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bulletin

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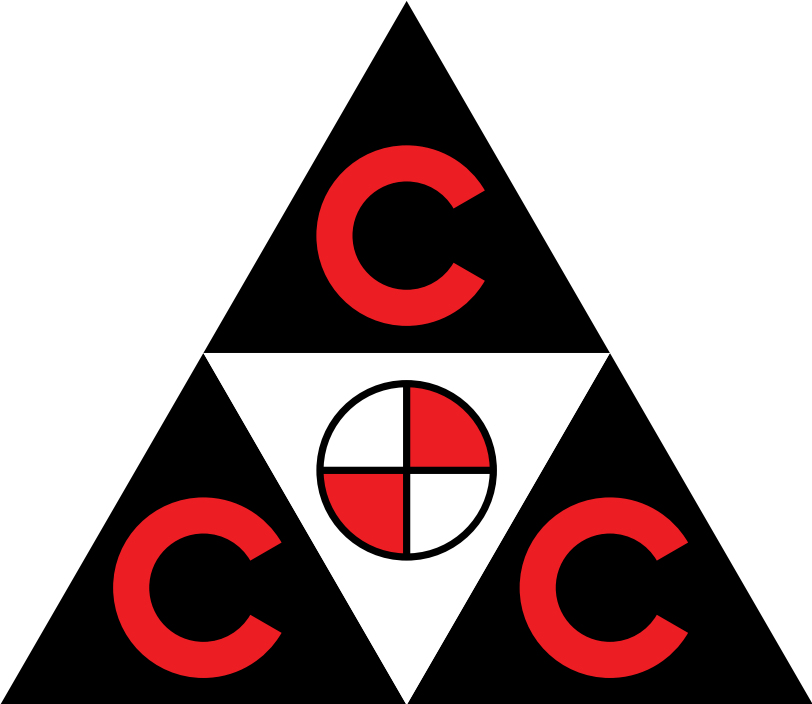
The Rise of LEED Construction

QATAR

Multipurpose Hall at Lusail Sports Club
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CCC TODAY

CCC has grown to be one of the largest international contractors in the world comprising a workforce in excess of 150,000 and operations spreading over more than 40 countries. This would not have happened without CCC's culture of high quality and superb technical standards.

Since inception, CCC's management has focused on achieving high standards of quality, safety and integrity and our motto has always been *"we aim to achieve excellence in everything we do"*. I therefore ask you all to act on it!

I will end with a brief note on the current market conditions. We have come through the last difficult 18-24 months, but we can now see signs of improvement. CCC is well positioned to play a major part in the market.

I am confident that with the new leadership we have put in place, CCC will rise to new heights in the coming years.

Procurement & Construction of Early Site Works for the NFE Onshore Project

Qatar



Early Site Works for the LNG project including the following main activities::

- General excavation (residual soil, unsuitable sabkha and excavation in rock); general fill with blended / excavated soil, imported material; demolition works; perimeter fence, gates, roads within fence and access roads; site storm water drainage system; basic infrastructure, including telecom, office building, and potable water line; Field Operation Center (FOC) building and associated facilities; 11 KV electrical power system.
- The client is Qatargas Operating Company Limited.
- The FEED contractor/consultant is Chiyoda.
- The project was awarded on 1 April 2019.
- The project start was 3 April 2019 for a duration of fifteen months ending on 2 July 2020.

Quality Management Principles and the P-D-C-A Cycle

Introduction

The seven quality management principles have replaced the previous eight principles introduced in the ISO 9001 standard in the year 2000. Although many of the principles have not changed, however, with the new 2015 version there is more emphasis on contribution of each principle to the organization's success.



1. Customer Focus

The primary focus of quality management is to meet customer requirements and to strive to exceed customer expectations. Sustained success is achieved when an organization attracts and retains the confidence of customers and other interested parties. Every aspect of customer interaction provides an opportunity to create more value for the customer; understanding current and future needs of customers and other interested parties contributes to sustained success of the organization.



2. Leadership

Leaders at all levels establish unity of purpose and direction, and create conditions in which people are engaged in achieving the organization's quality objectives. Creating a unity of purpose and direction, and engagement of people, enable the organization to align its strategies, policies, processes and resources to achieve its objectives.



3. Engagement of People

Competent, empowered and engaged people at all levels throughout the organization are essential to enhance its capability to create and deliver value. To manage an organization effectively and efficiently, it is important to involve all people at all levels and to respect them as individuals. Recognition, empowerment, and enhancement of competence facilitate the engagement of people in achieving the organization's quality objectives.



4. Process Approach

Consistent and predictable results are achieved more effectively and efficiently when activities are understood and managed as interrelated processes that function as a coherent system. The quality management system consists of interrelated processes; understanding how results are produced by this system enables an organization to optimize the system and its performance.



Quality Management Principles and the P-D-C-A Cycle

5. Improvement

Successful organizations have an ongoing focus on improvement. Improvement is essential for an organization to maintain the current level of performance, to react to changes in its internal and external conditions and to create new opportunities.



6. Evidence-Based Decision Making

Decisions based on the analysis and evaluation of data and information are more likely to produce desired results. Decision making can be a complex process and it always involves some uncertainty. It often involves multiple types and sources of inputs, as well as their interpretation, which can be subjective. It is important to understand cause-and-effect relationships and potential unintended consequences. Facts, evidence and data analysis lead to greater objectivity and confidence in decision making.



7. Relationship Management

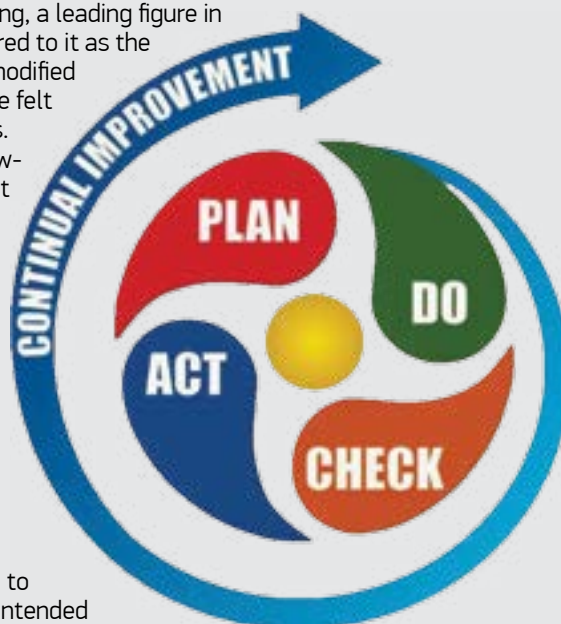
For sustained success, an organization manages its relationships with interested parties, such as suppliers. Interested parties influence the performance of an organization. Sustained success is more likely to be achieved when the organization manages relationships with all of its interested parties to optimize their impact on its performance. Relationship management with supplier and partner networks is of particular importance.



The 'Plan-Do-Check-Act' Cycle

PDCA was made popular by Dr. W. Edwards Deming, a leading figure in modern quality control; however, he always referred to it as the "Shewhart cycle". Later in Deming's career, he modified PDCA to "Plan, Do, Study, Act" (PDSA) because he felt that "check" emphasized inspection over analysis. PDSA cycle was used to create the model of know-how to implement and improve a process, product or service.

The concept of PDCA is based on the scientific method, as developed from the work of Francis Bacon (1620); the scientific method can be written as 'plan, do and check'. Shewhart described manufacturing under statistical control as a three-step process of "specification, production, and inspection". He also specifically related this to the scientific method of 'hypothesis, experiment, and evaluation'. Shewhart says that the statistician "must help to change the demand for goods by showing how to close up the tolerance range and to improve the quality of goods". Clearly, Shewhart intended



Quality Management Principles and the P-D-C-A Cycle

the analyst to take action based on the conclusions of the evaluation. According to Deming, during his lectures in Japan in the early 1950s, the Japanese participants shortened the steps to the now traditional “Plan, Do, Check, and Act”.

In the new revision of ISO 9001 standard (2015), the PDCA cycle was introduced as mandatory practice to be applied by the organization.

The PDCA cycle approach aims at overall improvement of the organization’s processes that provide value to customers, and during this course the organization ends with a better product or service, cost reduction and securing market share or customer commitment.

Plan

- Establish the objectives and processes necessary to deliver results in accordance with the expected output (the target or goals).
- By establishing output expectations, the completeness and accuracy of the specification is also a part of the targeted improvement.
- When possible start on a small scale to test possible effects.

Steps to be followed:

- Clearly & objectively state the problem;
- Give some background and context so that everyone can gain common understanding;
- Conduct the ‘5-why’ analysis to identify the root cause(s) of the problem;
- Brainstorm the whole situation and create hypotheses to test these.

Do

- Implement the plan, execute the process and make the product.
- Collect data for charting and analysis in the following “CHECK” and “ACT” steps.

Steps to be followed:

- Follow the scientific method to test the hypothesis;
- Change things and keep changing till a desirable result is achieved;
- Rather than waiting for perfect solution, try many small things that can be done quickly;
- Gather the facts based on direct observation of the experiment.

Check

- Study the actual results (measured and collected in “DO” above) and compare against the expected results (targets or goals from the “PLAN”) to ascertain any differences.
- Look for deviation in implementation from the plan and also look for the appropriateness and completeness of the plan to enable the execution.
- Charting data can make this much easier to see trends over several PDCA cycles and in order to convert the collected data into information. Information is what you need for the next step “ACT”.

Steps to be followed:

- In each case, ask “why?” until there is a clear understanding of what was effective and what was not;
- Reflect carefully on what worked and on what did not work in the experiment;
- Face the facts.

1. W.A. Shewhart (1891-1967) was an American physicist, engineer and statistician, sometimes known as the father of statistical quality control.

Quality Management Principles and the P-D-C-A Cycle

Act

- If the CHECK shows that the PLAN that was implemented in DO is an improvement to the prior standard, then that becomes the new standard for how the organization should ACT going forward (creating a new higher standards).
- If the CHECK shows that the PLAN that was implemented in DO is not an improvement, then the existing standard will remain in place.
- In either case, if the CHECK showed something different than expected (whether better or worse), then there is some more learning to be done... and that will suggest potential future PDCA cycles.
- Note that some who teach PDCA assert that the ACT involves making adjustments or corrective actions, but generally it would be counter to PDCA thinking to propose and decide upon alternative changes without using a proper PLAN phase, or to make them the new standard without going through DO and CHECK steps.

Steps to be followed:

- If the circumstances were not effective, repeat the cycle beginning with the plan phase;
- Observe the new current condition and set new targets toward the ideal condition, return to plan;
- If the same counter measures can be applied to similar problems to benefit others, do so;
- If the counter measures were effective, make the new method a standard that can be used and maintained.

ISO 9001:2015 and the PDCA Cycle

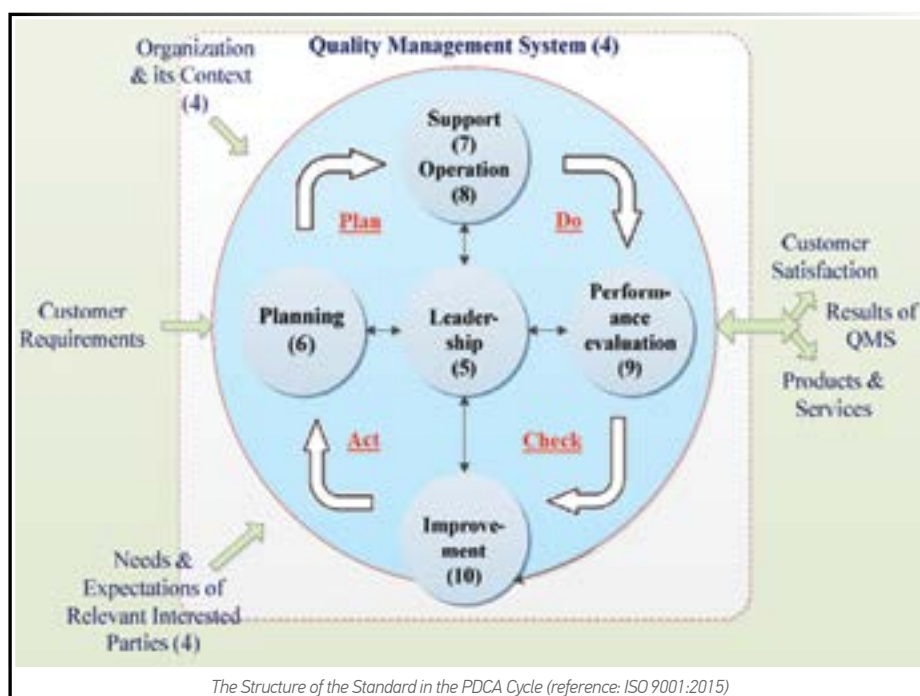
ISO 9001:2015 includes ten sections, with the bulk of the requirements in Sections 4 – 10.

