Canada's Leading Journal in Construction Economics

Leadership Interview
Mary Van Buren

Member Interview
Alireza Khodamorad

Member Interview
Aniqua Strachan

CIQS Chair
Erin Brownlow

Government Relations – Rob LeFort
Building Assessments – Nicholas Charlton
YQS Corner – Shane McKernan
Legal Corner – Saad Minhas
Project Profile – Carl Pedersen

The Journal of the Canadian Institute of Quantity Surveyors
Le Journal de l’Institut canadien des économistes en construction
FALL 2020
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CONSTRUCTION ECONOMIST
FALL 2020

The Journal of the Canadian Institute of Quantity Surveyors
Le Journal de l’Institut canadien des économistes en construction

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Cover Photo: Wide shot time exposure of the spillway on the Kananaskis hydroelectric dam on the Bow River, with Canadian Rocky Mountains, AB.
Implementing the CIQS Strategic Plan

As my first Chair’s Message, I would like to take this opportunity to thank all the members, volunteers, and staff of the CIQS. The past six months have been unlike previous years and, while work looks different from the outside, we are still productive and excited about implementing major components of our Strategic Plan.

I joined the CIQS in 2012 after more than 12 years in the industry, unsure of where my membership would take me. On a whim, I raised my hand at our local AGM in the Maritimes when asked if anyone wanted to volunteer on the local Board. In 2016, I joined the National Board as Maritimes Director. Over the last four years, and now into my fifth, there have been so many great changes. Our future is becoming clearer as we grow, and the opportunities for engaged volunteers are endless. I have found the last eight years volunteering for the CIQS very satisfying; it has also helped me grow both as a professional and an individual, especially since joining the National Board. I have significant respect for all who volunteer to participate, and I encourage anyone on the fence to go for it in the future. It is such a rewarding experience!

I would like to welcome our new and returning Directors of the Board:

David Dooks, PQS(F), Past Chair
Sheila Lennon, CAE, CIQS CEO

Directors:
Adam Ding, PQS, Education
Arif Ghaffur, PQS(F)
Hiran Dassoruth, PQS
Jack Chen, PQS
Jerry Crawford, PQS
Roger Ward, PQS(F)
Tammy Stockley, PQS

Observers:
Roy Lewis, PQS(F), Advisor to the Board
Shane McKernan, PQS, YQS Representative

I want to recognize David Dooks for his work as Chair over the last three years. He has been working diligently to increase awareness of the CIQS and develop relationships across each Canadian region, as well as internationally. He has been extremely dedicated, and his service is greatly appreciated. I am looking forward to having him sit as Past Chair to continue to offer advice and guidance.

I also want to thank Wendy Hobbs and Indu Elapatha for their work and time spent as Directors of the Board. You will be missed.

Congratulations to Indu Elapatha and Edward Traore on receiving designations as Fellows – quite an achievement! I hope to see you both in person at our next Congress.

As we move in to fall, the structure and function of the Board has been reviewed and new focuses have been identified resulting in a reformatting of our previous committees. We will be moving forward with the following Committees under the new structure, each with its own terms of reference and objectives.

1. Executive Committee
We can call this the meat and potatoes of the CIQS. The Executive Committee is responsible for executive staffing and office, governance (policies, procedures, by laws, standards etc.), financial, and international relations. The Executive consists of the CEO, Chair, Past Chair, and Vice Chair.

2. Education Committee
Our Education Committee is going strong as Adam Ding is takes on the role of Education Director. Under his leadership and transition from Wendy Hobbs, I am confident we will continue to make strides in updating our syllabus and accreditation program. Registration, publications, and translations are now also under the Education Committee portfolio.

3. External Relations Committee
After making great traction in the last year, this committee is responsible for communications and agreements with Industry and Government including participation in FIRPAC. Tammy Stockley chairs the committee and is responsible for discussions with our external firm and Government at any level. Arif Ghaffur is our CIQS representative at the FIRPAC meetings. We are currently working on an action plan for engagement of Industry Stakeholders.

“Our future is becoming clearer as we grow, and the opportunities for engaged volunteers are endless. I have found the last eight years volunteering for the CIQS very satisfying.”
Chair’s Message

Other members of this committee include Roger Ward and now Jack Chen. Hiran Dassoruth will be working with the committee to ensure our French counterparts are supported.

4. Member Engagement Committee
This is a new committee chaired by Arif Ghaffur with the assistance of staff. While not completely finalized, under this umbrella will be programs such as YQS – on which Shane McKernan has been working with Arif – Student Engagement, and Mentorship. We will also be reviewing Member Benefits, analyzing our current membership and how we recruit and retain members. While working on the individual programs, assistance will be required from other committees, making this an especially important lateral piece of our organization.

5. Chapter Committee
Another new committee, the Chapter Committee will be co-chaired by Jerry Crawford and myself. With the new structure of the CIQS, it makes sense that there be formal communication between the Board and the Chapter Chairs. We will be the conduit to the Board of Directors and will offer guidance on events and Chapter engagement. We will be able to direct queries to other committees as required and provide status reports to the Board. This is an exciting new addition, and we are looking forward to how this will roll out.

Those who know me understand I can get quite excited about my work, especially when numbers and spreadsheets are involved combined with concrete and sitework. I really enjoy my profession as a Professional Quantity Surveyor and I certainly hope many of you can relate. Assisting in the growth of our profession and organization has given me new energy!

We are all part of the CIQS community, and should any questions or ideas come up you would like to share with us, you can always send us a message. I am looking forward to the next two years as your Chair.

Erin Brownlow, PQS

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Message du Président du Conseil

Mettre en œuvre le Plan stratégique CIQS


J’ai rejoint l’ICÉC en 2012 après plus de 12 ans passés au sein de l’industrie, sans savoir véritablement où mon adhésion me mènerait. Lors de notre assemblée générale annuelle locale dans les Maritimes, j’ai machinalement levé la main lorsqu’un membre a demandé si quelqu’un souhaitait siéger au conseil d’administration local à titre de bénévole. En 2016, j’ai rejoint le Conseil national à titre de directrice des Maritimes. Au cours des quatre dernières années, et bientôt cinq, de nombreux changements majeurs se sont produits. Notre avenir se précise à mesure de notre croissance, et les possibilités pour les bénévoles engagés sont infinies. Les huit dernières années de bénévolat passées à l’ICÉC ont été très positives; elles m’ont aussi permis de m’épanouir tant sur le plan professionnel que personnel, et tout particulièrement depuis que j’ai rejoint le Conseil national. J’éprouve un profond respect pour tous nos bénévoles et j’encourage tous ceux qui hésitent à se lancer. L’expérience est très enrichissante!

J’aimerais souhaiter la bienvenue aux administrateurs du Conseil, nouvellement élus et reconduits :

David Dooks, ÉCA(F), président sortant
Sheila Lennon, CAE, présidente-directrice générale de l’ICÉC

Administrateurs :
Adam Ding, ÉCA, Éducation
Arif Ghaffur, ÉCA(F)
Hiran Dassoruth, ÉCA
Jack Chen, ÉCA
Jerry Crawford, ÉCA
Roger Ward, ÉCA(F)
Tammy Stockley, ÉCA

Observateurs :
Roy Lewis, ÉCA(F), conseiller auprès du conseil
Shane McKernan, ÉCA, représentante auprès des jeunes économistes en construction (YQS)


Félicitations à Indu Elapatha et Edward Traore, qui ont reçu le titre de Fellows, une belle réussite! J’espère vous voir en personne lors de notre prochain congrès.

À l’approche de l’automne, la structure et la fonction du conseil ont été examinées et de nouveaux axes de priorité ont été définis, ce qui a donné lieu à un remaniement de nos comités précédents. Dans le cadre de la nouvelle structure, nous irons de l’avant avec les comités suivants, chacun d’entre eux disposant de son propre mandat et de ses propres objectifs.

1. Comité exécutif
Le comité exécutif constitue la base fondamentale de l’ICÉC. Il est responsable du bureau et de la dotation des postes de direction, de la gouvernance (politiques, procédures, règlements administratifs, normes, etc.), des finances et des relations internationales. Le comité exécutif se compose du PDG, du président, du président sortant et du vice-président.

2. Comité de l’éducation
Notre comité de l’éducation fait preuve d’un grand dynamisme, Adam Ding assume le rôle de directeur de l’éducation. Sous sa direction et dans le cadre de la transition avec Wendy Hobbs, nous poursuivrons nos progrès dans la mise à jour de notre syllabus et de notre programme d’accréditation. Les inscriptions, les publications et les traductions font maintenant partie intégrante du comité de l’éducation.

