

## Project Report

Overnight Reconstruction with Rapid-Hardening Concrete  
Concretum® Q-FLASH 2/20



# Istanbul Airport Sabiha Gökçen SAW



Runway



Taxiways



Apron







**> 6'000 m<sup>3</sup>**

were utilized using  
Concretum® Q-FLASH 2/20

**18'000 m<sup>2</sup>**

An area of 18'000 m<sup>2</sup> was successfully reconstructed within 4 years, with the project being efficiently completed in just 6 months through nightwork.

**7 slabs**

Nightly, an average of 7 slabs, each measuring 3.75 meters by 5 meters, were systematically replaced, effectively covering an approximate area of 130 m<sup>2</sup>.

## Project Overview

Concretum® Q-FLASH 2/20, the latest generation rapid-hardening concrete, was employed for the overnight reconstruction of the runway and taxiways at Istanbul Sabiha Gökçen Airport.

With its comparable production, transportation, and processing methods to conventional concrete, Concretum® Q-FLASH 2/20 offered an efficient repair solution for the severe damages without the need for prolonged closure times.

The exceptional suitability of Concretum® Q-FLASH 2/20 was evident as it achieved the required compressive strength of 20 N/mm<sup>2</sup>, enabling aircraft to land on the newly poured slabs within just 1–2 hour after placement. Leveraging this rapid-hardening characteristic, damaged areas on the runway surface were systematically replaced during brief five-hour overnight closures.



Project film

The project, carried out from 2018 to 2022, successfully replaced a total area of 18'000 m<sup>2</sup> of the runway without causing any disruption to airport operations. This accomplishment highlights the effectiveness and compatibility of Concretum® Q-FLASH 2/20, ensuring the timely completion of the reconstruction while maintaining seamless airport functionality.

