Cardiac Life Support Services Redevelopment Project



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Ms. Jennifer Quinn
Infrastructure Ontario
777 Bay Street
Toronto, Ontario
M5G 2C8

Re: Value for Money Assessment – University of Ottawa Heart Institute Cardiac Life Support Services Redevelopment Project

Dear Ms. Quinn:

KPMG LLP (“KPMG”) has prepared the Value for Money (“VFM”) assessment for the University of Ottawa Heart Institute Cardiac Life Support Services Redevelopment Project (“Project”) at the Financial Close stage, in accordance with our letter of engagement with Infrastructure Ontario (“IO”) and IO’s methodology *Assessing Value for Money: A Guide to Infrastructure Ontario’s Methodology*.

The VFM assessment is based on a comparison of the total project costs at substantial completion for the Project under:

1. The traditional delivery approach, as reflected in the Public Sector Comparator (“PSC”) model; and
2. The Alternative Finance and Procurement approach (“AFP”), incorporating the Preferred Bidder’s proposed costs.

The VFM assessment was calculated using the following information (collectively the “Information”) within the VFM model:

- i. A Risk Matrix developed for IO by Altus Group and adapted by IO to reflect Project specific risks; and
- ii. Cost and other input assumptions extracted from the bid submitted by the Successful Bidder and other VFM model assumptions as provided by IO.

We have not audited or attempted to independently verify the reasonableness, accuracy or completeness of the Information.

Based on our understanding of IO’s VFM methodology, we can confirm that, the Information has been appropriately used in the VFM model, and that the VFM assessment demonstrates the AFP approach provides estimated cost savings of 10.4% in comparison to the traditional delivery approach.

Yours very truly

Will Lipson

KPMG LLP

Will Lipson

Partner

Toronto, Ontario

December 22, 2014



October 28th, 2014

Mr. Michael Inch
Vice President, Procurement
Infrastructure Ontario
777 Bay Street, 9th Floor
Toronto, Ontario M5G 2C8

Subject: RFP to Build and Finance University of Ottawa Heart Institute Cardiac Life Support Services Redevelopment Project RFP No. 13-403P

Dear Mr. Inch:

P1 Consulting was retained to perform fairness auditing services and provide an independent attestation on the RFP procurement process. Our mandate was to review and monitor the bid documents and communications, provide advice on best practices, review and monitor the evaluation and decision-making processes that are associated with the RFP to ensure fairness, equity, objectivity, transparency and adequate documentation throughout the evaluation process.

Infrastructure Ontario issued, in conjunction with University of Ottawa Heart Institute, a Request for Proposals to Build and Finance the Cardiac Life Support Services Redevelopment Project. The purpose of the RFP process is to select a general contractor to build and finance the Project.

The Project consists of approximately 146,000 square feet of new construction and 60,000 square feet of renovation space. The new facility will house Life Support Services Cardiac Imaging Services. The existing facility will expand and provide support spaces for the heart Catheterization/EP suite, surgical suite and the cardiac ICU.

In our role as Fairness Monitor, P1 Consulting made certain that the following steps were taken to ensure a fair and open process:

- Compliance with the requisite procurement policies and procedures and the laws of tendering for the acquisition of services relating to public sector procurement;
- Adherence to confidentiality of bids, and the evaluation process;
- Objectivity and diligence during the procurement process in order to ensure that it was conducted in an open and transparent manner;
- Proper definition and use of evaluation procedures and assessment tools in order to ensure that the process was unbiased;
- Compliance of project participants with strict requirements of conflict of interest and confidentiality during the procurement and evaluation processes;
- Security of information;
- Prevention of any conflict of interest amongst evaluators on the selection committee;

Mr. Michael Inch
October 28th, 2014
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- Oversight to provide a process where all bidders were treated fairly.

