

**OUTDOOR COOLING INNOVATION MADE IN SINGAPORE BY ST ENGINEERING AND SP GROUP FOR NATIONAL DAY PARADE**

**Singapore, 27 July 2017** – In a first for Singapore’s National Day Parade (NDP), segments of audiences will enjoy cool air comfort outdoors at the Floating Platform, through a made-in-Singapore innovation that ST Engineering and SP Group (SP) have created.

This engineering solution builds on ST Engineering’s Airbitat Smart Cooler’s revolutionary deep cooling technology and SP’s underground district cooling network at Marina Bay that provides chilled water for air-conditioning of buildings in Marina Bay. This solution functions on chilled water running from SP’s same underground system, which is more energy-efficient than electricity-powered cooling devices. This low-cost outdoor cooling saves 90 per cent in energy consumption compared to conventional air-conditioning.

Launched at the NDP Preview show on Saturday 29 July, there are 29 sets at and around the Floating Platform. In this first roll-out, the sets will be placed closest to the audience sections occupied by spectators with special needs, such as those in wheelchairs, and at areas where spectator queues may form.

This unprecedented system unlocks the potential of urban spaces in land-scarce Singapore and transforms the way communities live, work and play. It also demonstrates how industry collaboration can scale up urban solutions quickly and actively deploy innovative concepts to help build an environmentally sustainable Singapore.

Gareth Tang, General Manager of Innosparks, an Open Lab by ST Engineering, said, “We believe in solving complex problems of society through engineering. This innovative collaboration is one way ST Engineering pushes boundaries to create breakthrough, energy-efficient and sustainable solutions to improve daily lives.”

Managing Director of SP Group’s Singapore District Cooling, Jimmy Khoo, said, “This game-changing technology makes outdoor cooling viable in Singapore’s climate. Tapping on SP Group’s underground district cooling system that serves several buildings in Marina Bay, we are developing sustainable solutions that will help consumers save energy and cost.”