3. Comité des relations extérieures
Après avoir accompli de nombreux progrès au cours de la dernière année, ce comité est responsable des communications et des ententes avec l’industrie et le gouvernement, y compris la participation au Conseil consultatif sur les biens immobiliers du gouvernement fédéral et de l’industrie (FIRPAC). Tammy Stockley, qui préside le comité, est responsable des discussions avec notre cabinet externe et le gouvernement à tous les niveaux. Arif Ghaffur est notre représentant de l’ICÉC lors des réunions de la FIRPAC. Nous travaillons actuellement à un plan d’action visant la mobilisation des intervenants de l’industrie. D’autres membres composent ce comité, dont Roger Ward et maintenant Jack Chen. Hiran Dassoruth travaillera avec le comité pour s’assurer que nos homologues français sont aussi pris en compte.
4. Comité d’engagement des membres
Il s’agit d’un nouveau comité présidé par Arif Ghaffur avec l’aide du personnel. Bien qu’il ne soit pas encore achevé, ce comité est responsable de certains programmes, dont le programme des jeunes économistes en construction (YQS) – sur lequel Shane McKernan a travaillé avec Arif – ainsi que le programme de mentorat et le programme de participation des étudiants. Nous examinerons également les avantages offerts aux membres, analyserons l’effectif de nos membres et étudierons la façon dont nous recrutons et retenons les membres. Tout en travaillant sur les programmes individuels, une aide provenant d’autres comités sera requise, ce qui est en soi un élément latéral particulièrement important de notre organisation.

5. Comité des chapitres
Autre comité nouvellement créé, le comité des chapitres sera co-présidé par Jerry Crawford et moi-même. Avec la nouvelle structure de l’ICÉC, il est logique de mettre en place une communication officielle entre le conseil et les présidents des chapitres. Nous serons l’intermédiaire pour le conseil d’administration et offrirons des conseils sur les événements et l’engagement des chapitres. Nous pourrons adresser les demandes de renseignements à d’autres comités au besoin et fournir des rapports de situation au conseil. Ce comité est un nouvel organe important, et nous avons hâte de le mettre en œuvre.

Ceux qui me connaissent savent à quel point je peux me passionner pour mon travail, surtout lorsque les chiffres et les feuilles de calcul sont associés au béton et au chantier. J’aime ma profession en tant qu’économiste en construction, et je sais que nombreux d’entre vous peuvent comprendre la passion qui nous anime. Aider à la croissance de notre profession et de notre organisation m’a donné une nouvelle énergie!

Nous faisons tous partie de la communauté de l’ICÉC, et si vous avez des questions ou des idées que vous aimeriez partager avec nous, vous pouvez toujours nous envoyer un message. En tant que présidente, je me réjouis à la perspective de travailler étroitement avec vous au cours de ces deux prochaines années.

Erin Brownlow, ÉCA

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**Message du Président du Conseil**

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Erin Brownlow, ÉCA

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Chief Executive Officer’s Message

Volunteerism: The lifeblood of our organization

“As the country is in various stages of reopening and Canadians from coast-to-coast begin to return to work and seeing friends and family, I can’t help thinking of us all as bears who finally awaken from our winter hibernation. We emerge from our homes with the sun warming our faces, allowing us all to breathe a sigh of relief as we navigate our ‘new normal’, forgetting, if only for a moment, that a pandemic is continuing to roar.

That being said, I am immensely proud and amazed at the efficiency and resiliency of our national team and volunteers who stepped up when the country went into lockdown to make sure that our members continue to receive the quality of service they have come to expect from CIQS national and its local chapters. We all needed to adapt and change the way we have always done business, relying more heavily on technology and gearing away from in-person meetings and events, to meeting up virtually. The last six months have been a time of several ‘firsts’, none more exciting and ground breaking for the CIQS as hosting our annual general meeting virtually, using a sophisticated and interactive webinar platform to allow our members the ability to vote on governance matters, such as ratifying the 2020-2021 National Board of Directors.

The AGM was followed by the 2019 Year in Review, offering an overview of our achievements over the past fiscal year. An encore presentation was offered on August 5 for our student and associate stakeholders as well as for members who were unable to attend the AGM on July 28th. Below are some of the highlights of the Year in Review webinar. A copy of the presentation is available in the Members Only section of ciqs.org.

Organizational Restructuring: Over the last two years, five affiliates completed their dissolution and the CIQS Ontario Affiliate is currently in the final stages of dissolution with an anticipated conclusion this fall.

Registrar’s Report: We reached a 90% renewal rate for the 2020–2021 membership year, despite the pandemic. This shows the strength of our membership and of our profession. Thank you for your loyalty and trust in the CIQS. This world crisis has shown us that we truly are Stronger than ever – Together!

Strategic Plan: We shared a brief summary of our current achievements within each of the four key areas. A detailed timeline is available in the Members Only section of www.ciqs.org.

Marketing and Public Relations: The CIQS HUB – a website focused on the newly developed Student Outreach Program, the YQS Committee and our volunteer ambassador program – was officially launched during the July 28 webinar. Please visit www.qscareer.org for details. Our Annual Report (available for download on www.ciqs.org under Publications) was also released at this time.

Volunteers don’t get paid, not because they’re worthless, but because they’re priceless.” – Sherry Anderson

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- Graduate of a degree program in Electrical Engineering, or
- Minimum of seven (7) years experience as a Quantity Surveyor, or ten (10) as an Electrical Engineer in N. America, or
- Minimum of seven (7) years experience as an Electrical Construction Estimator, or six (6) years as an Electrical Project Manager in N. America.
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A.W. Hooker Associates Ltd.
Chief Executive Officer’s Message

These achievements could not have been accomplished without the hard work of our staff, with the help of our amazing and dedicated member volunteers. It was therefore disheartening to learn that out of the 144 members who registered for our virtual annual general meeting on July 28, only 60 actually logged on. That is less than 5% of the 1400 members who are eligible to vote. The AGM offers members an opportunity to make their voices heard. This year’s virtual format made it even easier as it allowed members who may not otherwise be able to take the time to travel to Congress to have their say in how their organization is governed, from the comfort of their home or office! Hopefully we will see a stronger turnout at our Annual General Meeting next year.

Today’s society (perhaps now more than ever) is pulling us in every direction and I understand that this hectic nature of our daily grind may not place volunteerism on the top of the agenda, but it is the lifeblood of your organization. Without the input and time donated by subject matter experts, we will have to climb a very large hill in hopes of reaching our goal of becoming the profession’s ‘go-to’ association.

To truly gain benefit from a membership with a professional organization, members need to do more than simply pay their annual dues. Volunteering your time to sit on a committee or lend your expertise to a project or task force is a wonderful way for you to help your organization grow and flourish, make an impact on the industry, learn from your peers and make lifelong friendships. Maya Angelou said it best when she stated that she has “learned that you shouldn’t go through life with a catcher’s mitt on both hands. You need to be able to throw something back.” Attend chapter meetings, log onto a webinar, become a mentor, or join us at Congress. There are a number of ways to become involved at the grassroots level and one of the most important is to attend your local annual chapter meetings and the national AGM, either in person or by proxy, to ensure that we always make the quorum that allows us to properly govern your Institute.

We are always looking for smart and dedicated volunteers to sit on a variety of chapter and national committees. For the foreseeable future, all committee work and events will be held virtually, so this is the perfect time to take a more active role as it does not require the added time of traveling to and from a meeting or event venue. For details on how you can get involved, please contact Sharon Lui at slui@ciqs.org.

If you are on the fence about whether volunteering is in your wheelhouse, or if it fits into your current schedule, remember, “volunteering is the ultimate exercise in democracy. You vote in elections once a year, but when you volunteer, you vote every day about the kind of community you want to live in.” (Author unknown). I hope to welcome many of you to our family of volunteers for the 2020–2021 member year.

Until we can once again meet in person, stay safe and healthy.

Sheila Lennon, CAE
CEO, CIQS

Did you know?

