

Founders' Honors 2026

The parliamentary complex of Nusantara

Project summary

Organization:
PT Hutama Karya (Persero)

Solution:
Construction

Location:
Nusantara, East Kalimantan, Indonesia

Project phase:
Construction

Expected completion date:
December 23, 2027

Key results

- **Up to 83% less site validation time.**
- **About 4,090 working hours saved.**
- **About 38.5% shorter hauling distances.**
- **About 61,181 liters of fuel saved.**

Project

PT Hutama Karya, the main contractor for five parliamentary buildings and supporting facilities in Nusantara, managed a 418,106 square meter site where earthworks constantly changed topography, stockyards, access paths, and work zones. Conventional planning could not connect reality capture, logistics, sequencing, and site validation quickly enough for the multizone construction environment.

Results

Using iTwin® Capture, AI, and SYNCHRO™ 4D, PT Hutama Karya converted current site conditions into orthophoto data, generated mobilization scenarios, and validated selected routes against active construction constraints. The team reports up to 83% less site validation time, about 4,090 working hours saved, 38.5% shorter hauling distances, 61,181 liters of fuel saved, and 164,411.3 kilograms of carbon emissions reduced.

Bentley software

- iTwin Capture
- SYNCHRO 4D



Site validation time fell by up to 83%, saving about 4,090 working hours.



Optimized routes saved about 61,181 liters of fuel.

Solution

Creating a digital twin of the project kept logistics aligned with changing site conditions.

- iTwin Capture converted current site conditions into orthophoto based reality data.
- AI-generated mobilization scenarios from terrain and equipment constraints.
- SYNCHRO 4D validated routes against active work zones and sequencing.
- Updated site data enabled planning to adapt across seven operational zones.

Facts

- PT Hutama Karya is constructing five parliamentary buildings and supporting facilities in Nusantara.
- The site covers 418,106 square meters and is divided into seven operational zones.
- Site validation time was reduced by up to 83%, saving about 4,090 working hours.
- Fuel savings reached about 61,181 liters and carbon emissions fell by 164,411.3 kilograms.

Find out more at Bentley.com
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