The erroneous use of the term construction project manager in lieu of construction manager in South Africa

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Abstract. The aim of the research was to evolve a range of interventions to address the misconception within the construction industry that Construction Managers (CMs) and Construction Project Managers (CPMs) are one and the same. The objectives of the study were to determine: the importance of CMs and CPMs within the construction industry; their contributions to the overall success of a construction project; nomenclatures used; what the practice of each profession entails, and the competencies, roles and responsibilities of a CM and CPM. The study entailed a quantitative survey using a self-administered questionnaire delivered per e-mail to a range of built environment stakeholders including Architects, Civil Engineers, CMs, CPMs, Health and Safety (H&S) practitioners, and Quantity Surveyors in the Nelson Mandela Bay metropole, South Africa. Findings include: CM and CPM are both very important, but different professions; incorrect nomenclatures are used; they require a degree of common competencies and attributes, and a CPM requires experience as a CM. Conclusions include: the common competencies and attributes contribute to the erroneous use of ‘Project Manager’ for a person in the employ of a contractor, managing projects, and the use thereof is to highlight the ‘status’ of the aforementioned. Recommendations include: contractors should use the correct nomenclatures for their respective personnel; the industry should be enlightened regarding the appropriate nomenclatures, and tertiary built environment institutions should enlighten their students regarding the respective disciplines and nomenclatures.

Keywords: Construction Management, Construction Project Management, Nomenclatures.

1. Introduction

Clients, contractors, and built environment practices need to identify competent professionals to effectively manage various stages of construction projects as the failure do so will ultimately result in various project failures such as exceeding budget, delays, and health and safety (H&S) and quality non-conformances. By virtue of their functions, CMs and CPMs play a pivotal role in the development and execution of construction projects. The combination of their management functions and leadership skills serve as a fundamental asset within the industry since they are accountable for ensuring projects are inherently healthy and safe, and completed within budget, quality, and time constraints [1].

The meaning of the terms CM and CPM vary for different projects in different countries. However, in South Africa the two terms are usually used to identify a single profession which refers to the manager who is in charge of a project on behalf of the client, or certain members within the professional team who carry out a couple of functions or share certain responsibilities of a construction project manager.

Although the number of qualified professional CMs and CPMs have increased significantly over the decades, demand still exceeds supply. Furthermore, historically the South African Council for the
Project and Construction Management Professions (SACPCMP) has registered more CPMs than CMs. The SACPCMP’s 2010/11 Annual Report [2] indicates 750 registered Professional (Pr) CMs and 181 Candidate (Can) CMs versus 1 584 Pr CPMs and 610 Can CPMs. The SACPCMP’s 2018/19 Annual Report [3] indicates 894 registered Professional (Pr) CMs and 533 Candidate (Can) CMs versus 1 709 Pr CPMs and 1 815 Can CPMs. These statistics allude to an imbalance in the respective registrations as there are more contracting organisations that employ CMs than there are construction project management practices. However, anecdotal evidence indicates that many CPMs previously practiced as CMs.

Given the misconceptions with respect to the functions fulfilled by CMs and CPMs, and the interchangeable use of the terms, a study was conducted, the aim being to evolve a range of interventions to address the misconceptions within the construction industry that construction management and construction project management are one and the same. The objectives were to:

- Investigate the perceived importance of construction management and construction project management within the construction industry, and whether the perceived importance influences the use of terms;
- Determine what contributions each of these professions offer to the successful completion of a construction project, and whether the perceived contributions influence the use of terms;
- Gain insight as to what each profession entails by comparing the two professions, and
- Identify the primary competencies, roles, and responsibilities of a CM and CPM.

2. Review of the literature

The term construction management has different meanings to various stakeholders within the built environment, however, it is commonly referred to as managing the construction process [4].

