



# FOCUS

Quarterly E-Magazine of  
The Institute of Quantity Surveyors, Sri Lanka  
Volume 14: Issue 01, June 2022



**HND Certificate Award Ceremony**

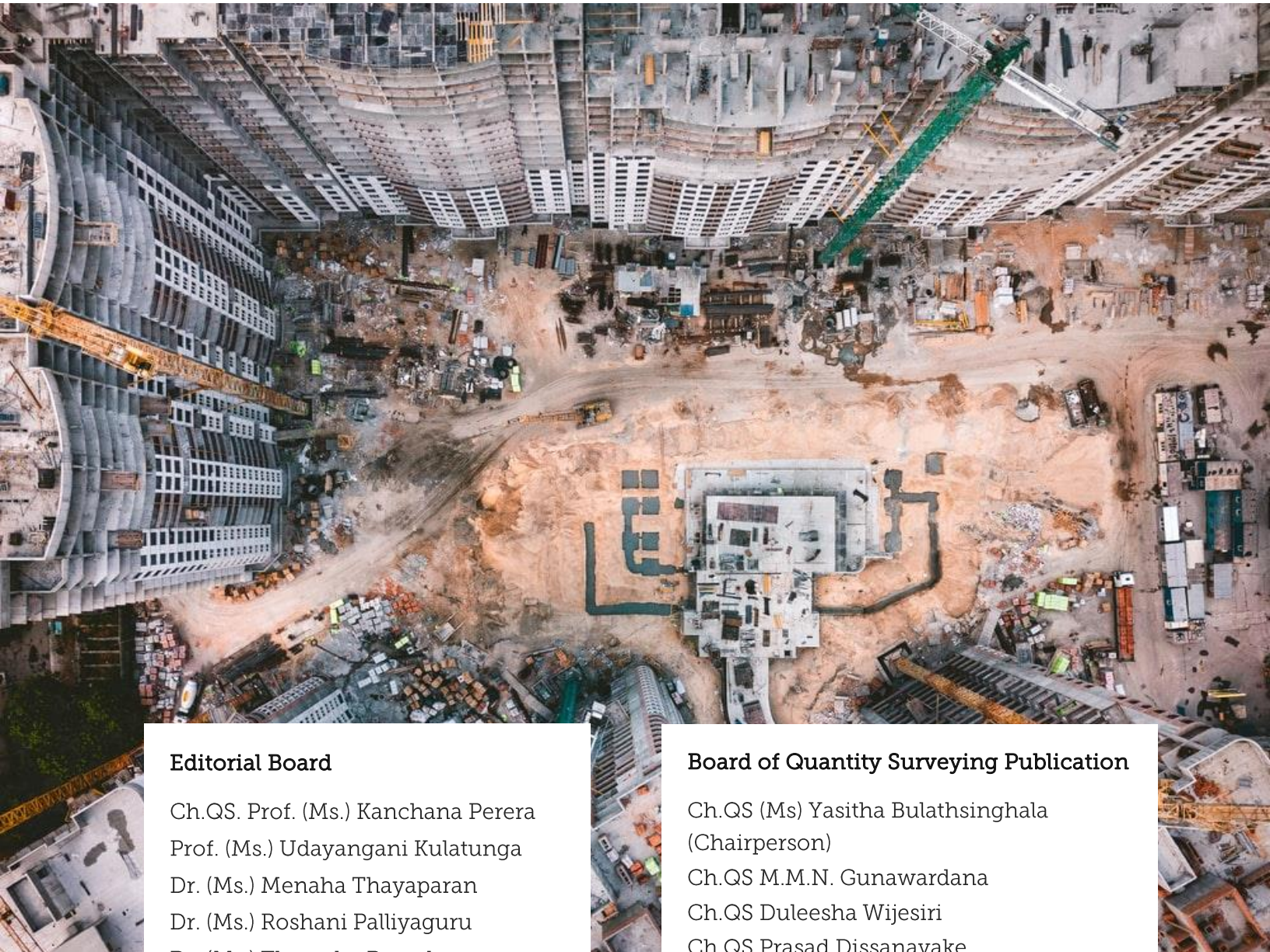
**Technical Member Certificate Award Ceremony**