Canadian Charter of Rights and Freedoms

Prepared by Yasmin Abdiladif, Dip. C.E.T.
Assistant to Editor, Construction Economist

Embedded in the Constitution of Canada (1982) is The Canadian Charter of Rights, which describes all basic civil rights of all people living in Canada. The goal of the Charter is to create a just society based on equality, freedom, and democracy. All government decisions and laws must respect The Charter, which outlines the following:

- **Fundamental Freedoms** – Anyone living in Canada is free to believe what they choose (religion, politics, personal beliefs), and is free to express them publicly.
- **Democratic Rights** – Citizens have the right to vote, and to run for office.
- **Mobility Rights** – Anyone living in Canada can travel and work anywhere in the country.
- **Legal Rights** – All people are innocent until proven guilty, and have the right to a fair trial.
- **Language Rights** – All people have the right to speak the language of their choice; French speaking people have the right to be educated at French language schools.

Although Canada has a diverse population, the Charter includes a clause guaranteeing equality regardless of race, national or ethnic origin, colour, religion, sex, age, and mental or physical disability. Courtesy of www.tvo.org.
Recently, I was asked the following question: What are the benefits of the CIQS engaging with International Professional Bodies and Affiliations, such as the following?

- Association of South African Quantity Surveyors (ASAQS)
- Australian Institute of Quantity Surveyors (AIQS)
- Building Surveyors Institute of Japan (BSIJ)
- European Council of Construction Economists (CEEC)
- Hong Kong Institute of Surveyors (HKIS)
- International Construction Measurement Standards (ICMS)
- Jamaican Institute of Quantity Surveyors (JIQS)
- Nigerian Institute of Quantity Surveyors (NIQS)
- New Zealand Institute of Quantity Surveyors (NZIQS)
- Pacific Association of Consulting Quantity Surveyors (PAQS)
- Singapore Institute of Surveyors and Valuers (SISV)
- The Royal Institution of Chartered Surveyor (RICS)
- The Royal Institution of Surveyors Malaysia (RISM)

The listed professional bodies/affiliations all have reciprocity agreements in some form with the CIQS mainly focused on collaboration to have their membership recognized and the exchange of professional research and knowledge. My (personal) thoughts are that engagement with these organizations is critical to the CIQS because it allows the CIQS to benefit with:

- **Best Practices**: Stay informed of the ongoing development of international best practices in construction and construction economics.
- **Positive Branding**: Continue to brand the profession in Canada to professionals who are linked to or may enter the Canadian marketplace.
- **Canadian Achievements**: Espouse approaches and developments in construction economics in Canada in an increasingly transient marketplace.
- **Strategic Networking**: Meet and develop professional networks at the international leadership level to contribute to strategy that is inclusive of Canada.
- **International Trade**: Understand and communicate restrictions and opportunities in cross-border trade relevant to construction economics.
- **New Members**: Support the many professionals who join the CIQS and enter the Canadian marketplace from countries around the world.

If the CIQS was not engaging with such International Professional Bodies and Affiliations it would become “local”, possibly isolated, self-consuming with limited knowledge share, and suffer restricted thought leadership.

I thank you for your support and contribution to the *Construction Economist*, and sincerely wish that you and your families keep safe and have a wonderful fall. If you have feedback, suggestions and, of course, any articles that you would like to be considered for publication, please email: editor@ciqs.org or ceo@ciqs.org.

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**Welcoming New Board Members**

I would like to welcome the new incoming directors Adam Ding, PQS (Education Director) and Jack Chen, PQS (Director) to the 2020-2021 Board of Directors. I would also like to congratulate Erin Brownlow, PQS, the newly appointed Chair. Also, a big thank you to David Dooks, PQS(F) for his dedication and achievements as Chair over a number of years.
Request for expressions of interest
Editor of the Construction Economist

A publication that has been in existence for over 30 years, Construction Economist is the official journal of the Canadian Institute of Quantity Surveyors (CIQS). The journal has earned a growing reputation for sharing knowledge and expounding thought leadership, as it strives towards becoming a best-in-class publication.

The CIQS is inviting applications for the prestigious role of Editor of the Construction Economist, reporting to the Managing Editor (a position that will be assumed by the current Editor). The role will require the incumbent to fulfill the following tasks:

• Ensure progress of the journal in accordance with the publication schedule.
• Review incoming content to ensure alignment with CIQS strategy.
• Work closely with the CIQS national office to coordinate the following:
  o Incoming content from members and other industry professionals.
  o Review of subject matter and proof-reading of articles.
  o Dialogue with the publisher in respect of content and timelines.
• Reach out to members and potential contributors of subject matters.
• Prepare an “Editor’s Message” to reflect current and topical issues.
• Prepare regular reports for the Managing Editor.

This is a voluntary position that typically requires approximately 30 hours per edition from the Editor, excluding input from the Assistants to Editor and assistance from the CIQS national office.

The Editor is required to be a Professional Quantity Surveyor (PQS) or Construction Certified Estimator (CEC) with demonstrable skills and references in receiving, developing, and publishing subject matter content. The incumbent will be dedicated to personal and continuing professional development.

The transition into the role will require the incoming Editor to shadow the current Editor over the forthcoming winter 2020 edition, thereafter formally assuming the role of Editor for the spring 2021 edition, and onward.

If you are interested in this role, please submit your photo and bio, accompanied by a statement not exceeding 300 words setting out why you consider yourself to be suitable for the role of Editor, and how you would further develop the Construction Economist.

All expressions of interest should be submitted to Sheila Lennon, Chief Executive Officer of the CIQS (ceo@ciqs.org). The deadline for receipt of expressions of interest from interested individuals is October 30, 2020.

Did you know?

Founded in 1959, the Canadian Institute of Quantity Surveyors (CIQS) is a self-regulatory, professional body that sets the highest standard for construction economics in Canada.

CIQS Features

• Accredited Programs
• Continuing Professional Development Events
• National Standards and Code of Ethics
• National Publication, Construction Economist
• International Reciprocity Agreements
• Member of PAQS & ICMS Coalition

CIQS Chapters

• British Columbia
• Prairies and Northwest Territories
• Ontario
• Québec
• Maritimes
• Newfoundland and Labrador

The CIQS Mission Statement is to promote and advance professional quantity surveying and construction estimating; to establish and maintain national standards; recruit, educate and support our members. CIQS Members continue to provide their expertise to Owners, Developers, General Contractors, Trade Contractors, Consultants and Other Industry Professionals. For further information visit our website: www.ciqs.org
The pandemic created a new normal that accelerated industry challenges and laid bare pre-existing needs for efficiency. Before COVID-19, the construction bar was preparing for prompt payment and interim adjudication introduced by the new Construction Act in Ontario, and other jurisdictions were keenly watching to see how they might implement such changes. The reforms were made to expedite disputes and, by all accounts, adjudication will work to accelerate dispute resolution or act as a deterrent. These overdue reforms have been reinforced by the pandemic and the ensuing complexity of disputes that are sure to arise.

As a key part of the reforms, interim adjudication is a good solution, but can we do better? Technology is currently transforming industries. For example, Blue J Legal has developed predictive artificial intelligence (AI) for tax law disputes, and we could eventually see the same trends in construction law. Technology is not a panacea and there are legitimate concerns about whether artificial intelligence has reached a point where it can perform complex legal tasks. However, it took decades for legislators to catch up to an industry that had already transformed, and we may be well served to consider dispute solutions better suited to a workforce of digital natives entering the sector. Ontario also happens to be a leading jurisdiction for AI talent. So perhaps AI could be one such solution, and here I have attempted to identify how it could address some of the remaining gaps that may balloon in a reformed system. For clarity, I will be referring to a deep learning form of AI as it is used to undertake tasks normally performed by humans, which goes beyond simple automated pattern recognition.

The authorized nominating authority, now known as the Ontario Dispute Adjudication for Construction Contracts (ODACC), may be well positioned to consider the following five factors to implement an AI adjudication system:

1. **Transition** – Lawyers and expert adjudicators can take a deep breath; they would not be replaced, and would likely continue to address more complex disputes and consolidations while an AI system operates in parallel. Adjudication has been added in an already tiered arrangement of dispute escalation, where parties will often be subject to notices, mediation and/or liens before moving along to judicial review, arbitration or litigation, as appropriate. An AI system may be able to replace adjudication for parties that opt in, or potentially supplement it as an additional step before adjudication. As an interim pilot, parties could submit materials and arguments to a test version of the AI system to assess the viability of their claims, (which would concurrently build up a database for future adjudications while reducing the number of cases brought forward). Those with fears around submitting a crucial project dispute to a machine should not ignore that users would build capability and experts would supervise outcomes; this collaborative approach ultimately yields an AI system that reflects the input of such contributions.