The standard is aligned to follow the Plan-Do-Check-Act (PDCA) cycle and, as a result, all activities and processes are subject to upfront planning.

The sections shown in the schematic “the structure of the standard in the PDCA cycle” grouped in a simplified manner for easy understanding of the new concepts in ISO 9001:2015.

In addition to the PDCA cycle, an organization can break down the intent of the requirements as:

- Understanding the business as a series of processes;
- Mitigating risk at every level;
- Validating and certifying that the system is working;
- Using data to improve.



For a better understanding of ISO 9001:2015, users may consider the publicly available information developed by ISO/TC 176/SC 2 and visit www.iso.org/tc176/sc02/public.

The process approach will be presented in more detail in the next issue of the CCC Bulletin.

The Palestinian Museum

Palestine

The Palestinian Museum is a flagship project of the Welfare Association (WA), a not for profit organization set up by members of the Palestinian and Arab business and intellectual communities. CCC completed the construction of this modern historical museum dedicated to preserving and commemorating the Palestinian heritage with PROJACS International and Arabtech Jardaneh.

The Palestinian Museum is Palestine's first green building with LEED certification, presenting an example of long-term sustainability in accordance with internationally benchmarked standards. Although the initial target was a LEED Silver certification, in the end the project was awarded a higher rating level: Gold LEED Certificate.

The Palestinian Museum is located in Birzeit, Palestine, seven kilometres north of Ramallah and the total land area is 40,000m². It consists of:

- **Main Building:** the building, with a total built up area of 3085m², includes a climate-controlled gallery space, amphitheatre, cafeteria with outdoor seating, a library, classrooms, storage, gift shop and staff offices.
- **External Area:** including Senasel and landscape for educational functions, café and seating areas in addition to parking areas.

The museum building and its surroundings are "a model for environmental sustainability on the Palestinian level" by implementing LEED in the design and construction phase.



The Palestinian Museum (Palestine)



Design Phase

Potable Water Use Reduction

- Three water tanks to harvest rainwater for collecting and reusing rainwater.
- Wastewater treated and reused for landscape irrigation and flushing.
- Use of efficient plumbing fixtures.
- Gardens planted with native plants, that will not require large amounts of water.

Energy Use Reduction

- Building's orientation minimizes heating and cooling demand.
- Hot water solar energy system used to heat water for public use.
- Efficient envelope saving energy use.
- Building management system controlling and reducing energy use.
- Efficient lighting fixtures (LED lighting).

Green Materials

- Materials exposed to the public such as paint, carpet, adhesives and so on contain less toxic substances (low VOCs content), thus creating a healthier environment for museum users.
- Use of materials with recycled content such that the sum of postconsumer recycled content plus ½ of the pre-consumer content %, based on cost, of the total value of the materials in the project.
- Building materials or products have been extracted, harvested or recovered, as well as manufactured within a 500 mile (800 kilometre) radius of the project site.





Construction Phase

Erosion and Sedimentation Control (ESC Plan) & Dust Control

- Watering the site during excavations to prevent dust transmission.
- Covering the stockpiles of backfill and excavated materials.
- Single size aggregates covering non-construction exposed areas.
- Erosion and sedimentation control using silt fence.
- Washing station for cars and trucks.

Construction Waste Management (CWM) Plant

- The plant was constructed on site to collect construction waste material.
- The collected material is segregated by the type of material for recycling (steel, wood, plastic, cardboard, concrete).
- Recycling specialists transport each type of material from site for recycling facility.

Indoor Air Quality Plan (IAQ)

IAQ Guidelines for Occupied Buildings under Construction for the items listed below:

- HVAC protection.
- Source control.
- Housekeeping.
- Material storage.
- Laborers, health, dust or medical masks.



Abu Dhabi Plaza Mixed-Use Development - ADP

Kazakhstan

FEATURE

Abu Dhabi Plaza is a major mixed-use development located in Astana, Kazakhstan, comprising a retail podium, residential apartments, international grade office spaces, and leisure facilities with a total area of 500,000m². It is the largest tower block in Central Asia.

The client of ADP is ALDAR Euroasia while the project manager is Mott MacDonald, consultant is AECOM and main contractor (Design-Build) is Consolidated Contractors Company and Arabtec Joint Venture (ACCL).

This integrated community, with direct access to the metro, includes:

1. 76-level mixed-use tower (highest in Central Asia) - 446 apartments and 18 floors offices and gross floor area of 100,000m². Targeting LEED N.C Silver.
2. 29-level offices tower and gross floor area of 65,000m². Targeting LEED C&S Silver.
3. 31-level offices tower and gross floor area of 62,000m². Targeting LEED N.C Silver.
4. 17-level residential tower- 122 apartments and gross floor area of 20,000m². Targeting LEED N.C Certified.
5. Business hotel operated by Sheraton 14 levels - 191 key room and 100 hotel apartments. Targeting LEED C&S Certified.
6. 2-level shopping mall- 150 Units and gross floor area of 66,000m². Targeting LEED C&S Certified.
7. 4-Level underground basement and gross floor area 150,000m² - Total parking spaces 4,000.
8. External works and landscape including piazza.

As the project started handing over countdown, LEED design submissions for some assets have been approved by USGBC while others are in the final stages. For these approved LEED design submissions, the project team has managed to exceed the contract LEED design requirements and achieved 10 to 20% extra LEED design points than ALDAR contract requirements. With such additional points, ADP has high opportunity to achieve higher levels of LEED Certification for some of the assets mentioned above once LEED construction submissions are approved.

During the design, procurement and construction stages of our project, LEED specific procedures and methodologies were followed. This was sufficiently covered in a previous article in the CCC Bulletin (issue number 122).

Furthermore, some challenges were faced and overcome during designing and constructing Abu Dhabi Plaza, such as:

1. Procurement of LEED compliant material from local markets since most of the suppliers and manufacturers are not familiar with LEED requirements (VOC, FSC, NAUF, etc...).
2. Applying LEED requirements on the design concepts of such a large-scale and multi LEED certificates project with several stakeholders.
3. Modifying and updated procedures to track LEED compliance of material and design.
4. Developing energy efficient HVAC design sufficient for Astana severe weather.



Abu Dhabi Plaza Mixed-Use Development - ADP (Kazakhstan)

FEATURE

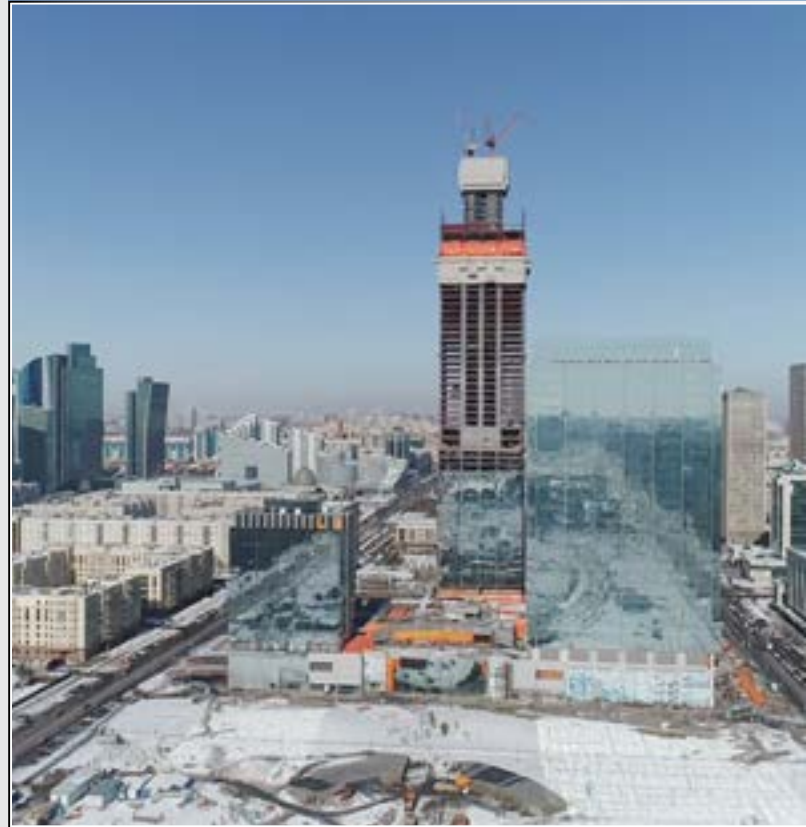
One of the main disciplines in any LEED Project is material. In Abu Dhabi Plaza, we have selected high end quality material to fit the level of luxury in our project while meeting LEED environmental aspects in related prerequisites and credits. Below are examples of such materials:

1. FSC certified wooden products.
2. Sealants, paints, adhesives and coatings with very low Volatile Organic Compound content (VOC).
3. Wooden products with No Added Urea Formaldehyde (NAUF).
4. High recycling content material.
5. Local material.

With regard to MEP systems, ACCL took into consideration energy and water consumption in design and selection of related systems and equipment. Without ignoring the satisfaction of future occupants:

1. Energy efficient HVAC systems and equipment, such as air handling units, pumps and chillers.
2. Lighting fixtures and systems with LED light fittings and motion detectors.
3. Low water consumption fixtures.
4. Integrated Building Facility Management system as an umbrella to control and monitor all building services and energy consumption during operation.
5. User friendly meters connected to each residential unit, retail unit and offices space to help the tenants in controlling and improving their energy, electricity and water consumptions.

Further to mentioned aspects, we would like to highlight the participation and sponsorship of several local Green Buildings initiatives in Kazakhstan over the last few years. Such a role is part of CCC's corporate responsibility towards local communities and increases awareness of Green Building in our industry.



Abu Dhabi International Airport (ADIA), New Terminal Building

Towards a Globally Renowned Sustainable Benchmark in the Aviation Industry

FEATURE

Located between the north and south runways of Abu Dhabi International Airport, the Midfield Terminal Building (MTB) is envisioned to be Abu Dhabi's new gateway to the world. The building is conceived a forward model of its category for the integration of sustainability into its design, construction as well as operation and maintenance.

With a total built-up area of over 700,000m², the Midfield Terminal is designed to handle a volume of 8,500 passengers per hour with 165 check-in counters, 106 passenger boarding gates, and 49 gatehouses with a capacity to accommodate 65 aircrafts at once. All of this is with the intent of minimizing passenger walking distance whilst allowing for flexible optimization with respect to future adaptations, technological reformation and transformability for internal reconfigurations.

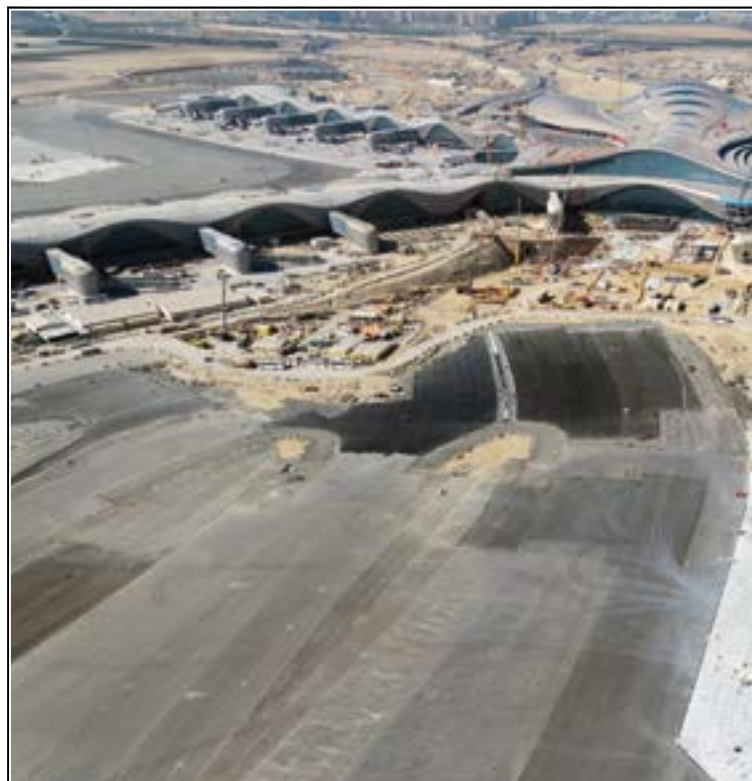
Within the framework of Abu Dhabi Environment Vision 2030, a comprehensive design strategy has been developed and incorporated with a commitment to maximize efficiency and reduce avoidable environmental negative impacts. The design was initially conducted to meet Estidama¹ sustainability guidelines and requirements to achieve a 2 Pearl rating². However, and with collaborative efforts between Abu Dhabi Urban Planning Council (UPC) and Abu Dhabi Airports Company (ADAC), the bar has been raised to a 3 Pearl rating; qualifying the MTB to become the highest-rated airport terminal in the GCC and to be globally recognized as the largest building ever to be rated.

