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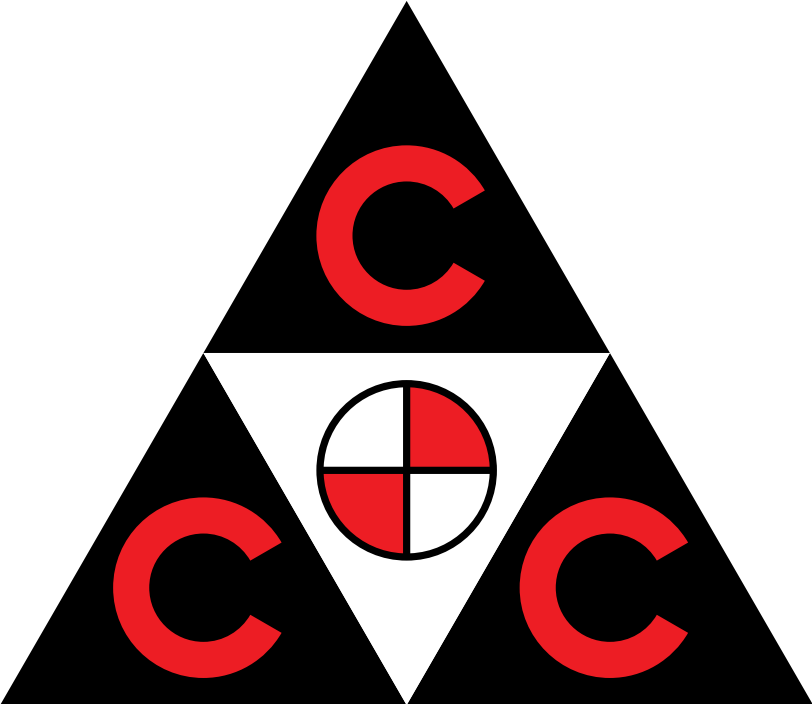
bulletin

Quarterly Magazine of Consolidated Contractors Company

Health, Safety & Environment
Honoring CCC's Commitment to People & Nature



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TURNAROUND YEAR

All indications point to better marketing conditions in our areas of operation in 2019. Let us take this opportunity to make CCC better, more flexible and more profitable.

I am counting on you all to begin by changing for the better the way we do things throughout CCC. Re-visit your crews, departments, project and area activities, changing old habits and introducing new ones that are more efficient, more economical and, above all, more sustainable.

As I always say to all CCC staff, let us “think outside the box”. Let younger staff lead and innovate; I am certain they will respond positively.

Please keep in mind that the safety of our family members is our number one priority as we all want our brothers and sisters to return home safely.

I wish you all a healthy, peaceful and prosperous New Year.

Quality Management Principles

Introduction

I worked as a project quality manager at the SHOALBA Power Plant back in 1999 for the ABB consortium: our Quality Department was dealing with permanent work related to 1800 MW steam power plants. One of the project directors approached me to send QC engineers to make an inspection on a ship for marine work the company was renovating. I said, fine we can do this, however we need a set of requirements or specifications and approved drawings. His response was that there were no specifications or a set of requirements, and added that for the last 50 years they had been doing work without specifications and also without ISO standards and they were doing fine.

In the industry, quality is not excellence or something perfect like the Mona Lisa of Leonardo De Vinci or Alcazar of Seville or the Duomo di Milano. Quality has to be measured against tangible values, drawings, standards, and/or specifications. We need to establish a set of requirements, control the process, do the work, and then compare the product at specified intervals against specified requirements. This is the only way to check quality in line with common quality standards and to determine compliance with specified requirements, otherwise it would be a judgment based on personal opinion.

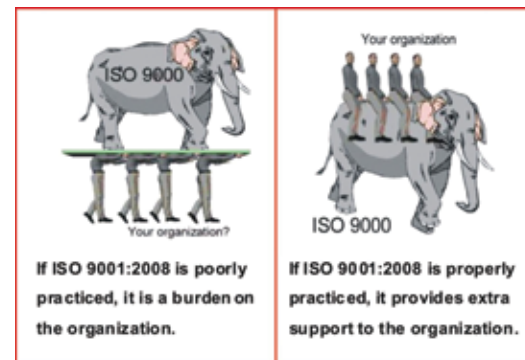


Does Quality Pay?

This begs the question: does quality pay? And of course this means quality in terms of management systems, ISO: 9001 certification and third party auditing.

Some would say we do not need to have an expensive quality management system in place as long as we have an acceptable level of

defects that we can absorb within our cost. So, what is the acceptable level of defects, 5%, 15% or 20 %?



With the introduction of 6-sigma (3.4 defect per 1 million opportunity) by Motorola and lean by Toyota (The Toyota Way) 5 % or even less defect rate is not acceptable anymore. Of course, manufacturing can introduce tight specification limits aiming at a 100 % defect free product; however, the construction industry for so many reasons has to live with a higher level of defects (for example: the maximum allowable defect rate is 3 % for piping for mechanical projects).

If we give this opinion (the need for a quality management system) further consideration, we will find out that eventually the failure cost is passed directly or indirectly to consumers. The actual cost of failure is tangible and can be easily calculated; however, the intangible costs are more important and not easy to measure (in the short term), such as losing market share due to poor quality. In 1977 the USA had 477 failures caused by pressure vessel failures. Lots of these failures were catastrophic in nature and caused human losses, property destruction and losses in revenue. This led to more stringent requirements in pressure vessels manufacturing.

The Need for a Documented Quality Management System

We can stipulate that it is possible to work without a documented management system and ISO certification for a small operation, for example, with 10 employees in one single location. A small number of employees can easily communicate on a daily basis and can apply a process that is not documented. However, what happens if the organization has 10,000 employees and is possibly scattered in different locations world-wide? If the organization wants to create unity of purpose based on one single vision and wants to introduce a learning process

Quality Management Principles

and continual improvement, a documented management system is a must. Today, IT applications make it possible to communicate and exchange ideas and transfer huge data for the benefit of the organization.

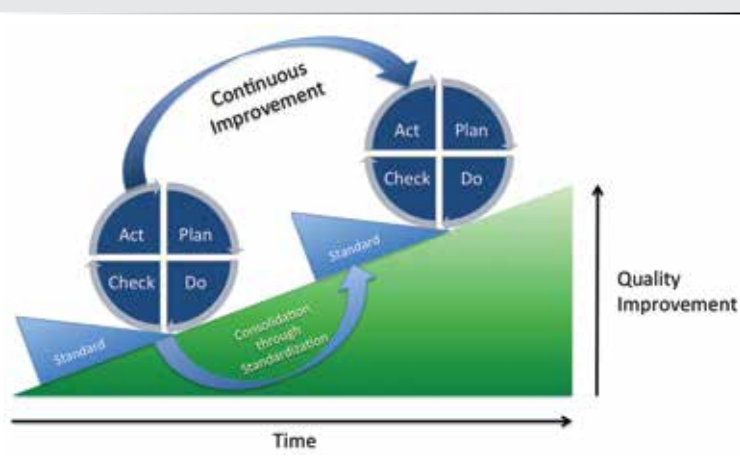
Is Quality Free?

In contrast to the question about the need for a documented quality management system in relation to unnecessary cost, we have Philip B. Crosby's* philosophy that can be summarized as follows: *"Quality is free, only for the organizations that are willing to pay for it".*

Therefore, the organization needs to believe in quality initiatives to the same extent as they believe in health, safety and environment initiatives, or any other core process in the management system, to have the benefit of the quality management system and to avoid having thousands of procedures with no benefits.

Company Needs

The needs for quality management systems have been forced by the global market. To stay in business the organization must develop and implement a quality management system. However, the organization needs also to believe in the system and the benefits derived from that system. The quality management system can be used for improvement purpose and the organization can create a new standard with a higher value. This is illustrated in the chart.



Many organizations followed the market directive and developed quality management systems and obtained ISO certification. However, they fell short of understanding the needs of these systems for the organization. Many organizations felt that these systems were imposed by the

market and they had no need for them. And this is where the quality initiatives drastically fail and do not deliver the benefit expected for the organization. Following implementation of the quality management systems world-wide for a period of 14 years (1987 – 2000), the ISO committee of the International Organization for Standardization realized the problems related to the organization's beliefs in relation to quality management systems "as imposed and not needed". For this reason the ISO committee introduced the basic principles that should be considered in development and implementation of quality management systems.

Further Consideration

Quality management systems have brains and a heart like a human being! Using the scientific approach, we can create processes and procedures for the organization to follow: this is the brains of the system. What is missing is the heart that can be described as: culture, motivation, loyalty, morale, the commitment of employees, care and concern, and so on.

The brains and the heart must work in an integrated manner to ensure the success of any organization. Any failure in one will create serious problems for any organization.

The Basic Principles

In order for the ISO Committee to help organizations in development and implementation of the management systems, the committee introduced the basic quality management principles, as illustrated in the chart.



The ISO 9000: 2015 series of standards focuses on the business process model, process and product improvement and risk management as the major tools of the quality management system. This gives new opportunities for any organization to use the quality management

Quality Management Principles

system as a strategic management tool, which can help to exceed compliance requirements and move toward business excellence.

These principles are meant to promote quality culture in the organization and must be considered in the development and implementation of quality management systems and never be forgotten:

- Customer focus.
- Leadership.
- Total involvement.
- Process approach.
- Continual improvement.
- Factual approach to decision making.
- Mutually beneficial supplier relationship.

The quality management principles can be used as a foundation to guide an organization's performance improvement. They were developed and updated by international experts of ISO/TC 176, which is responsible for developing and maintaining ISO's quality management standards.

These principles are not listed in priority order. The relative importance of each principle will vary from organization to organization and can be expected to change over time. The chart represents quality management basic principles with a brief description.

These principles will be studied in more detail in the next issue of the CCC Bulletin.



These principles represent the basic beliefs and rules that have a major influence on which something is done. Quality Management System principles are a set of fundamental beliefs, norms, rules and values that are accepted as true and can be used as a basis for quality management system for the benefit of the organization.

* Philip B. Crosby, an American businessman, was a legend in the discipline of quality. A noted quality professional, consultant and author, he is widely recognized for promoting the concept of "zero defects" and for defining quality as conformance to requirements.

Introduction

Health, Safety & Environment



The ultimate goal for CCC is to be recognized as the best contractor in the Middle East in terms of HSE performance and ultimately, in the world. Our employees and stakeholders not only support this goal but have high expectations that we will achieve it and we are determined not to disappoint them or ourselves.

Our HSE Management System continues to be certified and accredited by Bureau Veritas to the OHSAS 18001 (soon to become ISO 45001) and ISO 14001 Environmental Standard. These are very important and prestigious certifications for CCC and were acquired after the great efforts of the CCC HSE Corporate Department (HSE Group).

The HSE Group is diversified, multi-disciplined and engages in a wide range of activities. The group is based in Abu Dhabi and offers professional HSE support, direction, guidance, solutions and assistance to all CCC projects and operations worldwide.

Project support and coordination service is an important contribution to the HSE Group. We are involved from the project tender stage all the way through to project closeout. Services provided include tender clarifications, developing project HSE management policies and procedures, providing training modules, audits, investigations, temporary site support, newsletters, quarterly safety campaigns, posters and many other value-added services.

The HSE Group has met and often exceeded the expectations of clients, projects, other CCC departments, and operating companies by the continuous evolving of its services and placing a strong emphasis on internationally accepted professional HSE standards to ensure a safer and healthier work environment for all CCC employees and all CCC projects. The HSE Group remains highly flexible in order to meet the needs and requests of clients, projects and senior management.

The strong reputation that has been earned by the HSE Group is due to a professionally equipped and capable staff who are knowledgeable and experienced in successfully supporting projects and internal departments within CCC to their satisfaction. This is further enhanced by the innovative ideas of senior management who strive to create awareness and ensure CCC stays competitive as the business environment changes worldwide.

We strive to keep CCC on top as a leading HSE organization. Our goals and expectations for CCC in terms of HSE performance is that of continuous improvement with the goal of having the highest standards and expectations in the construction industry. Our clients, employees and other stakeholders not only expect this but deserve it as well.



Ensuring CCC's Excellence through Monitoring

Our company operates in some of the fastest developing regions in the world. In recent years, Africa and the Middle East have seen an impressive development in infrastructure, technology and welfare. As far as competitiveness goes, organizations and clients are stricter on safety and demanding the full implementation of Health, Safety and Environment standards at a level that could never be imagined a few years ago.

Contrary to past notions, in this new world HSE is no more a cost, but an important investment if a construction company wants to keep doing business. Continuously improving HSE to international levels of excellence will help our company achieve even greater positions among the world's biggest operators.

Besides the benefits of economic development, there are social and environmental costs to such a rapid change. Regulatory measures, with particular respect to HSE and sustainability, have advanced equally as fast to prevent negative and lasting impacts in the communities CCC operates.