2. **Costs** – Although adjudication costs are certainly lower than going to court, payment for counsel, adjudicators and nominal referral fees can accumulate. While this may compel parties to mediate amongst themselves, it may well mean that parties allow claims to accumulate until adjudication is feasible. In the alternative, AI adjudication could be developed as a cost-effective solution, due to its scale. The UK model has shown that disputes under $50,000 may not be
worth escalating, but an affordable platform for resolving disputes may prevent claimants from incurring unrecovered losses.

3. Expertise – Claimants have the ability to select adjudicators with expertise at issue in their dispute, (such as quantity surveyors, legal experts, architects etc.), whereas an AI system may be able to accumulate knowledge bases from a wide array of industries and, eventually, consider disputes with intersecting issues. It bears mentioning that an adjudicator’s decision could ostensibly be replicated by an AI system, as the potential for such technology to write cohesive and reasoned documents is well established. Supervision and review of decisions would likely address rule of law concerns as well. Studies on AI reasoning have exposed risks of bias, which tend to reinforce and scale biases submitted into the AI system or those of reviewers; however, implications of a poor decision due to bias exist, irrespective of delivery method. I view AI systems as an opportunity to confront bias in adjudications overall because, while standard adjudications are often only subject to judicial review or costly appeals, there will likely be greater scrutiny for bias in an AI system.

4. Efficiency – Availability of adjudicators is a concern that an AI system would address; currently ODACC is in the process of training experts to become adjudicators, but conflicts of interests and scheduling may remain a challenge as the system grows. Presumably an AI adjudication system would also cut some of the cycle time for disputes, because the time allocated for adjudicators to review materials would be reduced.

5. Data – ODACC has already built a custom online platform to facilitate the adjudication process, along with helpful guides on how to upload documents, and it stands to reason that an intelligent system should be added, and used to maximize the platform. There is an opportunity to leverage data from submissions, adjudicators and decisions that already flow through ODACC, and utilize it for AI adjudication. An AI system fed with data from decisions could be used to recognize similar fact patterns (this is in effect no different than the compounding experience of an adjudicator), decision data would remain confidential, and privacy concerns should be no different than those in current adjudication. ODACC could also require standardization of forms and evidentiary submissions made to adjudicators, (in the way that
CaseLines is already doing); this would not only allow adjudicators to identify key issues, but also create data points for an AI system to recognize and determine trends. In some cases, data on construction projects is already being tracked through IoT devices and commercial management software; such contemporaneous and accurate data could be used for AI dispute submissions.

One of many glaring concerns is that development of AI systems is still quite costly, and interested parties must weigh the investment of reducing the burden on courts against addressing the volume of lower value claims missed by adjudication. If the volume is high and the industry continues its momentum for reform, then market feedback could identify where the need to invest in creating inexpensive and more efficient dispute resolution is justified.

We have certainly made progress in implementing adjudication under the Construction Act. In order to keep pace with continued investments in infrastructure, increased costs of construction, and a thriving industry prone to a high volume of disputes, it may be helpful to consider technological solutions that both the construction and legal industry have been slow to adopt. To some, AI may appear to be ahead of our industry’s collective capacity for change but, as we have demonstrated through our ability to recalibrate in a pandemic, necessity could dictate our readiness to change and address once unforeseeable challenges.

About the author
Saad Minhas is a dynamic lawyer with over 10 years of commercial and legal experience in construction, commercial real estate, project finance and procurement matters. Most recently, Saad has been leading on complex construction and commercial real estate transactions as the sole Canadian counsel for a global company. He has received multiple awards for exceptional performance in crisis management, delivery of high volume and large-scale projects, and was recognized by the CIQS and RICS as a ‘Future Leader in Construction’.
this past year, the CIQS proudly hosted many successful in-person seminars and networking events from coast to coast, allowing members and external stakeholders to connect and share knowledge on relevant industry topics. In response to the COVID-19 pandemic, over the past few months we shifted our in-person events to a strong online presence through the addition of live webinars. Our webinars provide an opportunity for like-minded professionals to participate in live discussions with outstanding speakers and offer our members the chance to earn their CPD points.

Past Webinar Events

CIQS Prairies & NWT Virtual Annual Chapter Meeting and Webinar (Thursday, June 4)
The CIQS Prairies & NWT Chapter officially kicked off its inaugural webinar with a members-only meeting, featuring an overview of chapter highlights, membership progress, and the registrar’s report. These were followed by an informative presentation on risk assessment by keynote speaker Shane Nickolson, Director of Pre-Construction, Energy and Environment, at Graham Construction.

CIQS Prompt Payment & Adjudication Webinar (Thursday, June 11)
The CIQS – B.C Chapter hosted a Prompt Payment & Adjudication webinar featuring guest speakers Jane Ingman Baker (Counsel, Singleton Urquhart Reynolds Vogel LLP, Vancouver) and James Little (Partner, Singleton Urquhart Reynolds Vogel LLP, Toronto). The engaging duo both worked with Bruce Reynolds and Sharon Vogel on their report that led to the adoption of the Ontario Legislation; they discussed the process of how prompt payment legislation was implemented in Ontario and how it is being applied in the current crisis.

The Role of the Estimator in IPD Webinar (Thursday, July 30)
The CIQS Prairies & NWT Chapter presented this highly educational webinar that included a brief overview of IPD (Integrated Project Delivery) and how the contract structure changes the roles of designers, contractors, and owners. Keynote speakers Ken Jaeger (IPD consultant) and Craig Webber (Architect) described the validation process and how the role of the estimator is differs from the role in a more traditional project.

Inaugural AGM: Year in Review Virtual Presentation (Tuesday, July 28)
Due to the pandemic, the CIQS hosted its very first Virtual AGM (Annual General Meeting) drawing in members from across the nation, and beyond. The AGM offered a platform for members to make their voices heard and to have an active say in how their organization is governed.

Future Webinar Events

Accuracy of Construction Budget Estimating Webinar (Thursday, October 8)
Join a panel of industry experts in this informative webinar to learn about predicting realistic outcomes in construction budget estimates. The CIQS is proud to host this highly anticipated event featuring the following senior industry professionals:
- Natalie Dionne Alexander, PQS (Moderator)
- Antoine Aurelis, PQS (Senior Director, Lakeland Consulting)
- Stephen Emery (SVP, Infrastructure Ontario)
- John Alley (Director, Colliers Project Leaders)
The main objective of this webinar is to hear perspectives from senior industry professionals on how to deal with the unpredictable price variations and the impacts that they may have on project outcomes. Topics of discussion include the types of estimates, industry standards, and ongoing issues.

YQS Webinar Series (First series starts on Thursday, October 15)
The CIQS Young Quantity Surveyors (YQS) Leadership Webinar Series is a succession of 4 leadership webinars blending ongoing professional and personal development with advice from guest speakers who are senior-level professionals. Refer to page 16 for more information on this event.

Interested in being a speaker for a CIQS webinar? Please contact Sharon Lui at events@ciqs.org.

Prepared by Sharon Lui, Executive/Events Assistant.

The Construction Economist is also available in electronic format. Please visit the CIQS website www.ciqs.org and press the “Publications” tab.
Leadership webinar series and CIQS hub

The CIQS YQS Committee is proud to announce the launch of the ‘YQS Leadership Webinar Series’, hosted by leadership expert, Craig Woodall of Byng Leadership Inc. This four-part leadership series will host different guest speakers made up of senior industry professionals, with the focus on providing professional and personal development advice to help YQS members develop important leadership skills. This webinar series is FREE to all YQS members, so don’t miss out on some excellent topics and conversations.

Topics and dates are as follows:

**Why We Do What We Do:**
Understanding Our Ego, Bias, Fears and Drivers | Recognizing the Importance of ‘Human Systems’
Thursday, October 15, 2020, 12:00-1:30 PM (EDT)
Speaker: Tim Smith, President at MPa Project Consulting

**What Makes Us Unique:**
What Makes Up Our Personality and How It Influences Our Relationships, Myers Briggs Personality Assessment
Thursday, January 14, 2021, 12:00-1:30 PM (EST)
Speaker: Greg Brokenshire, President of Alberici Constructors Ltd.

**Dealing with Change:**
How to Overcome Resistance, and Drive Change
Thursday, April 15, 2021, 12:00-1:30 PM (EDT)
Speaker: To be announced

**Leading Others:**
How to Lead and Influence the Teams Around Us | Having Difficult Conversations
Thursday, June 24, 2021, 12:00-1:30 PM (EDT)
Speaker: To be announced

CIQS National has also launched the new ‘CIQS Hub’ website (www.qscareer.org), which is the go-to portal for student and YQS information and networking. Check out the hub to learn more about the YQS program, ambassadors of the industry, and upcoming events.

