



The Quintano Report (Hamrun Incident March 2020)

FEEDBACK TO THE REPORT

‘A CONSTRUCTION MANAGEMENT PERSPECTIVE’

Prepared by: The sub-committee obo the Malta Chamber of Construction Management

Date: 2nd of March 2021

Submitted to: The Chairman BICC

MALTA CHAMBER OF CONSTRUCTION MANAGEMENT

TO DRIVE UP PROFESSIONAL STANDARDS AND PUSH FORWARD INNOVATION

Scope & Objectives of this report

Visibility to the report titled 'Building Industry Technical Committee' dated April 2020 (**Appendix A**), was provided to the MCCM, during a BICC Advisory Board meeting held on Friday 29th January 2021. BICC have since requested review by all the members of same advisory board accordingly.

In view of this, the MCCM, appointed a sub-committee to review the report which outcome is hereby presented.

This document provides an overview in the form of a report related to the review exercise conducted by the sub-committee and is divided in the following sections:

Executive Summary

Section A: Background to MCCM

Section B: Review methodology

Section C: Main Review Commentary

Section D: Socio-Economic Views

Section E: Concluding comments and observations

Appendices

Executive Summary

The Local Construction Eco-System is made up of various players with an array of variable interests that not always align towards the National Priorities. We understand that Government is committed to drive the transformation of the current Building and Construction Sector with the main objective that of enhancing the regulatory aspects specific to the construction cycle of local building developments, as well as the strengthening of the strategy and policy aspects related to the built environment. Whilst the current regulatory framework related to Third Party Rights within the sector was recently enhanced, the adequate implementation and harmonisation of same is somehow lacking for many reasons, therefore the need to consider an 'overhaul' to the current legislation and practices. The construction sector is considered fragmented, various fora, various groups, hence the need to create a solid platform that serves primarily as the main regulator for the execution of the construction life cycle of any development as well as the creation of a hub for the as-built information. A platform for networking that promotes the continuous development and improvement of best practices within the sector. This is a huge opportunity to change.

The Quintano report comes in reaction to most unfortunate recent past fatal accident. The recommendations have been reviewed by the MCCM from a construction management aspect. Whilst, generally there is agreement with the main principles of the recommendations done, the MCCM, is of the opinion that whilst quick wins may potentially be attained in the short term, the aspects of upscaling the construction standards of our eco-system would need a holistic but integrated approach towards upscaling regulatory, practices, processes and standards. These aspects are deep down interwoven and require an in depth consultation before an overall strategy is drawn up and action plans may be implemented in a structured manner.

SECTION A

MALTA CHAMBER OF CONSTRUCTION MANAGEMENT (MCCM)

Recently founded, the Malta Chamber of Construction Management is committed to serve as a professional platform to Construction Project Managers in terms of the profession with the scope and objective that of elevating and upscaling Construction Project Managers' services at all levels including resources and best practise knowledge sharing base provided to the Construction sector within the islands. Driven by a single goal; to support and promote the desired improvements within the management field of services that ultimately lead to qualitative leaps within the built environment. We strive to work with other local and foreign institutions towards supporting local authorities in the preparation of rules and regulations that promote improvements within the Construction Industry.

OUR MISSION

- **The promotion for the public benefit of the science and practice of building and construction.**
- **The advancement of public education in the said science and practice including research and the publication of the results of all research.**
- **Improve the quality of life for the users and creators of our built environment**
- **To drive up professional standards, push forward innovation, influence political decisions.**
- **Professionalism- To champion standards and professional ethics in the science and practice of building and construction.**
- **Integrity- To strive for equity and fairness in our decision making and treatment of others.**
- **Excellence- To pursue the highest standards of quality in everything we do**
- **Respect- To consider the impact our actions will have on individuals and the public good**
- **To Lead a cultural shift towards professionalism in construction**
- **To Drive innovation in the science and practice of construction management**

MEMBERS OF THE SUB-COMMITTEE

Chairman

Karl Azzopardi (CEO, INDIS Malta Ltd)

Reno Vassallo (Construction Manager, Vassallo Builders)

Andrei Cachia (Chief Projects Officer, Projects Plus)

Jesmond Chetcuti (MCIOB AMICE representative of the MCCM acting committee
Project Manager GHRC)

Members are all in their personal capacity and their experience within the Construction Management Practise is provided in the specific appendix to this report. (**Appendix B**).

