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The Al Falah national housing project in Abu Dhabi is a major showcase for the benefits of precast concrete.


# Precast takes the lead

## The *Precast for All* seminar in Dubai highlighted the growing use of precast concrete elements in the construction industry

Leading precast concrete companies in the UAE recently successfully hosted the second edition of Precast for All, seminar highlighting the benefits of ready-made structures in construction. Held on 15 May at the Jumeirah Etihad Towers, the seminar offered industry know-how and an overview of the projects that integrate precast concrete components. The event gathered key government officials, prominent international precast industry experts, as well as contracting companies, consulting firms and real estate developers.

Her Excellency Fatema Al Jaber, board member, Abu Dhabi Chamber of Commerce and Industry, inaugurated the event, which was headlined by Max Jordan, senior director, Fluor Middle East; Sameh Al Ashri, engineering director, eConstruct; Bob Scott, head of structures, WS Atkins; Professor Maher Tadros and Professor Leslie D. Martin, Civil Engineering Faculty, University of Nebraska; and Carlos Amaya, senior associate assessor, Estidama.

Al Jaber said: "The precast industry is a key revenue-generating sector in the UAE. The pioneers of the precast sector are driving a new trend in the construction industry through offering high-quality products and maintaining safety and environmental standards."

Echoing this view, Jordan added: "The efficiency of precast structures produced in the UAE is phenomenal. Using precast fabrications reduces labour costs by up to 25%, as compared to conventional concrete. The UAE is witnessing the construction of a plethora of similar high-profile projects."

Speaking on Estidama compliance for envelope thermal performance, Amaya said: "The first and most important factor in evaluating the efficiency of materials is sustainability. Precast concrete greatly lowers the carbon footprint in construction, which is reflected in almost 100 projects that are currently being developed in the western region of the UAE."

The official spokesperson for the seminar, said: "The latest edition of Precast for All is the outcome of the combined efforts of ten industry leaders in the UAE. We are confident that the seminar will continue to offer a platform for professionals to share successes and identify solutions to challenges in construction."

According to statistical data provided by the Abu Dhabi Chamber of Commerce and Industry, the precast sector in the UAE is valued at $1.6bn, employing over 25,000 laborers and technicians working in the precast industry in the UAE in at least 20 manufacturing facilities, with the construction cost of each of these factories ranging from $50m to $350m.

The share of the use of precast techniques in concrete construction in the UAE's industry is now at 40%, and a glance at the benefits reveals why. "On the Al Falah villa development in Abu Dhabi, 4,126 villas were completed in 24 months using precast, while only 730 villas were completed in 20 month using traditional cast-on-site," said conference spokesman

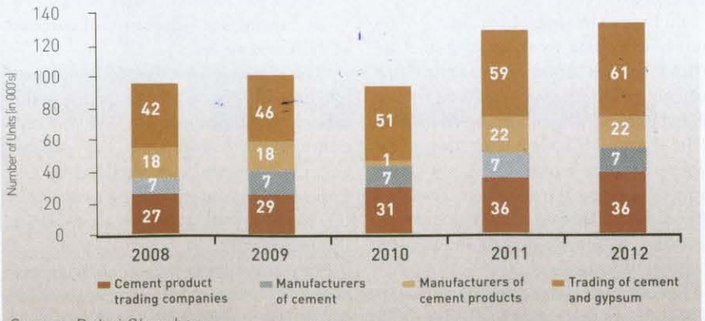
"So precast makes a saving in time, a good saving on manpower, and a third point is that the quality is ultimately better, because the precast is produced in a quality controlled factory environment." On the sustainability side, precast also lowers the carbon footprint of construction, noted Amaya. "I am happy with the progress in the precast market. If you look around you can see that many projects have converted

**25%**
**Reduction in labour costs by using precast fabrications**

**100**
**Projects in the Western Region are showcasing precast concrete**

**$1.6bn**
**Value of precast concrete sector**

### Cement and related companies registered with Dubai Chamber




Source: Dubai Chamber

Precast concrete boosts site efficiency and build quality.

to precast, and this means for sure that business will improve,"

Al Falah Community is a 12.5milliom square meter masterplanned development, located to the east of the Abu Dhabi International Airport. The project is being developed by Al Dar Properties and forms part of the Emirati Family Housing Programme, a wider government initiative launched by the Abu Dhabi Urban Planning Council to create more social housing for the local population.

Gulf Precast has spent over eight million man hours since work started in June 2010. Over 280,000m$^3$ of concrete has been poured to date, on what is one of the largest housing projects being developed in the region. It is undertaking the precast superstructure works for 2,069 villas forming Village 2 and Village 3, with a total of five villages (4,857 villas), as well as 280km of boundary wall and several electrical substations.

The construction involves more than 50 mobile cranes to install the villas at a rate of five villas a day. The required precast concrete elements are manufactured and delivered from seven different Gulf Precast production plants.

Gulf Precast CEO Elias Seraphim said: "We are pleased to be part of this strategic project that forms an integral part of Abu Dhabi's Government 2030 Vision and to have yet again completed another key milestone. Despite the challenging nature of the project, the works are progressing well and ahead of schedule."

The project features 18 different types of villas, ranging from three to five bedrooms of different styles.

"This is indeed an exciting accomplishment by the Gulf Precast team, and a major milestone for the project. We are very committed to complete the project successfully, and are thrilled by the prospects of future housing projects in the region," said Gulf Precast COO Dr. Daniele Pfeffer.

Precast concrete has steadily gained popularity in the Middle East construction industry as a preferred structural solution. Architectural and structural precast concrete components save time, cut costs and provide a high-quality appearance. Precast concrete also adds to the sustainability and durability of the structures.

**When the Al Falah villa project is completed, Gulf Precast would have manufactured and installed:**

- 119,495 structural precast elements
- 153,254 structural hollow-core slabs
- 33,905 decorative precast elements
- 66,660 decorative glass-fibre reinforced concrete (GRC) elements
- 21,098 precast shaft covers
- 280km of precast boundary walls