In addition to the amazing events CIQS is planning for YQS members, stay tuned for an upcoming, exclusive: YQS networking event that will take a big step in connecting YQS members across Canada. We are hoping to launch this new event in the coming months!

There is no better time to be a professional or aspiring QS, and it has been an inspiring journey seeing the development of the YQS program and the students/professionals who want to be part of it. The 10th CIQS President, Albert J. Vermeulen, once said, “We need to assert the quantity surveyor more strongly in relation to the other professions in the construction industry. Education of students to ensure a continuing profession is vital, and becomes more and more demanding every year.” Surely, this could not be more true!

**About the author**
Shane McKernan, PQS is a Project Manager for Landa Global Properties, a property developer based out of Vancouver, BC. With over a decade of experience in the construction sector, Shane’s experience includes cost consulting, project loan monitoring, and project & construction management. Shane has been on the CIQS – BC Board of Directors since 2013, where he joined as the board’s first ever student member and is now the Chapter President. Shane is also an Assistant to the Editor for the Construction Economist.
When was your first introduction to construction?
As a child, I enjoyed playing with all types of construction related toys. When I was 10 years old, my father bought me a model tower crane and, though it took nearly a month for me to assemble it, I enjoyed every minute of putting the parts together and seeing the progress each day.

I was 16 years old when I went to my first construction site. They were building a hospital. The visit was part a school program intended to introduce students to different industries and professions. Seeing a group of skilled people working together to achieve the same goal was fascinating. That was the first time I realized I was deeply passionate about construction, and that this passion went beyond childhood toys – it was what I wanted as a career.

What types of roles and responsibilities have you held, both currently and in the past?
After graduating with a civil engineering degree in 2006, I began my career as a site engineer/estimator on a petrochemical site for two years. I was responsible for tracking actual work carried out on a unit rate contract. I then joined the central office as a member of the tendering team. In 2011, I decided to continue my studies and was accepted to Sheffield Hallam University in England. This is where I obtained my MSc. in Construction Management in 2012. My dissertation for this degree evaluated e-tendering against traditional paper-based methods. In 2015, I moved to Canada and have been working as an estimator and project manager for subcontractors and general contractors since.

On what types of construction projects have you worked?
I have been involved in different kinds of construction projects such as institutional, commercial, industrial, and civil (petrochemical site). One of my recent projects I worked as the lead estimator on the Historic YWCA Building, located in downtown Calgary. Originally constructed in 1909, the Historic YWCA Building is a Provincial Historic Resource built in the Georgian Revival style. It is currently occupied by Community Wise, a non-profit hub that supports a variety of grassroots organizations. The City of Calgary has undertaken a conservation plan outlining the heritage value and character-defining elements of the building, as well as a framework guiding future preservation, rehabilitation, and restoration. The work comprises a building envelope rehabilitation including window conservation scope, new roof with new integrated gutter within cornice profile, as well as masonry brick and sandstone conservation.

Why did you pursue the PQS designation?
I wish to expand my network of peers in the industry. I hope to learn from their experience and give back by sharing my knowledge and experience with the young quantity surveyors. Moreover, being part of a recognized professional institute will help increase my knowledge and further develop my expertise. I attend most of the webinars/seminars held by the CIQS as I find them to be extremely useful and informative. This keeps me up to date and allows me to learn about new technologies and procedures.

What challenges and opportunities do you see for quantity surveying in the future?
Technology has an impact on the global business environment – and the construction industry is no exception. To remain robust, the industry must adapt and implement new technologies. Building Information Modeling (BIM) has been gaining tremendous momentum within the construction industry recently and I foresee many companies taking it on to remain agile and relative in the game. The construction industry demands Quantity Surveyors to increase their knowledge in order to fully implement and utilize new technologies within the industry. As a result, this would be a critical challenge for all Quantity Surveyors.

Despite the current economic downturn, I believe that we will see a growth in the number of quantity surveyors in the next few years. I believe this to be true because, the government is investing more and more in infrastructure to boost the economy.

About the author
Interview conducted by Arif Ghaffur, PQS(F), Editor of the Construction Economist.

Seeing a group of skilled people working together to achieve the same goal was fascinating.
CB Ross Partners have job opportunities in our Project Monitoring department for Assistant Cost Consultants, Cost Consultants and Senior Cost Consultants.

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Only select candidates whose resumes best match our requirements will be contacted.
Member interview

Aniqua Strachan, PQS, MRICS, BSc(Hons), DipSurvPract

Job Title: Chartered Quantity Surveyor
Company: CGT Contractors & Developers Ltd. | Location: Nassau, Bahamas

When did you begin your quantity surveying career?
My career started in 2006 with Davis Langdon on a major resort development project in Nassau, The Bahamas. Starting as an assistant to the team, I was not aware of the career path or what the Profession entailed. After a few months of working and receiving guidance from team members who were Chartered Quantity Surveyors, I was encouraged to pursue quantity surveying studies through a Diploma course at the College of Estate Management (CEM) while receiving practical and professional on-the-job training as a Junior Quantity Surveyor. I am thankful to Ian Memmott, former Partner at Davis Langdon, and Hopeton Austin, former Senior Quantity Surveyor at Davis Langdon, who respectfully provided the necessary assistance and mentorship that kept me on a track to advancing my career in quantity surveying. After the development halted, I accepted an opportunity with a leading local Consultancy firm of Chartered Quantity Surveyors and completed my BSC (Hons) in Quantity Surveying awarded by the University of Reading. In 2014, I went on to qualify as one of the youngest Professional and Chartered Quantity Surveyors in The Bahamas with the respective PQS and MRICS professional designations.

What is your current role and area of responsibility?
I am currently a Contractor's Quantity Surveyor (CQS) with one of the largest General Contracting and Development companies in The Bahamas. I am responsible for cost management activities from pre-contract through to final accounting and project handover. My project experience varies and includes high-end residential, commercial, healthcare, educational, and hospitality and resort development projects.

Is there a particular construction project in The Bahamas that you would like to tell us about?
Yes, the renovations and additions to a Bridge Control Building and the associated infrastructure works. This project was the first project for which I was given full responsibility as a Cost Consultant, and I was involved from conceptual design estimates through to project completion and final accounting. This project allowed me to expand my professional competencies such as project risks, contract strategy and procurement, client care, health and safety risks, contract administration and claims. In the end, the project was completed successfully, within budget and the agreed time stipulation, for full operations to continue.

Why is the PQS designation significant to you?
The PQS designation signifies a standard of professionalism and secures the trust of local and international clients and other industry professionals. Professional membership with the CIQS provides access to a network of professionals and provides an opportunity for me to stay current with industry events and changes around the world.

Have you visited Canada?
If so, how did you find that experience?
Yes. I have visited Canada and my experiences were nothing short of amazing. My most recent visit was in 2019 for the CIQS Congress in Quebec City which was an enlightening experience, ranging from the conference – where I was able to learn of industry updates and had the opportunity to network and interact with so many industry professionals – to the evenings touring the city and admiring the scenery in Old Quebec City. I was also able to tour a distillery in Quebec with the YQS group and enjoyed the interaction and comradery. From the conference to the beautiful scenery, kind people and interactions, I thoroughly enjoyed the experience and look forward to more experiences in the future.

About the author
Interview conducted by Arif Ghaffur, PQS(F), Editor of the Construction Economist.
We often talk about change: be it initiatives in the work place or shifts in our personal situations, things that happen to us or are imposed on us are ultimately things that we must battle through to survive. There is an alternative approach which is to embrace the change and not only survive but thrive, coming out the other side a more balanced, efficient, and vibrant person or organization. This article will dig into why our natural evolution makes this approach so difficult to adopt and offers some tips to help you navigate the uncertain and unpredictable times ahead.

At our most basic, we are just animals trying to survive on this planet and we have done a great job so far. It is our innate ability to survive that has made us so successful as a species, but that same survival instinct can work against us when faced with uncertainty and the need to adapt and change. I am sure that we can all agree that the current situation is filled with uncertainty and it has many of us fearful about the future, a perfectly normal reaction to have. We are creatures of habit: if our behaviour yesterday worked for us, allowed us to support our families, and ‘live another day’, we are naturally driven to repeat that same behaviour tomorrow. We crave predictable, repeatable and safe results. But what happens when the environment around us is changed suddenly, our normal and well rehearsed patterns of behaviour no longer work for us? We have to adapt – and therein lies the challenge.