A surprising amount of investment has been made in HSE legislation in the Middle East and Africa. Each country has its own keystone environmental and health and safety laws. These laws provide the purpose and institutional framework for all subsequent legislation which in turn provide the executive regulations necessary for implementation. Supported by the growth in the oil and gas sector, industry and infrastructure has expanded rapidly, requiring companies to act accordingly and introduce a full range of HSE legislation covering such things as: hazardous waste disposal, air and water quality standards, equipment safety and hazardous chemicals.

HSE has become a critical business issue, but this field is still relatively new and continuing to evolve. It is important to note that a recent drop in worldwide oil prices has obliged some businesses to look for financing and projects are increasingly turning to international banks for funding. With international financing come stringent requirements with regard to HSE as a condition of investment. Thus, the need for international investment will continue to play a role in strengthening HSE performance in the region.

An international organization requires recognition and CCC's HSE management system is certified by ISO, the International Organization for Standardization, proudly holding the certifications on Environment (14001:2015 Environmental Management System) and Health and Safety (OHSAS 18001:2007 Occupational Health and Safety Management Systems) awarded by Bureau Veritas (BV).

In order to ensure CCC is up to date with the continuous improvement demanded by ISO and BV and to provide a safe workplace for our employees, CCC has developed strong, safe work procedures for all its projects world-wide and monitors their implementation on every work site. Regular safety audits are carried out to ensure compliance with the client's requirements, laws, regulations and international standards.

Audit findings can also include how an organization can remediate potential threats to direct employees and subcontractors. When an organization follows through on the findings of a safety audit, the workplace will be safer, and there will be a reduced likelihood of worker injury, illness and death.

How Does CCC Do It?

A systematic approach is a vital ingredient for a safety audit process. CCC's PP701 Health, Safety and Environment Management Plan outlines the following components:

Internal HSE Audits

Internal HSE audits are carried out by the project HSE manager in order to evaluate the implementation and effectiveness of the HSE management plan, policy and procedures and recommended corrective actions.

Corporate Group HSE Audits

Are carried out by an HSE Group corporate representative in order to evaluate the effectiveness of the Health, Safety & Environment Plan and Procedures and their implementation in line with corporate HSE minimum expectations. In addition, the audit evaluates the implementation of any HSE action plans or HSE recommendations proposed by the Corporate HSE Group. These are conducted on a scheduled basis in normal conditions, while it will be more frequently upon special circumstances, such as low training records, increasing incident rates, exceeding target goals (a red flag condition) lost time or fatality incidents or reaching unacceptable KPI – Key Project Indicators. Analysis of collected data from regular inspections and audits is used to generate weekly HSE reports used for feedback and discussion with management to identify trends and initiate improvements.

Third Party Audit

When a certification audit is conducted at the project, the project management and the HSE Department are obligated to facilitate the audit and to close all findings resulting from the certification audit. Objective evidence to prove the closure of the finding is sent to the Corporate HSE Group in a timely manner and will be forwarded to the certification body.

Cold-Eye Review (CER)

The HSE Group adopted the Cold-Eye Review (CER) process as one of the methodologies for proactive monitoring on projects. CER involves a visit by the HSE Group to a project in order to identify shortfalls in compliance with the management system and recommended preventive measures based on the observations at an early stage of the project (preparedness or initial phase) or whenever requested by a client or another shareholder representative with the objective to boost or improve the project's HSE performance.

Here are some reasons why we conduct regular safety audits:

- To determine if safety and health programs and procedures are working.
- To verify that employees and management are engaged in safety programs.
- To verify that processes are in compliance with company policies and regulations.
- To verify compliance with applicable standards (i.e. OSHA, HSE Executive and so on) or best practices.
- To determine if the project is documenting safety and health program activities properly.
- To discover and manage potential hazards.
- To evaluate the effectiveness of existing management controls.
- To check the workplace overall safety.
- To check the equipment safety.
- To evaluate the adequacy of supervisors' and employees' safety training and performance.

Wherever there's smoke...

Although by definition an accident or incident can be described as an "unexpected" event, it actually sends 'smoke signals'.

Through auditing activities, an HSE professional is able to make use of 'trend analyses' over repetitive problems (findings) to identify where and when a certain type of accident is most likely to occur. Then, it will be his responsibility to advise the project management to take quick and efficient actions to eliminate or control such hazards.

Safety audit and inspections have been shown to reduce the number of accidents, so it is something that benefits most employers. It's recommended that we are proactive with safety, rather than waiting for accidents to happen without notice or indication.

The health and safety needs of a small or large business can change over time and it is important that audits are carried out on a regular basis. This will ensure the continued welfare, health and safety of employees within an organization, via the systematic appraisal of on-site procedures and processes. An audit will find specific areas in which improvements need to be made for the benefit of a business and its employees, and help companies to comply with legal duties and promote wellbeing.

Why is it Important?

Once you have health and safety procedures in place, there may be the temptation to think that you have done all you need to and that your business is set for the future. However, an audit is important and essential because it will help to:

- Reduce the risk of personal traumas or injuries.
- Prevent material loss.
- Promote employee morale.
- Ensure customer confidence.

What are the Other Benefits?

Credentials: a contractor bidding for clients or looking into new business will find that the majority of companies expect to have proper health and safety procedures in place. Having high standards of HSE in the industry will ultimately benefit its business goals.

Save money: A health and safety audit provides a calculated analysis of procedures and provides fact-based changes to be implemented. This saves time and money on what may be little more than second guesses about procedures and benefit areas such as employee sick leave.

Law abiding: There are different regulations and laws in place to ensure safety within different industries. If the contractor is not abiding by these laws, it can lead to projects getting in trouble with the authorities or possibly being shut down by authorities.

Avoiding any kind of incident that may lead to disastrous accident, illness and loss should be the top most priority of any business. To achieve this, audits shall be carried out to regularly check the documented safety measures are in place to protect all employees from harm.

Our Numbers and Results

Due to its oversized dimension and dynamics, it would be hard to get to an accurate number of internal HSE inspections carried out by CCC HSE officers and supervision in our projects. However, an approximate figure could easily get to 50,000 internal HSE inspections conducted annually.

On a corporate level, with a considerable number of construction projects world-wide, making sure they all abide by the company's expectations toward HSE takes a lot of effort to put together a one-team approach to verify their compliance to the established policies. Senior management are encouraged to commit themselves to the process and play an important role in the development of the company's HSE culture. Projects are selected based on priorities such as KPIs, critical path, serious incidents or shareholders concerns.

In 2017 alone, the CCC HSE Group conducted 25 corporate audits, CER and investigations in 21 projects in 7 different countries. This makes a total of 258 corporate audits, CER and investigations conducted since early 2011.

These activities have helped the company maintain the HSE international certifications (ISO) and CCC's position among international construction key-players.

HSE Project Site Support Visits



One of the most important HSE Group responsibilities is to ensure the continual development and improvement of HSE programs and performance at CCC projects. The HSE group provides high quality HSE support, direction, guidance, assistance and solutions in terms of project visits, meeting with project management, project staff and the client in addition to making sure that competent and qualified HSE personnel are provided who are capable of addressing and helping to solve project HSE site issues.

The HSE group also supports projects by providing interim HSE managers, specialized HSE training programs, HSE audits, Cold Eye Reviews, incident investigation, project mobilization phase support, development of project specific HSE procedures, and so on.

Interim HSE Manager

The HSE provides an interim HSE manager based on the project management request, client request or both. During the visit the corporate HSE representative acts as project HSE manager and performs all HSE roles and responsibilities until a permanent HSE manager joins the project. He conducts daily site HSE inspections and participates in the management walkthroughs, meetings with the client's HSE team and discusses with them the project HSE concerns, the HSE challenges on site, the HSE requirements and ways of improving the safety culture on the project. In addition, regular meetings with the CCC project management team and HSE staff are held during these visits to discuss site issues and plans for improving the overall project HSE performance and compliance.

HSE Training Support

The CCC HSE Group provides world class HSE Training and Certification courses. The following in-house HSE training courses are provided to any CCC project that requests such training.

- NEBOSH International General Certificate (IGC).
- OSHA 10 and 30 hour training.
- HSE leadership and management training for all levels of management and supervision.
- Train the Trainer.
- Incident investigation training.
- Injury record keeping and classification training for key management, safety and medical staff.
- Fire safety and fire warden training.
- Risk assessment training for HSE staff, managers and engineers.
- Hazard identification training for all levels of supervision.
- First Aid/CPR/AED (Adult/Pediatric) Level 3.
- H2S & Breathing Apparatus.

HSE Audits

HSE auditing is a proactive and structured process of collecting information on the efficiency, effectiveness, implementation and compliance with the HSE Management System. It determines whether activities and the related outcomes are in compliance with the HSE policies and procedures with the goal of achieving organization HSE objectives and goals.

Not only does auditing evaluate the overall implementation of the HSE management system, it also helps examine the integrity, consistency and applicability of the HSE plan and procedures and determine if it achieves the desired HSE results.

Audits and other HSE surveys are proactively conducted before accidents and incidents with the goal of preventing them from occurring. The process aids in identifying high risks that have the potential to lead to serious accidents resulting in property damage, harm to the environment, harm to the public, personal injury or death.

The HSE Group has competent and well trained HSE lead auditors that conduct numerous audits on CCC projects and operations worldwide. HSE auditors schedule audits for all projects and the frequency depends on the project complexity, scope, client requirements, number of incidents, last HSE audit and other relevant factors. The goal is to audit every active project at least once per year.

Audits and surveys contribute significantly to identifying major HSE nonconformities, HSE shortfalls and areas for improvement. The audit and survey process provides valuable information to enable the HSE Group to address HSE shortcomings, improve HSE performance with the ultimate goal of protecting people and assets from serious incidents.

Following each HSE Audit, a dedicated team analyzes the audit findings utilizing a trend analysis tool that highlights frequent and repetitive HSE shortcomings. This information is in turn used to develop HSE drives, improve training, develop safety alerts and information, lessons learned, and so on.

HSE Incident Investigation

Incident investigation is a reactive process that is initiated after the occurrence of incidents or injuries. Incident investigation is a thorough analysis of the events, actions and work processes that resulted in the incident or injury in order to determine root causes, contributing factors and where the breakdown in the HSE management system occurred.

An effective investigation requires a methodical, structured approach to information gathering, evaluation and analysis. The findings of the investigation will form the basis of an action plan to prevent the accident or incident from reoccurring and improving the overall management of risks.

The desired outcome is to provide an accurate description of the accident, identify direct and underlying (root) causes and remedial actions (corrective measures) that prevent recurrence of similar events.

Conducting HSE investigations provides a deeper understanding of the risks associated with work activities, highlight where breakdowns in the safety management system occurred, why existing control measures failed and the contributing factors leading to the undesirable events: this is very important and vital for developing and refining HSE risk management systems.

HSE Group investigators carry out HSE investigation after the occurrence of serious accidents including fatalities, lost time incidents, property damage, and so on. The investigator is dispatched immediately to the project site to gather and analyze information, identify implemented risk control measures, identify possible solutions, corrective actions and develop an action plan that will prevent or avoid recurrence.

In 2016, the HSE Group launched the HSE Investigation Team Initiative requiring all projects to allocate and train personnel as key HSE investigators to tackle HSE investigations for lost time incidents, near misses and medical treatment cases that occur on their respective projects. The initiative was successfully implemented and resulted in active involvement of the construction team helping to promote HSE ownership and accountability for the various disciplines on CCC projects.

The HSE Group is continually engaged in efforts to prevent and reduce work related incidents and injuries. Outcomes of accident and incident investigations will be effectively communicated to all projects and areas of operations.

HSE Project Site Support Visits

Following each investigation, the HSE Group generates and distributes HSE Alerts that share lessons learned and corrective actions. These are sent to all projects worldwide to increase awareness and strengthen HSE compliance among the CCC workforce.

The common concerns and the areas of improvement noticed during HSE support visits which need proper and adequate attention from the project management and projects HSE teams could be summarized as below:

1. HSE Planning

Proper and adequate HSE Planning (3 weeks to 3 months look ahead planning), to identify and prepare in advance for the HSE resources and requirements for future scheduled project activities so they are conducted in a safe manner with proper coordination with project planning team.