Within the context of South Africa, The Council for the Built Environment’s (CBE) ‘The Scope of Work for Categories of Registration of the Project and Construction Management Professions’ [5] defines a Professional Construction Manager as: ”a manager of the physical construction process within the built environment which include the following during the six stages of services: a) co-ordination; b) administration, and c) management of resources.” According to the related ‘Scope of Services’, CMs are involved in three stages, namely tender documentation and procurement (stage 4), construction documentation and management (stage 5), and project close out (stage 6). Although the CBE definition refers solely to the construction process, Construction Management entails the management of the business of construction, and projects [6]. In practice, the business of construction and projects are related, and the former enables and substantially influences the latter. This definition can be construed as the British Commonwealth definition. Furthermore, the reality is that projects cannot contract with clients; they require a medium through which the business transaction, namely the contract, is processed, which is the business of construction. The CBE’s ‘The Scope of Work for Categories of Registration of the Project and Construction Management Professions’ [5] defines a Professional Construction Project Manager as: “a manager of projects within the built environment from conception to completion, including the management of related professional services following the six stages of services.” According to the related ‘Scope of Services’, CPMs are involved in all six stages, namely project initiation and briefing (stage 1), concept and feasibility (stage 2), design development (stage 3), tender documentation and procurement (stage 4), construction documentation and management (stage 5), and project close out (stage 6).

Construction management is defined in the ‘CIOB’s Professionalism: An Inclusive Definition of Construction Management’ as “1. The management of development, conservation and improvement of the built environment; 2. Exercised at a variety of levels from the site and project, through the corporate organisations of the industry and its clients, to society as a whole; 3. Embracing the entire construction value stream from inception to recycling, and focussing upon a commitment to sustainable construction;
4. Incorporating a wide range of specialist services; 5. Guided by a system of values demonstrating responsibility to humanity and to the future of the planet; and 6. Informed, supported and challenged by an independent academic discipline.” [7] The CIOB’s definition is holistic, and implies that CMs fulfil a range of functions in the built environment as per ‘1’ to ‘4’, and emphasise that construction management is an independent discipline as per ‘6’, the implications being that related programmes must be holistic in nature. Furthermore, ‘2’ amplifies the levels of construction management, namely projects and the business of construction. However, the CIOB’s holistic definition does not fully align with that of the CBE.

Mwanaumo et al. [8] state that construction project management is more encompassing than construction management in that it extends from project initiation to project closeout. Therefore, related-training should include project briefing, project planning, project risk management, managing multiple projects managing the business of project management, scheduling, and controlling and managing contracts. However, construction management is mostly associated with the construction phase of the project which involves the actual physical construction of the project. A qualified CM will thus be appointed by the main contractor for contract administration and construction supervision [9].

The literature confirms the erroneous use of the respective terms as reference is made to assumptions by built environment practitioners who believe that construction management and a construction project management are one and the same thing, definitions and distinctions between construction project management and construction management have proven that they are not as pronounced as the differences between the other built environment professionals [10]. Indications, however, have proven that construction management and construction project management are two separate disciplines, which are both crucial to the built environment. As a result, construction managers and construction project managers are fundamental to every project since their management function and leadership contribution is an important asset within the construction industry, making their presence responsible for keeping the project on schedule, within budget, and to the required quality standards.

3. Research

3.1 Research method and sample stratum

A quantitative study was undertaken using a questionnaire, which was circulated by the lead researcher with the intention of obtaining a range of opinions regarding the construction management and construction project management professions in the construction and property development industries. The questionnaire consisted of seventeen-questions – nine demographic, and eight subject-related. Six of the subject-related were closed-ended, of which four were five-point Likert scale type questions, and a further two were open-ended. The questionnaire was sent to forty potential respondents that were either approached directly, or contacted by either telephone or e-mail, to participate in the study. These practitioners were selected because they work in the built environment and the researcher is either familiar with the organisations they work for or contacted them through other built environment practitioners known by the researcher. They in turn also suggested colleagues in the industry that they regarded as professional - a convenience snowball sample. Twenty-four questionnaires were completed and returned by respondents, which equates to a response rate of 60%.

