

MAKEOVER MASTERCLASS

— PART II

Feature—writer Kevin N. Kovalycsik takes another look at the new BC Place stadium, outlining how its redevelopment is about much more than just a new roof; it's the next BC Place for the next generation.



T

he new and improved BC Place stadium boasts the world's largest retractable fabric stadium roof; with the venue's refreshing new look as aesthetically pleasing to the eye as it is adaptable to all small and large sport, entertainment and convention events.

In fact, the new venue will host some ten events this September, twenty-two in October and a further thirteen in November '12; a mixture of host tenants' — BC Lions



And The Name Is . . .

We'll have to wait a little longer to find out the new name for the new BC Place Stadium. "Naming rights negotiations are in the final stages," said Podmore.

Podmore would not confirm rumours the naming rights sponsor is Telus with the stadium to consequently be called 'Optik Park', after its high-speed cable television product.

A telecommunications partner would seem an ideal association for BC Place. Telecommunications giant — Rogers Communications — assumed the naming rights of the formerly named 'GM Place' — home to the NHL Vancouver Canucks — in July 2010, wresting it away from Telus.

That naming rights agreement includes Canucks' mobile digital content and future television and radio considerations, exclusive to Rogers customers — properties surely sought after by Telus or any naming rights sponsor at the new BC Place.

"It was a very important strategic alliance for us," said Peter King, Senior Director of Sponsorship for Rogers Communications. "B.C. is a critical market for us and the investment with the Canucks further enhances our investment in the province, in the city, and builds on our sports legacy."

The price of Rogers' naming rights sponsorship is estimated at CAD\$1m per year. Extraordinary, when you consider the struggle facilities in the United States have had finding naming rights partners.