2. Hazard Identification

- a. The activity risk assessment is completed and method statement prepared with participation of the construction team and HSE team to ensure all activity hazards are properly identified and adequate control measures are in place.
- b. All subcontractors are required to complete risk assessments and method statements for their activities and these must be reviewed by the concerned CCC team.
- c. The Safety Observation Card (SOC) or similar process should be implemented on each project to encourage identification of unsafe actions and unsafe conditions and also enhance the construction team's hazard identification skills.
- d. Construction supervisors and workers should be involved in the SOC and the hazard identification process. SOC can be a criteria upon which they may be eligible to receive a safety award.
- e. Utilizing the Safety Observation Register (SOR) to log all observations (including observations from safety observation cards, site management walkthrough observations, camp & food safety inspections, internal audits, client inspections, client audits, and so on) will categorize hazards based on location, group, activity, potential injury, and so on. Such trend analysis will provide a strong indication of the risks and worker behavior on site and assist in identifying preventative actions based on specific locations, activities and groups to avoid incidents and facilitate decisions regarding improvement of risk control and the HSE management System.
- f. Complete the monthly project trend analysis which will help to achieve the goal of being "Proactive" in eliminating hazards and eliminating unsafe acts and conditions before incidents occur as well as being a good benchmarking tool.

3. HSE Communication

Effective "Communication" is an important part of the HSE Management System to facilitate safe construction operations

- a. Job Safety Task Instruction (JSTI)
 - The main objective of the JSTI is to identify potential hazards and Control Measures associated with each step of the task and communicate that information to workers. It should be delivered prior to the commencement of any task by the activity foreman or charge hand or at any time of the day should a new task begin.
 - Supervisors who deliver the JSTI should be competent to do so. They should understand the language, the content of the JSTI and establish two way communication with their workers.
 - The HSE training team shall provide a JSTI training course to all site supervisors (Site Engineers, FM, CH) to instruct them on how to deliver effective JSTI's.
- b. Toolbox Talks (TBT)
 - It shall be prepared weekly by the HSE Manager and shall address a specific safety topic to the entire workforce. It shall be delivered on a weekly basis by a competent person in charge (Supervisor, Foremen, Charge Hand, and so on).
 - It addresses the repetitive and identified hazards utilizing the trend analysis developed from the safety observation register to foster a pro-active HSE attitude and take appropriate measures to prevent incidents.

HSE Project Site Support Visits

- c. **Weekly Safety Supervisory Management Meeting (SSMM)**
In this meeting the HSE Manager shall present HSE statistics, trend analysis, important hazards identified during the week, preventive measures that are needed to be taken, Safety Alerts, Safety control measures for coming activities, Lessons learned from incident-Investigations, Good Practices and Initiatives, and all HSE issues necessary to be discussed.
- d. **Weekly Charge-Hand Meeting (CH-Meeting)**
Every Engineer, Superintendent and Section Head shall meet on a weekly basis with their own line supervisors (FM and CH) to communicate HSE Issues that are discussed during the Weekly Supervisory Safety Management Meeting. The HSE Manager or Safety officer shall attend, monitor and report on the meeting for evaluation and continual improvement.
- e. **Weekly Safety-Officers Meeting**
The HSE Manager shall meet with his Safety Officers and Staff members in order to update and discuss with them the performance of the department and the recent safety issues on the project.

4. HSE Officers Support

- a. Improve their performance through coaching, training, monitoring and continual assessment of their performance.
- b. Weekly Safety-Officer Meeting shall be conducted through which the HSE Manager meets with all HSE staff to update them and discuss any pressing HSE issues.
- c. Provide a clear roles and responsibilities to all safety staff.
- d. Provide a Special HSE Induction for Safety Officers .
- e. Develop specific "Daily Checklist for Safety Officer" to check their assigned areas to ensure that basic safety control measures are in place.
- f. Safety Officers shall be encouraged to use their authority to stop work in case of dangerous unsafe acts, unsafe conditions or IDLH (Immediately Dangerous to Life and Health) situations.
- g. Safety officers shall be required to use the SOC system to identify and report all hazards in their prospective areas. They shall be responsible and accountable for identifying and reporting all hazards in their assigned areas.
- h. The HSE Manager, deputy and senior safety staff shall support safety officers and support their decisions and findings.

5. Accountability for HSE Performance

- a. An accountability process toward safety shall be enhanced focusing on two major concepts which shall be implemented by project management and supervisors.
 - Senior Management (project director, manager, construction managers, engineers, section heads, line supervisors, foremen and charge hands) are RESPONSIBLE and ACCOUNTABLE for the safety of their crews and activities and will be held accountable for safety violations committed at their work location or by employees in their workforce.
 - Safety Performance is a fundamental criteria used in performance evaluation, promotion and bonus process for personnel at all levels. (Managers, Engineers & Supervisors)
- b. Project senior management shall communicate the ACCOUNTABILITY process by focusing on the two concepts that managers and supervisors are responsible and accountable for the safety of their workers and safety performance is a fundamental criteria of their evaluation and promotions.
- c. A statement of accountability may be developed and signed by all project management team members and supervisors and submitted to HSE Department

6. Safety Management Walkthrough (SMW)

- a. The SMW shall be conducted on weekly basis with participation of
 - Project Director, Project manager, project HSE manager, Site Construction Managers site Construction Engineers and HSE officers .
- b. The SMW shall cover all site and project facilities and the team may be divided in order to cover all locations.
- c. The SMW shall be documented and the findings shall be follow up and closed on time.

7. Supervision Improvement on Site

- a. All site activities should be conducted in presence of the activity site supervisor otherwise the activity will be suspended (for the safety of workers)
- b. The site supervisors and line management (F/M & C/H) shall show adequate visibility on site
- c. The site supervisor shall conducted a daily JSA /JSTI and sign the attendance sheet.
- d. Supervisors and engineers shall lead by example using the proper and required PPE to encourage workers and to create a proactive safety culture and work safely
- e. Proper and adequate participation in the safety observation cards (SOC) by line management
- f. Every construction crew in each area shall improve the safety on site by providing barricades, accesses, housekeeping, de-nailing, and so on
- g. The best crew in the area may be receive an award to motivate safe behavior with (safety certificates, cards, money, and so on) and their names and photos will be posted on the safety boards including the site foremen and charge hands.
- h. The site supervisors and line management shall attend HSE training courses identified by the HSE training team related to their site activities

8. HSE Training program

- a. A project specific "Training Matrix" shall be prepared to specify the training courses required to each target group of the workforce.
- b. A "Training Schedule" shall be prepared and announced to the workforce so personnel can plan their training based on the schedule.
- c. A "Training Register" shall be developed to keep records of HSE Training for personnel and to keep records of all HSE Training Activities.

9. Incentive Scheme

- a. Implementation of a generous incentive scheme to reward those who show strong commitment to Safety.
- b. Candidates for safety awards shall be selected fairly and based on good safety performance. Candidates may be selected by construction supervisors, project management team members and HSE officers.
- c. Safety incentives can include the following categories:
 - The Driver of the month based on the IVMS monthly report
 - The best SOC (Safety Observation card) for the month
 - The best JSTI for the month
 - The Safety Officer of the month
 - The best TBT for the month
 - The best Near Miss for the month
- d. Publicize the winners of safety awards and incentive schemes through meetings, TBT's and safety bulletin boards in order to raise safety awareness and to discourage future violations.
- e. One of the most important concepts of an incentive program is to reward the actions that you want repeated by the workforce.

10. Disciplinary Action

Disciplinary action should be used as a last resort and it needs to be implemented after careful thought and it should be implemented consistently, fairly and to all levels of workers.

- a. Disciplinary action is usually a four step process starting with a verbal warning, then a written warning, then a salary deduction and finally termination. Disciplinary action is not reserved on for workers who may commit willful safety violations but also toward their supervisors, line supervisors (CH & FM), engineers and managers as they are accountable for the safety and the behavior of their crews.
- b. Disciplinary action may be necessary for individuals and supervisors of all levels based on the results of incident investigation that indicate violations or shortcuts to safety procedures.
- c. Publicized disciplinary actions taken through meetings, TBT's and safety bulletin boards in order to raise safety awareness and to prevent future violations.
- d. Implement disciplinary action for drivers and machinery operators who willfully violate traffic and vehicle safety regulations. The monthly IVMS report must be used to spot driving violations in addition to site monitoring.

Does Safety Cost Money?

FEATURE

Do Not Pay More Money, Pay More Attention and Commitment to Improve Safety

The good news is that good safety performance does not cost any additional money. We need to **PAY more ATTENTION and COMMITMENT** rather than to pay more money to achieve better safety records and performance. Do not believe the false slogan “Safety Costs Money” which is used frequently by some individuals as an excuse for poor safety performance and who do tend not to study safety problems objectively. Such a slogan is not based on fair and scientific analysis and it is used as a quick ineffective solution for safety failure.

We can never succeed in improving safety performance if we believe and stick to such incorrect sayings as “Safety Costs Money” because it implies the attitude of a blaming-culture (safety versus construction), pointing fingers, the incapacity to solve problems professionally and objectively, the absence of a vision and strategic thoughts and a serious misunderstanding of the whole concept and the nature of the construction business.

“Money can neither solve all problems in life nor can it solve safety challenges on site” is the true or what it seems to be the true theory based on experience and fair-minded judgment. Based on field experiments and objective studies of the recent audits, incident investigations, site visits and Cold Eye Reviews, the lack of resources has never been a root cause of any incident which has occurred on CCC sites for the last four years. Very few NCRs (nonconformities) and observations have been issued because of a lack of resources and if it was a concern, it is mostly not using the resources which are already there, such as not wearing the personnel protective equipment (PPE) although it is provided and available and not using the grinder guard; not because grinders do not have guards, it is only because workers remove the guard for comfort and due to complacency.

The issue is not a lack of resources; rather it is poor management and ineffective usage of the existing resources.

It is important that we clarify and eliminate this misconception, that safety costs money, so that failure in safety cannot be easily and falsely justified. Elimination of this slapdash slogan will guide us to work in the right direction instead of pouring money in the wrong direction. It will help us look objectively and scientifically for the true root causes of incidents and the reasons for poor safety records and performance.



Looking at the results of investigations and audits, the most common root causes of incidents and most common issues and non-conformities are listed below. Such root causes and NCRs have formed a trend-type pattern and they are too repetitive that they have become strategic issues; therefore, they must be seriously considered and resolved strategically by senior management and all levels of CCC employees.

The most common root causes of incidents and safety NCRs are the following:

1. **Poor site line supervision especially (charge-hand and foremen):** fortunately, most if not all our CCC senior and middle management including project managers, construction managers and project engineers indicate serious concern and commitment to safety but unfortunately such awareness and commitment does not trickle down to our site line supervisors especially the charge-hand who is the most important man to achieve the goal of better safety as he is in direct contact with our main target which is the workforce on site. There is an obvious and serious gap between the senior management and line supervisors in terms of level of commitment, realizing the importance of safety and sharing the vision.
2. **Poor sense of accountability** of most employees, especially engineers and site line supervisors; charge-hands, foremen and therefore of the workforce.
3. **Poor enforcement** by engineers and supervisors of safety issues which leads to carelessness and complacency.
4. **Subcontractors:** lack of control, poor monitoring and ineffective integration.

Does Safety Cost Money?



5. **Poor hazard identification and reporting process:** safety officers do not report hazards adequately and construction crews are not effectively involved in the hazard reporting process. Efficient and accurate hazard identification and reporting is the first step to solve problems, and it would ensure that the effort made is in the right direction.
6. **Poor Hazard Communication:** The RA (Risk Assessment) and MS (Method Statement) which are mostly available at the projects and for which substantial time and effort made by the engineers to develop, usually are not communicated or poorly communicated to the workforce. The JSTI (Job Safety Task Instruction) which has been recently developed as a simple form of the RA is still poorly communicated to the workforce.
7. **Poor hazard rectification and follow up process.**
8. **Poor performance of safety officers** due to incompetence, poor monitoring and lack of support.

Two facts could be concluded based on the root causes and safety concerns listed above:

1. A lack of resources is not proven to be a root cause of incidents or even among the top 10 safety failings. This may guide us to set up our priorities and work in the right direction to improve our safety records and performance.
2. Resolving and rectifying these repetitive root causes and strategic safety issues do not require any additional cost. To examine if spending more money would solve these issues, we would ask the following basic questions:

- a. Do we need to spend more money, or what does it take to have a worker wear his safety glasses and gloves when they are already there in his pockets or thrown next to him?
- b. Does it cost more money, or what does it take to improve our site line supervision? How much does it cost if our engineers and supervisors stay closer to their workers and spend more time on site monitoring production, quality and safety performance as well?
- c. Does it cost more money, or what does it take to place barricade which is already in stacks around a crane and lifting operation to stop workers from working under hanging loads?
- d. Does it cost more money, and how much if yes, when we start to enhance the sense of accountability among managers, engineers, supervisors and safety personnel by implementing disciplinary action toward safety violations and rewarding good safety practices?
- e. Does it cost more money, or how many minutes does it take to instruct our workers to perform good housekeeping and provide safe access to their work places?
- f. Does it cost more money, or what does it take to assess and improve the performance of the safety officer who identifies and reports an average of only two unsafe observations per day (10 working hours)? How much more money does it cost if we encourage construction supervisors to participate in hazard reporting?
- g. Does it cost more money, or what does it take for our project management and engineers to focus more on foremen and charge-hands to share awareness with them and bring their level of safety commitment up to expectations?
- h. Does it cost more money, or what does it take to monitor and supervise subcontractors more closely on site and integrate them in safety meetings, walkthroughs and all elements of the HSE management system?
- i. Does it cost more money, or how many minutes does it take to deliver the JSTI or the content of the RA to workers every morning? Effective Tool Box Talk or JSTI not only improves safety performance but also it enhances job planning, encourages closer relationship between workers and their supervisors and contributes to better quality and higher productivity.

