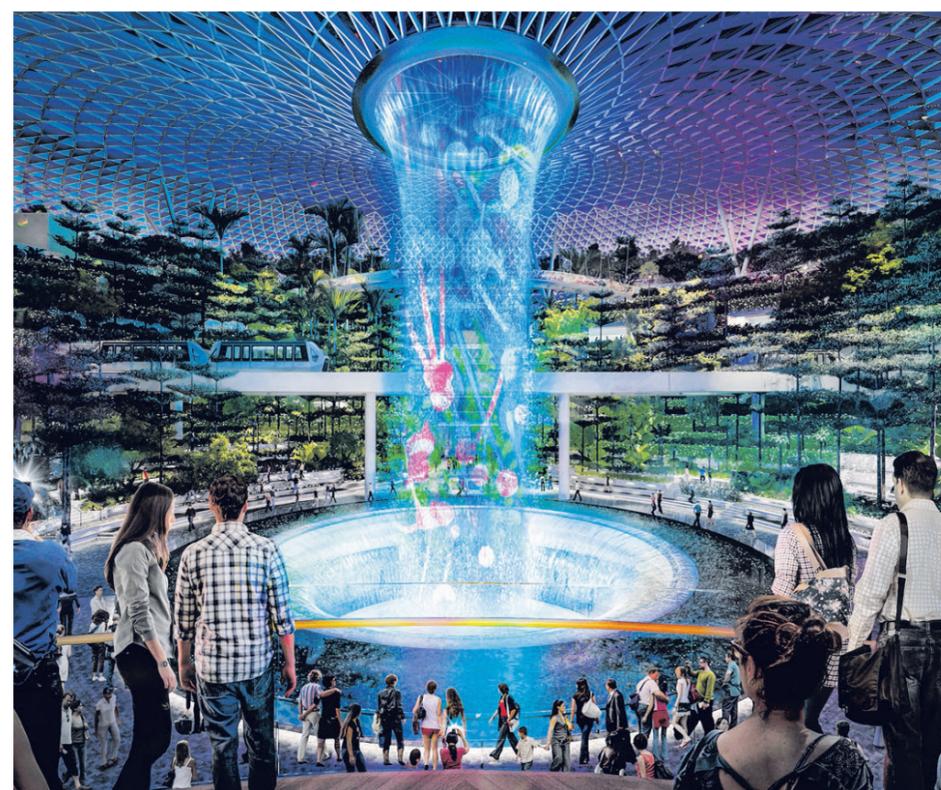
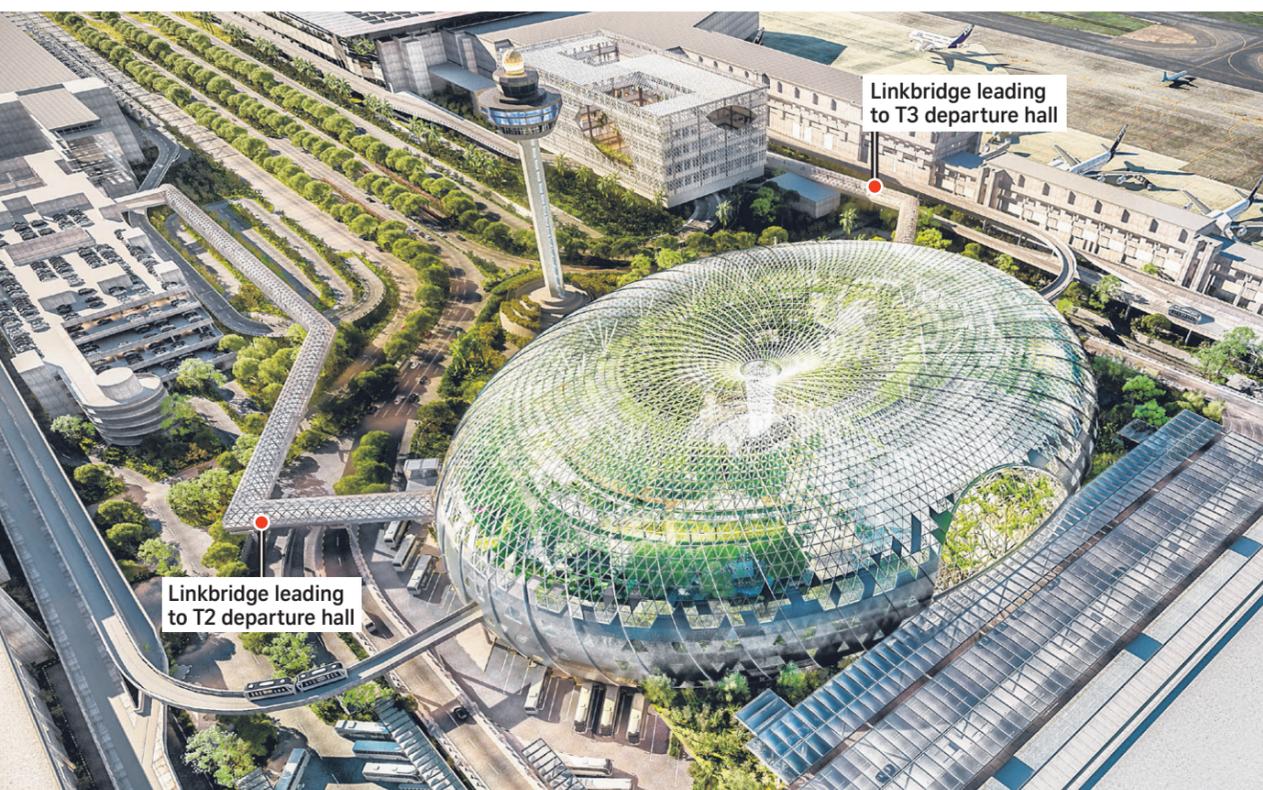