SECTION B

Methodology

The 'Quintano report' was circulated to the individual members of the sub committee during an initial meeting asking each member to review and provide individual comments to the content of the document. Comments have subsequently been consolidated into an observation / comment journal and were subject to collective discussions via workshop type meetings. Iterations followed and once a consensus on all matter was achieved the outcome was translated into this review report.

SECTION C

Review Commentary

1.1 Overarching vision

We believe that the overarching vision as laid down is clear and faithful to the scope and objectives of the stakeholders including society in general. No further comments noted.

1.2 Strategy

It is indeed painful to note that the overarching drive to shape up the sector is seen as a clear reaction after a number of incidents and fatal accidents that materialized in the recent past. The Quintano committee report within this section puts emphasis on the long-term changes, required to transform the building industry to modern ways of operation, comparable with those in other developed countries. Indeed, we are in total agreement with such a recommendation. The upgrading of the existing regulatory framework, the clear definition of roles and responsibilities, not only on site but also off site and related planning processes are to be considered key to long term results.

A development project's life cycle goes far beyond the execution stages (implementation stage) and in our opinion the pre- and post-construction stages are equally important (if not more, any failings at the planning stages will have dire consequences-cost, time and quality-during the latter stages) and require due consideration from a planning application and regulatory aspects as well. In our opinion, the long-term solution should stem from the clear distinction between a planning permit and a building permit hence the transformation of the current planning application and execution processes to a staged one that addresses the life cycle of the process in a staggered but practical process enhancing control points along the same process.

The role of the BCA is undoubtedly very important; however, it is of concern that the BCA seems to be looked at an Authority that should be upscaled to 'police' / 'enforce' construction site on the islands. In our opinion, the Authority should be built towards the long-term National Objectives that of ensuring that the building and construction sectors are revamped, Contractors and Developers upscale and that the eco-system of the built environment improves from a standard and academic perspective. Enforcement would be an essential core process but not the only priority. One would gauge success on less enforcement rather than increase enforcement.

The Registration and Legal Recognition of all professionals involved at one stage or more of the project life, and contractors/operators working within the industry, is a basic requirement

and importance is to be given on the design and implementation, of such a framework and system as to avoid something which addresses the immediate but not the long term. It should be designed in a way whereby it is faithful to the Capacity of the Contractors or/and Professionals; it allows proper gauging and room for scaling up or down as need be. The categorization, system and licensing should be studied in detail.

Creating the right communication lines and platform with the public/third parties and enabling the use of modern technologies and plant, not only during excavation and construction, but also at the design stage, especially for major projects (e.g., BIM technology-Building Information Modelling) is key going forward.

1.3 The BCA

The establishing of this authority is undoubtedly a very important step as this Authority is indeed required given the fragmented state of the sector in general.

The consolidation of the functions of the Building Regulation Office (BRO), Building Regulation Board (BRB) and the Masons Board (MB) into one Agency, is an area that Government has already initiated through the setting of the current Building and Construction Agency (BCA). In fact, the current BCA was tasked with a top priority item, that of the review and subsequent launch of various legislative processes during a period whereby the sector experienced several unfortunate accidents. On the other hand, there are all the other tasks within the BCA's remit that are considered 'work in progress' and hence the need to shift its gear to achieve an Authority status. Essentially, this means that the Authority would structure itself to deliver the regularisation of the Industry primarily from a compliance and regulatory aspect BUT equally important are all the other aspects including Industry's standards, as-built data, and the related eco-system. This calls for the creation of an adequate platform that apart from its main regulatory function provides the drive and support towards improving the construction sector in general.

1.4 Immediate Safeguards

This section provides a very good explanation of the technical issues and related work practices. We are in total agreement with the shortcomings as noted and we agree that these could be curtailed to put people's minds at rest, without significant impact on the construction industry.

It is very unfortunate that upgrading to what should be mere basics, is always seen as a cost burden. Working within safe practices, utilizing appropriate methods and materials to reasonable and appropriate standards provides efficiencies and less risks. Therefore, it is more a matter of raising standards and ensuring that professional and supervisory skills are applied along the full life cycle of a project.

An aspect that needs to be dealt with in detail is the application of a *penalty system*. Whilst penalties assist in terms of ‘fear or deterrent’, it does not make sense that an officer or even a member of the public reports an infringement and it takes extremely long to see follow-ups or that something happens. Agility in terms of enforcement should be considered tied to a penalty regime that is commensurate to duration and re-alignment periods tied to licensing related aspects.