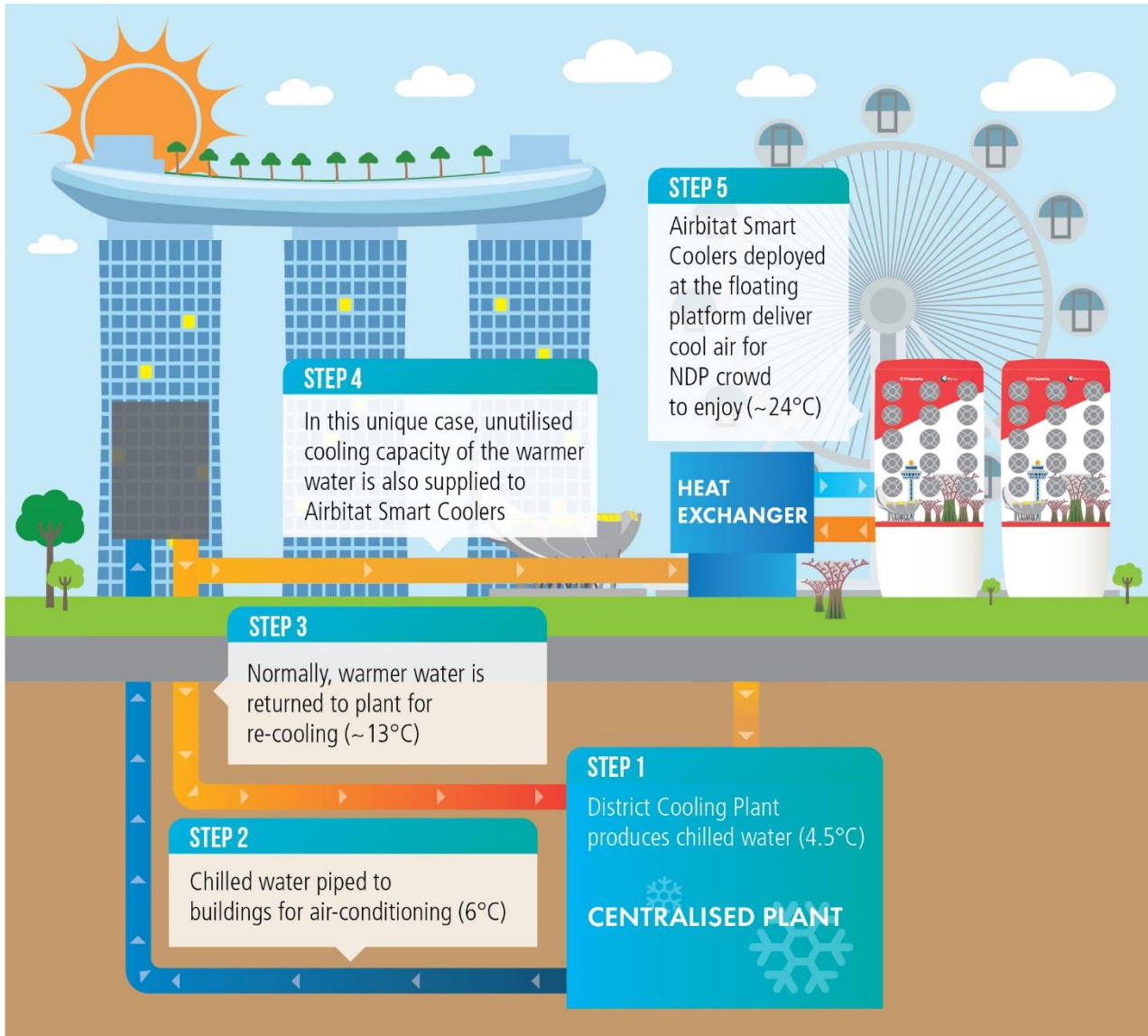
## **About ST Engineering**

ST Engineering (Singapore Technologies Engineering Ltd) is an integrated defence and engineering group specialising in the aerospace, electronics, land systems and marine sectors. It has global presence with offices in Asia, the Americas, Europe and the Middle East and employs about 22,000 employees. Across the globe, its employees bring innovation and technology together to create smart engineering solutions for its customers in the defence, government and commercial segments. Headquartered in Singapore, ST Engineering reported revenue of S\$6.68b in FY2016 and ranks among the largest companies listed on the Singapore Exchange. It is a component stock of the FTSE Straits Times Index, MSCI Singapore and the SGX Sustainability Leaders Index. Please visit [www.stengg.com](http://www.stengg.com) for more information.

## **About SP Group**

SP Group is a leading energy utilities group in the Asia Pacific. It owns and operates electricity and gas transmission and distribution businesses in Singapore and Australia, and district cooling businesses in Singapore and China. SP Group is committed to providing customers with reliable and efficient energy utilities services. More than 1.5 million industrial, commercial and residential customers in Singapore benefit from SP Group's world-class transmission, distribution and market support services. These networks are amongst the most reliable and cost-effective world-wide. For more information, please visit [spgroup.com.sg](http://spgroup.com.sg) or follow us on Facebook at [fb.com/SPGroupSG](https://fb.com/SPGroupSG).

Outdoor Cooling Innovation By ST Engineering & SP Group – How It Works



### **The Airbitat Smart Cooler**

The Airbitat Smart Cooler, created by Innosparks (an Open Lab by ST Engineering), is a proven product with an innovative two-stage cooling technology – it can save up to 80 percent energy when compared to the average air conditioner of an equivalent capacity. Airbitat is effective all-day and adapts intelligently to varying conditions throughout the day to deliver ultra-efficient cooling. Unlike conventional one-mode coolers, Airbitat's intelligent system detects the ambient environment and engages the right cooling mode to deliver the right level of thermal comfort. Most importantly, the Airbitat Smart Cooler is engineered to be eco-friendly, with negligible waste heat generation when compared to conventional air conditioning, and energy-smart as well. A typical 8-hour cooling cycle registers a combined energy and water cost as low as \$2.50 a day.

### **Singapore District Cooling's Underground System**

Singapore District Cooling (SDC) operates the world's largest underground district cooling system that provides reliable and efficient air conditioning 24/7, 365 days to 23 iconic buildings in the Marina Bay area. District cooling contributes to a sustainable Singapore. The system saves as much as 40 per cent in electricity consumption, and reduces 34,500 tonnes carbon dioxide emissions annually – equivalent to removing 10,000 cars from Singapore's roads. The electricity savings in the Marina Bay area are equivalent to powering 23,718 3-room HDB flats for a year. Engineering and design makes SDC's operations unique, enabling this huge industrial facility to be housed underground, freeing up space for more important use in land-scarce Singapore. Overseas, SDC is building a district cooling system for CapitalLand's Raffles City Chongqing. Once completed, the system will enable the development to save 50 per cent in energy savings and reduce utility costs by about S\$30 million over the next 20 years.