In response to water scarcity, being one of the UAE's biggest environmental challenges, the design has been developed with the target of 45.7% water consumption reduction compared to a baseline. Strategies include the usage of high efficiency plumbing fixtures such as water efficient flush and flow fixtures in addition to an environmentally responsive landscape design. Internal and exterior landscape design has followed a low-water, saline and heat tolerant planting strategy: 70% native or adaptive species have been used with minimum irrigation demand and minimal soil amendments coupled with a combo of aggregates and soft landscape to meet the Estidama 3 Pearl requirements.

Additionally, and in pursuance of higher usage efficiency and improved consumption management, water meters are strategically provided and placed particularly in washrooms, hospitality, retail and F&B outlets. Likewise for irrigation systems, which are metered and linked to a Building Management System (BMS) enabling the detection of any leaks and allowing for assessment necessary for future informed decisions.

As such, and in an attempt to lessen or better reverse the negative impacts caused by construction activities, water usage is monitored and managed all through to reduce water wastage, all in accordance with the Construction Environmental Management Plan, the Environmental Agency - Abu Dhabi (EAD) Guidelines as well as Estidama requirements. To that end, two major principles have been followed: one is maximizing reuse and the other is replacing potable water with non-potable water where possible.

Energy being a significant contributor to greenhouse gas (GHG) emissions and another major concern in the UAE's environmental agenda, an aim to largely reduce the environmental impact attributed to energy consumption is set with a target of an overall 14.4% consumption level improvement compared to a baseline. This has been realized through adopting consumption efficiency design guidelines that are demonstrated in climate-responsive design features i.e. the X-shaped form, the undulating roof, the high performance envelope, the low-emissivity energy efficient façade double glazing and the low U-value walls and roof. These components offer major contributions to operational energy and cost savings through substantially offsetting heat gain, cooling loads and minimizing energy loss and thus reducing energy demands.



Abu Dhabi International Airport (ADIA), New Terminal Building

FEATURE

Similarly, a considerable emphasis is given to effective day-lighting through a carefully designed lighting system that optimizes lighting through daylight controls contributing to 24.1% lighting load reduction. Equally, the integration of an adaptive and effectively controlled HVAC system being a catalyst towards the drive to reduce energy consumption has contributed to a cooling load reduction by 27.1% through displacement ventilation, energy wheels, series chillers in the central utility plan as well as demand based ventilation using CO₂ sensors. As a result of the reduced cooling loads, pump loads were reduced by 22.1%. Besides the aforementioned, energy efficient appliances, Energy Star rated or equivalent are used across the building which also contribute to the overall project energy efficiency targets.

Advanced metering and reporting systems and environmental monitoring technologies, being a significant role player in data-driven energy efficiency measures, have been installed and integrated in the project. The sophisticated meters will measure energy usage per use and per zone, offering the opportunity to observe the on-going energy consumption patterns through recording readings within a proposed time interval frequency. Energy meters are strategically provided on distribution boards (DBs), which convey recorded data to Electrical Power Monitoring Control Systems (EPMC). This

metering system helps with setting strategies for advanced monitoring and tracking real time energy use, identifying areas for improvement and enabling the building to run in a more energy and cost efficient manner while ensuring a comfortable environment.

On the materials' responsible sourcing front, the project's building materials' sourcing strategy and environmental metrics have been a major contributor towards the attainment of a 3 Pearl design rating. The MTB has thus far sourced 40.38% of its total materials by cost from local and regional markets, exceeding the targeted percentage by over 30%. Moreover, a set target to have no less than 70% by cost of all wood as FSC certified or equivalent, namely sourced from a responsibly managed forest, has been surpassed reaching a percentage of 82.88% to date. Likewise, 100% of the wood used in the building is intended to be legally sourced i.e. not obtained from the CITES list of endangered species. Additionally and with regards to recycled materials, 100% of recycled reinforcing and structural steel used in the project is UK CARES certified or under equivalent certification schemes.

Moreover, towards the promotion of a healthy indoor air quality and occupant comfort, materials such as adhesives, sealants, paints, coatings, carpets, hard flooring, ceiling systems used on MTB have Lower Volatile Organic Compounds (VOCs) and comply with Formaldehyde Class E1.

These sustainability practices have been implemented throughout the ongoing phase of construction and it is anticipated that a 3 Pearl construction rating will be received after construction is completed, and the building has complied with the requirements and is thus due for certification. Meticulously applying industry-leading practices and technology for a building this big and this complex is a living example of the effective collaboration and strong commitment of the teams working on this project towards setting a global benchmark for a sustainable airport with a low carbon footprint.



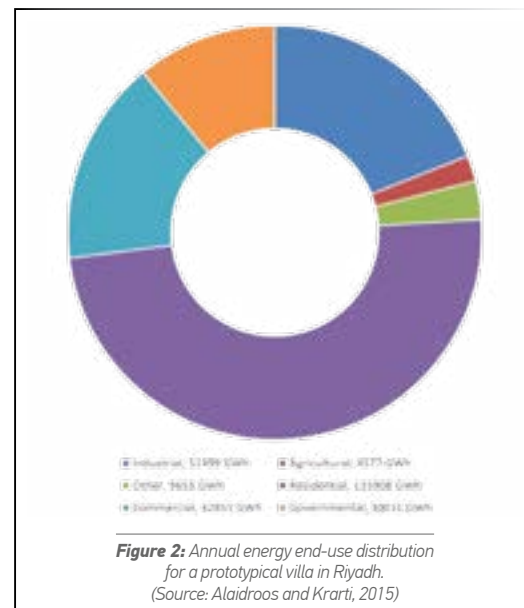
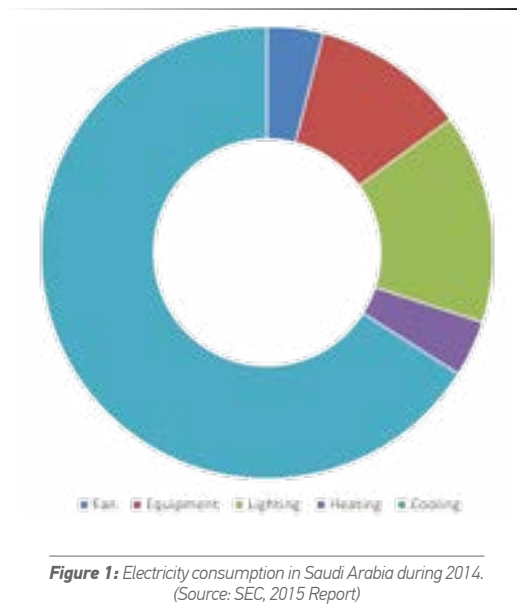
1. *Estidama* is an initiative developed as part of Abu Dhabi Vision 2030; it aims at transforming the way the built environment is constructed and operated through striving towards sustainability as the foundation of any new development across the emirate.
2. *Pearl Rating System*: A measurable tool for rating green buildings within the emirate of Abu Dhabi. It is a mandatory building code introduced by Abu Dhabi Urban Planning Council as part of the sustainability initiative "*Estidama*".

Green Building Construction in Saudi Arabia

Future Trends

Saudi Arabia is a signatory to the Paris Agreement, and the government is looking at ways of reducing carbons emissions. The Saudi Building Code Energy Conservation Requirements (SBC 601) was based on the International Energy Conservation Code (IECC). The Saudi Building Code stipulates energy conservation measures on commercial buildings but has various exceptions for residential buildings (dwellings).

According to the Saudi Electricity Company (SEC), nearly half (49%) of electricity generated is consumed by the residential sector - Figure 1. A study by Alaidroos and Krarti, 2015 on a prototypical villa in Riyadh show that two-thirds (66%) of energy in residential buildings is consumed for cooling - Figure 2.

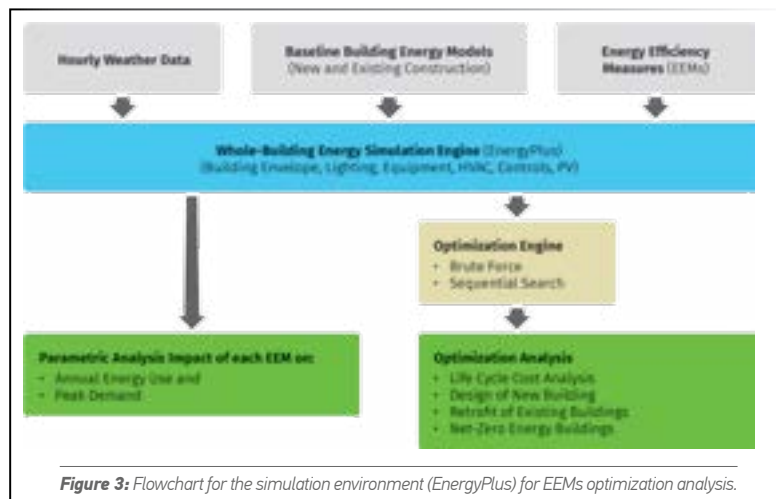


It is well recognized that, given the low electricity prices in Saudi Arabia, there is little incentive for households and businesses to invest in energy efficiency. This however is changing with the recently introduced threefold increase in electricity tariff. Energy prices are rising in Saudi Arabia, and consequently the demand for low energy homes will rise.

For the construction industry, the design and construction of residential buildings in Saudi Arabia would require more attention in the energy consumption aspect of the building. Energy Efficiency Measures (EEMs) would need to be implemented to reduce energy consumption, and there are various EEMs to choose from.

The objective would then be which combination of EEMs is most cost-effective for the building.

The optimal EEMs for a building can be determined by conducting a “whole-building energy modelling and simulation” exercise using computer software. A parametric analysis would select the best EEMs, and an optimization analysis would determine the optimal combination of EEMs for the building - Figure 3.



Green Building Construction in Saudi Arabia - Future Trends

Figure 4 depicts the optimal combination of EEMs; which is the lowest energy life cycle cost that corresponds to the highest energy use savings. Investments in a properly selected combination of EEMs for residential buildings would have short payback periods and therefore should be pursued.

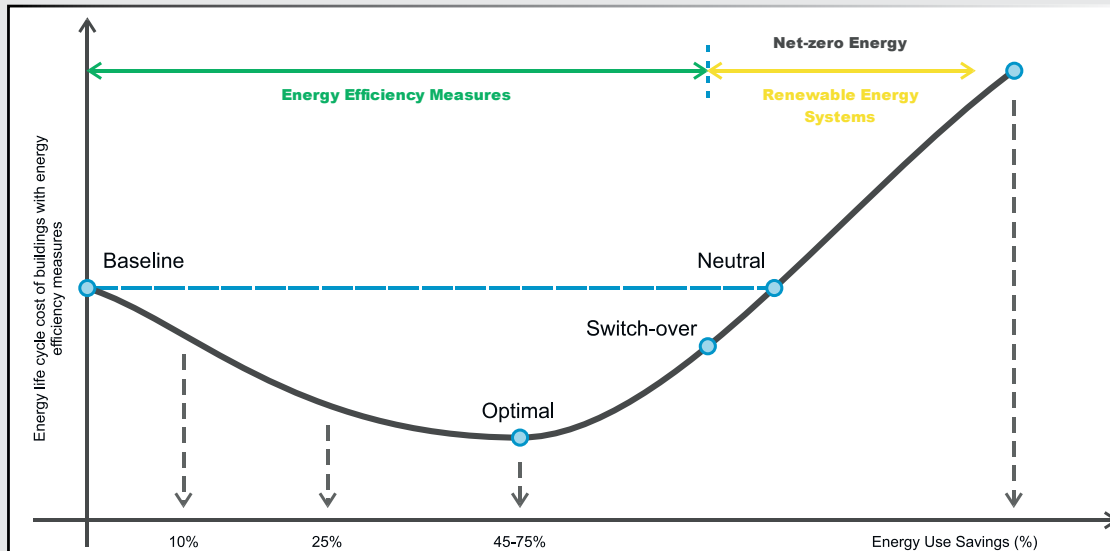


Figure 4: Sequential optimization path toward net-zero energy building

Source: A. Alaidroos and M. Krarti, *Optimal design of residential building envelope systems in the Kingdom of Saudi Arabia*, *Energy and Buildings*, Volume 86, 2015, Pages 104-117. <https://doi.org/10.1016/j.enbuild.2014.09.083>

K. Dubey, N. Howarth and M. Krarti, *Evaluating Building Energy Efficiency Investment Options for Saudi Arabia*, KAPSARC-UNESCWA project, 'Energy Productivity in the GCC', 2016, KS-1655-DP049A. <https://datasource.kapsarc.org/explore/dataset/evaluating-building-energy-efficiency-investment-options-for-sa/information/>

City Centre Almaza

Cairo, Egypt

FEATURE

Majid Al Futtain Properties Egypt (MAFP Egypt) is developing a 126,658m² convenient sub regional centre as a retail destination, designated as Almaza City Centre. The 147,845m² site is located inside the Ring Road between the relatively affluent Heliopolis and Nasr City districts of Cairo at the intersection of the Suez Road and Autostrad Road to be a five-minute drive from City Stars. The commercial retail centre, planned to house various tenants, is seeking to achieve Leadership in Energy and Environmental Design (LEED) Certification with the United States Green Building Council (USGBC).