The Importance of HSE Training

FEATURE

In the early years of HSE there were safety laws, standards, requirements, policies, and so on but there were no requirements for training. How could employees be expected to follow laws, standards and procedures without a full understanding of what those laws, standards and procedures contained or what to do to comply with the requirements? There is a reason people attend school from a young age through early adulthood. Education enables us to understand how things work, how to be successful and how to interact with others. HSE training is no different as it teaches us how to perform our work safely, use tools and equipment safely, protect ourselves and others around us, protect the public and the environment and identify hazards or hazardous conditions.

Let's take one of the earliest set of regulations associated with workplace safety, the United States Occupational Safety and Health Administration (OSHA). Signed into law in December of 1970, OSHA 1910 General Industry safety standards went into effect in March of 1971. Industry received these standards with mixed reactions. Many felt the government should not be involved in how people do their jobs or how companies instruct people to do their jobs. Others felt it was a necessary step to

reduce the high number of fatalities and injuries occurring on worksites all across America. When the first standards were written, none of them said anything about mandatory training on how to comply with the standard. It was assumed that companies would do that because it made sense but in reality training was only seen as an additional cost, so very little training was conducted.

As time passed, numerous work-related tragedies occurred and when OSHA investigated, one of the key findings was almost always a lack of training or understanding of policies, procedures, requirements and how to comply with them. As a result, OSHA began revising their standards and today almost every OSHA standard has a mandatory requirement for awareness training for anyone performing work that is affected by that standard. OSHA has even advanced to the point where they now have an OSHA training institute with resources available for awareness training on the standards.

Another important lesson that occurred as time passed was the realization that there were specific industries that had unique hazards and tasks associated with them. As a result, three additional standards were created to address those industries. The first was Part 1926 aimed



The Importance of HSE Training

exclusively at the construction industry and it was introduced in 1993. This was followed by standards specific to the maritime and agricultural industries. These newer standards all have awareness training requirements incorporated into them.

During this period of time employers also learned that training is an important part of the HSE management system and contributes significantly to good HSE performance and a strong HSE culture. Many studies concerning the benefits of training have all come to basically the same conclusions – a well trained workforce is a safer workforce. The same studies also emphasized that training in fact saves money versus costing money. Training improves HSE performance, creates a strong positive feeling about the work environment, which results in increased productivity. Today companies strongly support HSE training not because it is a requirement but because they have seen the positive results and enjoyed the benefits.

On the other hand, companies have also learned some very hard lessons related to HSE and training. During past economic downturns many companies have chosen to significantly reduce or even eliminate training programs and cut back on safety as well. It is no surprise that companies who chose this path very quickly saw an increase in incidents, injuries, near misses and a decrease in morale among employees. Those who stayed the course and continued to provide training and emphasize HSE not only maintained a high level of performance but were much more successful winning new contracts than those companies that chose to save money by cutting training. In fact some companies did not survive because their HSE performance was so weak that they could not get enough work.

Training is crucial for organizational development and success. It is beneficial to both employers and employees. An employee will become safer, more efficient and more productive if he is well trained.

What exactly constitutes training? Training can take place in many ways. The most common is the classroom and is much more formal. The use of videos, visual aids, hands on, discussion, problem solving, interaction, larger numbers, and so on makes the classroom a much more useful format. However, training can also take place on the work site. A supervisor stopping work that is being done in an unsafe manner and showing the workers the correct way to do it is a form of training. Tool box talks, job safety task instructions, reviewing a method statement, and so on are all forms of training. Hands-on

training is very effective in that the student can actually be shown how to do something and then demonstrate that he has learned the task properly. Sharing lessons learned from past incidents is a form of training. Essentially anything that helps improve an employee's knowledge, skill and attitude in terms of HSE can be considered training. HSE training is the process of enhancing the skills, capabilities and knowledge of employees for doing a particular job in terms of how to do it safely. Some common ways that HSE training can occur are as follows:

- Classroom
- On The Job
- Mentoring / Coaching
- Situational
- Seminars / Conferences
- Cross Training / Job Rotation
- Hands On
- Lessons Learned
- Tool Box Talks / Job Safety Task Instruction (JSTI).

Training is given for one or more of four important reasons:

1. New candidates who join an organization are given training. This training familiarizes them with the organizational mission, vision, rules, regulations and work conditions.
2. Existing employees are trained to refresh and enhance their knowledge.
3. If any updates or changes take place in technology, training is given to cope with those changes such as purchasing new equipment, changes in production technique, changes in work processes, and so on.
4. When promotion and career growth become important, training is given to prepare employees for higher levels of responsibility.

Advantages of Training

According to numerous studies and insurance company records, the following benefits result from quality HSE training:

1. **Improves morale of employees.** Training helps the employee in terms of job security and job satisfaction. The more satisfied the employee is and the higher his morale, the more he will contribute to organizational success and employee absenteeism and turnover will be lower.
2. **Less supervision.** A well trained employee will be familiar with and understand his job and need less supervision. Thus, there will be less waste of time and effort.
3. **Fewer accidents.** Errors are likely to occur if employees lack knowledge and skills required for doing a particular job. The more

The Importance of HSE Training

trained an employee is the less the chances of having work accidents and the more proficient the employee becomes.

4. **Chances of promotion.** Employees acquire skills and efficiency during training. They become more eligible for promotion and an asset for the organization.
5. **Increased productivity.** Training improves efficiency and productivity of employees. Well trained employees show both quantity and quality performance resulting in less waste of time, money and resources.

Objectives of Employee Training Programs

1. To prepare employees to meet the varying and challenging needs of the job and organization.
2. To provide knowledge and skills to new entrants and to help them to perform their role and job well.
3. To coach employees for more complex and higher level jobs.
4. To teach employees new and innovative ways and techniques of performing job.

Benefits of Trained Employees

Training is an important tool for employee development. Training is becoming increasingly important because of rapid changes in the internal and external organizational environment. The importance and benefits of trained personnel towards organizational development are:

1. Trained employees do not require tight control and supervision as they are well aware of how to perform a job.
2. Trained employees are higher performers by making optimum utilization of the materials, tools, equipment and other resources provided to them.
3. Trained employees minimize waste of resources and work efficiently and effectively.
4. Training makes employees more committed to an organization as the employees are provided with growth, advancement and learning opportunities.
5. Training develops proficient, skilled and responsible employees for complex and higher level tasks.
6. Trained employees adjust to the job better and absenteeism and turnover is lower.
7. Trained employees produce quality and quantity output.
8. Trained employees enable the organization to face competition from rival firms.
9. Trained employees can respond and adapt well to changing technology.

10. Trained employees become more proficient and their earning potential increases.
11. Trained employees have fewer accidents and incidents.
12. Trained employees improve the safety culture in the organization.
13. Trained employees will not take shortcuts.
14. Trained employees watch out for one other.
15. Trained employees more readily communicate concerns and ideas for improvement.

Reasons Training Is Not Conducted

- Perceived to slow down production.
- Perceived as unimportant.
- No understanding of the benefits.
- Fear of employees leaving for a better job after they are trained.
- Perceived as an unnecessary cost.
- Too time consuming.
- No provision of resources
- Lack of management support

Consequences of No Training

- Poor HSE performance.
- Increased Injuries and incidents.
- Increased turnover.
- Lower productivity
- Increased absenteeism.
- Shortcuts taken.
- Weak HSE culture.
- Poor HSE communication and feedback.

Why HSE Training Fails

- No management support.
- Unqualified trainers.
- Failure to customize training modules.
- Failure to update training modules.
- Poor training skills.
- No performance based training.
- No evaluation of training effectiveness.
- Lack of consistency.
- Get it over with approach.

Different Learning Styles

One of the most important aspects of training is to recognize the learning styles of employees. Research says there are three main learning styles and the challenge for those developing training materials is to try and address all three as there is very likely to be a mix in each training session. The three main learning styles are "Auditory", "Visual" and "Kinesthetic". Here is a brief description of each learning style.

The Importance of HSE Training

1. **Auditory** learners often talk to themselves and they may move their lips and read out loud. They may have difficulty with reading a writing task and they often do better talking to a colleague and hearing what was said. To address this learning style a brief explanation of the material to be covered is needed, questions during the course of the training is necessary, small groups work well (brainstorming) and at the end a brief review of the main points of the training.
2. **Visual** learners like to learn through written language such as reading and writing tasks. They remember what has been written down. They pay attention to the instructor, watch them closely and write down important information. They like charts, videos, demonstrations and other visual materials. They can easily visualize faces and places but using their imagination and seldom get lost in new surroundings. To address this learning style the use of graphs, charts, videos and other visual aids is important. Use role playing exercises, outlines, concept maps, flow charts, agendas, handouts and pads for taking notes and minimize potential distractions.
3. **Kinesthetic** learners need to touch things and move around. They tend to lose concentration if there is little or no external stimulation or movement. They will often take notes during training just to be able to move their hands. When reading they like to skim the material initially (get the big picture first) and then focus on the details. They typically use color high-lighters and take notes by drawing pictures, sketches, diagrams, and so on. To address this learning style, include activities, use color to emphasize key points, incorporate frequent stretch breaks, helps them visualize complex tasks or incorporate hands-on exercises during the training.

Training in CCC

Training in CCC has become increasingly important with significant emphasis from senior management over the last several years. Numerous memos and emails have been issued to projects emphasizing the importance of HSE training to enhance HSE knowledge, reduce incidents and develop competent workers.



The Importance of HSE Training

Not only has HSE training become increasingly important internally but the past four to five years have seen a significant increase in the emphasis on HSE training from clients. Almost every tender we evaluate now have very specific requirements for HSE training. With a robust internal HSE training program, it makes it much easier for CCC to comply with client HSE training requirements.

Another challenge is the increase in requirements from clients to utilize third party HSE training for some types of training, particularly in the past two years. There could be a number of reasons for this including easier for the client to manage training, clients' training requirements are consistently presented to all contractors, easy to maintain records, and so on. However, the bottom line question is whether or not paying the high cost for a third party HSE training results in better HSE training. The opinions are split in terms of whether you get a better product from a third party versus an in-house program that provides the same level if not better quality HSE training. It may be easier for the client to manage in terms of consistent content, records, and so on but usually third party training is a very packaged or generic approach and HSE often has very specific activities associated with the training that is done. It is much more effective to provide HSE training specific to the activities occurring on the project versus a generic approach. Also, having knowledgeable instructors within the company is much more effective and adds to the company's credibility in the eyes of its employees.

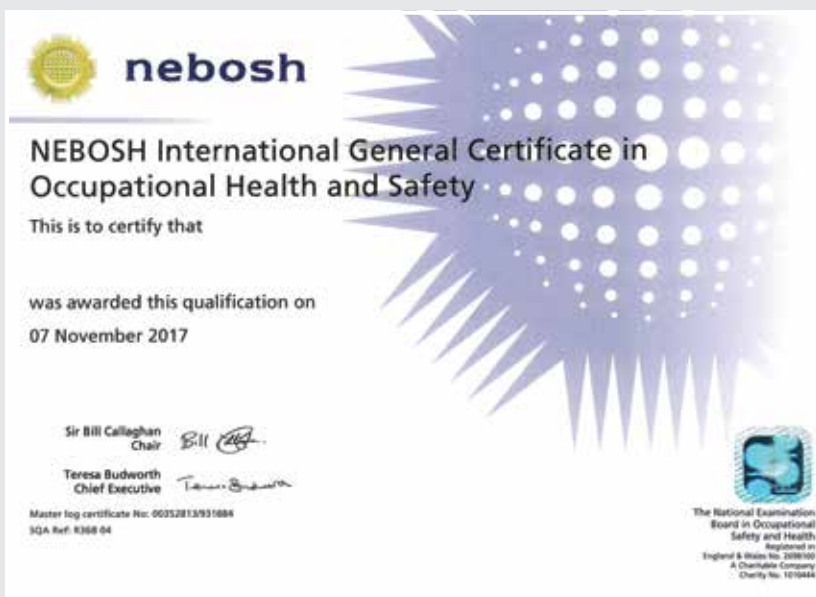
In terms of specific types of training that have been developed internally in CCC in order to avoid the cost of third party training, the following training programs are now offered internally:

- Internally approved provider for the NEBOSH International General Certificate.
- OSHA 10 hour and 30 hour courses.
- H2S (Hydrogen Sulfide) safety awareness and H2S train the trainer.
- Safety Management & Leadership.
- Incident Investigation.
- Hazard Awareness & Risk Management.
- Lead Auditor.
- Fire Warden & Fire Safety.
- Safety Workshops & Safety Goal Setting.