**Student Article Competition Award Ceremony**

**How Can the Construction Industry  
Adapt to a 'New Normal'?**

**Conceptual Transformation  
of Cash Flow Management**

**New Graduate Members**



### Editorial Board

Ch.QS. Prof. (Ms.) Kanchana Perera  
Prof. (Ms.) Udayangani Kulatunga  
Dr. (Ms.) Menaha Thayaparan  
Dr. (Ms.) Roshani Palliyaguru  
Dr. (Ms.) Tharusha Ranadewa  
Mr. Dharshaan Vijayananda

### Board of Quantity Surveying Publication

Ch.QS (Ms) Yasitha Bulathsinghala  
(Chairperson)  
Ch.QS M.M.N. Gunawardana  
Ch.QS Duleesha Wijesiri  
Ch.QS Prasad Dissanayake  
Ch.QS Buddhika Perera  
Ch.QS (Ms) Dhamisha Sriyananda  
Ch.QS Majith Kodithuwakku  
Ch.QS (Ms) Iresha Gamage

### Disclaimer

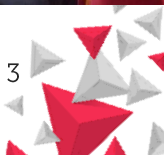
The information contained in this publication should not form the basis of any decision as to a particular course of action; nor should it be relied upon as a professional advice. Under no circumstances shall the publisher be liable for any direct, incidental, special and consequential loss and damage that results from the readers' reliance or non-reliance of information provided in this publication. The copyright of this publication vests solely and exclusively with the publisher and no part may be reproduced or transmitted by any process or means without prior written permission of the Institute of Quantity Surveyors, Sri Lanka.



# HND Certificate Award Ceremony 2022

The College of Quantity Surveying (guarantee) Limited successfully held the HND certificate award ceremony on 14<sup>th</sup> of March 2022 at the BMICH. The chief guest of the event was Mr. S.U.K. Rubasinghe, Director of Registration, Accreditation and QMS Division of Territory and Vocational Education Commission.

Around 95 students from HND 2017, HND 2018, and HND 2019 were received their Higher National Diploma Certificate during this event.



# Technical Member Certificate Award Ceremony - 2021

IQSSL is delighted to inform the successful completion of the IQSSL Technical Member Certificate award ceremony 2021 after a lapse of two years due to the COVID-19 outbreak.

The ceremony was held on the 14<sup>th</sup> of March 2022 at BMICH with the presence of over 100 technical members of the years 2019, 2020, and 2021.



# Award Ceremony

## IQSSL Student Article Competition 2021

IQSSL is delighted to inform that the award ceremony of the "IQSSL Student Article Competition 2021" was successfully held on 25<sup>th</sup> of March 2022 at the Institute of Quantity Surveyors as a follow-up event during the past presidents' meeting. The certificates and the cash gift for the winners of the Competition were presented by the former President Prof. (Mrs.) Chitra Weddikara.

Moreover, the invaluable commitment of the reviewing committee was recognised and appreciated by the IQSSL. Former President Ch.Qs Lalith Rathnayake handed over the token of appreciation for Dr. Roshani Palliyaguru and Dr. Tharusha Ranadewa as a symbolic representation of the reviewing committee.



# How Can the Construction Industry Adapt to a 'New Normal'?

**Agana Parameswaran and K.A.T.O. Ranadewa**

Department of Building Economics,  
University of Moratuwa



The construction industry is often recognised as a key economic pillar of a country. The COVID-19 pandemic has had an impact on each and every industry, including the construction industry. Therefore, adapting to the new normal is vital to minimise the negative impact caused by COVID-19. Many researchers highlighted several strategies for the construction industry to adapt to the new normal as presented in Table 1.