The project was targeting Silver Certification. However, the client was aiming to achieve a Gold Certificate.

Almaza City Center Summary LEED Credit Points by category				
LEED Credit Category	Possible Achievable Points	Points Pending	Not Achievable	Total Available Points
Total No. of Sustainable Sites Credits Points	16	8	4	28
Total No. of Water Efficiency Credits Points	6	0	4	10
Total No. of Energy and Atmosphere Credits Points	13	0	24	37
Total No. of Materials and Resources Credits Points	6	0	7	13
Total No. of Indoor Environmental Quality Credits Points	5	2	5	12
Total No. of Innovation in Design Credits Points	6	0	0	6
Total No. of Regional Priority Credits Points	4	0	0	4
Total No. of Almaza City Center Credits	56	8	46	110

Yes	May be	No	Credit #	Credit Title	Prereq/Credit Points	Responsibility	Support	Responsibility	Submitted Stage	LEEDonline Status
SUMMARY 42 approved points 16 Targeted points Yes (construction credits targeted) 6 Points may be (public transportation) 4 Points for discussion (green-power-certified wood-composite wood) 5 Points for Possibility (renewable energy)										

CCC has succeeded in achieving 4 points over LEED scope, in addition to 6 points in public transportation which will gain the project Gold Certification rather than Silver.

The project also achieved an extra 4 points, as per the table, from renewable energy after the client accepted the proposal and issued CAI for it.

	Consumption Annual						
	Excluding Renewable Energy Production						
Building Model Energy	Electricity (KWh)	Natural Gas (THERM)	Total (MBTU)	Energy Cost (USD \$)	Onsite Renewable Energy (KWh)	Total Required Energy (MBTU)	Energy Cost (USD \$)
Baseline Building Design (Average Rotations)	55,091,256	14,956	189,675	3,320,254	0	189,675	3,320,254
Proposed Building Design	49,500,912	14,981	170,443	2,981,754	2,332,706	161,219	2,822,101
		Annual % Cost Saving (Excluding Renewable Energy Production)		10.1%	Annual % Cost Saving (Considering Renewable Energy Production)		15%
					Achievable LEED Points		4

Table 1: Comparison of Annual Energy Consumption and Utility Costs with the Average Baseline Building

Msheireb Downtown Development Phase 4 Project

A Unique LEED Journey in Qatar

During the kick-off meeting of the MDP4 Project in December 2016 the client, Msheireb Properties (a subsidiary of the Qatar Foundation) made it very clear that the most important aspect of the project is to ensure that LEED requirements are met for the project. No effort was to be spared during the project execution to ensure that the project met these requirements.



FEATURE

Speaking on the practices of green building and sustainability in the business sectors, Noora al-Rumaihi, Manager, Communications and Public Relations at Msheireb Properties, said:

“Often times, companies believe that it’s not cost effective and routinely too inconvenient to function and build sustainably. Yet, the truth is quite the opposite. Organizations should be encouraged to move beyond current methods and feel emboldened to look upon sustainability and conservation as fundamental aspects of societal development and business advancement.”

The project includes ten LEED buildings with mixed use community on previously developed urban infill site in Doha, Qatar. The site has immediate access to existing infrastructure, such as roadways and alternative transportation opportunities. The scope includes external hardscape works and public realm linking to the Msheireb Metro station.

LEED (Leadership in Energy and Environmental Design) is one of the world’s most popular green building certification programs in use. It was developed by the USA’s Green Building Council with the aim to get building owners and operators to be more environmentally friendly and use resources responsibly ultimately contributing to sustainable development. The MDP4 Project contract requires that all buildings be certified to LEED Gold at least. The rating scheme applicable for the project is LEED 2009 New Construction (LEED NC) for the X block and LEED 2009 Core and Shell (LEED CS) for W, Y and Z blocks.

LEED CERTIFIED STATUS	POINTS
Certified	40-49
Silver	50-59
Gold	60-79
Platinum	80+

Table 1: LEED 2009 Certification Classification

Most of the LEED requirements (credit points) are achieved via site selection, design and material selection. Construction in the case of the MDP4 Project influences and contributes to a maximum of 17 points.

LEED requirements for the project as relevant to construction are shown in Table 2 (both credits and pre-requisites):

Msheireb Downtown Development Phase 4 Project: A Unique LEED Journey in Qatar

CREDIT / PREREQUISITE	INTENT	TARGET FOR THE PROJECT
SS Prerequisite 1 - Construction Activity pollution Prevention	To reduce pollution from construction activities by controlling soil erosion, waterway sedimentation and airborne dust generation.	Full implementation of an approved plan.
MR Credit 2 - Waste Management	To divert construction and demolition debris from disposal in landfills and incineration facilities. Redirect recyclable recovered resources back to the manufacturing process and reusable materials for reuse.	75% waste diversion (2 Points). Develop and implement waste management plan.
MR Credit 4 - Recycled Content	To increase demand for building products that incorporate recycled content materials, thereby reducing impacts resulting from extraction and processing of virgin materials.	10-20% recycled content (1 Point minimum, expect higher score of 2 points)
MR Credit 5 - Regional Materials	To increase demand for building materials and products that are extracted and manufactured within the region, thereby supporting the use of indigenous resources and reducing the environmental impacts resulting from transportation. LEED Alternative Compliance Path is applicable.	10-20% regional material (1 Point minimum, expect higher score of 2 points)
MR Credit 7 - Certified Wood	To encourage environmentally responsible forest management. (Include only permanent material. Does not include temporary work wood like shuttering and scaffold).	50% certified wood content (1 Point)
EQ Prerequisite 2 - Environmental Tobacco Smoke (ETS) Control	To prevent or minimize exposure of building occupants, indoor surfaces and ventilation air distribution systems to environmental tobacco smoke (ETS).	For implementation of an approved plan.
EQ Credit 3.1 - Construction IAQ Management Plan - During Construction	To reduce indoor air quality (IAQ) problems resulting from construction or renovation and promote the comfort and well-being of construction workers and building occupants.	For implementation of an approved plan (1 Point)
EQ Credit 3.2 - Construction IAQ Management Plan - Before Occupancy	To reduce indoor air quality (IAQ) problems resulting from construction or renovation to promote the comfort and well-being of construction workers and building occupants.	Provision for healthy indoor air environment via flushout or testing (1 point)
EQ Credit 4.1 - Low Emitting Materials - Adhesives and Sealants	To reduce the quantity of indoor air contaminants that are odorous, irritating and/or harmful to the comfort and well-being of installers and occupants.	100% of adhesives and sealants to comply (1 point) (Only for interior side foundation weather proofing)
EQ Credit 4.2 - Low Emitting Materials - Paints and Coatings	To reduce the quantity of indoor air contaminants that are odorous, irritating and/or harmful to the comfort and well-being of installers and occupants.	100% of paints and coatings to comply (1 point) (Only for interior side foundation weather proofing)
EQ Credit 4.3 - Low Emitting Materials - Flooring Systems	To reduce the quantity of indoor air contaminants that are odorous, irritating and/or harmful to the comfort and well-being of installers and occupants.	100% of flooring systems to comply (1 point) (Building interior only)
EQ Credit 4.4 - Low Emitting Materials - Composite Wood and Agrifiber Products	To reduce the quantity of indoor air contaminants that are odorous, irritating and/or harmful to the comfort and well-being of installers and occupants.	100% of composite wood and agrifiber products to comply (1 point) (Interior of buildings only)
IDc1.2 - Reduced Mercury Lighting	To establish and maintain a toxic material source reduction program to reduce the amount of mercury brought onto the building site through purchases of lamps.	90% of purchased lamps have less than 90 picograms per lumen hour of mercury (1 point)
IDc1.4 / EQ Credit 4.6 - Low Emitting Materials- Walls, Ceilings, and Insulation	To reduce the quantity of indoor air contaminants that are odorous, irritating and/or harmful to the comfort and well-being of installers and occupants.	100% of wall, ceiling, and insulation products to comply (1 point) (Interior of buildings only)

Table 2: MDP4 LEED Construction Requirements

In order to manage the program, the LEED management documents which have been submitted and approved by the client for the project are shown in Table 3.

DOCUMENT NAME	PURPOSE	DATE OF APPROVAL
Waste Management plan (Rev. 3)	To meet the requirements of the Waste Management credit for LEED. (MRc2)	17 October 2017
Erosion and Sedimentation Control Plan (Rev. 4)	To meet the requirements of Erosion and sedimentation Control (SSp1)	7 September 2017
Indoor Air Quality Management Plan (Rev. 1)	To meet the requirements of IAQ credits.	4 July 2017
LEED action plan	To detail the implementation of LEED on the project.	

Table 3: MDP4 LEED Management Documents Submittals

Msheireb Downtown Development Phase 4 Project: A Unique LEED Journey in Qatar

Since the start of the project and on a monthly basis, there is a joint LEED walkthrough with the client's representatives (TiME Qatar and HoK) that is carried out on the project to confirm compliance with the requirements. This walkthrough is followed by a meeting to confirm that all the LEED deliverables and submittals are in order for the period as well as to debrief and document the walkthrough. A scoring system has been developed (0-5, where 5 is outstanding compliance). After each walkthrough each credit site implementation is scored.

MONTHLY SITE INSPECTION RATING										
DATE	SSp1	MRc2	INDOOR AIR QUALITY (IAQ)							
			A	B	C	D	E	F	G	H
FEB. 24, 2018	4	4	2	-	-	3	3	4	N/A	N/A
MAR. 29, 2018	4	4	2	-	-	3	2	3	N/A	N/A
APR. 26, 2018	4	4	2	-	-	3	3	4	4	N/A
MAY 31, 2018	4	4	3	-	-	4	4	4	4	N/A
JUNE 28, 2018	4	4	2	-	-	4	4	4	3	N/A
JULY 23, 2018	4	4	3	-	-	4	4	4	4	N/A
SEPT. 09, 2018	4	4	2	-	-	3	4	2	4	N/A
SEPT. 27, 2018	4	4	3	-	-	4	4	4	3	N/A
OCT. 25, 2018	4	4	3	-	-	3	4	3	3	N/A
NOV. 29, 2018	4	4	3	-	-	3.5	4	2	2	N/A
DEC. 27, 2018	4	4	2	-	-	3	4	2	2	N/A
JAN. 31, 2019	4	5	3	-	-	4	4	4	4	N/A
FEB. 14, 2019	4	5	3	-	-	4	4	4	4	N/A

Indoor Air Quality (IAQ) Rated Categories:
(A) HVAC Ducts Opening Protection Shutdown Systems **(B)** HVAC Ducts Opening Protection Operating Systems **(C)** HVAC Equipment Protection **(D)** Pollutant Source Control **(E)** Pollutant Pathway Interruption **(F)** Housekeeping **(G)** Moisture Control **(H)** Scheduling

Table 4: MDP4 LEED Site Inspection Ratings over 12 Months

The overall implementation of LEED requirements on the project for the construction phase is on track. A detailed monthly LEED report is submitted to the client to detail the month's LEED progress along with evidence of compliance with each prerequisite and credit requirement along with the required evidence.