Regulations are the most obvious and very important to review and ensure we have updated regulations. Yet, if these regulations clearly ask for professionals to submit qualitative information related to safe work applications, this information should be submitted as supposed to and to the right level of detail requested. No shortcuts should be allowed. Guidelines for such data and related submissions should be subject to periodical updates and reviews.

The professional sector within the industry should become more of an ‘agent’ to regulators and certain firsthand checks and balances are to be done by them rather than wait for the Authority to stop works in cases of infringements. A system related to suspension of warrants and equivalent suspension of contractor’s license should be in place even if this system would consider temporary suspensions. This way, the professional or contractor or equivalent would be precluded from operating on any site/project (at any stage-being planning, implementation or hand-over) and not simply the specific project where the infringement took place.

1.5 Proposals for immediate mitigation of danger created by adjacent excavation

Whilst the technical aspects are well covered within this section, we feel that there needs to be a translation from the technical aspect to practice. Construction Management becomes key and planning related to timeline of execution of works within this cycle of a construction project is critical. Therefore, there needs to be a thorough overhaul in terms of the building permit. The introduction that this part of the construction cycle be conducted within a specific

timeline rather than in a staggered process as too often situations and issues arise when works start and stop at an intermittent pace with issues cropping up along the way due to such exposure during the down time.

We are not in agreement with the sound pressure level proposal that seems to suggest being measured directly by the BCA or the police. From a practical aspect, we all know that human resources are already scarce let alone the task to have the BCA or equivalent check the sound pressure levels. This can easily shift as part of the developer or contractors' responsibilities along the construction cycle.

The method statements and risk assessments that are to be submitted by the contractor/s should cover all the project cycle, from the setting up of the temporary facilities-including the welfare facilities, construction (to include both the temporary and permanent works) and fit-out till commissioning. It might look complex now however this would shift the culture towards pre-planning and becomes an ingrained process eventually. Standards are created this way. The site-specific application part is the most crucial.

It will be up to the Construction Project Manager appointed to represent the client/developer, to see that what is required by law is there (on the document) and what happens on site reflects what is on the document/s. If the information is not there, works should not commence.

The technical MS submitted by the architect does not address the logistics and related practices. The issues that impact third parties, are mostly non-technical issues (apart from excavations, temporary works etc.). What impacts the general public are more related to the logistics and related pollution issues. Practical examples are unplanned blocking of streets, haphazard crane and related ad hoc operations related to deliveries of material, debris, damages to pavements etc.

Regulations and Laws exist however these are generally generic and applications to zones, areas etc differ. Therefore, a proper construction method statement that includes a construction management plan that addresses logistics, temporary facilities (that change according to the construction cycle stage) is a must. There already exists an unfair balance between contractors and professionals that apply such principles and those that do not. Construction Management becomes key.

It starts with the design stages, as from experience there is a number of issues that crop up during the construction cycle that aminate from the fact original design does not take into

consideration the geographic location of the project or site and the associated logistics constraints thereof.

1.6 Assessing the technical feasibility of excavation and additional floors prior to the commencement of works

1.7 Excavation and additional floors, by default

1.8 Developer and his Perit to prove that the proposed development is indeed doable

We agree with these sections especially the need to enforce on the submission of the technical evidence indicated by the committee.

Item 1.8.1 is suggesting the importance of a qualified Construction Project Manager on behalf of the client/developer.

Improvement in the sector should not look at methods on how the blame may be shifted. All involved have to take on responsibility and the only way is to have a clear structure of responsibilities and a method whereby the lead shifts depending on the project cycle's stage.

There needs to be a split between design and management, especially in medium to large projects (and most of the issues that keep coming up are from medium sized projects).

As for the geotechnical studies, we note that the recommendation is that this would best be *signed off by a warranted Perit having experience in geotechnical engineering. We disagree as the report is to be signed off by only by QUALIFIED Geotechnical Engineers.*

1.09 The role and rights of third parties in ensuring cross-checking, whilst BCA is set up and empowered

1.10 The role of the Site Technical Officer (STO)

It is indeed a requirement that the roles and responsibilities related to this player within the construction industry needs a total overhaul in terms of definition and related duties. In our opinion and as a starting point, one should look at how the construction industry evolved internationally and locally and what is the contracting regime applied. Professional roles may have not changed in terms of warrants and related however specializations and contracting had changed. If one had to simply look at the FIDIC regime, an Engineer and an Architect, a Client's Representative and a Project Manager differ.

