

Digital twins of cities and construction

A city on screen with a model of roads and utility networks, a project under construction stage by stage, and a flat before the building is completed. We build the first version from open data and bring it to a verifiable model on the client's data.

Open on a phone:

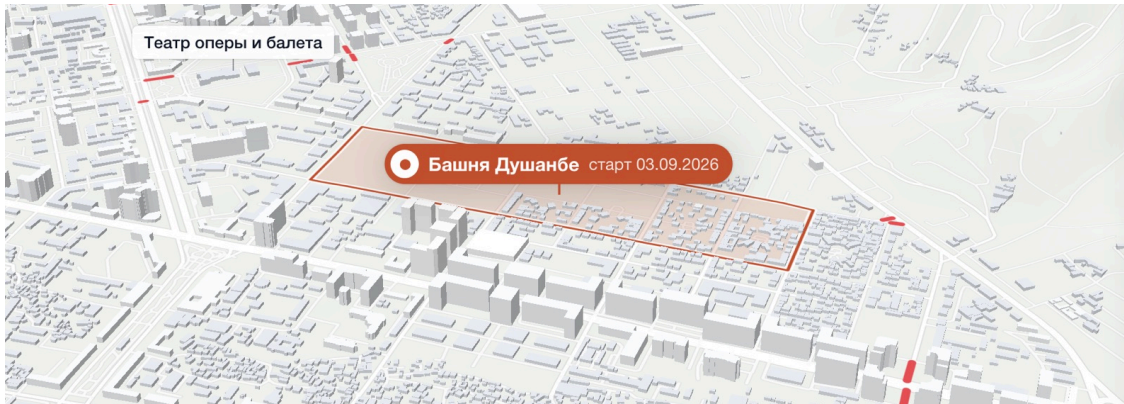
[**dvoynik.ordanio.ru/karakol/stroyka**](https://dvoynik.ordanio.ru/karakol/stroyka)

Dubai, JVC, best on a computer: [**dvoynik.ordanio.ru**](https://dvoynik.ordanio.ru)

Karakol, the Khan-Tengiri complex. Visualisation from open data, Blender. The complex is shown in full as designed, block positions are approximate. Phase one is built, phase two is at frame stage.



Two products: the city twin tests roads and networks, the construction twin shows a project stage by stage



City or district twin

Buildings, streets and terrain in 3D, traffic and network models, a “new complex occupied” scenario, construction monitoring from imagery, a chat over the data.

Examples: Dubai (Jumeirah Village Circle), Karakol, Dushanbe

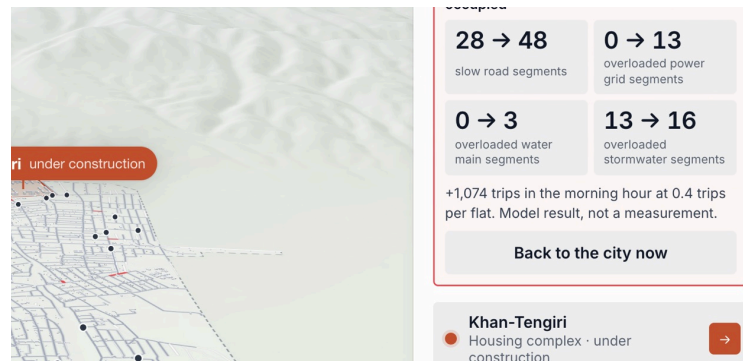


Construction project twin

The site on real terrain, a block in nine stages, a flat with its plan and utilities in the walls, a data passport: what comes from documents and what is typical.

Example: the Khan-Tengiri residential complex, Karakol

A developer uses the twin in three conversations: the city on load, buyers on the flat, investors on progress



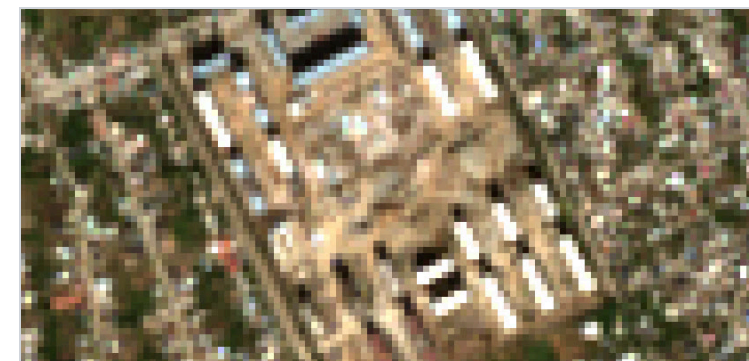
City

How many trips, how much water and power your complex adds, and which streets and networks will not cope. Figures come with assumptions, for the approval discussion.



Buyer

The flat before the building is completed: plan, window views, what is nearby, utilities in the walls. Opens by link on a phone.



Investor

Construction progress from dated imagery and documents: what is built by a date against the schedule.

Dubai, JVC: even with the 2024 bridge and Hessa Street widened in 2026, the model shows congestion at the district exit in the morning peak



Morning peak at the Hessa Street interchange, scene from the traffic model.

