ACHASM 2017 SUMMIT

PORT ELIZABETH, 16 - 17 OCTOBER 2017

THE PERFORMANCE OF CHSAs AND CHSOs: RESEARCH FEEDBACK

PROF JOHN SMALLWOOD
DEPARTMENT OF CONSTRUCTION MANAGEMENT,
NELSON MANDELA UNIVERSITY
AND
DR CLAIRE DEACON
MANAGING MEMBER, cd&a
SOUTH AFRICA

Introduction (1)

- Construction Industry Development Board (cidb) (2009) 'Construction Health & Safety Status & Recommendations' report attributed the significant number of accidents, fatalities, and other injuries that are prevalent in the South African construction industry to a lack of compliance with H&S legislative requirements, and stated that there is a lack of sufficiently skilled, experienced, and knowledgeable persons to manage H&S on construction sites
- The Construction Regulations make provision for the appointment of CHSAs and CHSOs (Republic of South Africa, 2014)
- The cidb industry report highlighted the need for professional registration of construction H&S practitioners due to, among other, the finding that there was a lack of competencies, and no formal registration process

Introduction (2)

- Led to the identification of three categories of registration with the SACPCMP, including CHSA and CHSO
- Given the findings in the cidb report 'Construction Health & Safety Status & Recommendations', other ad-hoc research findings, anecdotal evidence, exploratory research findings, further studies were conducted to determine, inter alia, the:
  - Performance and contribution of CHSAs and CHSOs
  - Barriers to CHSAs' and CHSOs' contributions to construction and construction H&S
  - Potential of interventions to contribute to an improvement in CHSAs' and CHSOs' contributions to and impact on construction and construction H&S

Legislation and Regulations

- CHSAs - Construction Regulations (Republic of South Africa, 2014):
  - Where a construction work permit is required a client must appoint a competent person in writing as an agent, and where notification of construction work is required the client may appoint a competent person in writing as an agent
  - The agent must manage the H&S on a construction project, and be registered with a statutory body
  - Clearly the requirements of clients are onerous given that they are invariably not built environment professionals or H&S professionals
  - Given the requirements of clients and designers and the indirect requirements of clients as a result of the designer requirements, CHSAs require a range of knowledge and skills
- CHSOs - Construction Regulations (Republic of South Africa, 2014):
  - Contractors must appoint H&S Officers on a full-time or part-time basis, which must be registered with a statutory body

Knowledge and Skills Areas (1)

- The SACPCMP requires a report upon application to register as a CHSA and CHSO that addresses the following nine knowledge areas (SACPCMP, 2013a):
  - Procurement Management
  - Cost Management
  - Hazard Identification Management
  - Risk Management
  - Accident or Incident Investigation Management
  - Legislation and Regulations
  - Health, Hygiene and Environmental Management
  - Communication Management
  - Emergency Preparedness Management

Knowledge and Skills Areas (2)

- The CHSA Scope of Services in turn states that CHSAs and CHSOs are expected to be experienced and knowledgeable relative to the following areas (SACPCMP, 2013b):
  - Construction project H&S management systems
  - Construction H&S management (CHSAs)
  - Construction H&S (CHSOs)
  - Construction H&S performance measurement and monitoring management
  - Construction H&S continual improvement

Knowledge and Skills Areas (3)

Composite knowledge area	CHSAs		CHSOs	
	MS	Rank	MS	Rank
OH&S	4.72	1	4.78	1
Project administration	4.60	2	4.25	2
Design	4.25	3	4.17	3
Law	4.10	4	3.86	5
Management / Management of parameters	3.79	5	3.87	4
Construction technology / Technology	3.68	6	3.66	7
Planning	3.63	7	3.73	6
Financial management	3.00	8	2.68	8
Mean	3.97		3.88	

Table 1: Importance of composite knowledge areas relative to the management of H&S by CHSAs and CHSOs (Smallwood & Haupt, 2008) (MS = 1.00 – 5.00).