- Train the Trainer.
- In addition to the above courses, the following are under development and planned to be available in 2019:
 - HSE staff development course.
 - ISO 45001 awareness (this is taking the place of the existing OHSAS 18001).

By request, projects can be assisted in developing specific HSE training programs to address a specific need or to avoid utilizing a third party. Both of these have been done on numerous occasions in the past few years.



The Importance of HSE Training

A quick look at training statistics for CCC in 2016, 2017 and 2018 reveals the following:

2016

- 76 CCC staff attended the NEBOSH IGC course for the first time and all 76 total sat for the examination.
- 56 CCC staff completed the OSHA 10 hour training.
- 109 CCC staff completed the OSHA 30 hour training.
- 46 CCC staff completed Safety Management & Leadership training.
- 93 CCC staff completed H2S (Hydrogen Sulfide) Safety Awareness training.
- HSE Project Training Man-hours = 1,510,611 (79 active projects) (94% of goal).

2017

- 22 CCC staff attended the NEBOSH IGC course for the first time and 48 total sat for the examination including new students and retest students.
- 417 CCC staff completed the OSHA 10 hour training.
- 107 completed the OSHA 30 hour training in 2017.
- 61 CCC staff completed Safety Management & Leadership training.
- 61 CCC staff completed Hazard Awareness training.
- 51 CCC staff completed Risk Assessment training.
- 58 CCC staff completed Incident Investigation training.
- 20 CCC staff completed H2S (Hydrogen Sulfide) Safety Awareness training.
- HSE Project Training Man-hours = 2,424,242 (76 active projects) (>100% of goal).

2018

- 42 CCC staff attended the NEBOSH IGC course for the first time and 48 total sat for the examination including new students and retest students.
- 140 CCC staff completed the OSHA 10 hour training.
- 337 CCC staff completed Safety Management & Leadership training.
- 76 CCC staff completed Hazard Awareness training.
- 80 CCC staff completed Risk Assessment training.
- 58 CCC staff completed Incident Investigation training.
- 20 CCC staff completed Train the Trainer training.
- 23 CCC staff completed Injury Classification training.
- 38 CCC staff completed Fire Warden and Fire Safety training.
- HSE Projects Training Man-hours = 1,843,146 (65 active projects) (100% of goal).

As competition increases, the importance of HSE training cannot be overemphasized. Maintaining a robust training program will always result in numerous benefits including being more competitive. Make HSE training a priority in your department or on your project in order to create a strong safety culture with knowledgeable, competent, safe and productive employees.

If you think training is expensive, try ignorance!

IPLOCA HSE Award Participation

FEATURE

It is with great pleasure we feature the **IPLOCA 2018 Environmental Award** CCC received for its innovation in Sustainability and Eco-friendly Initiatives. The Portable Power Cabin initiative was the latest innovation that CCC created in-house from recyclable materials to set up a solar energy system that generates clean energy and an alternative source of power at CCC projects in remote areas.

The idea was to use solar technology and recyclable eco-friendly material to set up a mobile cabin that is used as part of site establishment activities to power communication and mobile equipment for offices and camps. It is fully equipped, furnished and used with high availability, efficiency and dependability as offices on project sites.

The initiative was given the name **CCC's Go-Green 100 % Off-Grid Portable Power Cabin** using an existing cabin as a basis where several modifications to transform it into a power cabin were performed. The modifications and adjustments included:

- Dismantle wood from the original cabin to clean and reuse.
- Remove chemical paint.
- Weld battery boxes and PV module frame mounts.
- Prepare and place cellulose insulation.
- Paint.
- Install PV modules.
- Experiment with external design options.

The efforts made as well as the generous resources provided by the project management and the sustainability team resulted in an idea whirling around the minds of employees becoming a reality and enabled scrap materials to be recycled in a very efficient way.

The outcome was very impressive and the energy produced from one unit was sufficient to power the office appliances, ventilation and lighting.



A portable power cabin is an efficient tool that CCC seeks to implement and utilize on newly awarded projects, especially in remote areas. Not only will it save the excessive use of fuel powered generators but will also save a lot of time required for power and energy units to be transferred to the work locations. The time needed to mobilize an office, set up electrical connections and energize the office from a generator will be saved as the cabin can generate its own needed energy.

The concept was presented at the IPLOCA Annual Convention in September 2018 and was well accepted and admired by IPLOCA members and for which the selection committee decided to award CCC as a leading organization in preserving the environment and providing sustainable solutions for smooth operations and projects execution.

It's worth mentioning that the IPLOCA environmental award in 2018 was not the first for CCC. CCC has received six awards since 2012 in recognition of its vital role in innovative health, safety, technology, project execution excellence and sustainability solutions.

CCC's efforts have resulted in the IPLOCA awards since 2012 as shown in the photographs.

The initiative emphasizes CCC's visible commitment to the sustainability requirements of minimizing our carbon footprint and emissions to the environment.

The CCC Corporate HSE Group is constantly looking for and reviewing new concepts in technology, sustainability and safety to assist CCC in operating in a diligent, professional and responsible manner consistent with world-class companies and aligned with its stated HSE business goals and policy.

CCC senior management's true commitment is demonstrated through their visibility in HSE and sustainability conferences, resource allocation,



IPLOCA HSE Award Participation

incentive programs and recognition for those that put forth innovative ideas as well as their review and follow up on implementing innovative work programs across CCC projects worldwide.

CCC is looking forward to expanding the initiatives and transferring best practices and successful innovations to all areas of operations. CCC will remain a leading company in preserving the environment, maintaining the health and wellbeing of its people and advancing sustainability.

Despite restrictions posed by the current market fluctuations in the construction industry, CCC will always allocate the required resources, incentives, budgets, manpower, technology and facilities for creativity, innovation and improvement.

FEATURE



2016 Excellence in Project Execution Award Winners

McConnell Dowell Constructors (Aust) Pty Ltd and Consolidated Contracting Company Australia Pty Ltd (CCC) JV, represented by Mark Barrows and Zahi Ghantous, for the Australia Pacific LNG Pipelines Project, one of the largest, longest, and most complex pipelines constructed in Australia.



2018 Environmental Award Winners

The Environmental Award Selection Committee awarded Consolidated Contractors Group S.A.L., represented by Najib Khoury, for their Go-Green 100% Portable Power Cabin.



Greece

To You, our Generous Donor

From the heart, we would like to say a big "THANK YOU" for your continued support in this year's fourth consecutive Ramadan fundraising campaign.

The total amount reached was \$130,000 which the CCC owners matched to make \$260,000. It will be used for the following deserving causes:



1. Support to Syrian Refugees in Greece through Local NGOs.

Greece currently hosts approximately 50,000 refugees, most of whom will remain in the country. The local NGOs ensure these refugees understand their rights and provide them with job training and psychosocial support so that they can rebuild their lives.

2. Providing Medical Assistance to Gaza

Medical aid for the health and dignity of Palestinians living under occupation and as refugees in Gaza.

3. Supporting Education for Employment

Despite great progress in the last few years, millions of youths are still denied their right to employment. Restricted access to post education employment is one of the surest ways of transmitting poverty from generation to generation. Gainful employment is a vital human right for all young persons; they deserve a chance to work. EFE creates job opportunities.

4. Supporting Al-Nayzak Educational Programs

Al Nayzak is a Palestinian non-profit Jerusalemite and unique initiative that incubates young talents in science, technology, engineering, and math, and plants an ambitious vision in the hearts of this young community.

In 2018, the amount collected was \$30,000 more than in 2017, which is very significant in these severe economic times and is entirely due to your generosity, your love and your support. And always remember, that when you leave this earth you can take with you nothing that you have received, only what you have given.

AREA NEWS



CCC

The Changing Construction Landscape

Greece



On October 2, 2018, CCC hosted the International Construction Symposium in Athens, in collaboration with the Construction Users Roundtable (CURT) and Construction Industry Institute (CII). As an active member of CII (and previously Fiatch) and as the leader of CII's Horizon-360 innovation group, CCC was addressed by the CII Director Stephen Mulva to host this event as the first CURT and CII collaborative effort outside the US.

The symposium is a one-day round-table type event usually targeting 25-35 professionals from business leaders to discuss global construction industry challenges being skilled labor forces, owner to contractor design delivery, and many others.

This symposium entitled "The Changing Construction Landscape" focused on how global companies are changing the landscape through the implementation of digital transformation using BIM and advanced work packaging strategies, or by the adoption of new innovative technologies such as 3D printing, Virtual Reality, drones, and more.

More than 30 professionals attended the event coming from the US, Europe and Middle East including Peter Dumont, CURT President, John Palmer, CII's Associate Director for Technology and other attendees from international leading companies such as Procter & Gamble, Merck & Co, Bentley Systems, Inc., Independent Project Analysis, Assure Health and Safety Consultants and BD. CCC was present, with representatives from different departments.

The agenda was packed with presentations and networking events during lunch and coffee breaks.

After the welcome session by the event host and organizers, the opening presentation was a perspective from CII and CURT on



today's industry challenges; followed by the CURT owner's safety blueprint describing best practices from both research and owner experiences. Peter Dumont then explained "Operating System 2.0", a multi-industry collaborative research with "the goal to create a standardized, technology-enabled platform that accommodates future changes and makes capital projects more financially viable and sustainable". Construction project performances in Europe and the Middle East were the main topic in "Independent Project Analysis" director's presentation, with enlightenment on the influence of contracting strategy on project outcomes. Bentley's final demo started with a brief history about data visualization followed by way of enhancing digital jobsite through 4D capture in the field coupled with Augmented Reality (AR) technology to create an immersive crossed reality (XR) interactive environment.

Zuhair Haddad and Aref Boualwan were the featured CCC speakers. Zuhair presented CCC's strategy towards the digitization of the construction process by leveraging BIM as a key control tool from design to constructability and execution. The presentation entitled "Digital Transformation of the Construction Industry" promoted Advanced Work Packaging (AWP) as an integrated tool within BIM workflows for an effective construction activities planning leading to obvious productivity gains.

Aref's presentation was an overview of four innovative technologies implemented in CCC



AREA NEWS



as part of the president's initiative, including the Off-Grid Cabin project winner of "IPLOCA Environmental Award".

The event was also covered by journalists, for a post-event publication in a local Greek magazine, with an interview with Zuhair Haddad <https://biztech.gr/ccc-o-ψηφιακός-μετασχηματισμός-στον-κατ/>

Due to the success of this event, CII and CURT agreed to plan for future events with CCC in Dubai to coincide with the annual BIM conference. Peter Dumont sent a follow-up email saying "This first CII/CURT international forum was outstanding... Great venue, great hosts (CCC), great agenda and organization...Your focus on tech is something that other contractors need to emulate."

Organizers Background

CURT (Construction Users Round-Table):
<https://www.curt.org/>

CII (Construction Industry Institute):
<https://www.construction-institute.org/>

Further information about CII and CURT will be available soon on Fanous.



The American Friends of the Bethlehem Development Foundation (AFBDF)

USA



AREA NEWS



The AFBDF is a nonprofit organization established in September 2017 to bring in grass root support to the Bethlehem Development Foundation (BDF): an inaugural dinner at the Willard Hotel in Washington DC was held on February 6, 2018.

“We are thrilled by the outpouring support from our American friends and their commitment to help revitalize the Church of the Nativity where Jesus was born”, commented AFBDF President, George Salem in his welcome speech.

The event drew in \$432k of support for BDF projects and the Church of Nativity Restoration Project.

More recently, two additional events in the American cities of Houston and New York took place in October 2018 bringing up the total support to \$1,144,417.





The Houston dinner was held on October 8, 2018 at the Post Oak Hotel. The dinner served its purpose of broadening and expanding the reach of AFBDF to community leaders. The dinner was co-hosted by Ambassador Ed Djerejian, Rob Mosbacher, Samer Khoury (Chairman of the Board of Trustees of BDF) and George Salem, AFBDF President. The BDF Board of Trustees member, Reverend Dr. Mitri Raheb, addressed and moved the audience with his inspiring words:

“2000 years ago, Jesus was born in Bethlehem to rescue the world, today the world is called to help rescue Bethlehem. Jesus was Bethlehem’s gift to the world. The world is called today to give back to Bethlehem.”