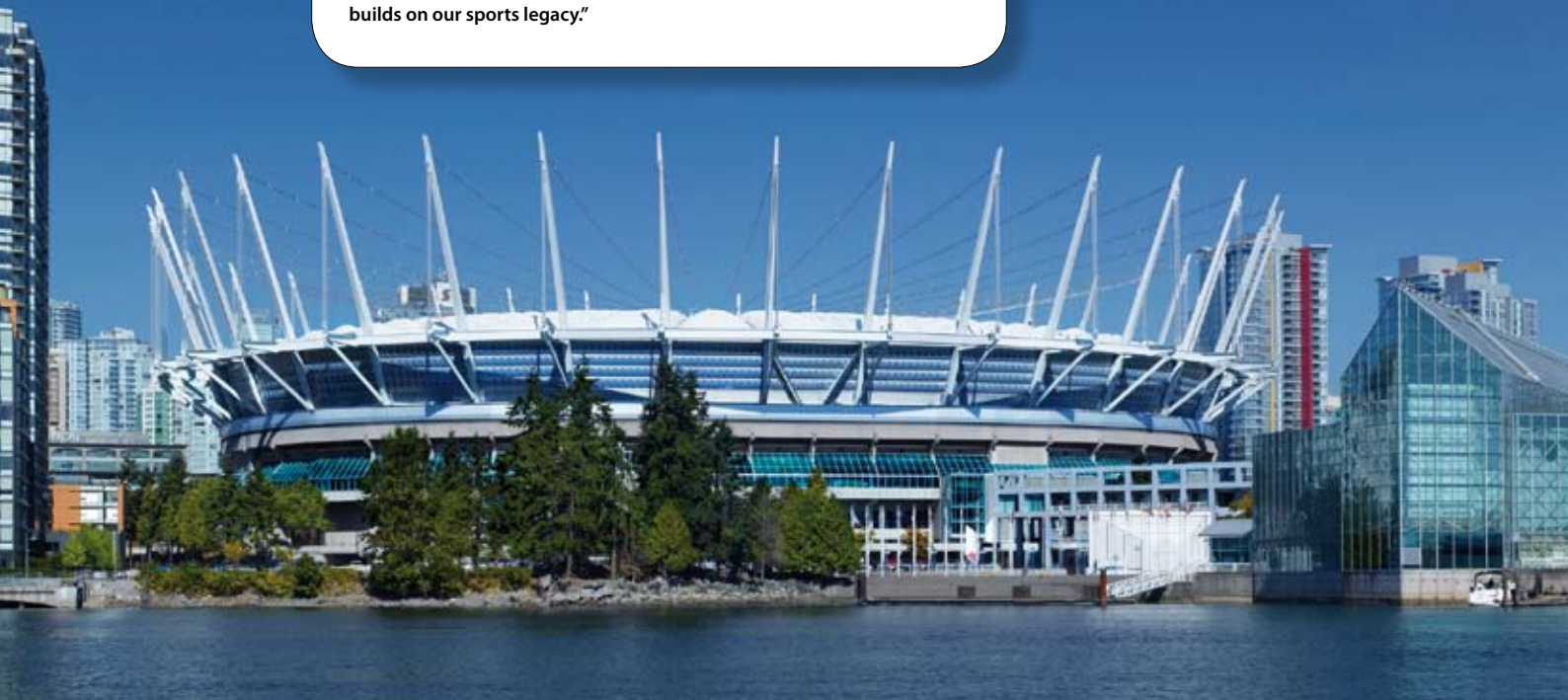
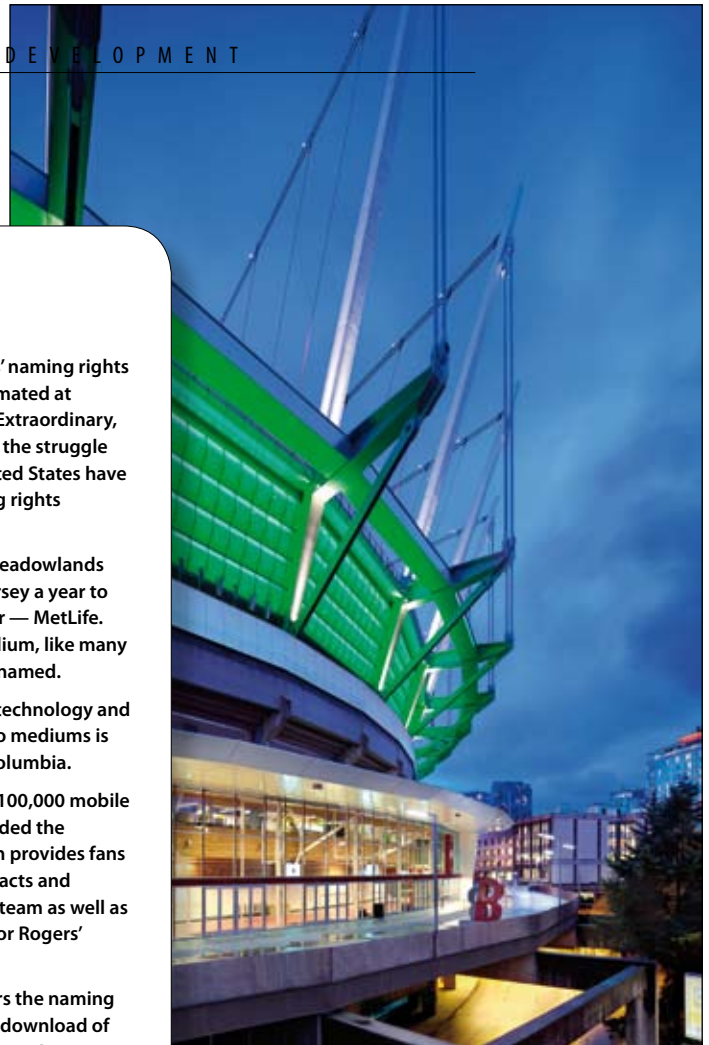
It has taken New Meadowlands Stadium in New Jersey a year to find its new partner — MetLife. And, Cowboys Stadium, like many others, remains unnamed.

The link to mobile technology and television and radio mediums is the key in British Columbia.

In 2010, King said, 100,000 mobile users had downloaded the Canucks app, which provides fans access to detailed facts and features about the team as well as exclusive content for Rogers' customers.

In 2011, with Rogers the naming rights sponsor, the download of the app jumped to nearly 500,000 for Apple, Blackberry and Android devices alone, providing additional revenues, and value to other advertising and sponsor partners.

Telus would not comment for this article. The company is currently the title sponsor of "Science World", a few blocks walk from the stadium.