In order to adapt, we have to get past the natural fear reaction and apply a logical and rational thought process. Unfortunately for us, our reptile brain, the part of our brain that reacts to keep us safe and alive, is much quicker than our logical/rational brains. As a result we find ourselves in a fight or flight situation before we have even considered alternative possibilities. It is the reason that so many people are now sitting on more rolls of toilet paper than they need, their fear reaction kicked in and they got into survival mode. With a pause, some reflection, and time to apply some logic to the situation, we are more likely to make sensible, on-purpose decisions rather than fear-based snap decisions. When we get into the reptilian reactionary mode we often experience feelings that we do not like, such as being scared, envious, guilty, or sad. The first step to pushing through change is to accept these feelings for what they are: normal and healthy reactions to a difficult and unsettling situation. Be OK with the feelings, acknowledge them, but do not let them control your response.

Once you have acknowledged your feelings you can move into logical and rational thought processing: Looking for opportunities to move forward rather than getting stuck in the past, a past I might remind you, was not as perfect as you are now remembering. We have an amazing ability to remember all the positive and exciting moments from the past but gloss over the negative aspects. It is natural to look back and wish for things to go back to ‘normal’ but remember that when you were back there, challenges were still plentiful and our lives were never easy. Moving forward takes the courage to take a step when you are not completely sure of the final destination. Once you have taken that first step, the second and third are much easier. The future, while still not completely defined, suddenly looks less scary.

My personal experience over the past few weeks has followed this exact path. In the first few days of lockdown my fear kicked in and I assumed that my business would suffer and potentially collapse because I have built it based on connecting with my clients in a face-to-face environment. Once the initial reactions had passed I was able to refocus on the potential and explore the virtual world of coaching and facilitation that I had not considered before. Now, it still does not feel totally normal and it can sometimes make me feel awkward working in a different way but I have come to realize that it is exactly that, it is different, not wrong. I am sure your businesses all have similar experiences. Now is the time to jump on those opportunities. What are the potential business streams that have opened up for you, what are the efficiencies that you can implement going forward?
Congratulations to the following CIQS members who have qualified as a PQS or CEC:

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This experience has forced us to change our day-to-day routine, and not all of those changes have been negative. I have been challenging all of my clients, both personally and corporately, to identify the one big positive that has come from this experience that they are prepared to commit to holding on to, once the lockdown is eased. Without fail, they all quickly respond with similar answers and the common theme is ‘relationships’. People have talked of connecting, virtually, with family members in a more meaningful way. Others have mentioned how they have come to know their colleagues better, effectively visiting them in their homes through the lens of a camera and having a newfound appreciation for their lives. Whatever your lesson has been, do not let go of it just because you are allowed back to the office.

Finally, remember that there is one thing that cannot be taken away from you, and that is your ability to choose how you respond to the ever-changing world around you. Watch out for your instinctual reactions, acknowledge your feelings, and make a choice to respond and take a step forward.

About the author
Craig Woodall is the President and Owner of Byng Leadership Inc. He has over 25 years of experience leading teams, projects, organizations, and individuals. His passion is Leadership Development, helping people and organizations grow by maximizing their leadership potential.
In today’s world, facility operational budgets are already under strain, and facility management teams are facing challenges in the form of declining resources. Pressure exists to find new and innovative ways to do more with these limited finances and resources, including the development of strategies that lead to cost-efficient assessment and management of current and future building related maintenance, repair, and replacement costs.

Developing a comprehensive and accurate picture of a facility’s condition, future renewal and operating costs is best achieved by conducting a comprehensive facility condition assessment (FCA). The FCA process has far-reaching benefits over and above the reduction of future repair and maintenance costs. It has proven to enhance facility management operations significantly, accurately identifying building deficiencies, project maintenance requirements, integrating sustainability initiatives, extending a building portfolio’s life span and increasing a building or portfolio’s desirability and value.

Facility Condition Assessments (FCA) are a forward-thinking and intelligent approach to the collection, consolidation and management of all critical building data. The data collected allows facility and building managers, capital planners, analysts, and executives to proactively and effectively determine their capital budget needs, today and years, into the future. This wealth of information allows stakeholders to respond and precisely identify any current or forecasted repair/renewal costs and leverage the data to make critical business-minded decisions concerning spending priorities, timing, and fund allocation. Also, the FCA has become an essential document for building owners and managers when seeking to secure capital funding for costly improvements.

Why conduct a Facility Condition Assessment?

The process
Technical standards exist for facility and building condition assessments. One such rule is ASTM E2018-15, Standard Guide for Property Condition Assessments: Baseline Property Condition Assessment Process. This is the accepted standard for most facilities or building condition assessments that involve the building structure and its systems.

Facility Condition Assessments start with an inspection to develop a comprehensive inventory of all the building systems and related infrastructure. Each building component and/or system is identified and uniquely named for reference. This creates a list of the systems, components and equipment for each building in an asset portfolio. System information will include specific details, as in the case of a rooftop heating unit, the age, make, model, location and capacity.

Facility Assessors will take digital photos that are very specific and detailed for all building components. These will be accompanied by precise, detailed and descriptive written notes/summaries pertaining to each building component or system. The narrative will include comments not only on condition but also on any deficiencies observed. Also, an Assessor will carefully review current and historical repair and/or maintenance records as well as to conduct interviews with facilities and maintenance personnel to create a clear picture regarding each component.

Different Types of Facility Condition Assessments

1. Comprehensive Assessment
An onsite inspection that utilizes a system template of the building type, expected costs, and descriptions with customer-specific short and long-term requirements.
2. Standard Assessment
An onsite inspection that utilizes a system template of the building type, foreseeable costs, and descriptions with template-driven short and long-term requirements.

3. Five-Year Needs Assessment
On-site assessment for the condition of assets over the next five years.

4. Lifecycle Systems
Onsite, system-level assessment for an asset’s capital renewal profile.

Each building system is divided into individual components. Each component will have its condition assessed separately. Facility condition assessments should consider the following:

1. Performance – How does the building system perform, what are the issues? From here, create a scale of performance or use an industry-standard such as BOMA.

2. Age – Most facility personnel use age to estimate a system’s life and for a good reason. Age usually corresponds with building system failure and a higher frequency of breakdowns and a higher need for repairs. In some cases, advanced age can mean less availability for repair parts, even if the building system performs well.

3. Current observed conditions – Facility personnel often base their assessment of a building system on varying criteria, if the system looks old, dirty or generally in poor visual condition, they will rate it lower even though the system may still be functioning very well.

Facility Condition Assessments should be conducted regularly. It is common practice to conduct the assessment every three to five years, dependent on the building’s usage, structural design, age and size.

How the data is used
Facility Condition Assessments can be used to address building code issues, fire code requirements, and accessibility legislation requirements. They help to develop long-term capital planning of expenditures for significant repair and replacement of building systems and equipment.

The information allows facility team members to review their current and future operational requirements. The data gathered will allow the facility management team to develop a short-term and long-term maintenance program that can address the specific needs and conditions of the buildings in their portfolio. This process helps facility management personnel maintain a fully operational building portfolio by better forecasting, managing and reducing maintenance costs.

Acknowledgement: This article was first published in the EFMA Ops Talk Fall 2019.
Throughout the last few years, talk of Canada’s recent, current, and future mega projects has typically included one of the many public transit projects, LNG Canada, the Trans Mountain Pipeline, or just about anything in Toronto. There are many more however, including at least three large hydroelectric dams from coast to coast worth roughly a combined $31 billion. Muskrat Falls in Labrador, Keeyask in northern Manitoba, and the Site C project in northeastern British Columbia.

These major public infrastructure projects are never without scrutiny, especially when there are significant impacts to natural resources. Hydroelectric dams can be amongst the most difficult to move forward and BC Hydro’s Site C is no exception. With many of the major hurdles aside, it is moving ahead and is certainly one to include on our country’s list of massive undertakings. That said, outside BC news of the project is not abundant, yet its background is amongst the most interesting and the budget is up there with the best of Canada’s mega-projects.

The history of the project dates back to the 1950s when investigation for potential sites was underway for three dams along the Peace River. For this dam in particular, five sites were identified (A, B, C, D and E). Site C was determined to be the most suitable in the late 1970s. In the early 1980s the project was pitched and ultimately shelved. Shortly after
this, in 1984, the Revelstoke Dam was completed and no dam has been built in BC since. The year 2010 saw the passing of the province’s Clean Energy Act, which meant the project no longer had to undergo further review by the BC Utilities Commission. This paved the way for the province to proceed with planning and development of Site C. For the last number of years, the province has been buying power from other producers; however, once those contracts expire, the producers could potentially export their power elsewhere which is, in part, what BC Hydro has cited as a reason to proceed with the dam, along with increased demand in the coming decades.