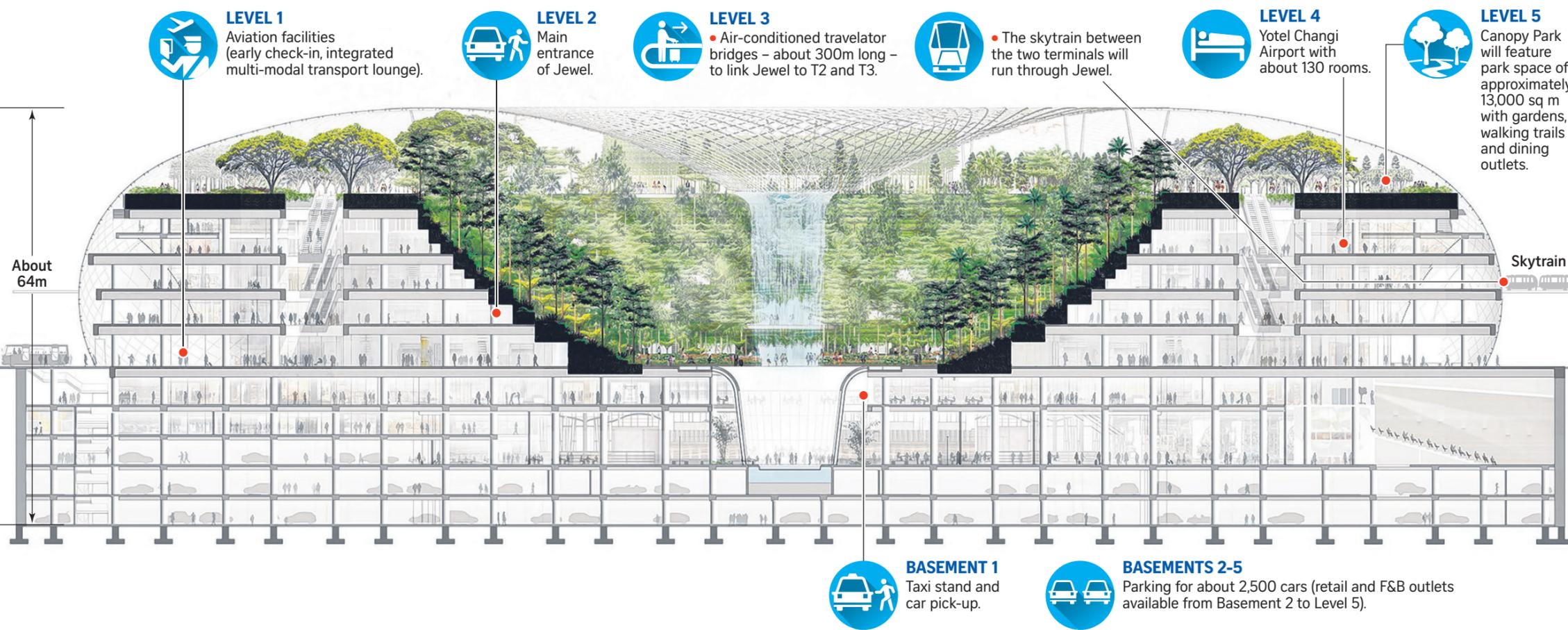