Table 1: Strategies to adapt to the new normal

No	Strategies	References
<b>Resources</b>		
1	Improve manpower management	[11],[12]
2	Improve manpower management on site	[11],[12]
3	Smart material logistics management	[11],[12],[14],[16]
4	Improve skill and team motivation	[5], [11],[12],[14]
5	Enhance concerns regarding welfare of employees	[16]
<b>Project Management</b>		
6	Improve project management	[11],[16]
7	Adopt new method for operation and work	[11],[12],[16]
8	Adapt proper communication and regular coordination	[3],[5],[9],[11],[12],[16]
9	Adapt administration and monitoring process	[9],[11],[14]
10	Optimise proper planning	[1],[2],[4],[12],[14],[16]
11	Optimise decision making	[5]
12	Optimise workflow efficiency	[11],[16]
13	Improve risk management measures	[10],[12]
14	Improve on site working time	[11],[12]
15	Optimise office management	[11]
16	Improve adaption to changes in design	[11]
17	Adequately and properly protect completed work	[16]
<b>Quality</b>		
18	Optimise quality control practice and assurance	[11]
19	Optimise first time quality	[11]



<b>Financial</b>		
20	Improve cost control management	[11]
21	Improve negotiation and cash flow management	[11]
22	Enhance value engineering	[11]
23	Utilise financial resource	[8],[9],[12],[14]
24	Examine current insurance policies	[16]
25	Confirm that the sources of income are maintained	[16]
<b>Contractual</b>		
26	Review legal and contractual rights and obligations of parties	[16]
<b>Technology</b>		
27	Adopt innovative technology	[4],[11],[12],[14],[16]
28	Automate	[6], [11],[14]
29	Building information modelling (BIM)	[6]
30	Wireless sensors	[6],[16]
31	Artificial intelligence and robots	[4],[6]
32	Virtual working	[4],[11]
33	Decrease on site activity, promote remote working and work from home	[11],[12],[16]
34	Industry 4.0	[15]
35	Prefabrication	[4], [5],[6],[11],[17]
36	3D-printing	[6]
37	Lean construction	[11],[14],[17],[18],[19],[20]
38	Last Planner System (LPS)	[19]
39	Choosing By Advantages (CBA)	[20]
<b>Safety</b>		
40	Ensure physical and mental health to ensure adequate manpower	[10],[11],[12],[16]
41	Adopt COVID-19 health, safety environmental protocol and regularly monitor, standard operating practice	[8], [9],[10],[11],[12],[14],[16]
<b>Other</b>		
41	Increase government development projects	[9]
42	Re-examine marketing strategy	[11],[16]

[1] (Alenezi, 2020c), [2] (Ghandour, 2020), [3] (Alenezi, 2020b), [4] (Ogunnusi et al., 2020), [5] (Alenezi, 2020a), [6] (Osuizugbo, 2020), [7] (Gamil & Alhagar, 2020), [8] (Zamani et al., 2021), [9] (King et al., 2021), [10] (Alsharif et al., 2021), [11] (Oey & Lim, 2021), [12] (Kawmudi et al., 2020), [13] (Vithana et al., 2020), [14] (Pathirana, 2020), [15] (Narayanamurthy & Tortorella, 2021), [16] (Raoufi & Fayek, 2021), [17] (Yuan et al., 2020), [18] (Verán-Leigh & Brioso, 2021), [19] (Mchugh, Patel, & Dave, 2021), [20] (Espinoza, Brioso, & Herrera, 2021)

As shown in Table 1, there is a variety of strategies that may be taken to mitigate the challenges that the COVID-19 pandemic has posed to the construction industry. In addition, the strategies can be categorised into eight as resources-related strategies, project management-related strategies, quality-related strategies, financial related strategies, contractual-related strategies, safety-related strategies, technology-related strategies, and other strategies.



As a result, the research concluded 42 strategies to adapt new normal for the construction industry. Moreover, as a result of the literature, highly agreed-upon strategies include: adapt proper communication and regular coordination, optimise proper planning, adopt COVID-19 health, safety, and environmental protocol and regularly monitor, with standard practice, lean construction, adopt innovative technology, and prefabrication.