Between planning and mobilization, several milestones had to be reached including an environmental assessment and financial approval in 2014, and the official notice to proceed in 2015. The project also received opposition from members of the Treaty 8 First Nations and the Peace Valley Landowner Association, consisting of area farmers and other landowners. Although the project has moved ahead, concerns are still present and are being challenged in both provincial and federal courts.

Once complete, the dam will be the fourth-largest producer of power in BC, by either hydroelectric or other means, behind the Mica, WAC Bennett, and Revelstoke dams. With maximum output of 1,100 megawatts – enough to power 450,000 homes – it is the largest of Canada’s three new dams. Keeyask is expected to produce roughly 695MW while Muskrat Falls will produce 824MW.

This amount of power comes at a cost. In a 2007 feasibility study based on the 1981 design, the budget was projected to be $6.6 billion, but updated in 2011 to $7.9 billion. This cost was revised again in 2014 to $8.3 billion, which was the approved cost in 2015, making it the most expensive infrastructure project in BC history. Add to that another $743 million for the high voltage transmission line distributing the power, making the total $9 billion. This budget was revised one more time in December 2017 to a staggering $10.7 billion. In recent months, it has been reported that this number is at risk due in part to additional foundations required on the right bank, and the complications caused by the COVID-19 pandemic. Despite the cost increases, and strictly from a numbers standpoint, it will produce more...
efficiently that the other two projects: 102.8MW per billion including the transmission line compared with Keeyask at 79.9MW per billion and Muskrat Falls at 72.3MW per billion. Both of the other projects have seen similar multi-billion cost increases. In Keeyask’s case, the cost still does not include the multi-billion dollar price tag to bring the power some 725km south.

The dam is located along the Peace River, approximately seven kilometers southwest of Fort St. John. It will be the province’s most northerly dam and the third along the river, after Peace Canyon and WAC Bennett upstream. At a total size of roughly 60m high by 1,050m long, it will create a reservoir of roughly 9,330 hectares. Part of the advantage seen from the site selection is the efficiency of using water already stored for the other dams. As an example, Site C’s reservoir area is roughly five percent the size of the Williston Reservoir for W.A.C. Bennett, yet its power generation will be 35%.

Crews began to mobilize to the site in mid-2015 to start prep work, site clearing and access roads, with the goal of a final completion date of 2024. Early earthwork challenges and the ongoing pandemic, among other things, have affected this schedule. In mid-March, BC Hydro announced it would be reducing the workforce to comply with provincial health guidelines. This workforce began to rebound in mid-May. The current anticipated construction schedule will have the generators online in late 2024 and the project will reach total completion in 2025.
Current site activities are significant. Notably, preliminary work for reservoir clearing began in September 2020, the powerhouse is under construction, and it is expected that the substation can be energized in late 2020. Work on the transmission lines is ongoing with one nearing completion. Work to re-align Highway 29 continues including a 1 km bridge at the Halfway River.

Similar to most major projects, local employment has been a hot topic and is tracked throughout the course of construction. BC Hydro provides regular reports focussing on employment of BC residents, residents of the Peace River Regional District, Indigenous people, women, and training opportunities. According to the latest report in June of this year, there were a total of 4,324 people employed on the project and of that, 72% were residents of BC.

The Site C Dam project has had lots of challenges overcome to date and, with construction activities still increasing, it is sure to have many more. In this complicated environmental and economic climate in which we live, a $10 billion-plus mega-project is no easy feat. While cost and schedule continue to be major topics, BC Hydro is quick to point out the 30-70 million tonnes of carbon dioxide its clean power will prevent from being generated in the atmosphere. Through the coming years, it will be interesting to watch how the executives and politics in charge navigate what lies ahead to provide 100 years of reliable power.

Sources:
- www.bchydro.com/energy-in-bc/projects/site_c.html
- www.sitecproject.com
- www.sitecproject.com/about-site-c/project-overview
- www.sitecproject.com/sites/default/files/construction-bulletin-20200821_0.pdf
- www.en.wikipedia.org/wiki/site_c_dam
- www.thenarwhal.ca/manitobas-hydro-mess-points-to-canadas-larger-problem-with-megadams
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- www.thenarwhal.ca/manitobas-hydro-mess-points-to-canadas-larger-problem-with-megadams

About the author
Carl Pedersen, B. Tech (CM), PQS, GSC is an Estimator for Bird Construction in Manitoba. With a background in hands-on construction work through a broad range of residential and ICI experience, he now has a primary focus on design-build industrial and light industrial project planning, development and cost management. Carl has also served in various roles on the CIQS Prairies & NWT Chapter including Vice President, Secretary and Winnipeg Chapter Representative. Carl is also an Assistant to the Editor for the Construction Economist.
The early story of the COVID-19 pandemic has been the tremendous personal toll it has taken on many thousands of Canadian families. Even many who have had and recovered from COVID-19 continue to see lingering effects of the illness. In my view, there is no more fitting comparison for the toll the pandemic has also taken on the economy.

Early stage shutdowns of local economies saved countless lives, while putting hundreds of thousands of businesses at risk, and putting millions of Canadians out of work. Compassion dictates that this was the right thing to do for Canadian families, but I argue it was also the right thing to do for the economy. While we will feel lingering effects for years to come, Canada will recover.

Canada is in an enviable position. Compared to many other countries – especially to our friends in the US – we are coming out of the emergency phase and adjusting to life with a new set of considerations in play. By moving quickly and early, we flattened the pandemic curve. As a result, policy makers are better positioned to plan for recovery.

The pandemic has been a catalyst of enormous change throughout the economy. The prevailing notion in Ottawa is that the construction sector has been less hard hit than retail, tourism, hospitality, and other personal services sectors. Decision-makers are starting to understand that fueling an economic recovery does not just mean filling the cracks that were exposed during the pandemic. They are now considering what investments could catapult Canada’s economy forward while the public’s appetite for fiscal activism remains high.

The CIQS has taken a leading role in encouraging the government to bring forward investments quickly. The organization wrote to the Prime Minister and has educated senior officials at Public Services and Procurement Canada about the ways CIQS members can ensure projects are delivered more quickly and cost-effectively.

Over the weeks and months ahead, the CIQS will promote its pre-budget submission to the House of Commons Standing Committee on Finance as a path forward for the economy as a whole. When working with government, aligning with the priorities of the party in power can yield strong results. Typically, in a minority government situation, it would be more important to work with the leading opposition party but, right now, the NDP and Bloc Quebecois hold the balance of power. These parties are more aligned with the Liberals’ vision of a ‘green recovery’; it makes substantial investments in energy efficiency projects, green infrastructure, and retrofits for the built environment that would create significant economic activity over the coming years.

The federal government has committed to bringing forward a stream of infrastructure projects valued at $3.3 billion to combat COVID-19. These investments will be targeted at projects with $10 million or less in eligible funding, to reach as many communities and projects as possible.
Each successful proponent will have had to show how its project directly supports community needs for adapting to life during the pandemic: upgrading ventilation systems, adding space in community housing, delivering broadband internet and mobile phone service to assist in physical distancing, and more. There is perhaps no clearer indication that the government is planning for a multi-year battle with the virus that could extend past 2022. As part of the Investing in Canada Infrastructure Program (ICIP), this stream will require provincial and municipal investments, but the federal government is increasing its contribution to up to 80% of total project costs.

The CIQS has recommended that the government expedite the delivery of construction projects by bringing forward investments in other streams of ICIP. The plan is currently back-loaded, and bringing investments forward to 2021-2022 and 2022-2023 for streams like urban transit and green infrastructure. Social streams of the program will stimulate economic growth and help the sector recover.

Finally, the CIQS is making another important recommendation related to the growth and support of the profession. The federal government – and the provinces for that matter – will be running historic deficits for this fiscal year, and likely for many years to come. As a result, there will be increased pressure from taxpayers to ensure every dollar is spent as efficiently as possible. The CIQS will be encouraging the federal government to study the significant benefits of engaging Professional Quantity Surveyors on all federal projects, and possibly encouraging their inclusion in bids and project plans. The CIQS has already engaged Public Services and Procurement Canada on these efforts and looks to developing more relationships in Ottawa that will create traction on this recommendation.
1. What is the role of the Canadian Construction Association?
The Canadian Construction Association represents more than 20,000 members from 63 local and provincial integrated partner associations, offering a voice to public policy, legal and standards goals for everyone working within every sector of the Canadian construction industry.