The Fairness Monitor actively participated in the following steps in the process to ensure that fairness was maintained throughout:

- Project kick-off meeting
- Review session of the draft RFP Documents
- Commercially Confidential Meetings with the Proponents
- Site and facility visits by the Proponents
- Review of the RFP Addenda
- Review of evaluation process and guideline
- Proposal receipt, bid evaluation and selection of the Negotiation Proponents
- The final step which we oversaw in the process, was the selection of the First Negotiations Proponent. A recommendation to the Evaluation Committee was made on September 19th, 2014 to approve PCL Constructors Canada Inc. as the First Negotiations Proponent.

As the Fairness Monitor for the **University of Ottawa Heart Institute Cardiac Life Support Services Redevelopment Project**, we certify that, at the time at which this report was prepared, the principles of fairness, openness, consistency and transparency have, in our opinion, been maintained throughout procurement process. Furthermore, no issues emerged during the process, of which we were aware, that would impair the fairness of this initiative.

Yours truly,

A handwritten signature in black ink that reads 'Jill Newsome'.

Jill Newsome
Lead Fairness Commissioner



Rendering of the University of Ottawa Heart Institute Cardiac Life Support Services Redevelopment Project



Courtesy of HDR Inc.

Project Highlights

The project will provide improved technological advancements to ensure continued access to high-quality, specialized cardiac services for residents in the Champlain Local Health Integration Network region.

New construction at the facility will:

- add four floors of state-of-the-art clinical and in-patient services
- expand support services such as biomedical engineering and information management services
- add approximately 146,000 square feet of space, housing life support services such as cardiac catheterization, cardiac surgery and the cardiac surgery intensive care unit

Redevelopment work at the existing facility will:

- include renovation of approximately 60,000 square feet of space
- provide support services for the heart catheterization/electrophysiology suite, surgical suite and the cardiac intensive care unit
- relocate and expand the cardiac imaging suite

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Summary

The University of Ottawa Heart Institute Cardiac Life Support Services Redevelopment Project supports the Province of Ontario’s long-term infrastructure plan to repair, rebuild and renew the province’s roads and highways, bridges, public transit, schools and post-secondary institutions, hospitals and courthouses in communities across Ontario.

Infrastructure Ontario plays a key role in procuring and delivering infrastructure projects, on behalf of the Province. When Infrastructure Ontario was created, its mandate included using an Alternative Financing and Procurement (AFP) method to deliver large, complex infrastructure projects. In June 2011, the Province expanded Infrastructure Ontario’s role to deliver projects of various sizes, including ones suitable for an AFP delivery model, as well as other delivery models.

The University of Ottawa Heart Institute Cardiac Life Support Services Redevelopment Project is being delivered under the Province’s AFP model.

The public sector retains ownership, control and accountability for the University of Ottawa Heart Institute.

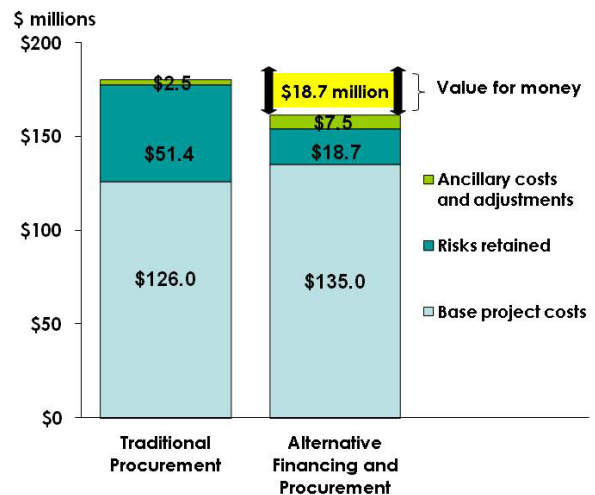
The purpose of this report is to provide a summary of the project scope, the procurement process and the project agreement, and to demonstrate how value for money was achieved by delivering the University of Ottawa Heart Institute Cardiac Life Support Services Redevelopment Project through the AFP process.