Exclusively, Oey and Lim (2021) emphasised the fact that a small number of subjects have implemented lean construction, the majority of them have emphasised action plans including the reduction of three lean components (Muda/Mura/Muri), further suggesting that they have absorbed the lean concept into their everyday thoughts and activities. Furthermore, BIM, LPS, VM (visual management), and prefabrication are considered as lean construction tools (Bae & Kim, 2008; Bajjou, Chafi, Ennadi, & Hammoum, 2017). Even though, the safety of construction sites can be enhanced by employing lean construction techniques (Bajjou, Chafi, & En-Nadiet, 2017; Enshassi, Saleh, & Mohamed, 2019).

Likewise, Li, Fang, and Wu (2020) recognised there are several lean construction tools used for a similar purpose, which were mentioned in solution tables such as JIT (Just-in-time) is a method of quality, costs, and schedule control, 5S/6S method was utilised to improve on-site management, CE (concurrent engineering) was used to create a planning control system, Total quality management (TQM) is used to enhance quality management, while standardisation highlight the significance of operational process standards and industry standards.

As a result, the majority of the strategies in Table 1 are labelled under lean construction and fall under one of the lean tools or approaches. Accordingly, lean construction can be used to tackle the majority of the impacts. The adaptation of lean construction leads to reducing most of the challenges due to COVID-19 in the construction industry and is one of the measures to mitigate the impact on the construction industry (Oey & Lim, 2021; Yuan et al., 2020). Consequently, lean construction will aim to maximise the value of the construction project through minimising unnecessary wastes, which will be a timely requirement during the post-COVID situation. Therefore, construction industry can implement lean construction to adapt to the new normal.

## References

- Alenezi, T. A. N. (2020a). COVID-19 Causes Of Delays On Construction Projects In Kuwait. *International Journal Of Engineering Research and General Science*, 8(4), 35–39.
- Alenezi, T. A. N. (2020b). Minimising The Delay Factors On Construction Projects : A Local Case Study In Kuwait City During COVID-19. *International Journal of Engineering Research and General Science*, 8(5), 5–8.
- Alenezi, T. A. N. (2020c). The Impact of COVID-19 On Construction Projects In Kuwait. *International Journal of Engineering Research and General Science*, 8(4), 6–9.
- Alsharef, A., Banerjee, S., Uddin, S. M. J., Albert, A., & Jaselskis, E. (2021). Early impacts of the COVID-19 pandemic on the United States construction industry. *International Journal of Environmental Research and Public Health*, 18(4), 1–21.  
<https://doi.org/10.3390/ijerph18041559>
- Bae, J., & Kim, Y. (2008). SUSTAINABLE VALUE ON CONSTRUCTION PROJECTS. *Journal of Green Building*, 3(1), 156–167.
- Bajjou, M S, Chafi, A., Ennadi, A., & Hammoumi, M. El. (2017). The Practical Relationships between Lean Construction Tools and Sustainable Development: A literature review. *JOURNAL OF Engineering Science and Technology Review*, 10(4), 170–177.  
<https://doi.org/10.25103/jestr.104.20>