CREDIT	TARGET POINTS	REQUIREMENT	% PROGRESS	POINTS EARNED	REMARKS
SSp1	0	Implement ESC	On Track	N/A	OK
MRc2	2	75% waste diversion	90.2%	2	OK
MRc4	2	20% of material contain recycled content (By cost)	38.5%	2	OK
MRc5	2	20% of Material are regional* (By cost)	15.8%	0	Needs improvement
MRc7	1	50% of total permanent material wood used must be FSC (By cost)	0%	0	No wooden Material submitted yet.
IEQc4.1	1	VOC limits as per LEED project Manual	On track	1	OK
IEQc4.2	1	VOC limits as per LEED project Manual	On track	1	OK
IEQc4.3	1	Meet flooring certifications and VOC limits as per LEED Manual	On track	1	OK
IEQc4.4	1	Material should not have added urea-formaldehyde resins	0	0	No materials submitted yet.
IEQc4.6	1	Meet certification requirements and LEED Manual VOC limits	On track	1	OK
IDc1.2	1	Meet the mercury 70 Pictogram limit in lights.	On track	1	Ok
IEQc3.1	1	Ensure that the air quality inside the buildings is maintained to standards.	On track	1	OK

Msheireb Downtown Development Phase 4 Project: A Unique LEED Journey in Qatar

CREDIT	TARGET POINTS	REQUIREMENT	% PROGRESS	POINTS EARNED	REMARKS
IEQc3.2	1	Before Occupancy after completion of all construction and finishing flushing to be conducted to ensure safe air quality.	0	0	Not yet started.
EAp1	0	Develop commissioning plan	0	0	Prerequisite. Not yet started.
EAc3	2	Develop Operation manual for future staff.	0	0	Not yet started.

• For projects outside the U.S. the Alternative Compliance Path (ACP) can be followed. The ACP allows an alternative calculation. For building materials or products shipped in part by rail or water, the total distance to the project is determined by weight average, whereby the portion of the distance transported by rail is divided by 3, the portion of the distance transported by inland waterways is divided by 2, the portion of the distance transported by sea is divided by 15, and added to the portion of the distance transported by any other means other than by rail, inland waterways, sea or road, provided the total weighted average distance does not exceed 500 miles (800 km).

Table 5: MDP4 Project LEED Progress Summary as of End of Year 2018

To comply with LEED requirements and to achieve LEED GOLD, Project Lead Coordinator Eng. Ashraf A. Zaki in close coordination and with the support of HSE, Procurement and site construction teams successfully adopting the following best LEED practices:

Erosion and Sedimentation Control

1. Project boundaries protected with silt fencing to avoid soil erosion.
2. Diesel generators were procured with built-in drip trays to avoid diesel spilling.
3. Vehicle exit and entry ramps were covered with concrete to avoid soil erosion and dust pollution.
4. Scheduled water sprinkling is done and followed to avoid dust generation and soil erosion.
5. Dust monitoring is carried out on monthly basis according to an approved procedure.

Construction Waste Management

1. Different types of bins are placed at site: concrete, steel, plastic, paper, food and wood.
2. Based on waste quantity, the designated locations of waste skips and the frequency of waste removal trips were managed by site environmental engineer.
3. Training is carried out during the HSE induction to workers to segregate waste, HSE team on site provide daily guidance to ensure proper segregation.
4. Waste contractor agreed to carry out secondary segregation at his facility and provide documentation.

Material Procurement

1. Project procured (California Department of Public Health) "CDPH" Certified products for wall and ceiling systems to achieve Innovation Credit IEQc4.6 - low emitting materials - ceiling and wall systems.



Msheireb Downtown Development Phase 4 Project: A Unique LEED Journey in Qatar

2. Project followed compliance of Green-seal, SCAQMD (South Coast Air Quality Management Department) for the following items: adhesives, sealants, paints and coatings.
3. Project procured Carpet Rug Institute Certified Carpet.
4. Project procured less than 1% of lights contains mercury content and complied to LEED Innovation Credit MR “Reduced Mercury Lighting”.
5. Project procured FSC (Forest Stewardship Council) certified products of wood and engineered wood.
6. No added urea-formaldehyde products procured for engineered wood or any other product.

Indoor Air Quality Management

1. Site temporary gypsum board panels at site got replaced by cement boards to get rid of mold growth that occurred due to Doha humidity levels and water leak from split A/C's. Where A/C's are used on site, condensate collection containers were installed to ensure no water accumulation to reduce potential for mold growth.
2. Housekeeping initiative to build it within the design of the activities is implemented to meet LEED indoor air quality during construction.
3. All ducts and riser openings are being sealed as per SMACNA guidelines.
4. Dedicated chemical storage rooms were designated to avoid harmful gases inhalation for construction workers.
5. Dust generating equipment (example: concrete grinders) was procured with vacuum option to minimize dust generation.
6. Sand dunes and cement bags are being continuously covered with tarpaulin sheets to avoid dust generation.

The MDP4 Project is set to achieve its commitment and help get all the buildings LEED Gold certified. With more environmental awareness, clients are heading in the direction of selecting environmental and sustainability certifications for their developments. CCC is well positioned to be able to understand and execute such projects successfully.



Project Overview

The project Al Zahia City Center is a retail mall developed to be a primary regional shopping and entertainment center in the Emirates of Sharjah for Majid Al-Futtaim Group. The total plot area is approximately 183,505m². The project is developed to achieve a LEED Gold rating based on LEED™ requirements. The project has been anticipated with 50 points in the design phase application and 19 points have been planned in the construction phase submission. The CCC team is on track to achieve the targeted construction credit.

CCC is responsible for the execution of site-related LEED activities such as construction waste management and erosion and sedimentation control practices, and those practices are ongoing and in line to achieve the target. Also, the monitoring mechanism has been put in place to ensure that LEED compliance requirements are implemented and documented.

Also, CCC has implemented onsite initiatives to achieve sustainable principles related to the environment, economy and society.

Project LEED Compliance

Sustainable Sites

- CCC Sustainability Team developed an erosion and sedimentation control plan to reduce the environmental impacts associated with construction activities and implement measures to prevent erosion, contain sediment and control drainage. The team is monitoring these best practices daily.
- 250 bicycle racks distributed will be installed with alongside, 24 shower and changing rooms.
- Two hundred sixty-nine preferred parking spaces are provided.
- A stormwater management plan is in place, resulting in a 25% decrease in the volume of stormwater runoff.

Water Efficiency

- Low flow fixtures are used to reduce water consumption by 50%.
- Plant selection of local species with low irrigation, the use of recycled water from on-site sewage treatment plant and efficient irrigation system is implemented to achieve 40% water saving.
- 100% onsite treatment of wastewater and reuse for cooling towers makeup and irrigation.

Energy Saving

- The project has achieved 4 points (15.52% energy savings) for the LEED EAc1 through considering many energy conservation measures through improved glazing thermal conductivity and SHGC, improved exterior wall, roof, and floors thermal conductivity, high-performance chillers, and an energy efficient interior and exterior lighting system.

Indoor Environmental Quality

For design credit the requirements were:

- Environmental Tobacco Smoke by prohibiting smoking in the building, prohibiting on-property smoking within 25 feet and providing signage to allow smoking in designated areas.
- Outdoor Air Delivery Monitoring by installing permanent monitoring systems, monitoring CO2 concentrations and providing a direct outdoor airflow measurement device capable of measuring the minimum outdoor air intake flow with an accuracy of plus or minus 15% of the design minimum outdoor air rate.
- CCC provided construction indoor air quality (IAQ) management plan accordance with Sheet Metal and Air Conditioning Contractors (SMACNA) Indoor Air Quality (IAQ) guidelines. CCC implemented the following actions to achieve the targeted credit by:
 - ↳ HVAC protection: to maintain cleanliness for all air ventilation equipment (FAHU, AHU, FCU and so on) and A/C ducts should be sealed in the factory and during storing either by blanking or capping opening/duct ends.
 - ↳ Duct Cleanliness: storage locations should include pallets or blocking to keep fabricated metal ductwork above the floor surface and the internal surfaces of the uninsulated ductwork should be wiped to remove excess dust immediately before installation.

Al Zahia City Center

FEATURE

- ↳ **Source Control:** provide low and zero VOC materials like carpet, sealants, adhesives, paint, caulks, cleaning solutions, wall covering and furniture. Moreover, by pollution sources to be directly exhausted to the outside through the exhaust system.
- ↳ **Housekeeping:** dust will be cleaned using a wet rag, damp mop or vacuum as required to maintain work areas as clean as possible without dust. Moreover, spills or excess applications of solvent-containing products will be removed on-the-spot.



Materials & Resources

- **Construction Waste Management:** the project requirement is to achieve 75% by volume of waste material generated during the construction must be diverted from disposal in landfills. CCC sustainability team achieved 99.56 % of the construction waste being recyclable, by managing and monitoring the construction waste and coordinating with recycling facilities in UAE.



Date	Net Weight for Waste Type (Ton)										
	General Waste	Cardboard	Paper	Wood Waste	Plastic Waste	Concrete Waste	ACC Block	Recycled Commingled Waste	Landfill Commingled Waste	Crush Concrete	Metal Waste
Total Sub Weight	135.68	24.827	2.12	1645.82	49.06	33871.18	66.76	582.7768	80.3652	11999.4	205.7
Total Diverted Weight (Tons)											48447.64
Total Wasted Weight (Tons)											48447.64
Percentage of Diverted Weight (Tons)											99.56%

- **Recycled Content:** the project requirement is to use materials with recycled content such that the sum of post-consumer recycled content plus one-half of the pre-consumer content constitute 30% of the total value of materials in the project. Meanwhile, the CCC sustainability team achieved till date 35.76 % recycled content, which is around 20% more the project requirement due to proper following up with subcontractors.
- **Regional Materials:** the project requirement is to use 30% of the materials which have been extracted, harvested or recovered, as well as manufactured within 500 miles of the project site. The sustainability team achieved till now 38.02% of the total value of materials in the project is regional (about 27% more than project requirements).
- **Certified Wood:** the project requirement is to use a minimum of 50% of wood-based materials and products cost, which are certified following the Forest Stewardship Council's (FSC) Principles and Criteria, sustainability team achieved till now 69.97% by purchasing the temporary formwork with (FSC) without additional cost.

The additional percentages which have been achieved in the above points are due to the well-prepared materials forecasting list, understanding the local market, proper coordination and following up with subcontractors.

Sustainability Initiative by CCC

Sustainability in construction has become a core issue in the last years. Nowadays, it is considered as one of the fundamental drives for successful completion of a construction project, so in Zahia City Center CCC implemented sustainability initiative as follows:

Using (EV) Electrical Vehicles instead of diesel pickups: the aim EV has the advantage of much lower running costs. The electricity to charge an EV works out around a third as much per kilometer as buying petrol for the same vehicle and a battery electric vehicle (BEV) has a lot less moving parts than a conventional petrol/diesel car. There are relatively little servicing and no expensive exhaust systems, starter motors, fuel injection systems, radiators and many other parts that are not needed in an EV: all better for the environment.

(As a start for this initiative we used two electric vehicles for test.) These vehicles are very efficient for the IT team to go between main offices and construction site and it has lower running costs instead of renting a pickup with the driver.

Using plastic water bottles and water coolers instead of disposable plastic water bottles and the advantages of using plastic water bottle is easy-to-use lids and cost-efficient.

Set printers, on two side printing option as default printer setting in order to save paper.

Use LED light in the construction site and offices.



Hassib Sabbagh Information Technology Center of Excellence

Palestine



AREA NEWS



Overview

The information technology sector in Palestine witnessed remarkable progress at the beginning of the new millennium. This advancement encouraged four Palestinian businessmen and entrepreneurs: Hassib Sabbagh, Said Khoury, Najjad Zeenni and Fawzi Kawash to donate four million dollars for the purpose of establishing four nonprofit excellence centers to serve the Palestinian community. This initiative led to the establishment of the Hassib Sabbagh Information Technology Center of Excellence (HSITCE) in 2005 with support from Hassib Sabbagh, the co-founder of Consolidated Contractors Company (CCC).

The center was founded in cooperation with the Palestinian Information Technology Association (PITA); the Patient's Friends Society, Jenin; the Engineers Syndicate, Jenin Branch; Consolidated Contractors Company (CCC) through American Near East Refugee Aid (ANERA) and the Arab American University Palestine (AAUP) with the aim to contribute to the development of the technological and economic sectors in the north of Palestine as well as bridge the gap between Arab American university students, graduates, academics and the local community nearby.