The value for money analysis refers to the process of developing and comparing the total project costs under two different delivery models expressed in dollar values measured at the same point in time.

Value for money is determined by directly comparing the cost estimates for the following two delivery models:

Model #1 Traditional project delivery (Public sector comparator)	Model #2 Alternative Financing and Procurement
Total project costs that would have been incurred by the public sector to deliver an infrastructure project under traditional procurement processes.	Total project costs incurred by the public sector to deliver the same infrastructure project with identical specifications using the AFP approach.

The cost difference between model #1 and model #2 is the estimated value for money for this project.



The value for money assessment of University of Ottawa redevelopment project indicates estimated cost savings of 10.4 per cent or \$18.7 million, by using the AFP approach in comparison to traditional delivery.

KPMG completed the value for money assessment. Their assessment demonstrates projected cost savings of 10.4 per cent by delivering the project using the AFP model, versus what it would have cost to deliver the project using a traditional delivery model.

P1 Consulting Inc. acted as the Fairness Monitor for the project. They reviewed and monitored the communications, evaluations and decision-making

processes associated with the University of Ottawa redevelopment project, ensuring the fairness, equity, objectivity, transparency and adequate documentation of the process. P1Consulting Inc. certified that these principles were maintained throughout the procurement process (see letter on page 3).

Infrastructure Ontario is working with the Ministry of Health and Long-Term Care to expand and renovate University of Ottawa Heart Institute, which will remain publicly owned, controlled and accountable.

Project description

Background

Ontario's public infrastructure projects are guided by the five principles set out in the provincial government's *Building a Better Tomorrow Framework*, which include:

1. public interest is paramount;
2. value for money must be demonstrable;
3. appropriate public control and ownership must be preserved;
4. accountability must be maintained; and
5. all processes must be fair, transparent and efficient.

University of Ottawa Heart Institute

The University of Ottawa Heart Institute is Canada's largest and foremost cardiovascular health centre dedicated to understanding, treating, and preventing heart disease. The University of Ottawa Heart Institute delivers high-tech care with a personal touch, shapes the way cardiovascular medicine is practiced, and revolutionizes cardiac treatment and understanding. The University of Ottawa Heart Institute builds knowledge through research and translates discoveries into advanced care. The University of Ottawa Heart Institute serves the local, national, and international communities as they pioneer a new era in heart health.

Project Scope

The project will expand the facility to accommodate the changing needs of the surrounding community. It will allow for continued access to high-quality, specialized cardiac services for residents in the Champlain Local Health Integration Network region.

New construction at the facility will:

- add four floors of state-of-the-art clinical and in-patient services;
- expand support services such as biomedical engineering and information management services; and
- add approximately 146,000 square feet of space, housing life support services such as cardiac catheterization, cardiac surgery and the cardiac surgery intensive care unit.

Redevelopment work at the existing facility will:

- include renovation of approximately 60,000 square feet of space;
- provide support services for the heart catheterization/electrophysiology suite, surgical suite and the cardiac intensive care unit; and
- relocate and expand the cardiac imaging suite.

The hospital will be built to the highest Ministry of Health and Long-Term Care standards for patient care and patient safety while being fully accessible.

Job Creation

The project will help provide economic stimulus by creating and supporting hundreds of jobs. At the peak of construction, it is estimated that 150 workers will be on site daily.

Competitive selection process timeline

The University of Ottawa Heart Institute Cardiac Life Support and Services redevelopment project underwent an open, fair and transparent procurement process to build and finance the project and PCL Constructors Canada Inc. submitted the proposal which delivers the best value. The procurement stages for the project were as follows:

September 16, 2013

Request for Qualifications

In 2013, Infrastructure Ontario and University of Ottawa Heart Institute issued a request for qualifications for the project, which resulted in five bidders being prequalified:

- Bondfield Construction Company Limited
- EllisDon Capital Inc.
- M. Sullivan & Son Limited
- PCL Ottawa Heart Institute 2014 Ltd.
- Pomerleau Inc.