Looking at the UK system, on medium and large projects most of the duties performed or expected to be performed by the STO, are carried out by the Site Engineer. This engineer is not involved in the design of the project. His duties are mainly to make sure that the designs in place do not conflict to site work applications. This also includes quality monitoring and a certain degree of H&S. As the monitoring of temporary works that vary from façade retention, scaffolding, excavations, shoring etc., these factors also form part of his/her remit. All these engineers are trained as Temporary Works Coordinators. It is standard practice that these engineers are employed by the contractor. Depending on the size and complexity of the project, this person might be on site or full time or part time. (In the UK it is not just a standard practice, but regulated by the *BS 5975 :2019 Code of practice for temporary works procedures and the permissible stress design of falsework*)

We totally disagree with the idea that the STO/Site Engineer is to be a BCA member of staff. This professional, like in the UK, must be a member of the contractor staff.

1.11 & 1.12 Regulations and Building Codes.

As commented within the report, there is no need to re-invent the wheel. We simply need to adapt existing international standards and tailor to the local built environment. Creation of markets is unavoidable.

1.13 Distinction between planning and construction

In agreement.

1.14 Responsibility for the building project

1.15 The main Players in the Construction Process

Quote:

“In the case of the more complex projects, the client’s representative also plays an important role in coordinating all involved parties. On the larger projects, the representative is often known as the project manager (and his team), whereas in the smaller projects, the Perit may be indirectly or directly fulfilling this role, whilst simultaneously constituting the design team or part thereof”

Unquote

We are not in full agreement with the above quote. There needs to be clear definition of what constitutes a large, medium or a small project. Small projects may necessitate a degree of complexity anyway.

The necessity for a Construction Project Manager, should be there all the time. The difference will be if the role be of a full or part time involvement. There is a clear anomaly here, at one point there is mention that the Construction Project Manager is the one that coordinates all those involved, from designers to the contractors (including the appointment of any of these or his/her recommendation) and at the same time, as LN136/2019 establishes that the approval of the STO is to come from the Perit.

If the Construction Project Manager is a Perit or not, depends only on the specialization of the individual, like the Geotechnical Engineer, this is a specialized profession that requires professionals specifically trained and qualified in Construction Project Management.

1.16 The role of the Perit and the Contractor

Quote:

“ Modern construction projects are too much complex to expect responsibility to be borne by a single person when there are so many different roles, and when regulation leaves much to be desired, leading the ambiguous situations of unclear split responsibilities”

“The responsibilities of the warranted professionals involved needs to be clearly defined, both on the `design` and on the `construction` side of the above set up”

Management aspects are completely missing here. There are planning, design, and implementation stages, the professional that holds all this together (at least in modern countries) is the Construction Project Manager. He or she makes sure that whatever is required at any stage is available. The designers are to carry the responsibility of what they are designing whilst the contractor is responsible not only for what he is building but also how is doing it. The Construction Manager is the professional that is to make sure that the contracting regime is followed, and all parties involved are doing their part within an established process and framework.

“ In conclusion, the execution of the works on site requires a system whereby responsibility is assigned to competent individuals, required in both the design team and in the contractor`s set up. At present, few people can fill this role, other than warranted Periti with years of experience.”

Unquote

There is contradiction here. At the beginning of this section, the committee remarked that in modern day construction industry, one person cannot bear the responsibility of the different roles.

The above quote is a clear indication to one of the flaws in the local construction industry.

1.17 Responsibility and operational methodology

Quote:

“ In small projects, this would mean that the `works specification` (what needs to be done- the permanent works) is written by the client`s architect (the design team) whereas the `works method statement` (how to actually get it done-inclusive of the temporary works) is written by the contractor`s architect (representing the construction or excavation team). In an ideal world, the latter is then reviewed and accepted/amended/contested by the clients design architect.”

In other countries such as the UK, EVERY method statement is reviewed and commented on by the management team. If there are technical issues, the design team will be requested to comment on these aspects. The MS should also include the logistics of the proposed works. The later are aspects that the management team can comment on as the management is the professional coordinating the project. To note that in medium and large projects, we might have the presence of more than one contractor/sub-contractor, thus coordination is imperative.

