

## Beijing 2008 – Technologies behind the Olympic

05 Sep 08

**Sherman Tan**

### The Mammoth Task

The world was awestruck by the 16-day Olympic in Beijing. For the spectators, 5,000 years of Chinese history, traditions and pageantry were unfolded in front of their eyes against the backdrop of the world best athletes in their national costume, 80 heads of states and representatives from 204 states and countries at the opening ceremony held on 08-08-2008 at precisely 2008 hours.

Behind the grand spectacle of human potential and more than 15,000 non-sports participants; there lies an entourage of scientists, technologists, builders, engineers, and technicians working behind the scene years ahead to support this mammoth event. Imagine the number of venues and events to cover include 31 Olympic venues, 28 sports with 302 events in Beijing, Qingdao, Hong Kong, Shanghai, Shenyang and Qinhuangdao.

### Olympic Innovations

Since the modern Olympics began in 1896, numerous companies have used the Olympic events to show case their latest technology and products. For the athletes, there are specially customised attire, energy drinks, health supplement and sport equipment. For the organizers, the core technology running and managing the entire event comprises the mission critical Games Management System, communication equipment, electronic displays/billboard and ticketing system just to name a few.

Companies from a host of industries—architecture, technology, food production, and more—have benefited from working with athletes or local Olympic organizing committees to develop fresh ideas. For instance, at the Squaw Valley Winter Olympics in 1960, IBM showcased the first computerized scoring using its mainframe system. Four years later, in 1964 at the Tokyo Olympic Games, the Seiko Group was selected to be the official time keeper. For this event, the first electronic printer was developed by the Shinshu Seiki Co. to print out times from their Seiko time pieces. This first electronic printer evolved later to become the EP-101 model in 1975 and subsequently, into the company that produces the wide range of Epson printers that we use today.

Some innovations happen at a much smaller scale. For instance, the PowerBar a Nestle subsidiary makes vitamin-enhanced energy foods for athletes, has come up with a new, user-friendly package for an energy liquid that Nestle says can boost cyclists' speeds. To minimise the mess from squeezing sticky liquids out of foil pouches, Nestle researches developed the bite-size gel casings that make it easier for athletes to handle these energy food minus the mess.

### Innovations at Beijing 2008

Although the online ticketing website crashed within hours during the opening day due to the huge number of hits; the first ever Radio Frequency ID (RFID)-embedded Olympic ticket in history was used. Driven by the need to eliminate counterfeit tickets, the Beijing organizing committee has commissioned a French-Chinese joint-venture company, ASK-TongFang to make tickets with tiny computer chips that can hold various data such as the seat number, bearer's name, passport or ID card number, and other details which are important information for the opening and closing ceremony.

In its bid to push its fledgling TD-SCDMA (Time Division-Synchronous Code Division Multiple Access), a variation of a new 3G mobile standard as opposed to the more established CDMA2000 and UMTS standard, China has asked Samsung to launch the world's first commercial TD-SCDMA mobile phones that are equipped with more advanced WOW services. For the uninitiated, WOW or "Wireless Olympic Works" service is a mobile multimedia phone application developed by Samsung and was first introduced at the 2006 Torino Winter Olympic Games. WOW services allowed staff of the organizing committee, athletes and media personnel to access various online services such as events, schedules, results, weather conditions of venues, receive messages from organizing committee and more. For this event, 15,000 new and exclusive Samsung F480 were given to affiliates of the Beijing Olympic Organising Committee.

Given the billions of dollars Beijing has spent sprucing up for the Games, many of the Olympic venues have become innovation showcases. The main stadium, by Swiss architects Herzog & de Meuron, features an unorthodox steel structure that makes it look like a giant bird's nest. That spurred Chinese construction companies to learn hyper-precise welding techniques they had never attempted before.

There are 3 themes in this year Olympics and next to the "Hi-Tech Olympics" and "People's Olympics" is the "Green Olympics". To live up to this theme, the National Aquatics Center, nicknamed the "Water Cube", is clad in a shimmering blue plastic coating that looks like bubbles. It traps 90% of the solar energy that hits the structure to keep the building warm, so the facility uses less energy to heat its five pools. At the basketball stadium, an aluminum alloy skin reflects most of the sun's rays, so the gym's cooling system will use less than half the energy of a more conventional structure.

#### **Commercial Laboratories**

The Olympics are an unparalleled marketing platform, and companies see innovation as a way to grab the public's attention. For instance, Speedo, got so much media coverage at the 2004 Athens Games for its full-body swimsuits that it decided not to spend on advertising related to the Beijing Olympics. While the decision was a risky one, swimmers wearing the updated LZR Racer had broken several world records. This alone generated so much free media coverage than the company has previously envisaged.

Another company, General Electric is a key believer of pushing innovation related marketing activities through the Olympics. So far, the company has benefited from more than 400 Olympic-related projects. For many, the spirit of the Olympics will live on—not only the spectacle but also the fierce competition that will bring about new profitable and innovative products to the market.

*The writer is the Principal Consultant & Director at Innovar Pte Ltd ([www.innovar.com.sg](http://www.innovar.com.sg)).*