3.2 Research findings

The majority of respondents (66.7%) listed occupations which formed part of the typical site staff deployed during a construction project - 20.8% of respondents listed their occupation as HSE Officers, only 8.3% as Construction Managers (CMs), whilst none listed their occupation as Construction Project Managers (CPMs). A fifth (20.9%) of the respondents listed occupations which formed part of the design team being Architects, Civil Engineers and Quantity Surveyors. Therefore, all the respondents can be deemed to be practitioners within the built environment, which contributes to the reliability of the findings.
Less than a third (29.2%) of respondents are registered with the SACPCMP, whilst 29.2% of respondents indicated that they are members of a project management, construction management, or other related professional body. This implies that the respondents can be deemed knowledgeable in terms of the importance of professional registration, and association, which contributes to the reliability of the findings.

Nearly all (91.7%) of respondents have a tertiary qualification - 20.8% of the respondents are in possession of a National Higher Certificate, 16.7% have a National Diploma, 12.5% have an undergraduate degree, 16.7% have a postgraduate degree, 20% have a Master’s degree, and no respondents indicated that they have a PhD degree. However, 8.3% of the respondents have indicated that they are in possession of more than one qualification. This implies that the respondents can be deemed to have substantive qualifications, which contributes to the reliability of the findings.

With respect to qualifications, 29.2% of respondents are in possession of construction management qualifications, 20.8% engineering qualifications, 8.3% both architecture and quantity surveying qualifications, 4.2% project management qualifications, and 25.0% qualifications from other fields. This implies that the respondents can be deemed to have acquired qualifications from various fields within the built environment, which contributes to the reliability of the findings. However, only 23.4% of respondents have either a construction management or construction project management qualification.

A quarter (25.0%) of respondents have worked for their current employer ‘≤ 1’ year, whilst 45.8% ‘> 1 ≤ 5’ years, followed by 12.5% ‘> 5 ≤ 10’ years, and 12.5% relative to both ‘> 10 ≤ 20’, and ‘> 20’ years. In summary, 75.0% of respondents have worked for their current employer > 1 year, 29.1% for > 5 years, and 16.6% > 10 years. The mean time respondents have worked for their current employer is 6.2 years. Therefore, the respondents can be deemed to have had exposure to their organisations, which contributes to the reliability of the findings.

In terms of construction experience, 41.7% of respondents have worked in construction ‘> 1 ≤ 5’ years, followed by 20.8% ‘> 5 ≤ 10’ years, 16.7% ‘> 20’ years, 12.5% ‘≤ 1’ year, ‘>’, and 8.3% ‘> 10 ≤ 20’ years. In summary, 87.5% of respondents have worked in construction > 1 year, 45.8% for > 5 years, and 25% > 10 years. The mean construction experience is 10.6 years. This implies that the respondents can be deemed experienced, which contributes to the reliability of the findings.

With respect to the age of respondents, 41.7% were ‘> 30 ≤ 40’ years of age, followed by 37.5% ‘≤ 30’, 8.3% respectively for each of ‘> 40 ≤ 50’ and ‘> 60’, and only 4.2% ‘> 60’. In summary, 79.2% of respondents were ‘≤ 40’ years of age, and 20.8% were > 40 years. Per definition relative to workers, people > 40 years of age constitute ‘older workers’. The mean age was 35.1 years.

In terms of gender, 20.8% of respondents were female and 79.2% were male.

Table 1 indicates the importance of five built environment disciplines in terms of the successful delivery of a construction project on a scale of 1 (not important) to 5 (very important), and a MS ranging between 1.00 and 5.00. It is notable that all the mean scores (MSs) are above the midpoint score of 3.00, which indicates that the respondents can be deemed to perceive the disciplines as more than important, as opposed to less than important in terms of the successful delivery of a construction project. However, given that the MSs are all > 4.20 ≤ 5.00, the respondents can be deemed to perceive them to be between more than important to very important / very important.