BC Place Revitalisation: New Roof

BC Place opened in 1983 as the first domed stadium in Canada covered by the largest air-supported dome in the world. Twenty-five years later, as the end of the design service life of the air-roof was approaching and planning for the Vancouver's Olympic Winter Games was underway, it became clear to the owner, BC Pavilion Corporation, that action was needed to assure the stadium's continued utility and relevance. Revitalisation of the existing facility was clearly seen to be both economically and sustainably superior to new construction.

The project was phased such that many interior upgrades were completed for the 2010 Olympic Winter Games. The second phase of the project was realised in the limited time between BC Place's hosting of the Games ending in March 2010 and the 99th Grey Cup in November of 2011, a testament to all involved.

BC Place's new roof is the most visible manifestation of the revitalised stadium. The roof structure creates a striking new image for the 'dome' while dramatically improving the venue for field sports. The ability to open the roof as well as the new lower bowl canopy visual screens, were key to attracting the MLS Whitecaps.

The new roof is unprecedented. BC Place is the only example of an existing domed stadium having its dome replaced with a retractable roof. The new retractable roof radial cable truss supported by 36m by 47.5m tall perimeter masts is first of its type in North America. The roof's masts and compression ring are prominently featured, creating a new iconic image for the venue.

The new roof is designed to carry seven million kg of snow and a new centre-hung videoboard system, the second largest in North America, on clear spans of 227m x 186m, covering 40,000m². The centre 7,500m² of the roof retracts to transform the multipurpose dome to an open-air field sport venue. The new roof is entirely enveloped with tensioned membranes, the low mass of which is highly desirable in seismically active British Columbia.

The retractable roof consists of pneumatic cushions of TENARA fluorocarbon composite fabric deployed from the centre 'garage'. The roof is supported above a continuous 12.5m high clerestory of louvers and transparent ETFE film that greatly enhances the openness of the stadium interior. This, coupled with the high light transmission through the various membranes employed to clad the roof, creates a dramatic bright and airy interior with the roof open or closed.

The unique optical properties of the ETFE film 'glazing' of the clerestory are exploited with a digitally controlled LED lighting system. The clerestory LEDs and the roof's architectural multicoloured lighting animate the stadium and, when appropriate, allow BC Place to boldly assert its presence in Vancouver's skyline.

The BC Place revitalisation has created an exciting state-of-the-art facility from what was an aging building at half the cost of new build. The new roof is a key element in this transformation.

Written by: David Campbell P.Eng., P.E., is President of Geiger Engineers and leader of the design and engineering team responsible for the new roof at BC Place.




MAKEOVER MASTERCLASS — PART II

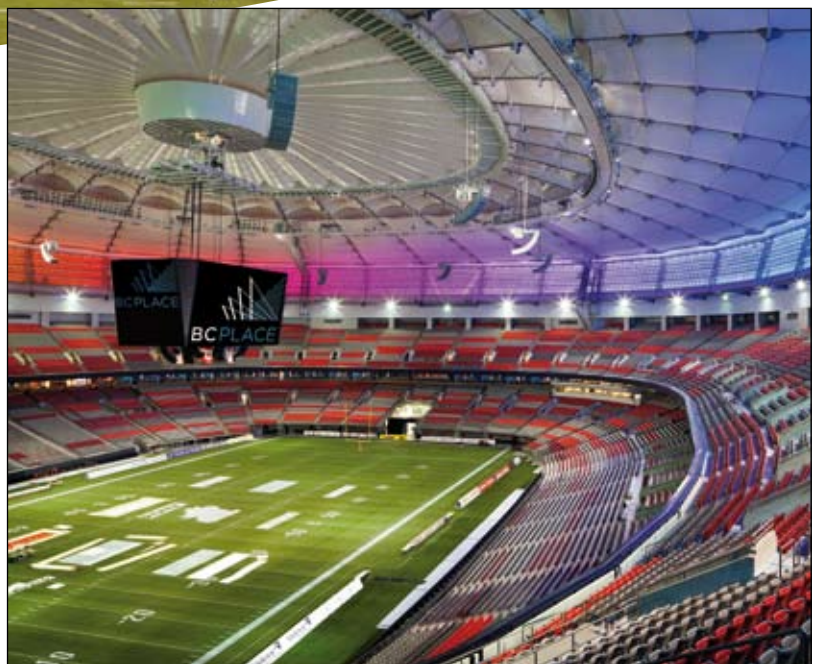




and Vancouver Whitecaps FC — games and the four-day BC Home & Design Show 2012.