### CONCRETE SPECIFICATIONS

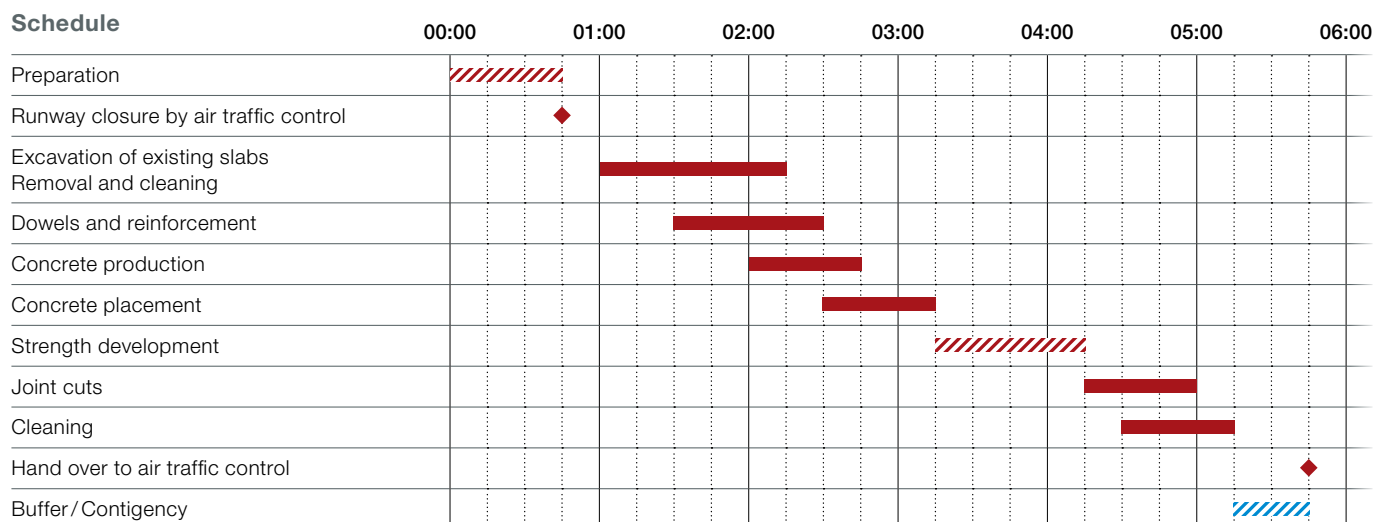
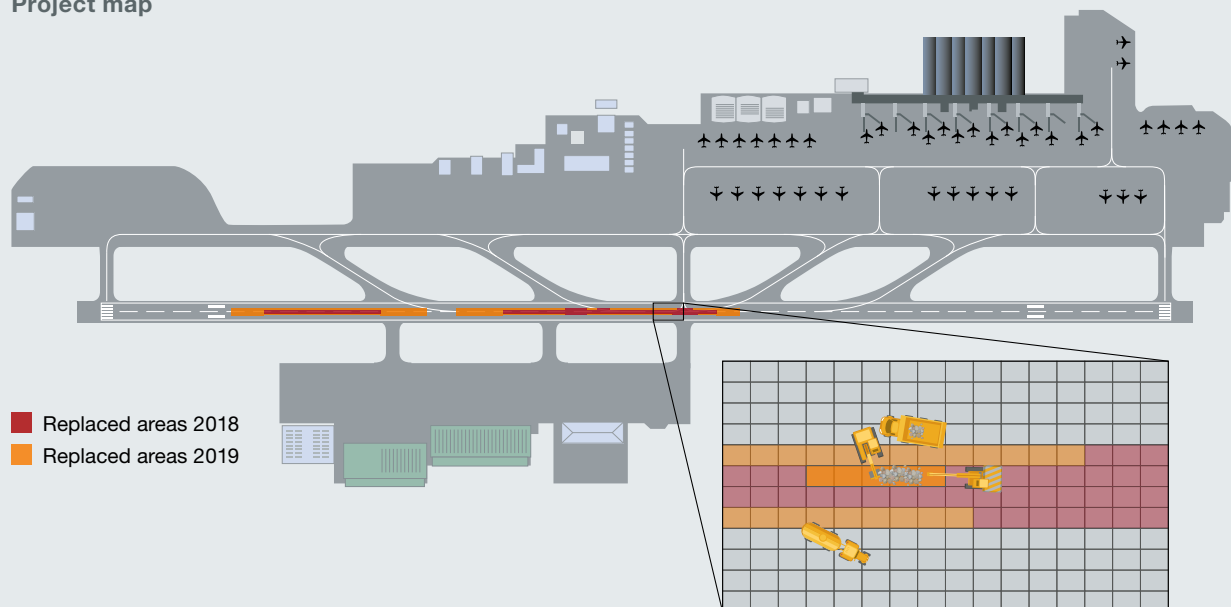
Product	Concretum® Q-FLASH 2/20
Exposure class	XC4, XD3, XF4
Strength class	C50/60
Consistency class	Slump: approx. 75–100 mm
Max. aggregate size	approx. 37 mm (crushed)
ASR	resistant

### CONCRETE PROPERTIES

Compressive strength 1 h after setting	18–22 N/mm <sup>2</sup>
Compressive strength 2 h after setting	26–30 N/mm <sup>2</sup>
Shrinkage $\epsilon_{SH}$	≤ 0.25 ‰
Heat of hydration	210 J/g (equivalent to low heat cement)
Moisture 3 h after setting	≤ 4 CM-%

### Project timeline







**YOUR PARTNER WORLDWIDE:**

**Concretum Construction Science AG**  
Steinackerstrasse 56  
CH-8302 Kloten  
Switzerland

Phone +41 44 445 13 46  
info@concretum.com

[www.concretum.com](http://www.concretum.com)

**OUR PROJECT PARTNER:**

**YBT Construction and Trade. Ltd.**  
Çobançesme Mh. Sanayi Cd. No:44  
Nish Istanbul Residence D Blok Kat 13/151  
Bahçelievler-Istanbul  
Turkey

Phone +90 212 6036261  
info@ybtinsaat.com

[www.ybtinsaat.com](http://www.ybtinsaat.com)