Rob Mosbacher moderated the event. The CEO of BDF, Mazen Karam, shared through videos and presentations the regeneration efforts for the Bethlehem Governorate. H.E. Ziad Al Bandak, Chairman of the Presidential Committee for the Restoration of the Church of Nativity and Chairman of BDF’s Board of Directors, presented all the restoration works accomplished and those remaining at the Church of Nativity. The event was supported by community leaders such as Mrs. Susan Baker who graciously attended with members from her prayer group.

The New York City dinner was held on October 10, 2018 at the New York Athletic Club. The event was co-hosted by Abbas “Eddy” Zuaiteer, Samer Khoury and George Salem.

The BDF Board of Trustees Vice Chairman, Dr. Hanan Ashrawi, addressed the enthusiastic audience about the importance of keeping the community of Bethlehem supported economically to enhance peace and prosperity for the governorate and the community at large.

Mazen Karam again gave a presentation using videos and illustrations.

The BDF Chairman of the Board of Directors Ziad Al Bandak also gave a presentation to the attendees who were leaders in their own communities, and who showed their enthusiasm to support the Bethlehem Development Foundation Development Action Plan.

Bethlehem Development Foundation (BDF)

Event in Rome

Italy



AREA NEWS



On the evening of Tuesday, December 11, 2018 at the Palazzo della Rovere in the Vatican, headquarters of the Order of the Holy Sepulcher, the BDF held a fundraising charity event under the patronage of Cardinal Leonardo Sandri, Prefect of the Congregation for the Oriental Churches, to present the status of the restoration works of the Nativity Church in Bethlehem.



Bethlehem Development Foundation (BDF) Event in Rome

In the historic frescoed rooms of the Palace, notes from the string quartet Le Archesse and the vocals of the soprano Elisa Cenni played alongside speeches and videos exhibiting the precious restoration works completed by the Palestinian Presidential Committee with the support of BDF and several international public and private donors. The event included an exhibition of before/after works completed for the restoration of the Nativity Church and historic artifacts from the Nativity Church where displayed.

The event was sponsored by CCC President (Engineering & Construction) Samer Khoury who is Chairman of the Board of Trustees for BDF.

Mazen Karam illustrated the past, present and future projects of BDF and its history. Ziad Al Bandak outlined the historical background of the restoration works being undertaken for the Nativity Church and the remaining efforts still to be completed and thanked the Holy See and Italy for their generous donations. He pointed to how the restoration works encompass a peace reconciliation plan among the Christian communities of the Status-Quo (Roman Catholic, Jerusalem Orthodox, and Armenian Apostolic). The 2019 future plan was presented, which includes the completion of all remaining restoration works at the Nativity Church including the frescoed columns, the mosaic floor, the consolidation of the southern wall, the stone floors and the grotto - all in less than ten years from the start of the feasibility study to finish.

Rev. Dr. Jamal Khader gave a brief reflection on how the Middle East, the Holy Land, Palestine and Israel are often spoken of as a place of tension and conflict. He then moved on to highlight a different reality, another aspect often forgotten by people, where a government, in this case the Palestinian Authority in a predominantly Muslim country administers and finances the restoration of a church; something we don't hear too often in the Middle East. BDF took their responsibility in consolidating the Christian and Palestinian Heritage. The three churches: the Catholic, Orthodox and Armenian collaborated and worked together with the Palestinian Authority for the restoration of the Church of the Nativity. A light of hope shines on the future of inter-church relations. Here is a great example where churches, The Palestinian Authority, the foundation, associations, countries and individuals work together in a great project.





Samer Khoury concluded the event with messages of peace and love. He referred to Bethlehem as the birthplace of Christmas and of Christ, where he hopes that peace among all faiths, among Palestinians and Israelis will prevail. Mr. Khoury also discussed his hopes of completing the restoration works of the Church of the Nativity by 2019 and fulfilling the wishes of his late father, Said T. Khoury, of restoring and maintaining Bethlehem for generations to come; this blessed city, chosen by God to be the birthplace of his messenger of love, peace and tranquility.





Lebanon

Arab Forum for Environment and Development (AFED) Conference

AREA NEWS

CCC participated in the AFED annual conference focusing on the theme “Financing Sustainable Development in Arab Countries”. The two-day conference took place on November 8-9, 2018 in Beirut, Lebanon under the patronage of Prime Minister-Designate Saad Hariri.

The conference hosted 420 delegates from 36 countries representing governments, civil society organizations, academic institutions and corporations. Several regional and international organizations active in the field of sustainable development, environmental policies and the banking sectors took part. Delegates included representation from the World Bank, the United Nations Economic and Social Commission for West Asia (ESCWA), the Organization for Economic Co-operation and Development (OECD), the United Nations Development Program (UNDP) regional hub for the Arab Countries, the European Bank for Reconstruction and Development (EBRD), the Islamic Development Bank and the Kuwait Fund.

CCC was represented by Nafez Hussein, Vice President Information Systems, Technology & Sustainability.

“Our attendance at the AFED conference underscores our dedication in addressing sustainability issues such as climate change concerns, environmental policies and anti-corruption in the MENA region and the construction industry” Mr. Hussein said.

Discussions focused on financing for sustainable development in Arab countries and implementing goals, as defined by the Paris Climate Change Agreement and the United Nations 2030 Agenda. Country strategies, corporate experiences, case studies and environmental policies enabling investments in sustainable development

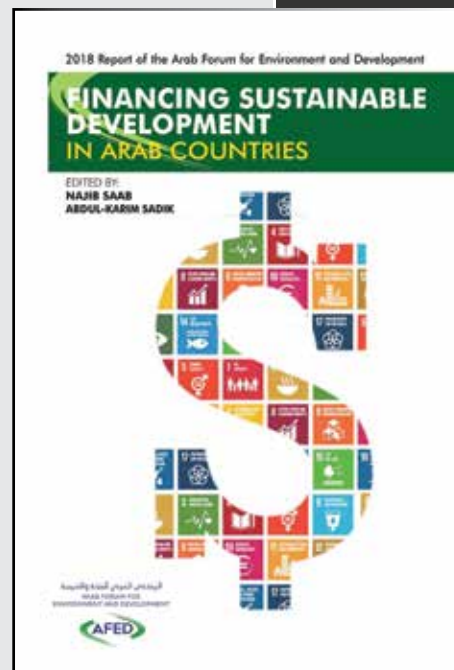
programs were also presented. The conference confirmed the findings of AFED’s recent report about the region’s funding gap towards achieving the Sustainable Development Goals and underlined the severe effects of climate change, corruption and conflict on sustainable development and the region’s economy.

Conference sessions emphasized tackling corruption in the Arab world and proposed a roadmap for establishing good governance and transparency.

Nafez Hussein said this occasion was a beneficial opportunity to compare CCC’s internal anti-corruption procedures with the processes suggested by expert organizations such as ESCWA, UNDP and OECD.

“CCC’s Ethics and Anti-Corruption Program (EACP) is truly advanced and in compliance with the global anti-corruption standards” he said.

The need for the private sector to take bold actions against climate change and in particular investing in sustainable energy was also stressed at the conference. CCC adheres to these principles by concentrating on sustainable resource management and energy use.



Biweekly Walkdown & PMV Award

Saudi Arabia



At BACS RMP Project and as part of the ES&H program, a biweekly boots on the ground walk is in place. All project management team members, directors to site engineers are divided into groups of four persons and each group is assigned to walkdown two stations/locations, focusing on ES&H related issues. All observations are discussed with the SPIC (site person in-charge) and actions to rectify any problems are triggered on the spot. No more reporting or exchanging emails are required, though "good practices" may be displayed on the project BE SAFE WhatsApp group.

These biweekly routine walkdown activities are followed by a monthly ZAT meeting (zero accident team) where some of the incidents of the month are displayed by one of the relevant directors, PM, CM, and awards are distributed. During October 2018 PMV was recognized for a two million manhours without LWDC. Walker Kimball the project consortium director presented the award to the PMV director Naim Abu Laila.

AREA NEWS





Greece

AREA NEWS

Third EU-Arab World Summit: Shared Horizons

CCC is a strategic partner and sponsor of the EU-Arab Summit and the Hasib Sabbagh Foundation is a Platinum Sponsor of the event.

In 2016, the First EU-Arab Summit, inspired by the late founders of CCC, Said Khoury and Hasib Sabbagh, brought together European and Arab government and business leaders in Athens to discuss strategies of EU-Arab cooperation and partnership between the two major economic and political blocs.

In 2017, the Second EU-Arab World Summit was held, again providing a dynamic platform for debating strategies of cooperation partnership between the two major blocs.

On October 29-30, 2018, united by the need to identify and collectively act in the common interests of the EU and the Arab world and to commit to work jointly on key priority areas, the Third EU-Arab World Summit: Shared Horizons was held in coordination with the Greek Government, providing a platform of engagement and dialogue to examine standing issues and ways to improve ties between the EU and the Arab world.

The Third Summit, held at the Athens Concert Hall (the Megaro) aimed to achieve improvement of relationships in the EU-Arab neighborhood; to enhance mutual respect between the two regions; to advance and diffuse knowledge and understanding and discuss strategies and pursue opportunities for greater interregional cooperation and lastly to highlight proposals and recommendations to be applied in order to achieve the goals of the summit.

The founder of the EU-Arab Summit, the President of CCC, Tawfiq Khoury, was honored by being invited to the podium to be the first speaker to address the attendees. These included heads of states, senior EU officials, ministers, scholars, influential business leaders, and other distinguished representatives from more than 30 countries, all gathered for discussions on cooperation on key issues covering politics, economy, energy, migration, inter-regional cooperation, and culture.

The Third EU-Arab World Summit was held under the auspices of Greek President Prokopios Pavlopoulos, the endorsement of Prime Minister Alexis Tsipras and the support of the Greek government. It took place under the patronage of the European Parliament, in cooperation with the Arab League, the Union of Arab Chambers and the Athens Chamber of Commerce and Industry, and with the support of the European Commission, the Arab-Hellenic Chamber of Commerce and Development, and the Swiss Arab Network.

The two-day event hosted more than 70 speakers.



Partnering Against Corruption Initiative (PACI) Community Fall Meeting

USA



The World Economic Forum (WEF) based in Switzerland is an International Organization for Public-Private Cooperation. The forum engages political, business and other leaders of society to shape global, regional and industry agendas with the aim of improving the state of the world.

Every year, WEF brings together top business leaders, international political leaders, economists, journalists and celebrities for up to four days to discuss the most serious issues facing the world.

The organization also provides a platform for its members in sector-specific initiatives. One such initiative, of which CCC is a founding member, is the Partnering Against Corruption Initiative (PACI).

In an effort to combat corruption, PACI was launched by CEOs from the engineering and construction industries and from energy, metals and mining industries during the annual meeting that was held in Davos in January 2004. Presently, approximately 140 top companies are members of the PACI initiative. PACI has become the prime business channel on transparency and anti-corruption.

CCC participated in PACI's Fall Meeting, which took place on November 6, 2018 in New York, USA. The meeting, held under the Chatham House Rule, focused on:

- Sharing insights on the latest political and economic challenges that are influencing the global anti-corruption agenda and exploring new strategies and challenges for breaking the corruption cycle as the world moves to a new global architecture.
- Exploring how does the risk of corruption influences investment decisions and the role of decision makers in promoting improvements in anti-corruption and collective actions.
- Solutions to the most pressing challenges on the global anti-corruption agenda key steps for rebuilding trust and integrity into the system.
- The Fourth Industrial Revolution - the threats to integrity posed by technology and how digital solutions can be used to expose and deter corruption.
- Exploring challenges and collaborative international approaches to anti-corruption within the shifting global environment.



Speakers included:

- Neil Bruce, President and Chief Executive Officer, SNC-Lavalin, Canada.
- David Cruickshank, Global Chairman, Deloitte, United Kingdom.
- John Scudder, Vice President, Chief Ethics and Compliance Officer-Latin America, Walmart, Inc., USA.
- Ian Gorst, Minister for External Relations, Government of Jersey, United Kingdom.
- Tarek Helou, Assistant Chief, FCPA Unit, Fraud Section, Criminal Division, USA.

Participants included:

- BT Group
- Citibank
- Consolidated Contractors Company
- Dell Technologies
- Deloitte
- Fluor Corporation
- Glencore International
- HSBC Holdings
- Nokia Corporation
- PwC
- Siemens
- SNC-Lavalin Group
- SNC-Lavalin Group
- Telefonaktiebolaget LM Ericsson
- The Coca-Cola Company
- Total
- Transparency International
- Walmart.



Race for the Cure

Athens, Greece

Contribution to CSR Initiative

CCC staff are encouraged to come up with ideas and activities related to CCC's CSR initiatives including Going Green and community involvement events. Please send your ideas, initiatives and achievements to the CSR-CCC email address csr@ccc.net.

