Composites in Architecture
Before we discuss the composite products show cased at this year’s architectural show, it is worth while to look back at the opening paragraph from the review of the AIA expo in 2013...

“If you strolled the expo floor of the Architecture (AIA) show in Denver ...you were sure to find pavilions dedicated to materials like wood, concrete, metal, stone and tile. But composites? No such luck. At the 2013 AIA show you really needed to search out the composite materials.”

What a difference a year makes!
This year’s AIA show was held in Chicago, and thanks to the architectural division of the American Composite Manufacturers Association (ACMA), the 18,000 attendees were finally exposed to composite materials on a large scale.

Composites Pavilion Common Area
To help build awareness and attract attendees to the pavilion, the Composites Growth Initiative (CGI) funded two large attraction pieces. These pieces were displayed in the Ashland Inc. sponsored common area.

Just a little over 50 feet in from the main entrance to the giant McCormick Center show floor you entered the first ever composites pavilion. This space was dedicated to the composite industry, where representatives from 23 companies demonstrated the design flexibility, durability, corrosion resistance and other attributes that composites offer to the design and construction industry.

Greg Lynn, a nationally recognized architect with an affinity for composite materials designed a hanging canopy that demonstrated the light weight nature of composites and design flexibility offered through the use of composite materials. The piece was constructed of carbon fiber pultruded ribbons that were shaped into a complex curved canopy. The canopy, built by Kreysler and Associates, provided a stunning visual both in the air and with its shadow on the floor of the common area.
Sitting on the floor of the common area was an impressive composite piece that clearly demonstrated the high strength-to-weight performance available through composites.

A foil from Oracle’s 2013 winning America’s Cup yacht impressed the expo’s attendees. The foil’s horizontal portion helps lift the boat out of the water, reducing drag and increasing speed. The vertical portion helps offset the wind’s tendency to push the yacht sideways. The high strength-to-weight of the foil is evident, as it carries the weight of the entire yacht as it reaches its top speed of nearly 50 miles per hour.

Next to the foil was a video that showed the impressive feat of the yacht, its crew, and the carbon fiber composite foil that “carried” the team to victory.

**Around the Pavilion**

The Composites Pavilion was packed with excellent examples of composites, including the more traditional window lineals and day lighting panels to brand new products such as exterior rain cladding and a basement foundation wall system.

The list of exhibitors can be found on the micro-site that ACMA developed specifically for the show. Link to it from the above logo to identify who was at the show and what they were helping attendees learn about composite materials.
Composite Cladding
Kreysler and Associates (American Canyon, CA) presented their Fireshield 285 product that will be featured on the San Francisco Museum of Modern Art. The large glass fiber composite façade can be designed into almost any shape, contour and texture and has been approved for use under the International Building Code (IBC).

Composites in Historical Replications
Glassline (Plymouth, MI) and Architectural Fiberglass (Cleveland, OH) provided attendees with information on the use of composites in lightweight exterior façade components and architectural replications.

Gurit helped attendees understand composite core materials and offered case studies including the popular Makkah clock tower and the structural FRP roof panels in the Haramain (Saudi Arabia) high speed rail terminal.

Formashape (Kelowna, BC) was showing their SilkTec architectural fascias. Above, Bern Steele gives the thumbs up sign, indicating he is ready to join in on the latest dance craze... “Do the Architect.”

Many Thanks to the ACMA Architectural Division for coordinating the pavilion. Special recognition to the steering committee led by Jeff Mooney (Best Bath) and supported by Bob Moffit (Ashland), Bill Kreysler (Kreysler & Associates), Gale Tedhams (Owens Corning) and Andrew Huber (ACMA).

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The Well Known
Not everything in the Composites Pavilion was new to the architectural community that attended. Several well known and trusted material and system providers, such as Kalwall (Bow, NH), Crane (Channahon, IL) and Best Bath (Caldwell, ID) were at the show helping to promote their respected and long trusted products.

The Next Generation
In addition to the sponsorship of the foil and canopy discussed above, the CGI also sponsored a booth (photo left) for Cal Poly School of Architecture. Cal Poly has an emphasis on the use of composites, and the students showed off some of their related works. The students were very excited to be involved and were great evangelists for composites!

Fiberglass Grating Featured
The corrosion resistance, durability and performance attributes of composite grating was featured by the Fiberglass Grating Manufacturers Council and their booth dedicated to promoting the use of FRP gratings, railings and stair treads. They featured aesthetic and durable grating and railing products for the commercial, residential and industrial applications.

Although many composites were found in the pavilion area, there were composites in other areas of the show floor, including an exciting new product by Advanced Architectural Products (Allegan, MI). This product significantly reduces thermal bridging in foam insulation installations by replacing the metal support channels with a pultruded composite track.

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**Ground-Breaking Composite Application**
The feature new product in the composites pavilion had to be the new Epitome Quality Foundation Wall system. This is a revolutionary composite building solution for residential foundations. It combines strength, insulation, and vapor barrier in a single step, and can be installed in two hours vs. two weeks for poured concrete foundations!

**Builder & Home Owner Benefits**
This composite solution allows for greater lateral strength than concrete, meaning you can back fill without the concern for cracking. The installed product has integrated composite studs for mechanicals and significantly eases finishing the basement space. Unlike traditional basements, this space is warm and comfortable due to the R-16.5 insulation and inherent composite moisture barrier.

**Collaboration Leads to Solution**
This exciting new product was invented by [Composite Panel System](http://www.compositepanel.com) (Eagle River, WI). After several years of development and testing with their partners, resin supplier [Ashland](http://www.ashland.com) (Dublin, OH) and fabricator [FiberTech](http://www.fibertech.com) (Washington Court House, OH), the foundation product is under going national code approval and being prepared for national launch. The Epitome system is an excellent example of how collaboration with technology and application leaders can take composites into new spaces and address the needs of the design/build industry.

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