1.18 The Role of the BCA

One needs to look at how other countries operate. We are not different. The BCA might not have enough resources and expertise, but we cannot expect this entity to be all over policing at one go. It is to be made clear that ALL involved have their responsibilities and must be accountable, even when they are not supervised or monitored.

Design consultants should ensure that they are updated not only with PA laws and regulations, but keep abreast with the latest design and technological innovations, construction methods etc. Same applies to the contractor. Such players need to make sure that they have well trained staff. In every level. By replacing old plant is not enough, contractors must invest in their human resource.

1.19 The STO

Commented upon earlier under section 1.10

Enforcement

A QA system is to be in place for every stage of the project. In time this QA system should become a tool that is commonly used (like H&S) and ingrained i.e. more of a standard check sheet with boxes to tick, BUT with a clear responsibility that once a box is ticked the person that ticks that box will be taking a certain level of responsibility. It will be up to the client/developer PM to make sure that all boxes are being ticked by the appropriate professional or contractor.

We should not expect the BCA to check each and every check sheet for each and every project, but whenever breaches are brought to the authority's attention or following audit spot-checks, this entity should have the resources and support to enforce.

1.20 Checks and Balances at permit vetting stage

Generally, in agreement.

1.20.1 Role of the BCA after planning approval

A point of contention is the note that the STO is to be appointed by the BCA.

The point of contact for any project should be always the Construction Project Manager appointed by the client/developer. He or she would be responsible of the coordination and to a certain level of the quality of the project. (If the client decides to delegate this responsibility to the main contractor it need to be clearly defined in the contract of appointment. This is not recommended as might result in a conflict of interest, between the management and the construction wing of the main contractor, especially when conflicts and litigations arise. In our opinion the client should always appoint a representative that is trained and experienced in all aspects of construction management including the contractual and commercial aspects).

The STO (or whatever name is given) should be the technical person that works for the contractor and present on site as much as required. He/she will not be expected to prepare nor permanent and not even temporary designs, but he is to make sure that all these (designs and data required) are available. If not on behalf of the contractor, he/she must inform the Construction Project Manager, so the issue is rectified.

Role of Insurance companies after planning approval

All professionals are to be covered by an indemnity insurance. Unless they are not employed, and their employer is providing it for them. An area that would maybe discussed is that CAR, 3rd party and related insurance is to be taken up by the client/developer as to ensure compliance to basic minimum with all contracted parties participating within the said policy. This way, one would make sure that insurances are in place along the project's cycle.

1.21 Checks and balances during excavation and construction

1.22 Deterrents

A standard QA system is to be in place for every project. Special projects will have additional measures that might be project specific.

Projects should be categorized thus establishing the mitigating measures and procedures expected.

The BCA and the authorities must be supported to enforce, and penalties can vary from suspension of licenses and warrants, blacklisting, to jail term.

We can look at what other countries have done, and their lessons learnt. We do not require to repeat their mistakes and at the same time we do not need to re-invent something that is working fine elsewhere.

1.23 Registration and classification

Agreed. Registration is to be for everyone on site, starting from the unskilled laborer right up to the senior manager. Similar to other countries.

1.24 Building professionals

In total agreement. Each profession is to be a separate profession and preferably, autonomous from each other but working together for the common good, similar to what happens in other countries.

There seems to be a contradiction here. In this section the committee is recommending the way forward in regard the professionals but in the majority of the text the Committee refers to the Perit maintaining responsibility.

1.25 Contractors

In agreement.

1.26 Tradesmen and skilled workers

Agreed however for Government and or equivalent projects, everyone on site should have a basic H&S Card (similar to the CSCS in the UK), this also applies to unskilled workers.

1.27 Operatives/drivers

Agreed, however anyone driving any sort of plant must have the equivalent card/certificate that confirms his training. Being competent is not good enough as this can never be verified. There should be cards starting from someone driving a dumper right up the largest excavator and cranes.

1.28 Ground Investigation Companies

Agreed. Standards need to be on the same level as those internationally (ISO 9001, 14001, 45001), Considerate Contractor, SSIP, CHAS, Safe Contractor etc.

For any contractor/companies involved in the construction industry, should be certified, and ideally audited by accredited institutions so to make sure that not only they obtain the certificate, but they stick to the standards.

Government contracts (following a transition period) should request these certificates as prerequisite for accepting their bids.

1.29 Methods for registration/classification

Agreed, however apart from local educational institutions we should seek partnerships with international institutions that could share their experience and avoid repeating mistakes done in their countries.