2. How long have you been in your current role at CCA and how has it evolved over the years?
I was hired as the President of the Canadian Construction Association three years ago with a mandate to modernize the association, which not only evolved the association but also my role.

One of my objectives was to create a more efficient governance structure by reducing the board from 85 members to 20. This board is supported by national advisory councils and committees, which encourages engagement and allows everyone to have a voice.

This new structure makes for a nimbler board, better able to log onto ad hoc zoom calls to quickly act on sensitive matters. This became evident when we needed to collaborate on our COVID-19 response, including making resources available online at www.cca-acc.com/covid-19-resources.

I was also tasked to make the organization more digitally savvy. Drawing from my past experience in digital marketing, I was able to identify ways for CCA to introduce more productive uses of technology, implement integrated connectivity to allow staff to work remotely, and move away from printed materials. The majority of our content is now only available in digital form. This digital upgrade did not happen overnight.

It has been a three year undertaking that paid off in spades when the pandemic hit as our staff already had all the tools they needed to work from home, allowing for business continuity with very little disruption to operations as we went into lockdown.

We increased our public affairs staff to create a proactive advocacy culture at CCA. We have designed new tools, hosted a productive CCA on the Hill and lobbied for federal prompt payment legislation. We also started a social media campaign to showcase everything our members do for their communities by encouraging them to add #CDNConstructionGives to social media posts announcing support for a cause by members of the construction industry. We also utilize online advocacy campaigns where we push our campaigns to our members, asking them to contact their government representatives using the tools provided by PushPolitics to harness the power of bottom-up politics.

3. The construction sector is still a heavily male dominated industry. Do you have any advice for women who are considering making a career in this industry? Approximately 3% of tradespeople are women. We need to break the stereotype that construction is too physical or unsafe for women. Not only does the Canadian construction industry have a strong record on safety, but there are also a great variety of job opportunities within the construction industry in addition to the trades, such as an architect or engineer or an office professional (marketing, administration, quantity surveying, etc).

On that note, it was very exciting for me to celebrate the association’s 100th anniversary as a woman at its helm with a female chair of the board (Zey Emir, Revay and Associates Ltd) at my side to help shatter the age-old idea that women have no place in construction.

4. What is CCA’s vision to ‘Build a Better Canada’ and how will you implement it? ‘Build a Better Canada’ is the vision of the CCA 2023 Strategic Plan with a mission to “inspire a progressive, innovative and sustainable construction industry that consistently acts with integrity”. (CCA 2023 A roadmap for change). The strategic plan focuses on ways to unite the industry, lead by adopting best practices and evolve to broaden membership and drive value.

One of the programs designed to promote the industry’s inclusivity and career potential is through the ‘Talent Fits Here’ campaign, which includes an outreach toolkit for students and a diversity campaign. We are hoping to also attract STEM students by showing use of technology such as drones and 3D printers used in project designs and delivery. We want to show that the Canadian construction industry offers a path for anyone interested in a great career. People are encouraged to explore the industry and reach out to local construction associations to learn how they can carve out a niche for themselves.

5. How large is the Canadian construction industry in terms of GDP and workforce?
The Canadian construction industry is a $142 billion industry that employs 1.5 million people, which equates to 7.5% of Canada’s total workforce and 7% of the country’s GDP. Construction is important...
for the health of the country. Water, broadband access, power grids, safe roads and bridges, schools and hospitals and the judicial system are all possible because of the construction industry. The assets built by our industry connects communities to each other and Canada to the world.

6. How has COVID-19 affected the Canadian construction industry?
With the exception of a few, the majority of provinces have kept very busy throughout the pandemic. That is not to say there have not been some setbacks, such as declined productivity due to increased sanitation, social distancing, people off work, supply chain disruptions, staff quarantines and interrupted trade because of the US border closure.

The safety-first mindset of our industry made it easier for the Canadian construction industry to adapt to COVID-19 safety measures. CCA collaborated with industry members to gain insight about health and safety best practices for the pandemic, leading to the production of COVID-19 resource material made available online.

Despite the culture of safety and can-do attitude, projects have still been impacted by increased start-up costs and added expenditure for additional PPE and sanitation of workstations. There is also the concern that the start of the new school year will create new outbreaks that end in school closures, leaving parents unable to go to work and constructions costs to go up.

To offset these increased productivity costs, CCA is advocating that the government implement a stimulus plan for the construction industry, which will also cover these costs so they can maintain liquidity.

7. What do you foresee to be the biggest challenges facing the Construction industry over the next five years (over and above any COVID-19 fallout)?
One of the biggest challenges facing the industry is an impending workforce shortage, as approximately one-quarter of current construction workers will retire in the coming decade. We need to find ways to attract people who may otherwise not have considered the construction industry as a career, such as retail, hospitality and tourism workers who were displaced by the pandemic, women, new immigrants and Indigenous people. Construction jobs are good, well paying jobs and the industry offers a variety of career paths for all types of people. It’s an industry that offers an opportunity for people to own their own business, be creative, enjoy variety in their workday and not be stuck behind a desk all day.

Use Paper Responsibly
Today's forest industry is working hard to become one of the greenest industries on earth.

Paper is an essential part of human civilization. While we all use and depend upon electronic communications, it is easy to ignore that it comes at an environmental cost. Worldwide spam email traffic creates greenhouse gases equivalent to burning two billion gallons of gasoline yearly, with numbers rising. More than $55 billion in toxic e-waste material is thrown away every year in the US alone, with a recycling rate of only 20% compared to 64.7% for paper.

No industry is perfect. But the paper industry has made, and continues to make, huge investments in environmental responsibility. Specifying and buying paper from certified sources ensures the continuation and growth of carbonabsorbing forests. Using paper with appropriate amounts of recycled fibre helps preserve forests, conserve energy, and maximize fibre usage through paper lifecycles.
In order to reposition the image of the industry as a career of choice, we need to help Canadians understand that infrastructure is an investment in the country’s economy that inspires us to greatness.

The second challenge is the industry’s aversion to innovation risk. This risk is instead taken by a contractor who brings innovative ideas or projects to light. Project risk needs to incorporate creative ideas, the number of jobs it creates, or the supply chain used into the calculation, not simply the bottom line. CCA understands the importance of innovation and has launched a mentorship program that matches people with interesting entrepreneurial ideas or solutions with industry leaders. The goal is for industry leaders to work with their mentees to refine their idea(s) so they can be utilized in the industry.

8. What are the opportunities that CCA sees emerging for the Canadian construction industry?
This pandemic has highlighted the importance of healthy infrastructure with consideration to its resilience to climate change and its environmental impact. It has also offered reflection on how to build better, with social distancing in mind as well as the need for reliable high-speed broadband. The impact of the closed US-Canada border on our supply chain shows the importance of strong, dependable Canadian-made products and materials.

These are all examples of how the Canadian construction industry can show innovation and growth. The Investing in Canada plan offers $180 billion in federal funding over 12 years for infrastructure programs across Canada. CCA has broached the subject of extending infrastructure planning to 25 years to help stabilize government spending commitments. It would also be beneficial for funding to be flexible based on needs and to ensure it includes all sectors, firms and infrastructure programs across the country. The quality of local infrastructure has a strong impact on the quality of life in a community and the Canadian construction industry is ready to do what it takes to ‘get it done well and safely’.

Mary Van Buren, MBA, CAE is a proven leader with an exceptional track record in advancing member interests. She is an expert in marketing, communications, strategy and digital and has worked in the private, public and non-profit sectors. Prior to becoming the president of the Canadian Construction Association, she held executive positions with MD Financial Management, Export Development Canada and the Canadian Real Estate Association. She holds an MBA in international business from McGill and a B.Com from the University of Ottawa. She is a Certified Association Executive and bilingual in English and French.

“...We increased our public affairs staff to create a proactive advocacy culture at CCA. We have designed new tools, hosted a productive CCA on the Hill and lobbied for federal prompt payment legislation.”

About the author
Alexandra Parliament is a Marketing and Communications Consultant with over 20 years of experience. She has a formal education in print journalism and has worked in the marketing and communications departments of a PR Agency, a major Marketing Agency, a national magazine, an annual three-day festival, provincial and national non-profit organizations and one of the largest loyalty programs in Canada. She has been published in a variety of magazines and online publications and is currently a steady contributing writer for Mechanical Business Magazine. She has been working with CIQS National in a PR/Marketing capacity since November 2018.
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