Furthermore, it is notable that CM predominates, and that CPM is ranked third, the difference in terms of the MS being 0.38, or 10.7% more important.
Table 1. Importance of five built environment disciplines in terms of the successful delivery of a construction project.

| Discipline             | Response (%) | MS  | Rank |
|------------------------|--------------|-----|------|
|                       | Unsure | 1  | 2  | 3  | 4  | 5  |     |
| Construction manager   | 0.0    | 0.0| 0.0| 8.3| 91.7| 4.92| 1   |
| Engineer               | 0.0    | 4.2| 8.3| 4.2| 83.3| 4.63| 2   |
| Construction project manager | 0.0 | 0.0| 4.2| 8.3| 16.7| 70.8| 3   |
| Quantity surveyor      | 0.0    | 0.0| 20.8| 20.8| 58.4| 4.38| 4   |
| Architect              | 4.2    | 8.3| 4.2| 20.8| 62.5| 4.29| 5   |

Table 2 indicates the importance of the level of contribution a CPM makes during the six stages of a project on a scale of 1 (not important) to 5 (very important), and a MS ranging between 1.00 and 5.00. It is notable that all the MSs are above the midpoint score of 3.00, which indicates that in general the respondents can be deemed to perceive the CPM’s level of contribution during all six stages as more than important, as opposed to less than important.

However, given that 2 / 6 (33.3%) project stages’ (Project Initiation and Briefing, Tender Documentation & Procurement, Construction Documentation & Management, and Project Close Out) MSs are > 4.20 ≤ 5.00, the respondents can be deemed to perceive the CPM’s level of contribution during these project stages to be between more than important to very important / very important. Furthermore, the MSs of 4 / 6 (66.7%) of stages are > 3.40 ≤ 4.20, which means the respondents can be deemed to perceive the CPM’s level of contribution during these project stages to be between important to more than important / more than important - Tender Documentation & Procurement (S4), Project Initiation and Briefing (S1), Concept and Feasibility (S2), and Design Development (S3). This reflects the more comprehensive role that CPMs play during the six stages of projects.

Table 2. Importance of the level of contribution a CPM makes during the six project stages of a construction project.

| Stage                                      | Response (%) | MS  | Rank |
|--------------------------------------------|--------------|-----|------|
|                                            | Unsure | 1  | 2  | 3  | 4  | 5  |     |
| Construction Documentation & Management (S5) | 0.0  | 12.5| 20.8| 66.7| 4.54| 1=  |
| Project Close Out (S6)                     | 0.0 | 16.7| 12.5| 70.8| 4.54| 1=  |
| Tender Documentation & Procurement (S4)    | 0.0 | 20.8| 16.7| 54.2| 4.13| 3   |
| Project Initiation and Briefing (S1)       | 0.0 | 8.3 | 8.3 | 8.3 | 62.5| 4.00| 4   |
| Concept and Feasibility (S2)               | 0.0 | 12.5| 12.5| 4.2 | 12.5| 58.3| 3.92| 5   |
| Design Development (S3)                    | 0.0 | 20.8| 12.5| 50.0| 3.88| 6   |

Table 3 indicates the importance of the level of contribution a CM makes during the six stages of a construction project on a scale of 1 (not important) to 5 (very important), and a MS ranging between 1.00 and 5.00. It is notable that all the MSs are above the midpoint score of 3.00, which indicates that in general the respondents can be deemed to perceive the CM’s level of contribution during all six stages of a construction project as more than important, as opposed to less than important.

However, given that 2 / 6 (33.3%) project stages’ (Construction Documentation & Management, and Project Close Out) MSs are > 4.20 ≤ 5.00, the respondents can be deemed to perceive the CM’s level of contribution during these project stages to be between more than important to very important / very...
important. This clearly indicates the focus of CMs during projects. Furthermore, the MSs of 4 / 6 (66.7%) stages are > 3.40 ≤ 4.20, which means the respondents can be deemed to perceive the CM’s level of contribution during these project stages to be between important to more than important / more than important - Tender Documentation & Procurement (S4), Design Development (S3), Project Initiation and Briefing (S1), and Concept and Feasibility (S2). Although the response relative to Tender Documentation & Procurement (S4) is appropriate, the response relative to the other three stages is inappropriate, unless CMs are involved with design-build projects, or are involved in negotiations relative to a project being undertaken using the traditional construction procurement system.