Revealing over 7,500sqm of clear blue sky, the new retractable roof has turned BC Place into a year-round, open-air facility, and become a new architectural signature for the province.

The cable-supported roof lets stadium management tailor the atmosphere for any event — from summer festivals in the sun, to football games under the stars, to indoor exhibitions, all comfortably protected from the rain and the transformation takes just twenty minutes. (For a closer look at the roof, download the BC Place Google Earth model.) Top to bottom, the project is an outstanding landmark for a new generation of Vancouverites and fans alike, as well as for the country of Canada. 



ICON Venue Group's Role on the new BC Place

ICON Venue Group, at the request of the Vancouver Whitecaps Football Club, held a consultant role during the reconstruction and upgrade of BC Place in Vancouver, British Columbia from 2010 through the end of 2011.

Having served as Owner's Representative for eight of the last thirteen MLS stadiums built since 2002, ICON was able to lend soccer-specific stadium experience to the reconstruction of BC Place to suit MLS soccer in the large multipurpose stadium.

While ICON served in many capacities, two of its main focus areas were to ensure that the state-of-the-art 'house reduction' curtain was engineered, fabricated, and installed to provide the intimacy of a smaller venue for the Whitecaps home MLS matches, and to see that the new sports field (as supplied by Polytan|STI) was best-in-class and would meet FIFA standards once installed.

With the Whitecaps being a tenant at BC Place, the team felt it needed to have MLS facility expertise present during the critical times of the stadium renovation make sure that the overall stadium renovations would include features to provide for the optimum MLS fan experience. From the Whitecaps perspective, it was important to make a lasting impression on the fans from the very first home match at the end of September 2011. By all accounts, the house reduction system met not only the Whitecaps expectations, but the MLS fans were ecstatic over the intimate feel of BC Place for soccer matches.

Parallel with the house reduction curtain process, ICON was intensely involved with the selection process and installation of the sports field playing surface. The new turf product had to be acceptable to both the Whitecaps and the BC Lions Football Team who share the facilities. Ultimately, the sports field met FIFA standards in late 2011 after only four matches, which was an unprecedented time period for such certification.

ICON also was involved early with the Whitecaps and BC Place management on research and investigation of retractable sideline seating where the team offers premium seating products. ICON was able to assist the team with selection of the proper adaptable and durable/removable systems. (See 'SEDA at BC Place' sidebar.)

MAKEOVER MASTERCLASS

- PART II

Modernised to World-Class Standards

In Phase One of the stadium renewal, the washrooms, access ramps, concourses, and concessions were all modernised for more comfort and more choice, better service and better accessibility for everyone.

At the same time, the 50 private guest suites were renovated and some 1,300 premium Club Seats were introduced, along with two new Club Lounges to service them.

The new retractable roof over the stadium is truly a technological marvel and has essentially transformed British Columbia's largest and most versatile event venue into a whole new place. The new cable-supported fabric roof is the largest of its kind in the world — designed and engineered for Vancouver's climate, following rigorous engineering and architectural studies. Engineered to handle even a "one-in-one-hundred-year" snowstorm, it





BC Place: Quick Roof Facts

- The blue-sky opening is 100m by 85m — the same size as the field below.
- The fabric roof section retracts into the centre of the opening, where it's hidden inside of a pod above the videoboard
- Each of the support masts is 47m tall. All together, the structure is like eighteen suspension bridges, each around 200m long.
- The new roof is much more energy efficient than the original, saving 25% on energy costs (or about CAD\$350,000 per year).

will be able to support up to seven million kilograms (7,000 tonnes) of snow. But most importantly, BC Place is now able to hold world-class events in comfort with a year-round schedule for the first time ever. And that allows BC Place to contribute even more to British Columbia's economy — by boosting economic activity from approximately CAN\$58m per year in the past, to more than CAN\$100m today and into the future.

One major new feature inside the stadium is the new four-sided electronic video scoreboard system. The 100,000-pound unit, which can be raised or lowered, depending on event and game requirements, boasts two 68ft by 38ft HD video screens. These screens are the second largest centre-hung screens in all of North America behind Cowboys Stadium in Texas, and cover an area equivalent to 450 42-inch flat screen televisions.