- Bajjou, Mohamed Saad, Chafi, A., & En-Nadi, A. (2017). The potential effectiveness of lean construction tools in promoting safety on construction sites. *International Journal of Engineering Research in Africa*, 33, 179–193. <https://doi.org/10.4028/www.scientific.net/JERA.33.179>
- Enshassi, A., Saleh, N., & Mohamed, S. (2019). Barriers to the application of lean construction techniques concerning safety improvement in construction projects. *International Journal of Construction Management*, 0(0), 1–17. <https://doi.org/10.1080/15623599.2019.1602583>
- Espinoza, L. R., Brioso, X., & Herrera, R. F. (2021). Applying cba to decide the best excavation method: scenario during the covid-19 pandemic. In L. F. Alarcon & V. . González (Eds.), *29th Annual Conference of the International Group for Lean Construction (IGLC29)* (pp. 870–879). 8(5), 169–177.
- Gamil, Y., & Alhagar, A. (2020). The Impact of Pandemic Crisis on the Survival of Construction Industry: A Case of COVID-19. *Mediterranean Journal of Social Sciences*, 11(4), 122–128.
- Ghandour, A. (2020). The impact of covid-19 on project delivery: a perspective from the construction sector in the United Arab Emirates. *Humanities & Social Sciences Reviews*, 8(5), 169–177.
- Kawmudi, W. N., Jayasooriya, S. D., Rupasinghe, A. R., & Ariyaratna, K. C. (2020). Identification of the Challenges Imposed by COVID-19 Pandemic on Sri Lankan Construction Projects. *13th International Research Conference of General Sir John Kotelawala Defence University*, January, 35–44.
- King, S. S., Rahman, R. A., Fauzi, M. A., & Haron, A. T. (2021). Mechanisms for addressing the impact of COVID-19 on infrastructure projects. *4th National Conference on Wind & Earthquake Engineering*. <https://doi.org/10.1088/1755-1315/682/1/012047>
- Li, S., Fang, Y., & Wu, X. (2020). A systematic review of lean construction in Mainland China. *Journal of Cleaner Production*, 257. <https://doi.org/10.1016/j.jclepro.2020.120581>
- Mchugh, K., Patel, V., & Dave, B. (2021). Role of a digital last planner @ system to ensuring safe and productive workforce and workflow in COVID-19 pandemic. *Proc. 29th Annual Conference of the International Group for Lean Construction (IGLC29)*, 87–96.
- Narayanamurthy, G., & Tortorella, G. (2021). Impact of COVID-19 outbreak on employee performance – Moderating role of industry 4.0 base technologies. *International Journal of Production Economics*, 234(February), 108075. <https://doi.org/10.1016/j.ijpe.2021.108075>
- Oey, E., & Lim, J. (2021). Challenges and action plans in construction sector owing to COVID-19 pandemic – a case in Indonesia real estates. *International Journal of Lean Six Sigma*. <https://doi.org/10.1108/IJLSS-09-2020-0149>
- Ogunnusi, M., Hama-adama, M., Salman, H., & Kouider, T. (2020). COVID-19 Pandemic: The Effects and Prospects in the Construction Industry. *International Journal of Real Estate Studies*, 14(November), 120–123.
- Osuizugbo, I. C. (2020). Disruptions and Responses within Nigeria Construction Industry amid COVID-19 Threat. *Covenant Journal of Research in the Built Environment*, 8(2), 37–48.
- Pathirana, L. P. D. S. (2020). Effect of COVID -19 and Strategic Response: A Review on Sri Lankan Construction Industry. *SSRG International Journal of Economics and Management Studies (SSRG-IJEMS)*, 7(6-june), 73–77. <https://doi.org/10.14445/23939125/IJEMS-V7I6P110>
- Raoufi, M., & Fayek, A. R. (2021). Identifying Actions to Control and Mitigate the Effects of the COVID-19 Pandemic on Construction Organizations: Preliminary Findings. *Public Works Management & Policy*, 26(1), 47–55. <https://doi.org/10.1177/1087724X20969164>
- Verán-Leigh, D., & Brioso, X. (2021). IMPLEMENTATION OF LEAN COVID-19 IMPACTS IN RESIDENTIAL CONSTRUCTION PROJECTS IN LIMA, PERU. *Proc. 29th Annual Conference of the International Group for Lean Construction*, 923–932.
- Vithana, N. D. I., Bandara, K., & Jayasooriya, S. D. (2020). Impact of COVID-19 Pandemic to Construction Industry in Sri Lanka. *13th International Research Conference General Sir John Kotelawala Defence University*, 161–166.
- Yuan, Z., Zhang, Z., Ni, G., Chen, C., Wang, W., & Hong, J. (2020). Cause Analysis of Hindering On-Site Lean Construction for Prefabricated Buildings and Corresponding Organizational Capability Evaluation. *Advances in Civil Engineering*. <https://doi.org/https://doi.org/10.1155/2020/8876102>
- Zamani, S. He., Rahman, R. A., Fauzi, M. A., & Yusof, L. M. (2021). Effect of COVID-19 on building construction projects: Impact and response mechanisms. *4th National Conference on Wind & Earthquake Engineering*, February. <https://doi.org/10.1088/1755-1315/682/1/012049>