Table 3. Importance of the level of contribution a CM makes during the six project stages of a construction project.

| Stage                              | Response (%) | MS  | Rank |
|------------------------------------|--------------|-----|------|
|                                    | Unsure 1     | 2   | 3    | 4    | 5    |       |
| Construction Documentation & Management (S5) | 4.2 0.0 4.2 8.3 16.7 66.7 4.33 | 1    |
| Project Close Out (S6)             | 4.2 0.0 4.2 12.5 12.5 66.7 4.29 | 2    |
| Tender Documentation & Procurement (S4) | 4.2 12.5 4.2 16.7 16.7 45.8 3.67 | 3    |
| Design Development (S3)            | 4.2 12.5 4.2 20.8 29.2 29.2 3.46 | 4    |
| Project Initiation and Briefing (S1)| 4.2 16.7 12.5 8.3 16.7 41.7 3.42 5=|     |
| Concept and Feasibility (S2)       | 4.2 16.7 12.5 12.5 8.3 45.8 3.42 5=|     |

Table 4 provides a comparison of the importance of the level of contribution a CPM and a CM make during the six project stages of a construction project in terms of MSs ranging between 1.00 and 5.00. It is notable that Construction Documentation & Management (S5) and Project Close Out (S6) are the top two ranked stages relative to both CPM and CM. However, relative to CPMs they are ranked joint first, and relative to CM, they are ranked first and second respectively. Furthermore, the MSs relative to CPM are 6.3% and 7.6% higher than those relative to CM. Then, the difference between the MSs relative to Construction Documentation & Management (S5) is also notable, as this is the most important stage relative to CMs. This is probably attributable to, inter alia, the ‘integration of design and construction’ challenges CPMs encounter during this stage. Given that CMs are generally not involved during stages 1 to 3, the related MSs should be lower than those relative to CPMs.

Table 4. Comparison of the importance of the level of contribution a CPM and a CM make during the six project stages of a construction project.

| Stage                              | CPM MS  | CPM Rank | CM MS  | CM Rank |
|------------------------------------|---------|----------|--------|---------|
| Construction Documentation & Management (S5) | 4.54 1= | 1        | 4.33 1 | 1       |
| Project Close Out (S6)             | 4.54 1= | 2        | 4.29 2 | 2       |
| Tender Documentation & Procurement (S4) | 4.13 3 | 3        | 3.67 3 | 3       |
| Project Initiation and Briefing (S1)| 4.00 4  | 5        | 3.42 5= | 5=      |
| Concept and Feasibility (S2)       | 3.92 5  | 5        | 3.42 5= | 5=      |
| Design Development (S3)            | 3.88 6  | 4        | 3.46 4 | 4       |