Knowledge and Skills Areas (4)

Composite skill area	CHSAs		CHSOs	
	MS	Rank	MS	Rank
Interpersonal / Developmental	3.96	1	4.23	4
General management	3.95	2	4.31	2
Leadership	3.94	3	4.38	1
Technical	3.84	4	3.86	6
Planning	3.81	5	4.19	5
Financial	3.28	6	3.19	7
Negotiating	3.02	7	4.27	3
Mean	3.69		4.06	

Table 2: Importance of composite skills areas relative to the management of H&S by CHSAs and CHSOs (Smallwood & Haupt, 2008) (MS = 1.00 – 5.00).

CHSA Research – Method and sample stratum

- A self-administered questionnaire was circulated to 40 CHSAs registered with the SACPCMP
- Consisted of 22 questions, 21 of which were close ended, one being open ended
- 10 Five or six point Likert scale type questions
- Certain questions required a sixth point due to either a ‘have not’, ‘does not’, or ‘will not’ response
- 14 Questionnaires were included in the analysis of the data = response rate of 35%
- A measure of central tendency in the form of a mean score (MS) was computed to enable ranking and comparisons:
  - Between 1.00 and 5.00 (five-point scale), or
  - Between 0.00 and 5.00 (six-point scale)

CHSA Research – Findings (1)

Stage	Yes (%)
1. Project initiation and briefing	27.3
2. Concept and feasibility	0.0
3. Design development	18.1
4. Tender documentation and procurement	27.3
5. Construction documentation and management	27.3
6. Project close out	0.0

Table 3: Stage at which CHSAs are generally appointed.

CHSA Research – Findings (2)

Aspect	Response (%)							MS
	Un-sure	Have not	Minor……..... Major					
			1	2	3	4	5	
Contributed	0.0	21.4	0.0	14.3	28.6	28.6	7.1	3.36
Impacted	7.1	21.4	0.0	7.1	35.7	21.4	14.3	3.55

Table 4: Extent to which CHSAs have contributed to and impacted on H&S (MS = 0.00 – 5.00).

CHSA Research – Findings (3)

Factor	Response (%)							MS	Rank
	Un-sure	Does not	Minor…….... Major						
			1	2	3	4	5		
Inadequate construction H&S knowledge	0.0	7.1	0.0	7.1	14.3	28.6	42.9	3.86	1
Late participation in the project	0.0	0.0	0.0	14.3	21.4	28.6	35.7	3.86	2
Non-consultation by project management / principal agent	7.1	7.1	0.0	7.1	14.3	21.4	42.9	3.85	3
Inadequate construction H&S experience	0.0	7.1	0.0	7.1	14.3	35.7	35.7	3.79	4
Exclusion from decision making	7.1	0.0	0.0	14.3	28.6	14.3	35.7	3.77	5
Inadequate knowledge of the construction process	0.0	0.0	7.1	7.1	21.4	35.7	28.6	3.71	6
Inadequate resources	0.0	0.0	0.0	21.4	28.6	28.6	21.4	3.50	7
Exclusion from management of project	0.0	7.1	0.0	14.3	21.4	28.6	28.6	3.50	8
Status level	15.4	7.7	0.0	0.0	38.5	15.4	23.1	3.45	9
Inadequate construction management knowledge	0.0	0.0	7.1	7.1	35.7	35.7	14.3	3.43	10
Inadequate construction process experience	0.0	0.0	14.3	7.1	14.3	50.0	14.3	3.43	11
Lack of authority	0.0	7.1	7.1	21.4	7.1	14.3	42.9	3.43	12
Inadequate construction management experience	0.0	7.7	0.0	7.7	38.5	23.1	23.1	3.38	13
Inadequate construction activities experience	0.0	0.0	14.3	14.3	28.6	21.4	21.4	3.21	14
Inadequate knowledge of construction activities	0.0	0.0	7.1	35.7	7.1	42.9	7.1	3.07	15

Table 5: Extent to which factors constitute a barrier to CHSAs contributing to H&S (MS = 0.00 – 5.00).