Vision

To be pioneers in "technologizing" the community.



Hassib Sabbagh Information Technology Center of Excellence



Mission

HSITCE will strive to create the Palestinian information society. This goal can be achieved through the best practices of information technology. To accomplish this task, we will create different types of information systems for different local community units, provide high quality technical training courses for different categories of the local community according to their needs, and encourage creativity and innovation for the university's students in the business and technical fields.

Objectives

The ultimate goal of HSITCE is to provide high quality community services to the public in the northern part of the West Bank. The center seeks to achieve the following goals:

1. The center acts as an information system provider to the civil society by acting as an intermediary between them and donors.
2. The center provides high quality technical training courses and diplomas.
3. The center promotes creativity, innovation, incubation and mentorship services to entrepreneurial projects and ideas.
4. The center also seeks to obtain licensing to provide exams such as CCNA.

HSITCE's Services

SERVICE	THE BENEFICIARY
Incubation	Students, Graduates and Entrepreneurs
Capacity Building	Pupils, University Students, Private and Public Sectors as well as Non-Governmental Organizations
Events organizing and hosting (Workshops, activities, Exhibitions, Intelligence Games, etc.)	University Students and Local Community
Enterprise Hosting	Palestine Monetary Authority, Transcend Company

Activities and Programs Offered since Establishment

The table gives brief information about HSITCE's activities.

ACTIVITY TYPE	NO. OF BENEFICIARIES	SOURCE OF FUNDING
Incubation, Acceleration and Related Activities	100	Diverse
IT training For (University students and community)	600	Fees/NGOs
IT initiatives For (School students)	200	Fees/NGOs
Financial and administrative training (University students and community)	900	Fees/NGOs
University students internship	50	AAUP
Intelligence Games	4,000	Konan (Startup)
Conferences, such as TEDx	300	AAUP
Work Shops	11,500	Diverse
Development of Mobile Applications (Nabd al Hayat Application)	Unidentified	World vision
Professional diplomas	60	Fees

Tengiz Project Expansion & the CCEP Technical Training Center

Kazakhstan



The January/February 2019 issue of the Oil & Gas Kazakhstan Magazine published an article based on an interview with Area General Manager, Hisham Kawash. CCC's commitment to corporate social responsibility and the development of societies in which it operates are highlighted in this article. You will find a summary below, along with some excerpts and photos.

The expansion of the Tengiz Project is the largest industrial project in the Kazakhstan oil and gas industry as well as in the country in general. 50,000 people will be involved at the peak of the project, providing employment for a large number of Kazakhstanis. This is a challenge for construction companies which need to attract large amounts of skilled labour.

There is therefore a need for subsidized training and retraining of local people. However, only a small number of companies have chosen this course due to high costs and it is a pleasure to write about a foreign company which has adopted such an approach.

The CCEP Technical Training Center does not only train company employees, but all those residents of the Atyrau region who are willing to learn basic working specialties. The trainees are provided with accommodation, meals and coveralls. They are paid a scholarship and those who graduate with good results are guaranteed a job in CCEP, working in Tengiz.

"We are all like a big family in the company"

Hisham Kawash



The training center, located on the campus of the APEC Petro Technical College in Atyrau, provides training for welders, carpenters, pipe installers, locksmiths and electricians (a list which is going to be expanded). The trainees are taught theory and practical skills from one to three months.

AREA NEWS





UAE

Zahia City Center Project Health and Fitness Initiative

AREA NEWS

Regular exercise has many more benefits apart from weight loss or keeping in shape. For example, work productivity is one of the several aspects in life that exercise helps.

Being productive and alert at work can help us get our job done faster and more efficiently, especially in our field as a contractor.

CCC's President of Engineering & Construction Samer Khoury has on various occasions encouraged employees to exercise regularly and pay attention to their body mass index.

In general, the benefits of exercise can be summarized in the following points:

Alertness and Energy

One way that exercise can help improve productivity at work is through alertness. When we exercise, the blood flow to the brain is increased and this process sharpens our awareness and better prepares us to tackle our next big project or challenge. Exercise also gives us more energy and this means we feel more awake at work.

By being more attentive we perform our work correctly and to the best of our ability.

If we do not have time especially due to our tight time-schedule of the construction site to complete a full workout every day, it is advisable to make small changes to meet daily targets, for instance walking during the lunch period or using the stairs instead of the elevator. Also, a distance watch can be useful as it counts our daily steps and how many meters we have walked during the day.

Optimum Physical Health

Maintaining good physical health enhances our general workability. Apart from preventing certain medical conditions it improves our cardiovascular health. This means that we will have the necessary energy to carry out the physical requirements of our job.

Most importantly optimum physical health reduces the risk of suffering an injury on the job. The typical advice is to perform a minimum of 30 minutes of exercise daily, up to five days a week.

Improves Mental Health

Improved mental health is yet another way of boosting work productivity. Regular exercise can help limit feelings of anxiety and sadness. When we exercise, our brain releases serotonin that helps us feel better and improves our state of mind, making the pressures of work more manageable to handle. According to the University of Cambridge serotonin is a neurotransmitter in the brain that sends messages to the body to stimulate mood and positive emotions. Regular exercise can be particularly helpful in dealing with stress, which is common in the construction workplace. Dealing with stress constructively can lead to improved relationships with our co-workers.

Illness Prevention

Regular exercise that includes walking, running, swimming, weight lifting, or jogging can help reduce the risk of developing certain types of illness. This means fewer sick days at work. Having a strong immunity system minimizes catching the common cold. Also, exercise reduces our risk of developing obesity, type 2 diabetes, hypertension and heart disease (all of which can impact work productivity).

At our project Zahia City Center (UAE), we started to reflect Samer Khoury's vision for a healthier and more productive team. We have arranged and participated in many activities such as football tournaments and marathons which helped Zahia City Center Project Team to be more active and increase the social connection between the team members and with other companies (see article p.48).



On February 22, 2019, CCC AL-Zahia Team joined the MAPIE Tournament at JLT Dubai. Among 20 teams, Zahia team secured 2nd place.

Management Review Meeting, Abu Dhabi

UAE



AREA NEWS



CCC's management held its annual Management Review Meeting on April 16, 2019 at the Rotana Beach Hotel in Abu Dhabi. The attendees discussed the matters that concern the company's day-to-day operations and the company's plans for the future.

CCC's President, Engineering & Construction, Samer Khoury, addressed the meeting by stating that 2019 will be the turnaround year for CCC especially in the oil and gas sector with the expected award of three mega LNG projects in the MENA region and Africa. Mr. Khoury also emphasized that CCC's strength in the market remains its people and its commitment to delivering projects with the highest safety and quality standards.

Mr. Khoury urged the attendees to continuously work on improving CCC's performance in all areas and strive to remain a leading contractor in the industry.

The meeting concluded with the following key messages:

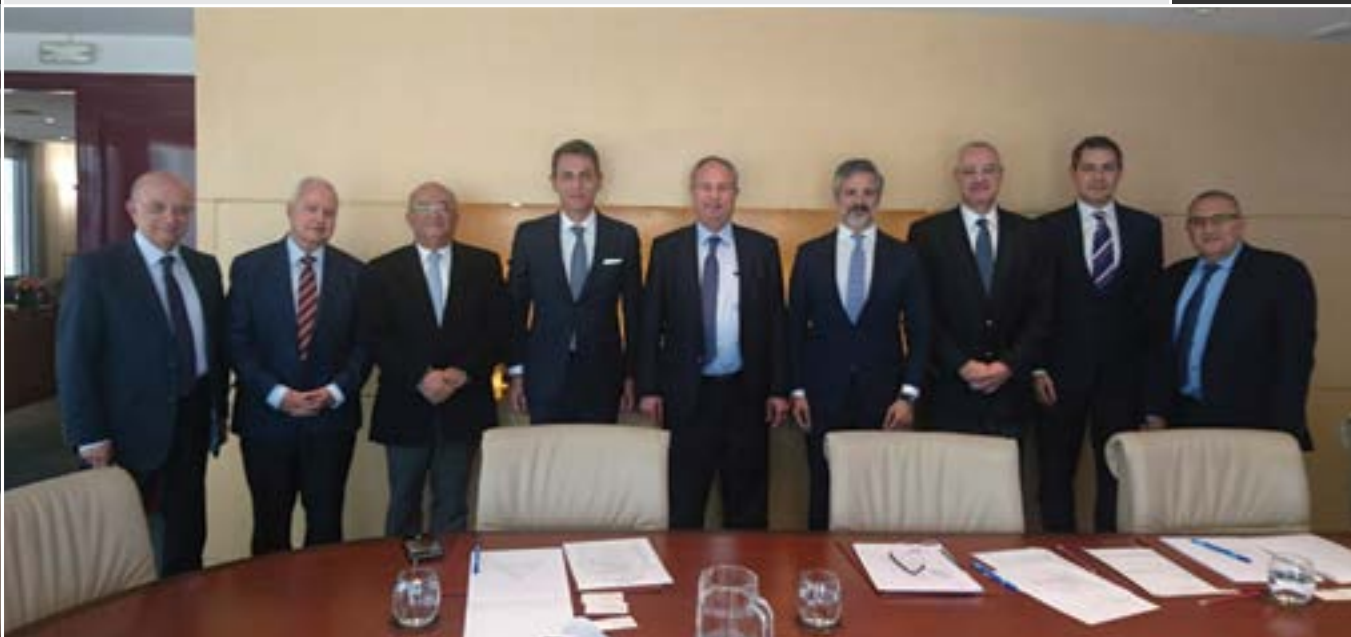
- Safety and quality are everyone's responsibility and all need to work continuously on improving our performance.
- Sustainability is becoming a key aspect in the selection criteria of awarding projects.
- Everyone in CCC needs to work on reducing CCC's carbon footprint.
- Subcontractors require closer monitoring and management especially from safety and quality perspectives.
- Productivity needs to be improved by 10% across the board.
- Expedite the collection of all outstanding payments, variations and claims which is crucial for maintaining a healthy cash flow.
- Allocation, as of now, of high performing staff to the expected new awards in 2019.



Greece

Visitors from STFA Construction Group

AREA NEWS



From Left to Right: Antoine Haddad, Jamal Akl, Tahsin Bagci, Aslan Uzun, Samer Khoury, Sezai Taskent, Zahi Saba, Gurol Celen, Bassam Addada.

The Chairman of the STFA Construction Group Sezai Taskent visited the CCC offices in Athens on March 18, 2019 and met with Samer Khoury (President, Engineering and Construction) and other senior CCC staff members.

Mr Taskent was accompanied by Tahsin Bagci (Advisor), Aslan Uzun (CEO) and Gurol Celen (Business Development Director).

Talks covered a wide spectrum of topics, from the current geo-politico-economic situation prevailing in the Middle East and Africa to potential upcoming projects of common interest. Prospects for collaboration on some of those projects were also explored.

It is worth noting that STFA is one of the leading Turkish construction firms working in Turkey and abroad. Their operations cover various fields from infrastructure to marine works. They are present in several countries in the region (such as Saudi Arabia, Qatar, Oman, UAE, Morocco and Libya, among others).

CCC and STFA worked in a successful joint venture (from 2007 to 2012) in the construction of the landmark new port at Al Duqm in Oman, which was executed as a consortium with Jan De Nul at a total value of 1.9 billion dollars.

Training Courses on Construction Management

Saudi Arabia



Two training courses were conducted recently in Saudi Arabia by the CCC Training & Development Department.

Participants who successfully completed these courses earned Professional Development Units (PDUs) from the Project Management Institute (PMI), USA.

The first one was held on March 19-29 and was on the subject of Construction Planning & Scheduling (15 PDUs). The second course, held on March 21, covered Creative Problem Solving & Decision Making (7 PDUs).

Many thanks were extended to Saudi Arabia Management, Human Resources, Administration and Services Departments for their outstanding support in the organization of these courses.

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Japan

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On March 4-5, 2019 a delegation led by CCC President, Engineering & Construction Samer Khoury visited Chiyoda and JGC in their offices in Yokohama, Japan. Even though the purpose of the visit was future collaboration, celebration was in order as it has been over 50 years that we have been working with JGC and Chiyoda!

As a souvenir of this golden milestone, CCC offered their partners symbolic medallions engraved with the name and date of our first project together. CCC's first project with Chiyoda was the Zarqa Refinery Extension in Jordan in 1968. That same year CCC also worked with JGC for the first time on the Desulfurizer Plant (Aminol) in Kuwait.