On October 7, 2018, ninety-six CCC employees participated in the Race for the Cure event which took place in the centre of Athens. The annual race was organized by the Hellenic Association of Women with Breast Cancer "Alma Zois" in collaboration with the Susan G. Komen Organization. CCC has been one of the sponsors of the event since 2009, and its employees have been participating since then. The race is one of the most popular races for breast cancer awareness in Europe and is the largest sports event with a social purpose in Greece, bringing together more than 150,000 participants throughout the history of the event. The goal is to raise awareness about early detection methods and guidelines for safety as well as to raise funds for the implementation of programs by Alma Zois.



CCC Launches its Volunteering Program

On October 19, 2018 CCC launched its Volunteer Program at an event held at its premises in Athens. The program aims to engage employees in volunteering activities that support and address issues that impact the quality of life of disadvantaged people. In support of CCC's commitment to serve those in need, the newly issued volunteering policy provides employees with 20 hours of time off work to use in providing their expertise, talent and time to help a worthy cause, or in the betterment of life conditions of the needy.

The launching ceremony was attended by CCC employees and various NGOs such as Amnesty International and Doctors of the World among

several others which were invited to display their work and their volunteering activities and mingle with staff members.

During his speech, Mr. Samer Khoury, CCC's Engineering & Construction Chair, said: "CCC's corporate and family values are based on three pillars: integrity, sincerity, and humility. The best definition of humility is to help our fellow human beings through volunteering. Recently, I have endorsed a new volunteering policy to encourage everyone who wants to volunteer. The company's Volunteer Program serves as a basis for CCC's commitment to improving people's quality of life and to ensure that the core values of CCC align with a balance between improving the company's



CCC Launches its Volunteering Program



business and improving the quality of life of its workforce, families, communities and societies where we operate. “

Ms. Rosie Nasser, CCC’s Corporate Social Responsibility Consultant, spoke at the event, stressing that:

“CCC’s humanitarian giving started even before the concept of Corporate Social Responsibility became a thing in the corporate world, in good times and bad times; CCC never stopped giving back and contributing to the communities in which it conducts its business. Its contributions range from building a house for a disadvantaged family in Botswana, to empowerment and capacity building of youth and women in Lebanon, Jordan and Palestine, and to establishing vocational training programs and centers in Kazakhstan, Saudi Arabia, Oman and Jordan. In Greece, CCC’s efforts range from reconstructing a playground for a day care nursery in Kypseli, to providing relief assistance after the earthquake of Kefallonia, to the delivery of sleeping bags to the refugees at Eleona Camp.” She went on to add that

“CCC’s Volunteer Program in Athens aims to contribute to the socio-economic development of Greece and to use time and talent in many

areas such as education, health, environmental sustainability, human rights, poverty reduction, refugees and vulnerable groups in general.”

In Athens, the CSR Department will be collaborating with Ethelon to carry out a selection of group volunteering activities which include beach cleaning, school restoration, STEM Education for school students, preparation of hygiene kits for socially vulnerable groups, and restoration of public spaces. All these actions address one or more of the 17 Sustainable Development Goals of the United Nations. The 17 Goals adopt a holistic approach and respond to the global challenges we face, including poverty, inequality, environmental degradation, prosperity, quality education and sustainable cities.

Kostapanos Milliresis, General Manager and Co-Founder of Ethelon talked about the important role that businesses should play in the social sphere and the importance of CCC’s initiative. He said:

“It is our great pleasure to participate in and support CCC’s Volunteer Program. It is very important to see such big companies as CCC offering their employees the opportunity to play an active role in society. To dedicate one’s own time to the needs of one’s fellow human beings is also the reason for the existence of Ethelon, so that all this will to offer will have the greatest impact.”

The program will be run and managed by the Corporate Social Responsibility (CSR) Department whose role is to facilitate and organize the volunteering process and support the employees by disseminating group or individual volunteering activities and matching their talents and expertise with appropriate volunteering jobs.



Breast Cancer Mobile Clinic in the West Bank of Palestine



Over the last two years CCC in cooperation with the Bank of Palestine has been committed to supporting this project in order to serve Palestinian ladies living in hard-to-reach areas. CCC supports many wellness programs that operate among different countries.

On Thursday 27 September, 2018 Dunya Women's Cancer Clinic officially launched the mobile clinic for early detection of breast cancer: this event came following two years of efforts and process of preparing and supporting.

The breast cancer mobile clinic will reach ladies cut off from access to health checkups. For many ladies, this mobile clinic may be their only source of health care.



The pink mobile clinic is equipped with new technologies to detect this disease in its early stages and follow up the progress of the treatment later in coordination with the Ministry of Health. The success of this initiative keeps growing despite the difficult circumstances we live in.



R. NASSER

Photography Training

Building a Better Future for Palestinian Youth

In partnership with Zakira, the Image Festival Association, CCC launched a capacity building project for Palestinian youth of Ain el Helweh Refugee Camp in Lebanon.

The project's objective is to provide nine-month professional photography and videography training and career development programs for Palestinians aged between 15 and 18 years. The goal is to empower them with a skill, a professional tool that they can employ in

prospective careers like commercial photography (studio, events photography, wedding photography, portraits, documentaries, and photojournalism).

The young people will be requested to choose a topic of their interest to photograph, and the project will be concluded in July 2019 with a photography exhibition featuring their best images and photographic skills learned.



Visual Art Training for Refugee Children



On October 1, 2018 the CSR Department in cooperation with the Museum of Cycladic Art in Greece launched a program that aims to bring together refugee children with Greek speaking students to attend visual art training workshops on how to use the Cypro-Minoan language as a common code of communication through art. The project will bring together children from different nationalities and backgrounds to work together, intermingle and enhance their creativity.

Samer Khoury, President, Engineering & Construction, said:

"We actively support the societies in which we operate and especially vulnerable groups. As a model of social responsibility, we in CCC consider it necessary to give the next generation the opportunity to start an amazing journey of knowledge and art. Thanks go to the Museum of Cycladic Art, which gives us the opportunity to become a facilitator of the Everyone, together at the Museum program. The program is particularly important as it provides children with the platform to exercise their fundamental right to self-expression through art and to have the opportunity to communicate and interact without discrimination and stereotypes."

The on-going program will be implemented in three cycles, each cycle will include five workshops and will bring together 20 children - 10 Greek students and 10 refugee children, aged 13-18. Children will learn how to use ideograms to write words and sentences in their own language. Then they will use this newly learned language to communicate with each other. The program aspires to provide the necessary



platform for the smooth integration of refugee children into the Greek society, to enhance their creativity and communication skills, and to help them develop relationships with other children. The program will be completed in June 2019 with an exhibition showcasing the children's works of art.





CCC Volunteers Restore Agias Eleousis Square in Maroussi Athens

CORPORATE SOCIAL RESPONSIBILITY

On October 26, 2018, Samer Khoury and around 40 CCC employees and their families volunteered to restore Agias Eleousis Square by painting the walls, artistically designing images on park benches and planting flowers.

The volunteers worked in three groups, the first group worked on painting the walls and waste baskets, the second group planted flowers and the third group restored the park benches using special material.

The aim of the action is to protect public spaces of the urban environment by promoting sustainable development and green areas within the city. Following the completion of the first action of the program, Mr. Khoury, said:

"I am very happy to have participated today, inaugurating the first action of our Volunteer Program in Greece. By faithfully serving the principles and values of the company, our contribution to the local communities we live in is our priority."



Wildfires in Athens

Volunteerism in Emergency Situations



The tragedy of the Greek fires all began on Monday, July 23, 2018 when the first fire alarm sounded in Kineta, a town about an hour west of Athens. Later on, the authorities received calls reporting flames near Rafina, east of the capital. Just about an hour later, the wildfire had reached Neos Voutzas, to the northeast, and then, powered by strong winds, it moved fast down the hill to the seaside town of Mati where the biggest tragedy happened.

Greeks a couple of days later were still piecing together one of the nation's worst disasters in recent memory. Many scattered fires had broken out in a very short span and spread with a fatal velocity. Suspicion of arson combined with grief and recrimination shattered the Greeks as they went through the ruins of fires that killed at least 91 people and burned thousands of homes.

Almost immediately after the fires, many volunteers stepped forward to help those affected. Dozens of people, mostly teenagers and young adults, queued patiently to register for volunteering duties to help out pack into boxes food, water, medicines, clothes, shoes, hygiene products, and so on. Many schools, town halls, gyms and many other places were open for people

to drop off whatever supplies they thought would be helpful for those affected by the fires.

One of the many non-governmental organizations (NGOs) which were taking part in providing their help was the Scouts Club founded in Kifissia (a northern suburb of Athens). Scouts Club is an NGO whose mission is to contribute to the education of young people through a system of values helping build a better world where they develop as individuals and play a vital role in society.

On Thursday, July 27 with the help of CCC employees Bruce Richardson, Pavlos Kamitsakis, Darryl Goringe and Vanessa Manoura, the Scouts Club helped to transfer hundreds of boxes which contained water bottles, baby wipes, clothes, shoes, food, medicine, food for animals, and much more. These boxes were loaded into two trucks in which we all helped whether it was bringing the boxes outside from the storage room, helping pass them in the "chain line" we had created, lifting them into the two trucks and finally wrapping the area where the boxes were stored in the truck with a cloth to prevent anything falling off or in case of rain when transported to Nea Makri.

Finally, when the boxes were taken to Nea Makri many volunteers who had followed the truck with their cars helped unload the boxes off the trucks.

The experience was extraordinary. Everyone was friendly, cooperative, and there was a lot of team work. The feeling at the end after helping for a cause was beyond words. You really feel like you have contributed to a cause and you can't help but smile when you say "I too helped in the wildfires of Attica". We all should at least take part in one volunteering event, if not only for the experience, but most importantly to help for a cause. For those who want their children to take part in any of the Scouts Club's causes and events, the organization's address is Charilaou Trikoupi Street 73, Kifissia.



The Center for the Disabled Reopens its Doors



CORPORATE SOCIAL RESPONSIBILITY



A cooperation agreement for the reopening of the Center for Creative Activities for People with Disabilities of the Municipality of Maroussi (KDAP-AMEA) was signed between the Municipality of Maroussi (a northern suburb of Athens) and CCC. This cooperation will ensure that people with disabilities continue to receive the care they need for the year 2019.

Taking into consideration the need for our fellow citizens who suffer from disabilities to be creative and active members of our society, both parties agreed to re-operate the premises located at Zinonos Eleatou Street, where the municipality's center for the disabled is located. CCC's support will go towards operational costs and the employment needs of the required staff, namely:

- a social worker who will be in charge of the creative engagement of the children and young people with disabilities, by developing personal or group activities.
- a special educator who will ensure the individual education of children with disabilities on self-care issues and the training of their family members in the appropriate treatment of their specialized care needs.

During the signing ceremony of the cooperation agreement by the Mayor of Maroussi George Patoulis and CCC's President of Human Resources Suheil Sabbagh, Mr. Patoulis said:

"In order to offer equal access to entertainment, creative expression and engagement for all our fellow citizens, we are cooperating with the productive forces of our city who share the same social sensitivity with us, in order to re-operate the care home for people with disabilities in our city".

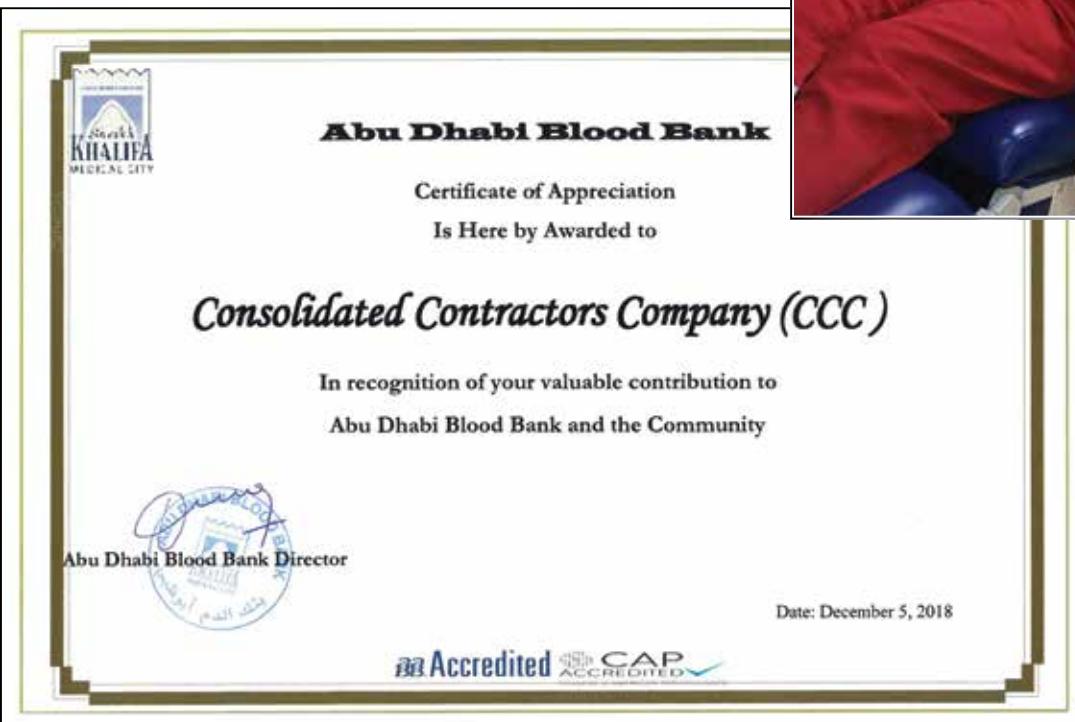
The signing of the cooperation agreement was attended by the General Secretary of the Municipality of Maroussi, George Didaskalou.