March 21, 2014

Request for Proposals

A request for proposals (RFP) was issued to the pre-qualified proponents, setting out the bid process and proposed project agreements to build and finance the project.

Proposal submission

The RFP period closed on September 8, 2014. Four proposals were received. The bids were evaluated using the criteria set out in the RFP.

Preferred Proponent Notification

PCL Ottawa Heart Institute 2014 Ltd. was selected as the successful RFP proponent based on its proposed price and project schedule, in accordance with the evaluation criteria set out in the RFP.

November 27, 2014

Commercial and Financial Close

A project agreement between PCL Ottawa Heart Institute 2014 Ltd. and the University of Ottawa Heart Institute was executed.

December 2014 – fall 2019

Construction

During the construction period, the builder's construction costs will be funded by its lenders in monthly instalments based on the construction program set out by PCL.

Construction will be carried out in accordance with the project agreement. The project will be overseen by a joint building committee made up of representatives from Infrastructure Ontario and the University of Ottawa Heart Institute.

Completion and payment

PCL Ottawa Heart Institute 2014 Ltd. will be paid using both an interim completion payment and substantial completion payment, which is expected in fall 2019.

Project agreement

Legal and Commercial Structure

University of Ottawa Heart Institute entered into a project agreement with PCL Ottawa Heart Institute 2014 Ltd. (PCL), comprising of approximately 59 months of construction. Under the terms of the project agreement, PCL will:

- build the University of Ottawa Heart Institute redevelopment project;
- provide a financing package for the construction; and
- ensure that, at the end of construction, the building meets the requirements specified in the project agreement.

The University of Ottawa Heart Institute will be publicly owned and publicly controlled. The hospital will continue to be publicly funded and publicly administered – this is non-negotiable for the Government of Ontario and more importantly, for the people of Ontario.

Construction and completion risk

All construction projects have risks. Some project risks are retained in varying magnitude by the public sector. Examples of risks retained by the public sector under either the AFP or traditional model include planning, unknown site conditions, changes in law, public sector initiated scope change, and force majeure (shared risk).

Under the AFP model, some key risks that would have been retained by the public sector are contractually transferred to the private sector. On a traditional project, these risks, such as design coordination and resource availability, can lead to cost overruns and delays. Examples of risks transferred to the private sector under the AFP project agreement include:

Construction price certainty

PCL will redevelop the facilities at the University of Ottawa Heart Institute for a guaranteed maximum price of \$135 million, including financing costs. The builder's guaranteed maximum price for the hospital redevelopment may only be adjusted in very specific circumstances, agreed to in advance

and in accordance with the change order procedures set out in the project agreement.

Scheduling, project completion and delays

PCL has agreed to reach substantial completion of the University of Ottawa Heart Institute redevelopment project by fall 2019. The construction schedule can only be modified in very limited circumstances, in accordance with the project agreement.

Costs associated with delays that are the responsibility of PCL must be paid by PCL.

Design co-ordination

The project agreement provides that PCL is responsible for all design coordination activities to ensure that the facilities are constructed in accordance with the design.

Costs associated with design coordination that are the responsibility of the builder must be paid by the builder.

Construction financing

PCL is required to finance the construction of the project until it reaches substantial completion. The project agreement provides that the builder will be responsible for all increased financing costs resulting from any builder delay in reaching substantial completion. This shifts significant financial risk to the builder and is a strong incentive to prevent late delivery.

Commissioning and facility readiness

PCL must achieve a prescribed level of commissioning of the redeveloped facility at substantial completion and must co-ordinate the commissioning activity within the agreed-upon construction schedule. This ensures that the University of Ottawa Heart Institute will receive a functional building facility at the time payment is made.