Both companies attributed this long and successful partnership to common vision, values, transparency and teamwork. They also expressed their desire to continue working with CCC well into the future. In fact, several LNG mega projects are in the pipeline with our longstanding partners, notably in Qatar, Mozambique, Nigeria and Papa New Guinea.

CCC also met with retired octogenarian Chiyoda and JGC executives who were at the basis of this long partnership and over the years became close friends with our late founders, Said Khoury and Hassib Sabbagh.

CCC Has Been Working with JGC and Chiyoda for over 50 Years!



Training Courses on Risk Management

Qatar

Two training courses were conducted recently in Qatar by the CCC Training & Development Department. They were held at the Diplomatic Club in Doha.

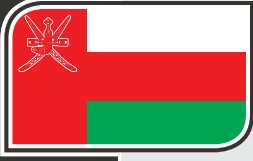
Participants who successfully completed these courses earned Professional Development Units (PDUs) from the Project Management Institute (PMI), USA.

Risk Management was the subject of the course held on March 24-25 (15 PDUs). The second course, held on March 26, covered Problem Solving & Decision Making (7 PDUs).

The Qatar Area Management, Human Resources, Administration and Services Departments are to be thanked for their excellent support in arranging these courses.

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Oman

Training Courses on Value Engineering & Time Management

Two training courses were conducted recently in Oman by the CCC Training & Development Department. They were held at the GAZP Project.

Participants who successfully completed these courses earned Professional Development Units (PDUs) from the Project Management Institute (PMI), USA.

Value Engineering was the subject of the course held on April 9-10 (10 PDUs). The second course, held on April 11, covered Time Management (7 PDUs).

Many thanks to GAZP Project Management, namely Maher Abou Chaaban, Bashar Elias and Abdallah Melhem for their outstanding organization and kind help. Also, special thanks go to the Area Oman Management, HR, Administration and Services for support.

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Training Courses on Public Speaking & Presentation Skills

UAE



This training course was conducted recently in Abu Dhabi by the CCC Training & Development Department.

Participants who successfully completed these courses earned 10 Professional Development Units (PDUs) from the Project Management Institute (PMI), USA.

The course was held at the Park Rotana Hotel on April 17/18, 2019.

Many thanks to UAE Area Management, HR, Services, EPSO Personnel and Administration for their outstanding organization and assistance.



AREA NEWS

T. MHANNA

MDP4 Achieves 15 Million Man-Hours LTI Free

Qatar



On April 1, 2019, MDP4 Project in Doha, Qatar achieved 15 million man-hours worked without a major injury.

To mark the event, the project organized an HSE awards ceremony on April 15, 2019. During the ceremony 100 awards were distributed to those who made this achievement possible in addition to cake for all the workers served with the lunch as a token of appreciation. The ceremony was attended by the client (Msheireb Properties) the PMC (TME Qatar), an ILO representative as well as the consultant and the project management team. A certificate signed by the CEO of Msheireb Properties was presented to the project director in recognition of the achievement. In his address, Ihab Al Sharif, Project Director, thanked the awardees for the significant contribution to this achievement and asked that it be continued in the spirit of partnership to ensure that 'we all can go back home safely at the timely completion of the project'.

The ILO Representative, Steve Needham, also recognized the efforts carried out by TCC/CCC JV especially participating in Qatar's first Occupational Safety and Health Month activities.

He also appreciated the safe work and the remarkable achievement thanking TCC/CCC JV for inviting him to be part of this event.

The client's (MP) senior HSE manager, Husain Ali, after presenting TCC/CCC JV project director with a certificate signed by MP's CEO to mark the achievement, thanked the project team for their outstanding efforts and urged all to continue with the safe work.



CCC Commemorates International Women's Day 2019

WOMEN'S EMPOWERMENT

On March 8, 2019, CCC's President of Engineering & Construction Samer Khoury sent out a video message on the occasion of International Women's Day 2019.

International Women's Day (IWD) is a global day for celebrating the social, economic, cultural and political achievements of women world-wide.

It has occurred for over a century - the first IWD gathering took place in 1911. Since then, IWD has assumed a new global dimension for women worldwide. The growing international women's movement has helped to build support for women's rights and participation in the political and economic arenas.

Reflecting on this year's theme **"Better the balance, better the world"** Mr. Khoury stressed the importance of gender diversity. Gender diversity and diverse leadership are beneficial for both team¹ and overall business performance². Studies by prestigious think tanks, such as the Harvard Business Review and the World Economic Forum³, corroborate that. Globally, the value of a more diverse workplace and the contribution talented women can make are increasingly being understood, particularly in positions of responsibility.

In his message Samer Khoury discussed the determination, efficiency, commitment and attentiveness women have demonstrated in programs organized by various NGO's supported by CCC such as Education for Employment, the Vitas Group and the Welfare Association.

The low numbers of women in CCC and particularly in senior levels of responsibility were also highlighted by Mr. Khoury. A call for action and cooperation to increase these numbers was put across.



Quote from Mr. Samer Khoury's message published on CCC's social media

CCC has established a commitment to taking a stronger and more active stance for diversity by focusing on women's empowerment and gender diversity in a systematic way. Efforts will be focusing on engaging more women, training more women and inspiring women through promoting them in leadership roles.

As part of this commitment, a Championing Committee for the Empowerment of Women has been established. A women's forum has been set up at the Athens office to explore issues and collect ideas about improving women's participation and development at CCC. Additionally, feedback from all CCC female staff was requested via the annual Employee Satisfaction Survey to receive views and suggestions.

1. Harvard Business Review, 2011, "Defend Your Research: What Makes a Team Smarter? More Women" Anita Woolley and Thomas W. Malone, Carnegie Mellon University and Massachusetts Institute of Technology.
2. Harvard Business Review, 2016, "Study: Firms with More Women in the C-Suite Are More Profitable" Marcus Noland and Tyler Moran, the Peterson Institute for International Economics.
3. The Global Gender Gap Report 2018, World Economic Forum.



CCC Women's Empowerment Initiative - Athens office Forum (from left to right: Mary Earls, Salma Shawwa, Rita Saloum, Vicky D. Kefalas, Lila Aggelopoulou, Nadia Zayadine, Adriana Amenta, Natalia Tasoula, Maria Kourou. (Additional members not present in photograph: Nadia Zarnier and Rasha Nimer)

CSR Projects & Initiatives



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.

CCC Provides Access to Water and a Better Educational Environment for the Children and Community of Manguna Village in Mozambique

As part of CCC's Corporate Volunteering Program, CCC volunteers rehabilitated the public school of Manguna (Escola Primaria Completa De Manguna), and provided the school and the community with access to water. The four month long project included the painting of the outside and inside walls of two school buildings, offices, the school director's accommodation and replacing the broken roof sheets with new ones. Internal works included the painting of walls, the replacement of roof girders and sheets, and the coating of blackboards.

Situated just one kilometer away from CCC's Palma A fungi Road Project, where many of CCC's workers come from, Manguna School enrolls around 250 children and had neither toilets nor running water. CCC volunteers addressed this by building new toilets for students and teacher with septic tanks and installing a borehole with a hand pump near the school, providing not only the students but also the whole community with access to water.

The opening ceremony of the school was held on February 1, 2019 and was attended by CCC staff members and volunteers, community leaders, school committee members as well as school teachers and students. CCC representatives officially handed the school over to the School Committee Members and provided the school with books and stationery.

This project falls under CCC's Corporate Social Responsibility priority covering education and addressing the social needs of disadvantaged communities where CCC operates.



Empowering Women: Doit4Her Campaign

On the occasion of International Women's Day, CCC joined the Doit4her Campaign to support displaced refugee women residing in Tripoli, Lebanon. In collaboration with Companies for Good, CCC UAE joined the campaign initiative designed to empower refugee women while protecting the environment at the same time.

CCC invited employees in the UAE to join the campaign by donating used, unwanted electronic devices (phones, tablets, laptops) and CCC donated 10 computers with their screens and accessories.



CSR Projects & Initiatives

All the electronics will be cleared of data and sold and half of the proceeds will go to The Big Heart Foundation to empower women. For more information about the campaign: <http://uae.melltoo.com/doi4her>

CCC Supports Recreational and Educational Activities for Children

CSR has recently signed an agreement with the Friends of the Child Association to strengthen children's mental and emotional capacity through recreational and educational activities. The Association was founded in 1987 with the aim of protecting and supporting children from families that face financial and social problems so that they can grow up with dignity and create a more promising future for themselves and for society. Through multifaceted support (psychological, moral and material) families are supported and empowered to better cope with their needs, especially regarding their responsibility towards the proper development and education of their children.

The association established a nursery in 2007 to respond to the needs of children aged two to six who face serious developmental difficulties because they come from a family environment with serious financial and social problems. CCC has been supporting the nursery's activities since 2015 which aims to create a place where children can learn to love learning and receive the care they have been deprived of. At the nursery, children have the opportunity to spend several hours a day in an organized, safe and calm environment doing creative activities, under the guidance of specialized teachers who use specific methods and a variety of educational activities tailored to the children's needs and limitations.

CCC's support has been channeled to contribute to the efforts of the nursery that focus on proper childhood development and education that begins at an early age. As a result the objective is to offer the care that children have been deprived of as well as a variety of recreational programs that positively affect their cognitive skills.



Nursery Children at the Museum of Cycladic Art



Nursery Children at the Museum of Cycladic Art

Since the signature of the agreement in January 2019, the nursery has organized a trip to the Karolos Koun Theatre for 16 children to see the "Aladdin" play. Based on a folk tale, the play transported the children to the exotic and colorful Baghdad on an adventure with original live music and comic situations.

The second activity targeted 23 children who attended a training program entitled "Adventure in Katharoupoli" (the Clean City). Through innovative games and joyful theatrical events the children traveled to the world of Katharoupoli, the city of health and cleanliness. They learned how germs and lice are transmitted, and how to wash their teeth and hands. The goal of the training program goal was to make the children aware of their personal hygiene habits not only at school but at home as well.

In February 2019, and after CSR connected the nursery representatives to their project partners at the Museum of Cycladic Art, 20 children were invited to the museum to attend the educational program entitled "Once Upon a Time in Athens". The children learned about everyday life in ancient Athens, through the life of a young boy from his birth to his adulthood. They examined exhibits of that time, specifically the boy's toys and in the end we actively engaged in the construction of an ancient toy, the so-called iyga.

Also in February, the children were taken to see "The House of Karagiozis" at the Megaron (the Athens Concert Hall). In a multilayered performance with many giant traditional figures the kids got in touch with the history of shadow puppetry from its birth until today. In this great, colorful and musical performance, the combination of folklore with education set the imagination of our young viewers in motion and increased their knowledge.

In March 2019, 40 children attended the performance "Carnival, Play, Seesaw" at the nursery school. The program was performed by the Chronos Group. The children followed the traces of a lost kite and discovered the secrets of a princess dancing with colorful ribbons. The best part was

CSR Projects & Initiatives

shown just before the end when the young and old people dressed in carnival costumes got in the rhythm of the carnival. The children swirled around a maypole, threw serpentine and danced listening to lovely carnival music. It was a unique performance which illustrated to the children the spirit of the carnival.

CCC's support for the educational and recreational program of the nursery will continue until June 2019. Since its establishment the association has been able to offer valuable help to more than 13,600 children and 5,692 families by giving them the opportunity to face the future with optimism. CCC is proud to have been able to support the mission of the association to offer children with the needed educational and entertaining activities that they are deprived of as well as a variety of recreational programs that positively affect their cognitive skills.

Blood Donation in Saudi Arabia



In collaboration with governmental hospitals in Riyadh, a ten day blood donation drive was organized by the Riyadh Metro Project. Three hundred employees participated in the drive. The aim was to raise awareness that individuals can save lives and improve the health of others by donating blood, to encourage people to donate blood voluntarily without compensation and to support the operation of safe and reliable blood services.

CCC Stands Against Hunger

Since 2016, CCC and its project consortium have cooperated with Saudi Arabia's Food Bank (ETTAM) to collect surplus food from BACS' South Camps and distribute it to the needy.

Supported by the Saudi government, Ettam is a non-profit organization engaged in collecting excess food from hotels, restaurants and companies and distributing it to those in need. The donation of surplus food does not only benefit



disadvantaged people but also has a positive impact on the environment by cutting down on waste and supporting the main elements of sustainability.

In an era of rising food prices and increasing hunger in the world, it is quite alarming that one third of the food produced in the world for consumption is wasted. According to a study of the Food and Agriculture Organization (FOA) of the United Nations, approximately 1.3 billion tons of food is wasted in both industrialized and developing countries.