Blood Donation in Abu Dhabi



On December 5, 2018 56 employees of EPSO, CCC Underwater and CCC Area and Project staff braved the needles to save lives.

At least 56 blood bags were collected during the blood donation day organized by EPSO in partnership with the Abu Dhabi Blood Bank, Sheikh Khalifa Medical City. For the fifth time in a row, CCC received a certificate of appreciation for its continuous support of this life saving initiative from the Abu Dhabi Blood Bank.



STEM Course for Refugee Children at Athens Office



On December 19, 2018 CCC volunteers provided Science, Technology, Math and Engineering (STEM) education to 26 refugee children aged between 6 and 12 years old from Elefsina Refugee Camp.

This volunteering activity took place at CCC's premises in Athens and was organized by the CSR Department, Ethelon and the International Organization for Migration. STEM education is based on the idea of educating students in four specific disciplines - science, technology, engineering and mathematics - in an interdisciplinary and applied approach, rather than teaching the four disciplines as separate and disconnected subjects.

Before the volunteering activity, the CCC volunteers attended a 3 hour training course delivered by professional trainers from the World Robot Olympiad Association; a non-profit organization which promotes robotics in STEM education for children and develops their creativity and problem solving. Naim Trabelsi, one of CCC's ambassador volunteers who participated said:

"The training made us realize how through brick building and coding such education can refine talents and skills of kids in complex problem solving, critical thinking, creativity and even project management."

The children were taught the basic steps of robotics, and that each construction has "artificial intelligence" that is the product of students' algorithmic thinking and is realized through a digital program, which they drew themselves on a touch screen of a wireless tablet connected to the robotic structure.



CCC's Sustainability Competition

Winners' Feedback

In late 2017 CCC launched its first annual Sustainability Competition, aiming to further integrate sustainability within our organization's culture. The competition granted the winners and their projects prestigious prizes and broad recognition across the group for their best practices. The teams involved in the winning activity were dispatched to important green topics conferences to scout out for more such innovative solutions. The winners of the competition contributed their feedback on the conferences attended in a brief commentary:

Omar Abdel Qader and Ziad Abu Sharar

- *Jazan Integrated Gasification Combined Cycle - Sulfur Recovery Unit (JIGCC-SRU) Saudi Arabia - Camp Category*
- *WasteExpo 2018, Las Vegas, Nevada, USA, April 23-26.*

WasteExpo's conference program was a valuable professional development opportunity. The education and training we received as participants sharpened our skills and has enabled us to better perform our work. WasteExpo's conference program was unparalleled.

We attended several presentations and visited various booths investigating products or ideas that would suit the needs of sustainable camp operations. We made contact with exhibitors focusing on recycling: machinery, waste control and transportation solutions. These topics were on the top of our agenda, since they are major concerns in camp operations.

Through our discussions with exhibitors, we realized that CCC's waste management and recycling practices are in accordance with the global approach of the field, the only difference being the use of large scale modernized facilities which are non-applicable in our areas of operation.



Abeer Afshi and Aravind Narayan

- *Riyadh Metro Project, Saudi Arabia - Camp Category*
- *Water Technology and Environmental Control Exhibition @ Conference 2018*
- *Cremona, Italy - October 24-27.*

We attended this conference as a prize for winning (2ndplace) of the 2017 CCC Sustainability Competition.

This year's conference topics included: sustainable agriculture, drug pollution and chemicals, water transportation and storage, waste management and more. The exhibition featured specialty water products, water technologies and innovations covering multiple applications, including desalination, water distribution, water management and wastewater treatment.

Water today is a critical resource since many of the water systems that keep ecosystems thriving and feed a growing human population have become stressed, and the concept of a "Water Footprint" is becoming an important parameter in the industry. Such exposure/experience introduces CCC employees to the latest water technologies and innovations, hence enhancing the company's knowledge base in water-use efficiency and its applications on projects, camps and offices.



CCC's Sustainability Competition - Winners' Feedback

Khaled Hamaideh and Sharif Abdelrazeq

- *Kazakhstan Area Camp Category*
- *Urban Mining and Circular Economy Symposium, 2018*
- *Bergamo, Italy, May 21 - 23*

The convention was a valuable experience that focused on the theoretical and educational aspects of a "Circular Economy" (a methodology developed to maximize the utility function of raw materials and increase their life cycle) and "Urban Mining" (a process assuring full utilization and maximum reuse of the product prior to disposing to landfill).

Being the only representatives from the construction industry we made a point of highlighting our experiences to help connect research and theoretical concepts with real-life examples and application.

The two day intensive sessions were wrapped up with a workshop and a technical tour allowing us to better understand the practical aspects of adopting circular economy and urban mining approaches. We visited the facility of Viscolube a company active in refining used lubricant oil regeneration to produce high quality regenerated base oil, group I+ and II+, and industrial waste solvent recovery and valorization.

In thinking how urban mining and circular economy correlates with CCC's business, some examples are:

- Cost saving through material efficiency.
- Procurement teams can identify suppliers who provide circular economy solutions.
- Through Building Information Modeling (BIM) and advanced technologies waste is reduced during construction.
- CCC can leverage this knowledge in the estimation process through employing value engineering.

Talal Mhanna and Nabil Gaaya

- *Water Mega Reservoir project*
- *Package C, Qatar - Project Category*
- *Waste to Energy and Resources Summit 2018*
- *London, UK, May 23-24*

The summit we attended was very informative, hosting waste-to-energy industry leaders from all around the world who provided insights and a comprehensive outlook on the current affairs of this emerging industry. Overall, the waste to energy and resources industry has a bright future.



Opening Session of the Urban Mining and Circular Economy Symposium, 2018



Site Visit at the Viscolube Oil Refining Facility



CCC's Sustainability Competition - Winners' Feedback

The world will continue to produce waste and although regulations, policies as well as technologies will reduce the amount of waste being produced, a significant portion of waste will not have a final destination other than landfills or incineration.

This waste with a relatively high calorific value exists in enormous amounts particularly in oceans around the world. With technological advancements that allow treating inert fly ash and other gaseous emissions, waste to energy resources seem a likely solution. This would mean a new market and more future projects for CCC.

Another opportunity for CCC is to start considering the potential for investing in a waste to energy modularized (power) plant that can be moved around projects, the same way an asphalt plant or a concrete batching plant is set up. It can for example serve a main power house for a project's main facilities.

Saif Jayyousi

- *Bausher Waste Water (Madinat Sultan Qaboos), Oman - Project Category*
- *Smarter-E Europe 2018*
- *Munich, Germany, June 19-22*

The convention I attended took a comprehensive approach to the topics relevant to the energy world. Cross-sector energy solutions and technologies were presented focusing on generation, storage distribution and use of energy and how these aspects interact.



Smarter E-Europe included a series of different events. I focused on Intersolar Europe and EES Europe since they were more applicable to CCC construction activities. Intersolar Europe focuses on photovoltaic, solar thermal and solar power plants. It has become the most important industry platform for manufacturers, suppliers and distributors in the global solar industry. EES Europe presents innovative battery technologies and future-oriented solutions for storing renewable energies.

The exhibition is considered as one of the world's leading exhibition series for the solar industry hosting more than 1,177 exhibitors from 155 countries. Through my exhibition tour it was made clear that all manufacturers are aiming to increase the output and efficiency of solar panels while compacting the frame size. Several techniques are used such as the bifacial panels that produce solar power from both sides of the panels. Also, the simplicity, availability and affordability of PV systems have increased the market demand for photovoltaics.

In summary, my findings from attending the Smarter E Europe are below:

- Major manufacturers, investors and suppliers are joining the renewable energy industry which reflects future growth in the sector.
- Governments globally support renewable energy. More funding is provided for solar plants installation, development and R & D.
- In the exhibition, lithium-ion battery technology was the visitors' main attraction compared to other storage solutions. This indicates an increased number of off-grid installations in the future due to the affordability, durability and reliability of lithium-ion batteries.

Christmas



On Friday, December 21, 2018 in Athens the traditional Christmas lunch was celebrated by the CCC executives and the Athens office staff.

The video of the event was broadcasted live through our live streaming website "<http://live.ccc.net>" for all CCC staff around the world.

The event started with a speech from Mr. Samir Sabbagh (Manager of Business Development and Director) wishing everyone happy holidays and a happy new year.

Mr. Tawfic Khoury (Executive Vice Chairman) wished everyone a Merry Christmas and a successful new year. Mr. Tawfic Khoury noted his optimism for the upcoming year, ensuring CCC will achieve clear growth in the coming year.



Mr. Suheil Sabbagh (President Group Human Resources) stressed the importance of having faith in CCC as it will never forget you. He also wished everyone a merry Christmas and a happy new year.

Mr. Samer Khoury (President Engineering and Construction) stated that the world is changing around us, including CCC's attitude toward being a younger company. Additionally Mr. Samer Khoury specified that the coming year will be better for CCC in the MENA region. Finally he stressed on the importance of helping others in the holy season and wished everyone a merry Christmas and a happy new year.



Party



Closing the event, Mr. Samir Sabbagh emphasized the importance of challenging ourselves for a successful future.

Overall the mood was festive and generally positive, hopefully sentiments that will follow us in this New Year, through hard work, with efficiency and team building. Challenge the young!

N. Barakat





Engagements and Marriages

Mohammad Imama Sabri Ansari (Riyadh Metro Project, Saudi Arabia) would like to announce to his colleagues his marriage to **Fatima Shakeel**. The happy event took place on June 23, 2018.



Baby Boys

Umar Gulzar Bajwa (ATD Project, Oman) and his wife are pleased to announce the birth of their first baby boy named **Almir**. He was born on October 16, 2018 in Gujranwala, Pakistan. "Our prince brings love, joy and happiness to the whole family."

The birth of a baby boy called **Eyad** is announced by Safwat Ezzat (CFP Project, Kuwait) and his wife. He was born on October 30, 2018 in Sohag, Egypt.

Husam Abu-Tarieh (Area Office, Jordan) and his wife Khuzama Al-Brihi are very glad to announce the birth of their first baby boy named **Kareem**. He was born on November 14, 2018 in Amman, Jordan. All the family are very happy with the new arrival.



Baby Girls

Nur Nobe Nahid (Area Personnel, UAE) and his wife, Jui Moni, from Dakar, Bangladesh, are happy to announce the birth of a baby girl. Her name is **Nahiya Noorjabin** and she was born on November 26, 2018.

Anas Shaheen (EPSO, UAE) and his wife, Hana Abu Dayah, are happy to announce the birth of their second baby girl, called **Nay**. She was born on January 2, 2019 in Abu Dhabi.



Baby Twins!

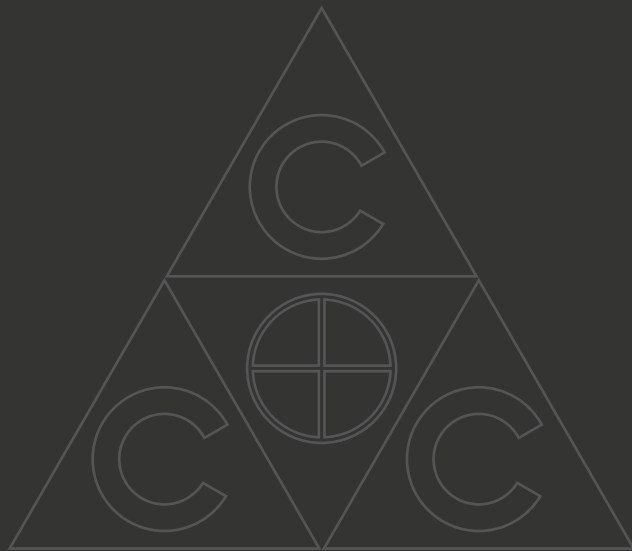
Fares A. Al Qoulaq (GBRP Project, Botswana) and his wife Wafa Segueni are pleased to announce the birth of twins, **Abdurahman** and **Ayah**. They were born on September 7, 2018 in Montreal, Canada.

When in Houston,
do like the Houstonians do ...



Business Development in
London Fog



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