Table 5 presents the degree of concurrence with seventeen statements relative to the differences, similarities, and relationships between the CM and the CPM on a scale of 1 (strongly disagree) to 5 (strongly agree), and a MS ranging between 1.00 and 5.00.
14 / 17 (82.4%) statements are true, and 3 / 17 (17.6%) are false. There is a high level of concurrence, namely agree to strongly agree / strongly agree (MSs > 4.20 ≤ 5.00) relative to ‘Cooperation, communication and cohesion between a CM and a CPM is essential for the successful execution of a construction project’ (T), ‘Both the CM and CPM must have favourable personal attributes to manage people, processes, and responsibilities’ (T), ‘The CM oversees the execution of the entire project’ (T), ‘The CM oversees the construction of the building’ (T), and ‘A CPM can manage and oversee more than one project simultaneously’ (T). However, the concurrence (MSs > 3.40 ≤ 4.20) relative to ‘The CPM oversees the construction of the building’ (F) is inappropriate, as CPMs do so indirectly via the general contractor in the form of the CM, and also inappropriate relative to ‘The CM oversees the execution of the entire project’ (F) as this is the function of the CPM. ‘A CM should be registered with the SACPCMP and a member of professional bodies such as the CIOB’ (T), and ‘A CPM should be registered with the SACPCMP and a member of professional bodies such as the ACPM or the CIOB’ (T) attracted concurrence between neutral to agree / agree. ‘Both the CM and CPM are imperative for project success, and without one the project would most definitely be destined to fail’ (T), and ‘Both the CM and CPM have similar overall project goals’ (T) also attracted concurrence between neutral to agree / agree. With respect to the former statement, both CPMs and CMs fulfil specific project functions, which are complementary. With respect to the latter statement, it is the function of both CPMs and CMs to optimise performance relative to the respective project parameters, namely cost, environment, health and safety, productivity, quality, and time. ‘It is imperative that a CM be in possession of a Construction Management qualification’ (T), and ‘It is imperative that a CPM be in possession of a Construction Management qualification’ (T) also attracted concurrence between neutral to agree / agree. A Construction Management qualification is the ideal ‘qualification for a CM, and is recognised as the gateway qualification for a CPM. ‘A CM can be employed as a CPM’ (T), and ‘A CPM can be employed as a CM’ (T), which attracted concurrence between neutral to agree / agree, are true. Many CPMs invariably first practice as CMs, in which case they can be readily employed as a CM. With respect to CMs being employed as a CPM, such CMs would require a period of internship. Although the concurrence relative to ‘A CM can manage and oversee more than one project’ (T) is between neutral to agree / agree, it is less than in the case of ‘A CPM can manage and oversee more than one project simultaneously’ (T). The only concurrence between disagree to neutral / neutral is relative to ‘The roles and responsibilities of a CM and a CPM are similar’ (F), which is false. However, a CPM manages design delivery, and the procurement process, and indirectly oversees the construction process. Furthermore, a CPM is involved from stages 1 to 6, whereas a CM is only involved from stages 4 to 6.

Table 5. Concurrence with respect to statements relative to the differences, similarities, and relationships between the CM and the CPM.

| Statement                                                                 | Response (%)                                                                 |
|---------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| Cooperation, communication and cohesion between a CM and a CPM is essential for the successful execution of a construction project (T) |                                                                                           |
| Both the CM and CPM must have favourable personal attributes to manage people, processes, and responsibilities (T) |                                                                                           |
| The CPM oversees the execution of the entire project (T)                  |                                                                                           |
| The CM oversees the construction of the building (T)                      |                                                                                           |
|                                                                                           | Uns | Strongly disagree | Disagree | Neutral | Agree | Strongly agree | MS  |
|---------------------------------------------------------------------------|-----|------------------|----------|---------|-------|----------------|-----|
| Cooperation, communication and cohesion between a CM and a CPM is essential for the successful execution of a construction project (T) | 0.0 | 0.0              | 0.0      | 0.0     | 20.8  | 79.2           | 4.79|
| Both the CM and CPM must have favourable personal attributes to manage people, processes, and responsibilities (T) | 0.0 | 4.2              | 0.0      | 0.0     | 29.2  | 66.7           | 4.54|
| The CPM oversees the execution of the entire project (T)                  | 0.0 | 0.0              | 0.0      | 4.2     | 50.0  | 45.8           | 4.42|
| The CM oversees the construction of the building (T)                      | 0.0 | 0.0              | 4.2      | 8.3     | 37.5  | 50.0           | 4.33|
A CPM can manage and oversee more than one project simultaneously (T)
A CM should be registered with the SACPCMP and a member of professional bodies such as the CIOB (T)
A CPM should be registered with the SACPCMP and a member of professional bodies such as the ACPM or the CIOB (T)
The CPM oversees the construction of the building (F)
Both the CM and CPM are imperative for project success, and without one the project would most definitely be destined to fail (T)
It is imperative that a CM be in possession of a Construction Management qualification (T)
Both the CM and CPM have similar overall project goals (T)
A CM can be employed as a CPM (T)
It is imperative that a CPM be in possession of a Construction Management qualification (T)
The CM oversees the execution of the entire project (F)
A CPM can be employed as a CM (T)
A CM can manage and oversee more than one project simultaneously (T)
The roles and responsibilities of a CM and a CPM are similar (F)

| Practitioner                                      | Yes (%) |
|--------------------------------------------------|---------|
| Foreman                                          | 41.7    |
| Site Manager / Site Agent                        | 25.0    |
| Construction Manager (CM)                        | 12.5    |
| Construction Project Manager (CPM)               | 8.3     |
| Project Manager / Principal Agent                | 8.3     |
| Not identified                                   | 4.2     |