Activity protocols

PCL and the consultants from the University of Ottawa Heart Institute will establish a schedule for project submittals by the builder, taking into account the time for review needed by the hospital's consultants.

This protocol mitigates against the builder alleging delay as a result of an inability to receive responses in a timely manner in the course of the work.

Change order protocol

In addition to the change order procedure set out in the project documents, Infrastructure Ontario's change order protocol with the University of Ottawa Heart Institute sets out the principles for any changes to the project work/scope during the construction period, including:

- requiring review and approval of change orders from the University of Ottawa Heart Institute;
- specifying the limited criteria under which variations will be processed and applied;
- timely notification of potential variations to Infrastructure Ontario;
- timely review by Infrastructure Ontario for owner-initiated scope changes;
- approval by Infrastructure Ontario for any variations that exceed pre-determined thresholds; and
- approval by Infrastructure Ontario when the cumulative impact of the variations exceed a pre-determined threshold.

In addition to the transfer of the above key risks to PCL under the project documents, the financing arrangement entered into between PCL and its lenders ensures that the project is subject to additional oversight, which may include:

- an independent budget review by a third-party cost consultant;
- monthly reporting and project monitoring by a third-party cost consultant;
- the requirement that change orders must be within the project contingency or funded by the University of Ottawa Heart Institute; and
- the requirement that prior approval be secured for any changes made to the project budget in excess of a pre-determined threshold.

Achieving value for money

For the University of Ottawa Heart Institute project, KPMG's value for money assessment demonstrates a projected cost savings of 10.4 per cent, or \$18.7 million, by using the Alternative Financing and Procurement approach, as compared to the traditional procurement approach.

KPMG was engaged by Infrastructure Ontario to independently assess whether – and, if so, the extent to which – value for money will be achieved by delivering this project using the AFP method. Their assessment was based on the value for money assessment methodology outlined in *Assessing Value for Money: A Guide to Infrastructure Ontario's Methodology*, which can be found at www.infrastructureontario.ca. The approach was developed in accordance with best practices used internationally and in other Canadian provinces, and was designed to ensure a conservative, accurate and transparent assessment. Please refer to the letter from KPMG on page 2.

Value for money concept

The goal of the AFP approach is to deliver a project on time and on budget and to provide real cost savings for the public sector.

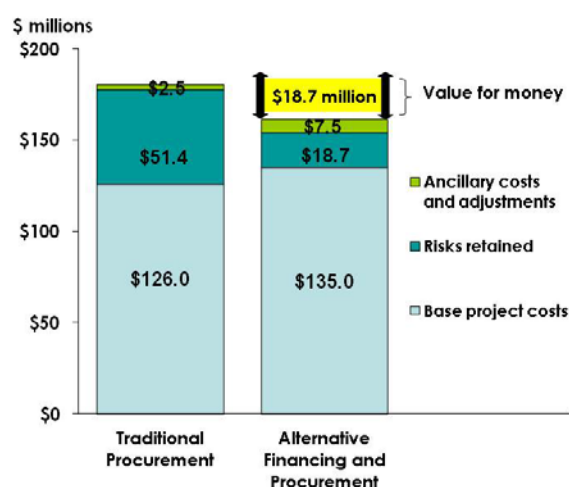
The value for money analysis compares the total estimated costs, expressed in today's dollars and measured at the same point in time, of delivering the same infrastructure project under two delivery models - the traditional delivery model (public sector comparator or "PSC") and the AFP model.

Model #1 Traditional project delivery (Public sector comparator)	Model #2 Alternative Financing and Procurement
Total project costs that would have been incurred by the public sector to deliver an infrastructure project under traditional procurement processes.	Total project costs incurred by the public sector to deliver the same infrastructure project with identical specifications using the AFP approach.