# Conceptual Transformation of Cash Flow Management in Construction Industry During the COVID-19 Outbreak



**Chamodi Piumika  
Namarathna**

Sri Lanka Institute of  
Information Technology  
Department of  
Quantity Surveying

## Introduction

One of the key professions in the modern construction industry is quantity surveying. Quantity Surveyors mainly involve in cost controlling, predicting, and monitoring for different types of construction projects. But unfortunately, due to COVID-19 pandemic situation since the 2020 march to date, the whole country's living conditions are on hold. Due to this sudden lockdown of the country, all industries including the construction industry were severely affected. To prevent the further spread of the virus, the Sri Lankan government implemented full and partial lock down time to time, restricted the public transportation system, implemented domestic health protocols, and asked the citizens to proceed with work from home. Companies had to develop new strategies if they wanted to survive in this situation. People got stuck in their homes, many lost their jobs, especially in the construction industry. People lost their way of income generation. The whole world is facing a situation where they never ever dreamt of. An enthusiastic inspirational writer, Laila Akita once said, "In this situation, we must adapt, survive and strive." As one of the most significant professions in this sector, QS plays a critical role in assisting key stakeholders in their resilience efforts. In the middle of these unpredictable conditions, QS experts must be ready to adapt by continuing to enhance their abilities.

Among those, cost management is one of the crucial abilities to enhance during this situation.

## Cash Flow Management in Construction

Cash is the lifeblood of the construction industry. Cashflow management is one of the key responsibilities of a QS in a construction project. Basically, cashflow management is done by establishing a budget and forecasting the cash flow along with the established budget. In order to have a proper cash flow forecast, first a budget should be established for a certain time period. According to the author Dave Ramsey, "A budget is telling your money where to go, instead of wondering where it went". A budget is like a baseline to compare the actual performance of the company cash flow. Normally, both the budget and the forecast are done for a year. After preparing a proper budget for a construction project, those budget figures will not be changed.

So, it helps to analyse the actual performance of the cashflow against the established budget figures. Forecasting is a method of estimating potential results and determining what is the outcome of the project in the future. As a perfect strategy, cash flow forecasts assist the company in achieving their growth plans.



Furthermore, it will generally make aware the client or the employer on their monetary commitments and timelines under the contract. Cashflow forecasting, will help predict the cash inflow and cash outflow of a construction project and review and analyze the financial health of the construction project. Budgeting and forecasting were a lot easier before covid 19 outbreak compared to now.

### **Cash Flow Management in COVID-19 Pandemic**

At the initial stage of the pandemic in Sri Lanka, almost all the construction projects were stopped immediately. It was mainly due to uncertainty associated with the situation. It has been one and half years with covid 19 in our country, and the industry has begun to conceptually transform by inventing new strategies to stand slowly against the pandemic. Due to this sudden shut down of the country in the initial stage of the outbreak, the construction material supply was interrupted, workers and professionals who got infected were quarantined, cost overruns were prevalent, price escalations took place, the projects were slowed down, and many future projects were terminated by the employers due to ill financial health of themselves. Even though the world moved to strategies such as work from home, video conferencing, online marketing etc, as per my opinion, most of the jobs in the construction industry cannot proceed as work from home.

Mainly, the construction industry requires physical engagement of people to perform numerous activities. However, the industry has evolved to practice e-tendering, video inspection programs, purchasing materials online, de-recruitment and limiting non-essential recruitments.

Even the Construction Industry Development Authority (CIDA) has implemented health and immunity enhancement guidelines to be followed by the people who work in the industry. When it comes to cost management of an ongoing construction project in this backdrop, the budget figures and forecasts are totally incompatible. Therefore, the employers are compelled to adjust the targets and goals in order to prevent making huge losses and somehow to survive in the industry. Since, the health and safety requirements of construction projects increased and due to the implementation of more information technology-oriented strategies, the preliminary costs of projects tend to be higher in this pandemic situation. The cash flow of projects has totally changed due to sudden adjustments and newly added measures in the construction industry.