CHSA Research – Findings (4)

Composite knowledge area	Response (%)						MS	Rank
	Un-sure	Very poor……Excellent						
		1	2	3	4	5		
Health & Safety	0.0	0.0	0.0	0.0	21.4	78.6	4.79	1
Planning	0.0	0.0	0.0	14.3	35.7	50.0	4.36	2
Law	0.0	0.0	0.0	7.7	53.8	38.5	4.31	3
Project administration	0.0	7.1	0.0	7.1	50.0	35.7	4.07	4
Management/ Management of parameters e.g. quality	0.0	0.0	0.0	21.4	50.0	28.6	4.07	5
Financial management	0.0	0.0	7.1	14.3	50.0	28.6	4.00	6
Construction technology / Technology	0.0	0.0	7.1	21.4	64.3	7.1	3.71	7
Design	0.0	0.0	14.3	35.7	50.0	0.0	3.36	8

Table 6: Self-rating of CHSAs in terms of composite knowledge areas (MS = 1.00 – 5.00).

CHSA Research – Findings (5)

Composite skill area	Response (%)						MS	Rank
	Un-sure	Very poor……Excellent						
		1	2	3	4	5		
General management	7.1	0.0	0.0	14.3	0.0	78.6	4.69	1
Leadership	7.1	0.0	0.0	0.0	28.6	64.3	4.69	2
Planning	0.0	0.0	0.0	0.0	42.9	57.1	4.57	3
Negotiating	7.7	0.0	0.0	15.4	38.5	38.5	4.25	4
Financial	7.1	0.0	0.0	14.3	50.0	28.6	4.15	5
Interpersonal / Developmental	7.1	0.0	7.1	7.1	42.9	35.7	4.15	6
Technical	0.0	0.0	0.0	7.1	71.4	21.4	4.14	7

Table 7: Self-rating of CHSAs in terms of composite skills areas (MS = 1.00 – 5.00).

CHSA Research – Findings (6)

Aspect	Response (%)						MS	Rank
	Unsure	Very poor	Poor	Average	Good	Very good		
Understand and appreciate construction H&S	0.0	0.0	0.0	0.0	21.4	78.6	4.79	1
Construction H&S competencies	0.0	0.0	0.0	0.0	21.4	78.6	4.79	2
Understand and appreciate the construction process	0.0	0.0	0.0	0.0	57.1	42.9	4.43	3
Understand and appreciate construction management	0.0	0.0	7.1	0.0	42.9	50.0	4.36	4
Understand and appreciate construction activities	0.0	0.0	0.0	0.0	71.4	28.6	4.29	5
Designing for construction H&S competencies	0.0	0.0	7.1	7.1	35.7	50.0	4.29	6
Resources	0.0	0.0	0.0	7.1	64.3	28.6	4.21	7
Construction management competencies	0.0	0.0	0.0	14.3	50.0	35.7	4.21	8
Understand and appreciate project management	0.0	0.0	7.7	0.0	61.5	30.8	4.15	9
Understand and appreciate design	0.0	0.0	0.0	7.1	71.4	21.4	4.14	10
Project management competencies	0.0	0.0	7.1	21.4	42.9	28.6	3.93	11
Design competencies	0.0	0.0	7.1	21.4	64.3	7.1	3.71	12

Table 8: Self-rating of CHSAs in terms of various aspects (MS = 1.00 – 5.00).