1.30 The role of education and information to third parties

Similarly, we can use examples by other country experiences on how they behave with respect to impacted third parties. Good Neighbor Schemes should be encouraged, even safe visits so to explain what is going on. This will create a better atmosphere between the parties.

1.31 Modern Technology to upgrade existing practices

Our opinion is that it is high time to start addressing the professional responsible by his proper title (and not keep saying Perit).

If we are talking about structures, we need to refer to the structural engineer, for excavations the structural engineer and the geotechnical engineer, for architectural design we refer to the architect, in regard management we refer to the Project Manager (Construction PM in this case).

SECTION D

Brief socio-economic views

The Chamber notes the focus on the need to have a properly functional Building Construction Authority, and to which we are in total agreement. Yet, we strongly recommend that this Authority be adequately resourced and does not only focus on the control and regulatory enforcement aspects BUT equally if not more important, are the aspects of upscaling of building standards and construction methods applied and specified by designers, architects, and engineers.

The Authority's proposed role place a large emphasis on the development of human capital in the building and construction sector. To be successful, the Authority requires competent persons to conduct the expected work with diligence and quality. This would entail indirect investment in the 13,000 circa employees of the construction sector, including a significant amount of technical and highly skilled personnel, who will be required to have the right skills for the job which at times implies a tertiary level of education. Upskilling of the sector's workforce will result in improved productivity, which intrinsically results in improved competitiveness of the sector and value-added contributions to the economy.

The authority should become a continuous research hub both in terms of knowledge within a form of as-built depository as well as the pursuing of new technologies and method to sustainable developments. Sharing of knowledge between the various parties, contributing also to an increasingly knowledge-driven economy for increased value added.

The improvement of our infrastructure to a qualitative one, not only enhances the attractiveness of the location to a business but also to the workers they seek to attract and more broadly is essential to

the quality of life of the community. This aspect shall enhance our chances to continue to attract niche tourism, foreign direct investment, and key personnel, along with the improvement in well-being. Ultimately, quality buildings will serve as catalysts towards the adjustment of market prices in the construction industry which have over the years continued to skyrocket. The resilience of the market will depend on the quality offering given the scarcity of land.

It is known fact that the construction industry is subject to information asymmetry that may lead to moral hazard and adverse selection type of issues resulting in economic disadvantages to the specific players. Therefore, the upscaling of the sector including the effective enforcement of bureaucratic mechanisms which regulate the various roles of each stakeholder, their competencies, as well as their liabilities in this market, allowing the reduction of information asymmetry.

SECTION E

Conclusion

As noted within our review comments, it is a very good step that there is a 'solid' attempt towards addressing the state of play related to how building and construction projects are executed. Our main observation is that the process towards upgrading the construction process is very complex and goes far beyond technical solutions.

The attempts in the form of short- and long-term actions as included within the Quintano Report, are very positive however seem to focus on ONLY specific stages of a project's life cycle. The said report underlines specific technical solutions but is generally weak in terms of construction and project management application aspects. In our opinion, upscaling the methods of construction and application on site requires serious consideration of the application of good construction practise management and the regimes these bring about. Therefore, looking at upscaling the industry from a technical solution is good yet it has to be seen as highly integrated with management practices and applications.

It is our opinion that the below should be considered as an integral core to the reform:

1. Emphasis on Management Aspects

As noted within our review comments, it is a very good step that there is a 'solid' attempt towards addressing the state of play related to how building and construction projects are executed. Our main observation is that the process towards upgrading the construction process is very complex and goes far beyond technical solutions.

The attempts in the form of short- and long-term actions as included within the Quintano Report, are very positive however seem to focus on ONLY specific stages of a project's life cycle. The said report underlines specific technical solutions but is generally weak in terms of construction and project management application aspects. In our opinion, upscaling the methods of construction and application on site requires serious consideration of the application of good construction practise management and the regimes these bring about. Therefore, looking at upscaling the industry from a technical solution is good yet it has to be seen as highly integrated with management practices and applications.