Table 6 indicates the built environment practitioners responsible for the production on site within respondents’ organisations. 41.7% identified Foreman, 25.0% identified Site Manager / Site Agent, 12.5% CM, and 8.3% each CPM and Project Manager/Principal Agent. However, 4.2% did not identify any practitioner.

Table 7 indicates the built environment practitioners responsible for managing the entire construction project from conception to completion, including the professional team, as perceived by respondents. Half (50%) of respondents identified more than one built environment practitioner (multiple options), followed by CPM (41.7%), and only 4.2% architect and other (not specified). The identification of ‘multiple options’ is probably attributable to architects and other practitioners fulfilling the function of principal agent. It is notable that no respondents identified CM, which indicates a clear understanding that CMs are not responsible for managing projects from conception to completion.
Table 7. Practitioners responsible for managing the entire construction project from, including the professional team.

| Practitioner                                | Yes (%) |
|---------------------------------------------|---------|
| Multiple options                            | 50.0    |
| Construction Project Manager (CPM)          | 41.7    |
| Architect                                   | 4.2     |
| Other                                       | 4.2     |
| Civil Engineer                              | 0.0     |
| Construction Manager (CM)                   | 0.0     |
| Quantity Surveyor (QS)                      | 0.0     |
| Property / Real Estate Developer            | 0.0     |
| Town Planner                                | 0.0     |

4. Conclusions
Contrary to the common perception throughout the construction industry, construction management and construction project management are two distinct disciplines and professions within the built environment. Even though inherent differences do exist between the two professions, such as the roles and responsibility of the CM and the CPM throughout a construction project, the two professions do however share some similarities, for instance both the CM and CPM should have favourable personal attributes to manage people, processes, and responsibilities. However, the common competencies and attributes contribute to the erroneous use of ‘Project Manager’ for a person in the employ of a contractor managing projects, and the use thereof is to highlight the ‘status’ of the aforementioned.

The research revealed that the CM and CPM are both very important built environment practitioners in the construction industry. This study focused on the link between these two very important professions and investigated the contributions each of these professions make during the six stages of construction projects to achieve optimal project success. CPMs contribute more to projects during stages 1 to 3, and to a degree stage 4, than CMs do. However, there is a fair degree of misunderstanding relative to this as indicated by the findings. Furthermore, the literature indicates that CPMs focus on managing all the project stages, which includes client briefing, design delivery, procurement, construction, and project close out, whereas CMs contribute to procurement and focus on construction, and project close out.

It is essential that built environment practitioners, as well as other stakeholders in the construction industry, such as clients, understand the functions of the CM and CPM, to ensure that appropriate competent professionals are appointed for the respective functions, as failure to do so, could ultimately result in project failure.

5. Recommendations
Contractors should use the correct nomenclatures for their respective personnel; however, leadership should be provided at industry level by professional and employer associations. The CBE and the SACPCMP have clearly distinguished between construction management and construction project management by recognising the respective disciplines / professions by creating the respective categories of registration. Furthermore, the CBE’s ‘The Scope of Work for Categories of Registration of the Project and Construction Management Professions’ and ‘Scope of Services’ clearly indicate the nature of contributions and stages of involvement, which should be heeded by all industry stakeholders. Employer and professional associations should enlighten their respective constituencies regarding the appropriate nomenclatures and encourage members to use ‘common’ nomenclatures.
Tertiary built environment programmes should include a module that informs students of the roles and responsibilities of the respective project stakeholders.

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