The new state-of-the-art sound system features loud-speaker arrays mounted from above on video board displays and under the balconies. Sound-absorbing panels near the roofline have been installed to reduce sound reflection in the open-air configuration. The new and brighter lighting system provides illumination required by HD television broadcasts.

New seats measure 22-inches wide, 3 to 4-inches wider than the previous seats, and come in four colours, each with their own cup-holder. As for Premium club seats, they have cushions, and sideline seats are fully padded.

Patrons can easily follow all of the action from their mobile devices from one of 800 WiFi points located throughout the stadium. Ticket scanners and concession stand registers will utilise these points as well.



**MAKEOVER
MASTERCLASS**
— PART II



SEDA at BC Place



A big part of the BC Place reconstruction was figuring out a way to make the seating and field turn around as quickly and effectively as possible to try to bring more events to the venue. SEDA was one of the few companies approached with the problem of the old building, in which sections of up to 25 rows had to be pulled out through the exits, and stored on the outside of the facility, causing traffic, and temporary road closures in downtown Vancouver each time this tedious task had to be performed.

SEDA approached the problem as any other, fully customised to this particular client's needs. SEDA's engineers tried a few different ways of dealing with the situation, resulting in a solution much more storage space efficient than before.

SEDA kept the size of the stand the same, twenty-five rows, but made the entire unit automated, retractable, easily lowered, and movable by means of an air cushion system. The sections are now divided into systems ranging from rows 1-17 and 18-25. The reason for the two sections is a spindle system incorporated in the back section, allowing the system to lower underneath the concrete ceiling, and be easily moved into storage (which is now inside the facility). The seats fold down at the press of a button, and the system retracts at the press of another, making the turn over possible in a very short period of time.

BC Place can now host all kinds of different events with little scheduling and traffic conflict when it comes to the change over; making this downtown Vancouver facility more efficient than it was before. SEDA is very proud to be a part of that and can therefore now check off another completely customised job with a happy customer.

MAKEOVER MASTERCLASS - PART II

Fully Multifunctional

As part of the redevelopment of BC Place, the owners PavCo, purchased terracover™ by Terraplas plc to replace their nearly ten year old original terracover® system.

This allows them to be truly multifunctional and in the first two months, as well as the Vancouver Whitecaps playing numerous soccer games, the venue also hosted Monster Trucks, (see pictures of setup and event itself), a Boat Show, the BC Home & Design Show, and the Roger Waters THE WALL Live concert.

After a rigorous RFP process the Georgia Dome have followed suit and are replacing their terracover™ system with the new vertical locking terracover™, which is due for delivery at the end of August 2012.

Northern Lights Display

The new BC Place has quickly become a unique icon, the newly recognisable landmark of Vancouver's skyline, and a place of pride for all British Columbians. Adding to the excitement is a new lighting effects system, which not only adds to the stadium architecturally, but also allows BC Place to 'come alive' both inside and out, enhancing the overall guest experience.

This new and sophisticated integrated lighting system utilises energy-efficient LED lights to display an infinite array of static colour or moving colour designs atop, and on the sides of, the new BC Place. The more than nine acres of roof, the clear façade panels on the side of the building, and the roof's support masts all provide an incredible canvas for lighting the stadium at night.

The new BC Place roof covers an area of approximate-



ly 38,000sqm. The stadium roof façade (or clerestory) — known as the Northern Lights Display — utilises 1,700 ETFE panels, stacked four rows high, and 6,800 linear feet of energy-efficient LED lights to create customisable lighting displays.

ETFE is a semi-transparent material that allows sunlight into the stadium during the day and is also embedded with thousands of tiny metal dots called “frits” that reflect the light from the LED displays, allowing BC Place to become a glowing landmark that can be seen far and wide after dark. Together, the new BC Place roof and the Northern Lights Display enable a wide range of both static and dynamic programming, with more than 26,000 individual programmable lighting elements.

BC Place is illuminated from 5.30am to sunrise in the morning, and from sunset to 10pm most nights. On event nights, the roof and Northern Lights Display remain lit until the conclusion of the event.

The new BC Place is nothing short of a makeover master-class for other Stadium and Facility Managers. ✨