2. Creation of Standards

Emphasis is to be exerted on the importance of proper certified Construction Project Management Practices along the full cycle of a project. This should take into consideration what other countries managed to adapt as for example the UK or BS 5975:2019 (Code of Practice for Temporary Works), or its European equivalent that can easily be tailored to suit the local environment. This origin of this BS goes back to the early 70's when following several collapses of temporary structures, the UK government appointed Professor Stephen Bragg to prepare a report/investigation and come up with recommendations. This report was published in 1975. A number of these recommendations, eventually found themselves in the first edition of BS 5975, published in 1982. Along the years this BS has been regularly updated to accommodate the ever-changing construction industry. Main highlights or specific areas include:

- A. Recommendations and guidance on the procedural controls to be applied to all aspects of temporary works. It also includes guidance on design, specification, construction, use and dismantling of falsework and guidance on permissible stress design of falsework. This guidance also applies to the design of what is termed "class A" falsework in BS EN 12812, the design of which is specifically excluded from BS EN 12812.
- B. Provide recommendations in relation to training and education.
- C. Provide recommendations for the procedures required to ensure that temporary works are conceived, designed, specified, constructed, used, and dismantled in a safe and controlled manner suitable for all construction projects.
- D. Recognize that more complex projects require more control measures and that additional client-specific procedures might be required on major infrastructure projects. Section 2

includes clauses on the roles of clients, permanent works designers and construction management organizations.

- E. It also covers the design of temporary works and in particular the design of falsework and relevant formwork, Materials including material factors, Loads and load factors, Design of falsework, including both proprietary equipment and traditional scaffolding solutions. Wind loading (reference to temporary and permanent stability) and reference to other British Standards for the design of structural steelwork, reinforced concrete, and excavation support.

3. Managing safety, from design to construction (The Construction (Design and Management) Regulations 2015)

Like the BS 5975, here we have a document that has been updated on a regular basis, following lessons learned, that we can easily refer to and adapt for the local environment.

What these regulations represent:

- *the law that applies to the whole construction process on all construction projects, from concept to completion; and*
- *What each duty holder must or should do to comply with the law to ensure projects are carried out in a way that secures health and safety.*

Ref. HSE the Construction (Design and Management) Regulations 2015

Maybe some of its contents will not be gladly accepted, as even though `everyone` wants change, for some the status quo is much better. The phrase `we always did it like this` is a standard on our sites. Unless this mentality is going to change, accidents will keep on happening, poor quality (on all aspects) will remain etc. etc.

4. Recognition of the Construction Project Manager and the importance of the role towards upscaling the industry's applied methods of construction and related.

The role of the Construction Project Manager (CPM) (Client appointed) should be equally important as the main players within the project's cycle. Raising the standards, we reckon that not only the quality level of the CPM needs to go up, but also its status.

Looking at this aspect within the context of the BCA, we anticipate that it would eventually become mandatory that unless the full management structure is in place, no building permits

are issued. All the documentation related to the project are to be collected and uploaded to the BCA system/records by the Client's CPM.

The CPM, apart from the warranting board will be operating within the structure of an officially recognised Chamber that will make sure that the standards of its members are kept high and any failings, through the non-abiding with the chamber regulations, code of ethics and practice, will result in expulsion from the chamber and the eventual loss of the warrant.

"Benefit of professional construction project management include highly skilled processes that facilitate planning, coordination and control of a project from inception to completion. In the longer term, such processes will balance the competing needs of cost, scope and schedule. Large projects can have hundreds of participants, all of whom focus on their particular contractual role. These can include the architect, interior designer and contractor, as well as many other professionals: land use consultant, permit expediter, engineers, specialty consultants & contractors such as security and automation, landscape designers, etc.

For a project to be successful given its considerable number of "moving parts", all professionals involved must be carefully vetted, coordinated and managed to bring out their best work to meet the vision and goals of the project. A qualified construction project manager serves as the catalyst to 'glue' the entire process together, filling in managerial expertise where required, controlling budgets, initiating cost savings ideas, mitigating risks and ensuring communication.

Most commercial, institutional and educational owners are busy with their core operations or projects. Most residential owners are even busier with their own lives, families and businesses. Few have the depth of experience or technical expertise required to manage their own project. Most do not have the time or inclination to devote to a multi-year process through planning, entitlement, design and construction, nor should they or their agents accept the risks involved should anything go wrong. A construction manager acts as the owner's representative and advocate, educating and leading owners through the challenges of design and construction."

Ref: Stonemark Construction Management

Karl Azzopardi

Jesmond Chetcuti

Reno Vassallo

Andrei Cachia

Appendix A – *Building Industry Technical Committee Report (Quintano Report).*

Appendix B – *Outline profile of subgroup committee members.*