CHSA Research – Findings (7)

Intervention	Response (%)							MS	Rank
	Un-sure	Will not	Minor…….. Major						
			1	2	3	4	5		
Increased consultation by project management / principal agent	0.0	0.0	0.0	0.0	7.1	28.6	64.3	4.57	1
Inclusion in planning activities	0.0	0.0	0.0	0.0	14.3	14.3	71.4	4.57	2
Participation in the early stages of projects	0.0	0.0	0.0	0.0	21.4	0.0	78.6	4.57	3
Inclusion in decision making	0.0	0.0	0.0	0.0	0.0	50.0	50.0	4.50	4
Formal CHSA qualification	0.0	0.0	0.0	0.0	0.0	53.8	46.2	4.46	5
Inclusion in the management of projects	0.0	0.0	0.0	0.0	21.4	21.4	57.1	4.36	6
Education / Training relative to construction H&S	0.0	0.0	7.1	0.0	0.0	35.7	57.1	4.36	7
Optimum position in projects' hierarchies	0.0	0.0	0.0	7.1	14.3	21.4	57.1	4.29	8
Education / Training relative to construction activities	0.0	0.0	0.0	0.0	14.3	50.0	35.7	4.21	9
Education / Training relative to project management	0.0	0.0	0.0	0.0	21.4	35.7	42.9	4.21	10
Education / Training relative to construction management	0.0	0.0	0.0	0.0	21.4	35.7	42.9	4.21	11
Education / Training relative to the design process	0.0	0.0	0.0	0.0	21.4	42.9	35.7	4.14	12
Education / Training relative to the construction process	0.0	0.0	0.0	7.1	14.3	42.9	35.7	4.07	13
Increased authority	0.0	0.0	0.0	7.1	14.3	42.9	35.7	4.07	14
Optimum resources	0.0	0.0	0.0	0.0	28.6	42.9	28.6	4.00	15

Table 9: Extent to which interventions could contribute to an improvement in the contribution of CHSAs to H&S (MS = 0.00 – 5.00).

CHSA Conclusions (1)

- CHSAs are mostly appointed during Stages 4 and 5, which does not enable them to influence construction H&S through design:
  - May not be viewed as being able to contribute during these stages, which the other findings underscore
  - Clients and / or principal agents may not view consideration of H&S during the earlier stages as necessary or of value
- CHSAs have contributed to and impacted on H&S:
  - They have a role to play relative to construction H&S
  - Their creation courtesy of the Construction Regulations is vindicated
- A range of factors constitute a barrier to CHSAs contributing to H&S, particularly inadequate knowledge and experience, which in turn leads to their limited status, exclusion form decision making and management of the

CHSA Conclusions (2)

project, and not being consulted, all of which are also barriers

- Although CHSAs rate themselves quite high relative to eight composite knowledge areas, seven composite skills areas, and twelve aspects the finding that the contribution of CHSAs to H&S could be improved, and that a range of interventions could contribute to an improvement in the contribution of CHSAs to H&S, particularly education and training relative to various aspects, indicates a need for developmental interventions

CHSA Recommendations

- Given the potential of a formal CHSA qualification, and a range of education / training related interventions in terms of contributing to an improvement in the contribution of CHSAs to H&S, CHSAs should register for and complete formal tertiary education programmes that empower them in terms of construction economics, management, H&S, and science and technology as well as design management, procurement management, and project management
- Continuing professional development (CPD) courses should be evolved relative to the these subject areas
- CHSAs should be appointed at Stage 1 'Project initiation and briefing' and obviously during Stage 2 'Concept and feasibility', and Stage 3 'Design development':
  - The completion of appropriate tertiary education programmes, and CPD will enable CHSAs to contribute during these stages

CHSO Research – Method and sample stratum

- A self-administered questionnaire was circulated to delegates attending a two-day construction H&S summit in Durban, South Africa
- Consisted of 24 questions, 23 of which were close ended, one being open ended
- 9 of the 23 close ended were five or six point Likert scale type questions
- 36 Questionnaires were included in the analysis of the data
- Certain questions required a sixth point due to either a ‘have not’, ‘does not’, or ‘will not’ response
- A measure of central tendency in the form of a mean score (MS) was computed to enable ranking and comparisons:
  - Between 1.00 and 5.00 (five-point scale), or
  - Between 0.00 and 5.00 (six-point scale)

CHSO Research – Findings (1)

Response (%)						
Unsure	Grade 12	N Dip.	BTech	BSc	BSc (Hon)	Other
11.0	50.0	38.9	11.0	2.0	0.0	41.7

Table 10: CHSOs' qualifications according to respondents.