The cost difference between model #1 and model #2 is referred to as the value for money. If the total cost to deliver a project under the AFP approach (model #2) is less than the total cost to deliver a project under the traditional delivery approach (model #1), there is said to be positive value for money. The value for money assessment is completed to determine which project delivery method provides the greatest level of cost savings to the public sector.

The cost components in the VFM analysis include only the portions of the project costs that are being delivered using AFP. Project costs that would be the same under both models, such as land acquisition costs, furniture, fixtures and equipment, are excluded from this VFM calculation.

The value for money assessment is developed by obtaining detailed project information and input from multiple stakeholders, including internal and external experts in project management and construction project management. Components of the total project costs under each delivery model are illustrated below:



The VFM assessment of the University of Ottawa Heart Institute project indicates an estimated cost savings of 10.4 per cent, or \$18.7 million, by using the AFP approach in comparison to traditional delivery.

It is important to keep in mind that Infrastructure Ontario's value for money methodology does not attempt to quantify a broad range of qualitative benefits that may result from using the AFP delivery approach. For example, the use of the AFP approach will more likely result in a project being delivered on time and on budget. The benefits of having a project delivered on time cannot always be accurately quantified.

These qualitative benefits, while not expressly quantified in this value for money analysis, are additional benefits of the AFP approach that should be acknowledged.

Value for money analysis

For a fair and accurate comparison, the traditional delivery costs and AFP costs are present-valued to the date of financial close to compare the two methods of delivering a build finance project at the same point in time. It is Infrastructure Ontario's policy to use the current public sector rate of borrowing for this purpose to ensure a conservative and transparent analysis. For more information on how project costs are time-valued and the value for money methodology, please refer to *Assessing Value for Money: A Guide to Infrastructure Ontario's Methodology*, which is available online at www.infrastructureontario.ca

Base costs

Base project costs are taken from the price of the contract signed with PCL and include all construction and financing costs. The base costs between AFP and the traditional delivery model mainly differ as follows:

1. Under the AFP model, the private party charges an additional premium as compensation for the risks that the public sector transfers to them under the AFP project documents. In the case of traditional delivery, the private party risk premium is not included in the base costs as the public sector retains these risks.
2. The financing rate that the private sector is charged under AFP is higher than the financing

rate of the public sector and is not included in the traditional delivery base costs.

In the case of the AFP model, the base costs are extracted from the price agreed among the parties under the project agreement. For the University of Ottawa Heart Institute project, these were \$135 million.

If the traditional model had been used for the University of Ottawa Heart Institute project, base costs are estimated to be \$126 million.

Risks retained

Historically, on traditional projects, the public sector had to bear costs that go beyond a project's base costs.

Project risks are defined as potential adverse events that may have a direct impact on project costs. To the extent that the public sector retains these risks, they are included in the estimated project cost.

The concept of risk transfer and mitigation are keys to understanding the overall value for money assessment. To estimate and compare the total cost of delivering a project under the traditional delivery versus the AFP method, the risks borne by the public sector (which are called "retained risks") should be identified and accurately quantified.

Comprehensive risk assessment not only allows for a detailed value for money analysis, but also helps Infrastructure Ontario and the public sector sponsors to determine the party best able to manage, mitigate and/or eliminate the project risks and to appropriately allocate those risks under the project documents.

Under the traditional delivery method, the risks retained by the public sector are significant. As discussed on pages 11-12, the following are examples of risks retained by the public sector under the traditional delivery method that have been transferred under the project agreement to PCL:

- construction price certainty;
- scheduling, project completion and potential delays;
- design co-ordination;
- construction financing;
- schedule contingency;
- commissioning and facility readiness; and
- activity protocols.