As per my understanding as a future quantity surveyor, despite the enormous negative impact of this pandemic, this created few positive changes also in the construction industry. The concept of 'think out of the box' has come to the forefront, as the professionals of the industry seek new strategies to survive in the industry. Furthermore, innovations and more new technologies like digital conferencing have been introduced to the industry to cope up with the given situation. Also, the industry has become more cautious about the risks as well as the health and safety compared to the times before COVID-19 pandemic.

Because of these changes, cash flow of ongoing construction projects is totally messed up. Thus, the budgeting and forecasting must be revised to suit the ongoing situation of the country.



Even if rearranging those budget figures and forecasting is tough in this situation, I think it will be more helpful for the cost management of future construction projects in the industry because those budgets and forecasts are done in accordance with changes and newly added principles in the evolved construction industry.

## Conclusion

In summary, a quantity surveyor is a professional having wide knowledge about cash flow management as well as specialized in many other areas. Cashflow management must be an important part of a company's overall COVID-19 risk assessment and action planning. Despite the increase in uncertainty of the industry, as per my view this COVID-19 outbreak will certainly change the company principles and cultures where the traditional methods will move towards innovative solutions. Also, this situation will expand the usage of automated equipment. This will have a huge impact on the cash flow of the industry. Probably, the total cost of many construction projects will rise, but many unwanted costs have gotten rid because of this outbreak. According to my view, both positive and negative changes have occurred to the cash flow of the construction industry. As future QSs, I think we must adapt according to those changes and implement new strategies to overcome the negativity and look forward to the industry in a positive way.

## References

- Rics.org. (2021). [online] Available at: <https://www.rics.org/globalassets/rics-website/media/upholding-professional-standards/sector-standards/construction/black-book/cash-flow-forecasting-1st-edition-rics.pdf> [Accessed 19 Apr. 2021].
- Deloitte. (2020). Managing cashflow in crisis. [online] Available at: <https://www2.deloitte.com/content/dam/Deloitte/global/Documents/About-Deloitte/gx-COVID-19-managing-cash-flow-in-crisis.pdf> [Accessed 25 Jun. 2021].
- Ministry of Urban Development, Water Supply and Housing Facilities health and immunity enhancement guidelines for covid -19 and dengue CIDA Health Guidelines for Construction Industry Construction Industry Development Authority Sri Lanka. (2020).[online]. Available at: [https://www.cida.gov.lk/newsevents/CIDA%20COVID%20and%20DEGUE%20Guidelines%20for%20Costruction%20Industry%20Version%203\(Revised\).pdf](https://www.cida.gov.lk/newsevents/CIDA%20COVID%20and%20DEGUE%20Guidelines%20for%20Costruction%20Industry%20Version%203(Revised).pdf) [Accessed 25 Jun. 2021].
- Majumder, S. and Biswas, D. (2021). COVID-19 Impacts Construction Industry: Now, then and Future. [online] Research gate. Available at: [https://www.researchgate.net/publication/347839377\\_COVID-19\\_Impacts\\_Construction\\_Industry\\_Now\\_then\\_and\\_Future](https://www.researchgate.net/publication/347839377_COVID-19_Impacts_Construction_Industry_Now_then_and_Future) [Accessed 25 Jun. 2021].



# Congratulations!

IQSSL New Graduate Members of the  
Graduate Membership Qualifying Examination (GMQE) - April 2022



**Ms. P.A.S.I. Jayarathne**  
from University of Sheffield  
Hallam (June 2017)



**Ms. C.J. Deniyage**  
from University of Vocational  
Technology (September 2019)



**Ms. G.C.D. Alwis**  
from University of Vocational  
Technology (April 2012)



**Mr. P.S.P. Sirimewan**  
from University of General Sir John  
Kotelawala Defence (January 2020)



**Ms. W.A.M.J.C. Prematillake**  
from University of Liverpool John Moores (February 2019)







[www.iqssl.lk](http://www.iqssl.lk)