- The respondents that identified 'other' recorded HIRA, IRCON, and SAMTRAC. The findings highlight the low level of formal qualifications that CHSOs possess, and therefore, that they are unlikely to possess the requisite knowledge and skills
- 54.5% of CHSOs are employed on a permanent and 41.7% on a contract basis (based upon the respective individual cited percentages which may not have equalled a 100% when added)
- 41.6% of CHSOs are deployed on projects on a 'part-time', and 55.7% on a 'full-time' basis (as above)

CHSO Research – Findings (2)

- 57.1% of respondents indicated that other functions fulfill the role of CHSO, and 42.9% responded in the negative. This finding relates to the basis on which CHSOs are employed
- 85.7% of respondents indicated that CHSOs fulfill other functions, and 14.3% not

CHSO Research – Findings (3)

Type	Response (%)
Commercial	14.6
Industrial	13.1
Infrastructure	53.5
Residential	6.3
Other	11.6

Table 11: Type of construction projects respondents provided H&S consultancy services for in 2015.

Response (%)					
Site Manager	Site Agent	General Foreman	Site Manager / Agent	Other	Unsure
30.6	33.3	0.0	11.1	22.4	2.8

Table 12: Functions to whom CHSOs report according to respondents.

CHSO Research – Findings (4)

Aspect	Response (%)							MS
	Un-sure	Have not	Minor……..... Major					
			1	2	3	4	5	
Contributed	0.0	0.0	5.6	2.8	61.1	19.4	11.1	3.28
Impacted	0.0	0.0	5.7	14.3	34.3	34.3	11.4	3.31

Table 13: Extent to which CHSOs have contributed to and impacted on H&S (MS = 0.00 – 5.00).

CHSO Research – Findings (5)

Factor	Response (%)							MS	Rank
	Un-sure	Does not	Minor……..... Major						
			1	2	3	4	5		
Exclusion from decision making	0.0	0.0	0.0	8.3	8.3	41.7	41.7	4.17	1
Non-consultation by site management	0.0	0.0	2.9	2.9	14.3	45.7	34.3	4.06	2
Lack of authority	0.0	0.0	0.0	2.8	27.8	30.6	38.9	4.06	3
Exclusion from management of site	0.0	0.0	0.0	11.1	22.2	33.3	33.3	3.89	4
Inadequate construction process experience	0.0	2.9	0.0	5.7	14.3	51.4	25.7	3.89	5
Inadequate construction management knowledge	0.0	0.0	0.0	8.6	28.6	40.0	22.9	3.77	6
Inadequate construction activities experience	0.0	0.0	2.8	11.1	22.2	36.1	27.8	3.75	7
Inadequate construction management experience	0.0	0.0	0.0	8.6	31.4	37.1	22.9	3.74	8
Inadequate knowledge of the construction process	0.0	5.6	0.0	11.1	13.9	38.9	30.6	3.72	9
Inadequate knowledge of construction activities	0.0	0.0	2.9	8.6	25.7	42.9	20.0	3.69	10
Inadequate construction H&S experience	0.0	0.0	2.9	20.0	20.0	31.4	25.7	3.57	11
Inadequate construction H&S knowledge	0.0	0.0	5.6	13.9	27.8	30.6	22.2	3.50	12
Status level	0.0	2.9	5.7	17.1	31.4	22.9	20.0	3.26	13

Table 14: Extent to which factors constitute a barrier to CHSOs contributing to H&S (MS = 0.00 – 5.00).