# Peering into Changi's Jewel

Jewel Changi Airport, a five-storey development with five basement floors, is on track to open in early 2019. Being built in front of Terminal 1, it will offer travellers a plethora of shopping and dining options and visual treats, including a 40m indoor waterfall. **Karamjit Kaur and Lim Yong** take a closer look.



## CROSS-SECTIONAL VIEW



<b>Project cost</b> \$1.7 billion	<b>Total site</b> 3.5ha	<b>Total gross floor area</b> 134,000 sq m	<b>Facilities for airport operations</b> 18,500 sq m	<b>Indoor gardens and attractions</b> 21,700 sq m	<b>Retail</b> 53,800 sq m (about 300 shops and restaurants)

## UNIQUE FEATURES

- Forest Valley**  
A five-storey garden with about 2,500 trees and 100,000 shrubs from countries like Brazil, Australia, Thailand and America.
- 40m indoor waterfall**  
Transforms into an enchanting light and sound show with special lighting effects in the evenings.

## CONSTRUCTION FACTS

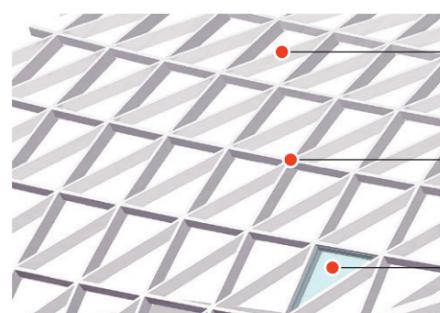
### Jewel's roof facade

A contiguous grid shell that weighs 4,000 tonnes, equivalent to the weight of about six Airbus 380 planes.

The roof spans an area of 23,410 sq m – roughly the floor space of 213 HDB five-room flats.

It is 200m at its longest and 150m at its widest, and supported by a ring of 14 12m-tall tree-like columns.

The facade is made up of:



Close to 18,000 pieces of steel beams.

Over 6,000 steel nodes – pieces that connect the steel beams and glass panels

Over 9,600 pieces of specially manufactured glass.

- The glass, manufactured in the US, can transmit light – for plant growth – while reducing heat gain to ensure sustainable cooling of the interior.
- The entire study, engineering and shortlisting of the glass material alone took nearly two years to complete.

## CONSTRUCTION TIMELINE

- May 2013 to Oct 2014** Design development and calling of tender
- Oct 2014** Award of main contractor
- Dec 2014** Groundbreaking and start of construction works
- Oct 2016** Completion of all structural works from basements 1 to 5
- Fourth quarter 2018** Construction works expected to be completed
- Early 2019** Opening