Through its cooperation with Ettam, the Riyadh Metro Project so far has provided more than 10,000 meals to the needy. CSR hopes to replicate the surplus food collection initiative of the Riyadh Metro Project in other project areas. The goal of the preserving food campaign is to remind people about the importance of supporting and spreading the culture of giving to those who are less fortunate in the form of food.



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Corporate Volunteering Program

"The best feeling in life is making others in need happy. It does not have to be money; it can be a half hour of comforting a sick person, or taking care of an elderly person, or just simply a smile...."

Samer Khoury

CCC's Volunteer Program in the UAE : Al Jalila Children's Specialty Hospital

Since the Volunteer Program's initiation in Athens, the program has been transferred to the UAE. CSR has since then organized a group volunteering activity and disseminated among employees names of NGOs which provide volunteering activities.



On February 14, 2019 CCC volunteers brought joy and fun to the children of Al Jalila Children's Specialty Hospital. Organized by CSR's committee member and CSR Lead Coordinator in the UAE, Dana Mahboobeh, a group of CCC volunteers spent two hours playing and entertaining the children at Dubai's Al Jalila Hospital. Some of the volunteers entertained a group of children in the playroom and others visited patients in the Chronic Renal Failure Department. In line with the hospital's infection control policy, the volunteers took safe toys and gifts with them. When asked about his volunteering experience, volunteer Mohd Ahmed Al Assaf said

"I suggest we have frequent visits to Al Jalila Children's Hospital and more regular visits to the dialysis patients."



The CCC volunteers were Moh'd Al Assaf, Abdallah Abbad, Shelden Calusin, Mostafa Baghdadi, Rami Khader, Dana Mahboobeh and Amin Saleh.

Introducing Colors into the Daily Lives of Refugees

On February 1, 2019 ten CCC volunteers joined a dynamic team of international volunteers from around the world to paint refugee residence cabins at Eleona Camp in Athens. The volunteering activity was organized by CSR in collaboration with Project Elea which is an initiative that focuses on improving the living standards of refugees. Approved by the Greek Ministry of Migration Project, Elea provides basic services such as food and clothing distribution as well as offering educational, cultural and skill sharing programs to refugees.

CCC volunteers participated in putting some color in the daily lives of the residents of Eleona Refugee Camp and managed to turn some of the dull grey colored containers into bright and cheerful colors. CCC volunteers had a great experience and suggested that CSR should continue and increase its community involvement through volunteerism.



Corporate Volunteering Program

The CCC volunteers were Dimitra Ntalachani, George Chahda, Rosemary Hunt, Omar Alfatyah, Muhammad Zimmo, Francesca Koomen, Tarek Desir, George Khouri, Yvonne Wyss and Haigo Kourouyan.

CCC Volunteers Help the Homeless



On February 20, 2019 a group of CCC volunteers lent their helping hands to put together and package 250 hygiene kits for vulnerable and socially excluded groups of people. After the economic crisis the number of homeless people in Greece has reached 20,000 of which almost half of whom live in Athens. In just 20 minutes of their time, the group of volunteers was able to help 250 people.

In cooperation with Ethelon, Emfasis Foundation was invited to the CCC premises to provide an informative talk about the state of homelessness in Greece, their scope of work as an organization and how they approach those who live mainly on the street and face serious problems of survival. With a mission to provide immediate and effective solutions to the overall needs of the homeless and unemployed, Emfasis also shared with the group of volunteers some of their success stories where they managed to find either a home or work for some people living under the poverty line.

The CCC volunteers included Darryl Goringe, Haiganoush Kourouyan, George Chahda, Lada Ninova, Emma Morris, Gregory Mouzakitis, Maha Harb, Rosemary Hunt, Vicky Nicholas, Tina Frangou, Georgina Dimitropoulou, Despina Kyriakidou, Mira Zeit and Dimitra Ntalachani.

CCC Volunteers Teach STEM to Underprivileged Kids

CCC volunteers provided Science, Technology, Math and Engineering (STEM) education to 26 refugee children aged between 6 and 12 years from Elefssina Refugee Camp. The volunteering activity took place on CCC premises with 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 three hour training period 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 an education can refine the talents and skills of children 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 using a touch screen wireless tablet connected to the robotic structure.

The CCC volunteers were Eleni El Homsy, Rasha Nakhleh, Elias Nakhleh, Naim Trabelsi, George Chahda, R.D. Vijay, Khaled Laz and Gregory Mouzakitis.





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Individual Volunteering Experiences

Roland Khoury Volunteers with the Doctors of the World

Roland Khoury has started volunteering as an interpreter for the Doctors of the World Center for Refugees. When asked about his volunteering job he said: *"You cannot imagine the load and huge number of refugees and poor people visiting the center to receive free doctor consultations and even small operations. I was interpreting for Arabs and French speaking Africans from 11am till 4.30pm moving from one doctor to another: plus I did some other administrative work and paper filing. I will encourage all my friends, inside and outside CCC, because volunteering does not only help the associations and the beneficiaries but also the volunteer himself. This experience made me wiser, appreciating my life and the blessings I have. This experience will give me the strength to face any problem in my life because they really are incomparable to those desperate poor sick people."*

He added: *"I thank CSR for this gift and hope to continue my volunteering activities."*

Pro-Bono Training for NGOs

CCC Ambassador Volunteer Delivers Training Workshops

On December 7, 2018 Naim Trabelsi (Athens Office) delivered a "Project Management and Sustainability of NGOs" for the senior management team of the Greek Council for Refugees (GCR). The workshop aimed at empowering and enhancing the performance, effectiveness and accountability of staff. The training was attended by the director of the Council, project managers and the fundraising, social work, procurement, human resources and IT departments.

On February 1, 2019 Trabelsi delivered a 6-hour training seminar on Project Management to the Community Home Coordinators of the Smile of the Child NGO. The Community Coordinators serve in homes set up by the NGO to host children who are victims of violence, children with health problems and children living in poverty. Through the training the Home Coordinators had the opportunity to learn how to manage projects, how to manage their time, prioritize their tasks, staffing and how to self-evaluate their performance. All the acquired skills will work for the benefit of the children living in the homes and will contribute to maintaining a family atmosphere for them.



Training at the Smile of the Child NGO

Individual Volunteering Experiences

How I Felt About Volunteering

Author: N. Trabelsi

When I was first assigned to conduct training to senior staff members of the Greek Council for Refugees (GCR) and the Smile of the Child Organization, I understood that it required analyzing data, looking at the business model of other industries besides construction, setting the right content strategy and finally, delivering the training to an audience working in the humanitarian field. Most importantly, I felt that I needed to catch their attention. This proved to be a challenge that required some research, knowledge and skills other than the ones that I had acquired in my usual job duties and responsibilities.

Even though this was not my first experience in training NGOs, they were not as big and renowned as the Greek Council of Refugees and the Smile of the Child Organization. Moreover, this time I felt a responsibility as I was presenting my company, CCC. The responsibility I felt was much bigger and there was no room for errors. I realized that the outcome should be perfect. However, perfection doesn't exist. I still remember the thought that kept returning to my head:

"Why did I take on this volunteering task and why am I doing this to myself?!"

Later though, I discovered that through this experience volunteering adds something to our personality, it makes you feel worthy and fulfilled, and provides one with a plethora of feelings that one may not experience in any other circumstances of one's life. This experience was a great opportunity to get to know myself better. It was definitely an experience of self-enlightenment. It was a great opportunity for me to understand how companies manage their obligations towards society and how innovation in business does not have a limit. In fact, when I felt the admiration of the audience after the completion of the training, and as they wondered and questioned why other companies are not doing the same, I felt proud to be part of CCC. Embracing non-conventional business strategies makes CCC leading initiatives and innovations that make the world a better place. A company which is respected by society.

Today, I feel more committed to continuing conducting such professional training for other NGOs and local institutions which contribute towards supporting the great image of CCC.

To conclude, the message I can give to my CCC friends and colleagues can be best expressed in a quote by Dr. Martin Luther King:

"If you can't be a sun, be a star. For it isn't by size that you win or fail. Be the best of whatever you are."





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CCC Offers English Courses to Employees in the UAE and Kazakhstan

To support the personal development of workers, CCC started providing English language courses to its workers at Jabal Ali Camp in the UAE. The courses are delivered by SmartLife, an NGO registered with the Community Development Authority (CDA) of Dubai and focuses on the betterment of blue collar workers. Under the NGO's Smart Reading Program, around 70 workers were first screened and placed in beginner, intermediate and advanced classes.

Running from February until June 2019, the two-hour classes are dedicated to reading simple motivational and inspiring stories in English. Each student gets a chance to read and the explanation of these passages are followed in Hindi, Tamil, Telugu or Malayalam as needed. To enhance their communication skills in English subjects that are close to their daily lives, themes that they can relate to and resonate well with them are chosen to be topics of discussion, for instance, Food, Health, Family, Work, Bank, Airport, and Sports. Conversation and interactive exercises, as well as role playing will center on a chosen theme every week.



Employee Welfare

The aim and benefits acquired from enhancing their language skills will help workers to shake off their fear and enhance their confidence and self-esteem in having acquired a new skill. Each class has a minimum of two and maximum of four teachers to ensure that each student gets individual attention. Upon completion of the course, and succeeding in a test, a SmartReading graduation will be held and students will receive certificates of completion and prizes.

Similarly and since July 2017, English courses have been offered to local staff in Kazakhstan. Professional English language teachers of leading learning centers have been delegated to deliver these courses to provide the staff with an opportunity to learn a new language and build their confidence as well as to improve communication between expatriate and local staff. Depending on their needs, staff joined the elementary, intermediate or Business English courses. While the elementary and intermediate levels of learning focused on a holistic general approach, the advanced levels focused more on business language and professional direction. The English courses have proven to increase confidence and develop skills needed to improve productivity at work.

Football Fun in Tengiz



A football tournament was organized by and for the Civils and Core Substation (3GP) Project employees in Tengiz, Kazakhstan.

The tournament was held on March 3, 2019 at the industrial village of Tengiz and included 16 competing teams. Awards, medals and trophies were the prizes that were given to the winner team, second and third runner up teams. The tournament provided the staff with the opportunity to have some fun, stay healthy and it created an atmosphere of friendliness and brotherhood amongst them. According to Senior Administrator, Amin Mushtaha, facilitating enjoyable activities and social connections between employees will ultimately create a fun atmosphere which can help us retain good employees longer.



Sports Day and Basketball Tournament in Qatar



In addition to organizing a five month basketball tournament stretching from July to November 2018, the CSR Team organized a sports tournament for all CCC workers. The tournament was held on December 18, 2018 on the occasion of Qatar's National Day and it brought together around 700 workers from all CCC projects who played basketball, volleyball, billiards, table tennis and cricket.

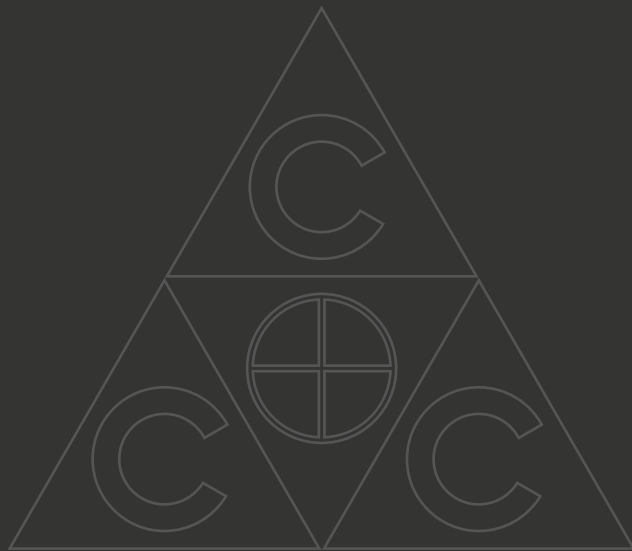
7th Charity Marathon in Sharjah, UAE

On March 9, 2019 around 22 CCC staff and their family members from the Zahia City Center Project joined thousands of contestants of different ages, nationalities and mental and motor abilities in the 7th Charity Marathon in Sharjah.

Organized by The Friends of Arthritis Patients Association of the Health Education Department at the Supreme Council for Family Affairs in Sharjah, the event was under the theme "Do not postpone - continue today". This annually organized marathon aimed to promote community awareness of arthritis; one of the common diseases in the UAE as well as to support patients facing daily challenges.





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