CHSO Research – Findings (6)

Phase	Response (%)						MS	Rank
	Un-sure	Limited……Extensive						
		1	2	3	4	5		
Understand and appreciate construction H&S	0.0	5.6	16.7	30.6	33.3	13.9	3.33	1
Understand and appreciate the construction process	2.8	16.7	33.3	19.4	19.4	8.3	2.69	2
Understand and appreciate construction management	0.0	13.9	33.3	30.6	16.7	5.6	2.67	3
Understand and appreciate construction activities	0.0	11.4	42.9	22.9	14.3	8.6	2.66	4

Table 15: Rating of CHSOs in terms of their understanding and appreciation of various aspects (MS = 1.00 – 5.00).

CHSO Research – Findings (7)

Composite knowledge area	Response (%)						MS	Rank
	Un-sure	Very poor……Excellent						
		1	2	3	4	5		
OH&S	0.0	0.0	16.7	22.2	50.0	11.1	3.56	1
Law	0.0	19.4	25.0	30.6	22.2	2.8	2.64	2
Project administration	0.0	25.0	33.3	27.8	11.1	2.8	2.33	3
Construction technology / Technology	0.0	17.1	45.7	25.7	11.4	0.0	2.31	4
Planning	2.8	13.9	52.8	22.2	2.8	5.6	2.31	5
Management / Management of parameters	2.8	22.2	36.1	30.6	5.6	2.8	2.29	6
Financial management	2.8	36.1	50.0	5.6	5.6	0.0	1.80	7
Design	2.8	50.0	33.3	5.6	8.3	0.0	1.71	8

Table 16: Rating of CHSOs in terms of composite knowledge areas (MS = 1.00 – 5.00).

CHSO Research – Findings (8)

Composite skill area	Response (%)						MS	Rank
	Un-sure	Very poor……Excellent						
		1	2	3	4	5		
Interpersonal / Developmental	5.6	11.1	19.4	50.0	8.3	5.6	2.76	1
General management	2.8	13.9	38.9	30.6	11.1	2.8	2.49	2
Negotiating	2.8	11.1	38.9	38.9	8.3	0.0	2.46	3
Leadership	2.8	16.7	36.1	33.3	8.3	2.8	2.43	4
Planning	5.6	13.9	44.4	27.8	5.6	2.8	2.35	5
Technical	0.0	28.6	39.3	25.0	7.1	0.0	2.11	6
Financial	5.6	25.0	47.2	16.7	5.6	0.0	2.03	7

Table 17: Rating of CHSOs in terms of composite skills areas (MS = 1.00 – 5.00).

CHSO Research – Findings (9)

Intervention	Response (%)							MS	Rank
	Un-sure	Will not	Minor……..... Major						
			1	2	3	4	5		
Increased consultation by site management	0.0	0.0	0.0	0.0	13.9	38.9	47.2	4.33	1
Inclusion in planning activities	0.0	0.0	0.0	2.8	8.3	47.2	38.9	4.26	2
Education / Training relative to construction H&S	0.0	0.0	0.0	2.8	16.7	33.3	47.2	4.25	3
Education / Training relative to the construction process	0.0	0.0	0.0	11.1	5.6	33.3	50.0	4.22	4
Formal CHSO qualification	2.9	2.9	0.0	2.9	14.3	45.7	37.1	4.17	5
Education / Training relative to construction activities	0.0	0.0	0.0	11.1	8.3	38.9	41.7	4.11	6
Inclusion in management of site	0.0	0.0	0.0	2.8	25.0	30.6	38.9	4.09	7
Education / Training relative to construction management	0.0	0.0	0.0	11.1	16.7	30.6	41.7	4.03	8
Inclusion in decision making	0.0	0.0	2.8	5.6	22.2	36.1	33.3	3.92	9
Increased authority	0.0	0.0	0.0	2.8	36.1	33.3	27.8	3.86	10
Optimum position in site hierarchy	0.0	0.0	0.0	2.8	38.9	41.7	16.7	3.72	11

Table 18: Extent to which interventions could contribute to an improvement in the contribution of CHSOs to H&S (MS = 0.00 – 5.00).