Examples of these risks include:

- *Design coordination/completion:* Under the AFP approach, the builder is responsible for design coordination activities to ensure that the facility is constructed in full accordance with the design in the project agreement. The builder is responsible for inconsistencies, conflicts, interferences or gaps in these design documents, particularly in the plans drawings and specifications; and for design completion issues that are specified in these design documents but erroneously left out in the drawings and specifications.
- *Scheduling, project completion and delays:* Under the AFP approach, the builder has agreed that it will provide the facility for use by the University of Ottawa Heart Institute by a fixed date and at a pre-determined price. Therefore, any extra cost (financing or otherwise) incurred as a result of a schedule overrun caused by the builder will not be paid by the province, thus providing the builder a clear motivation to maintain the project's schedule. Further oversight includes increased upfront due diligence and project management controls imposed by the builder and the builder's lender.

Infrastructure Ontario retained an experienced, third-party construction consulting firm, Altus Helyar, to develop a template for assessing the project risks that the public sector relinquishes under AFP compared to the traditional approach. Using data from actual projects as well as its own knowledge

base, the firm established a risk profile under both approaches for infrastructure facilities.

It is this generic risk matrix that has been used for validating the risk allocation for the specific conditions of the hospital project.

Using the AFP model reduces these risks to the public sector. For example, had this project been delivered using the traditional approach, design coordination risks that arise would be carried out through a series of change orders issued during construction. Such change orders would, therefore, be issued in a non-competitive environment, and would typically result in a significant increase in overall project costs for the public sector.

The added due diligence brought by the private party's lenders, together with the risk transfer provisions in the project documents result in overall cost savings as these transferred risks will either be better managed or completely mitigated by PCL.

A detailed risk analysis of the project concluded that the average value of project risks retained by the public sector under traditional delivery is \$51.4 million. The analysis also concluded that the average value of project risks retained by the public sector under the AFP delivery model decreases to \$18.7 million.

For more information on the risk assessment methodology used by Infrastructure Ontario, please refer to Altus Helyar's Risk Assessment Template for BF projects, available at www.infrastructureontario.ca

Ancillary costs and adjustment

There are significant ancillary costs associated with the planning and delivery of a large complex project that vary depending on the project delivery method.

For example, there are costs related to each of the following:

- *Project management*: These are essentially fees to manage the entire project. Under the AFP approach, these fees will also include Infrastructure Ontario costs.
- *Transaction costs*: These are costs associated with delivering a project and consist of legal, fairness and transaction advisory fees. Architectural and engineering advisory fees are also incurred to ensure the facility is being designed and built according to the drawings and specifications.

The ancillary costs are quantified and added to both models for the value for money comparison assessment. Both project management and transaction costs are likely to be higher under AFP given the greater degree of up-front due diligence. The ancillary costs for the project under the traditional delivery method are estimated to be \$2.5 million as compared to \$4.8 million under the AFP approach.

An adjustment of \$2.7 million has been made under the AFP model. This adjustment is for the notional public financing costs resulting from interim payment to the builder. An interim payment will be paid to the builder when the new building is completed part way through the overall project. The notional public financing costs will cover the period between completion of the new addition, expected in early 2018, and the project substantial completion, expected in fall 2019.

For a detailed explanation of ancillary costs, please refer to *Assessing Value for Money: A Guide to Infrastructure Ontario's Methodology*, which is available online at www.infrastructureontario.ca

Calculating value for money

The analysis completed by KPMG concludes that the additional costs associated with the AFP model are more than offset by the benefits which include: a much more rigorous upfront due diligence process, reduced risk to the public sector, and controls imposed by both the lenders and Infrastructure Ontario's standardized AFP procurement process.

Once all the cost components and adjustments are determined, the aggregate costs associated with each delivery model (i.e., traditional delivery and AFP) are calculated, and expressed in Canadian dollars, as at financial close. In the case of the University of Ottawa Heart Institute project, the estimated traditional delivery cost (i.e. PSC) is \$179.9 million as compared to \$161.2 million under the AFP delivery approach.

The positive difference of \$18.7 million or 10.4 per cent represents the estimated value for money by using the AFP delivery approach in comparison to the traditional delivery model.