CHSO Conclusions (1)

- Employment of CHSOs follows the pattern of general employment in construction – permanent and contract, and part-time and full-time
- Basis of appointment indicates that the nature of the appointment relates to the nature, value, and complexity of projects
- Contractors endeavour to aggregate costs through multi-function appointments
- There is a degree of singular, dual, and multi-reporting - at the very least, CHSOs interact with the general and production management of sites
- CHSOs can be deemed to have contributed to and impacted upon H&S between a near minor to moderate / moderate extent

CHSO Conclusions (2)

- The function is important and the 'CHSO' requirement in terms of the Construction Regulations is justified
- The contribution of CHSOs to H&S could be improved, namely between a moderate to near major / near major extent
- Furthermore, their contribution to and impact upon H&S is likely to have been marginalised by their low level of qualifications, and inadequate knowledge, and experience, the functions they report to, the basis of their employment, and other functions that they fulfil
- A range of factors constitute a barrier to CHSOs contributing to H&S:
  - The top four, namely exclusion from decision making, non-consultation by site management, lack of authority, and exclusion from management of site, constitute marginalisation

CHSO Conclusions (3)

- However, four of the other factors are inadequate experience related and a further four are inadequate knowledge related
- Therefore, it can be concluded that inadequate 'construction' knowledge and experience contribute to the exclusion of CHSOs from the management of sites, and the actual barrier to CHSOs contributing to H&S
- This is underscored by the rating of CHSOs in terms of their understanding and appreciation of various aspects, composite knowledge areas and skills, and the extent to which interventions could contribute to an improvement in the contribution of CHSOs to H&S and construction

CHSO Recommendations (1)

- Formal qualifications would empower CHSOs to contribute optimally to H&S and construction. Minimum qualifications could include a ND: Building, followed by a BTech: Construction Management (Health and Safety) as developed by the Cape Peninsula University of Technology
- Given current reality, continuing professional development (CPD) is necessary:
  - This should be provided by the SACPCMP relative to all the knowledge and skills areas
  - Furthermore, employers should provide in house courses relative to all the knowledge and skills areas, especially planning and construction technology
- CHSOs should report to the site manager, however, H&S discussions between contracts managers and site managers should involve CHSOs

CHSO Recommendations (2)

- CHSOs should be an integral part of site management in terms of:
  - Contributing to project planning by providing the H&S needs for activities, including hazard identification, and risk assessment
  - Attendance of project progress meetings, principal contractor subcontractor meetings, and principal contractor financial management meetings
  - Detailed H&S reporting, including the provision of statistics, deviation and incident reports, cost of accidents, and cost of H&S

References (1)

- Construction Industry Development Board (cidb), 2009. Construction Health & Safety in South Africa Status & Recommendations. Pretoria: cidb.
- Republic of South Africa, 2014. No. R. 84 Occupational Health and Safety Act, 1993 Construction Regulations 2014. Government Gazette No. 37305. Pretoria.
- SACPCMP, 2013a. SACPCMP Registration application form – CHSA. Midrand: SACPCMP.
- SACPCMP, 2013b. Registration Rules for Construction Health and Safety Agents in terms of Section 18 (1) (c) of the Project and Construction Management Professions Act, 2000 (Act No. 48 of 2000). Midrand: SACPCMP.

References (2)

- Smallwood, J.J. and Haupt, T.C. 2008. Competencies Required to Manage Construction Health and Safety, In: Proceedings Rinker International Conference 'Evolution of and Directions in Construction Safety and Health', University of Florida, Gainesville, Florida, USA, 9-11 March, pp. 227-240.