9.76 km² of Jumeirah Village Circle on open data, opened by link

DATA OpenStreetMap, RTA GTFS via Dubai Pulse

At the merge with Hessa Street, **3,243** vehicles per hour at 26 % of the speed limit

MODEL SUMO, morning peak, not checked against counts

The 700 m bridge to Hessa Street (2024) and the widening to 4 lanes in each direction (19 Apr 2026) are in the model; the bridge capacity of 3,200 vehicles per hour was used to calibrate it

DATA mediaoffice.ae, 21 Oct 2024 and 19 Apr 2026

Karakol was built from open data in two days: we produce this draft level on your project free of charge



Karakol, the Khan-Tengiri complex as designed, outlined in terracotta, block positions approximate. Built on 13–14 October 2026. dvoynik.ordanio.ru/karakol

20,397

buildings; most heights are estimated by type, and this is labelled

28 → 48

slow road segments in the morning peak after the complex is occupied, model

0 → 13

overloaded power grid segments after move-in, model

Dushanbe was built the same way: 38,058 buildings, the Dushanbe Tower site tied to the streets with an accuracy of about 15 m



Visualisation from open data, Blender

Dushanbe, the area of the future complex. The terracotta line in the render shows the earlier search zone for the project; the refined site outline is on the live screen. dvoynik.ordanio.ru/dushanbe

52 buildings announced, a 340 m tower, 6,160 flats

DATA Press service of the President of Tajikistan, 3 Sep 2026

Exposed soil on the site of the former Green Bazaar since 28 Aug 2026

ESTIMATE from Sentinel-2 imagery

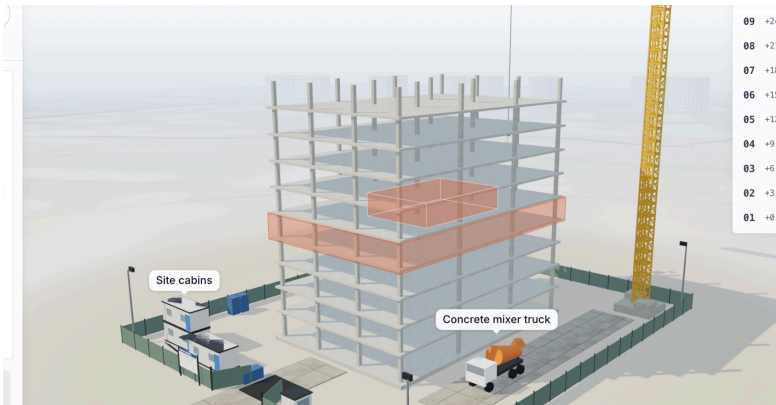
All flats occupied: 310 slow road segments instead of 205 on a notional traffic baseline

MODEL scenario, not checked against counts

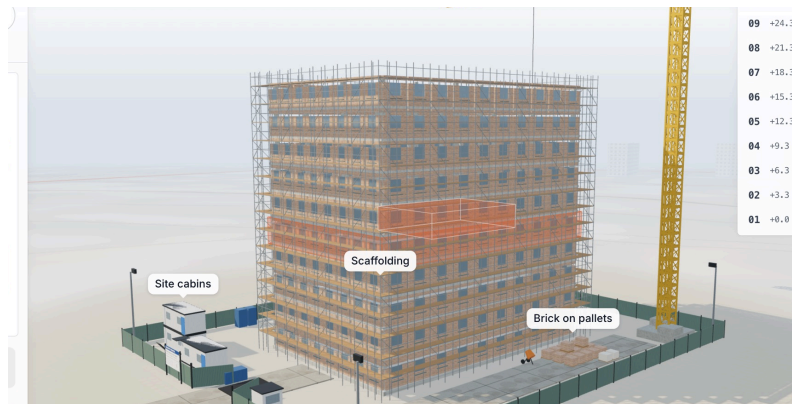
Khan-Tengiri: one block is shown in nine stages, from excavation to move-in, on the real terrain of the site



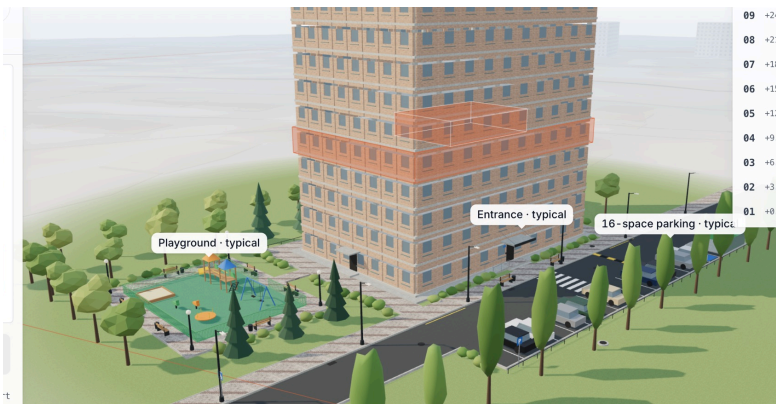
02 Excavation



04 Frame · on site now



05 Walls



09 Move-in

Block dimensions, number of floors and layout come from the developer's design. Stage durations, machinery and the yard are typical and labelled as such.

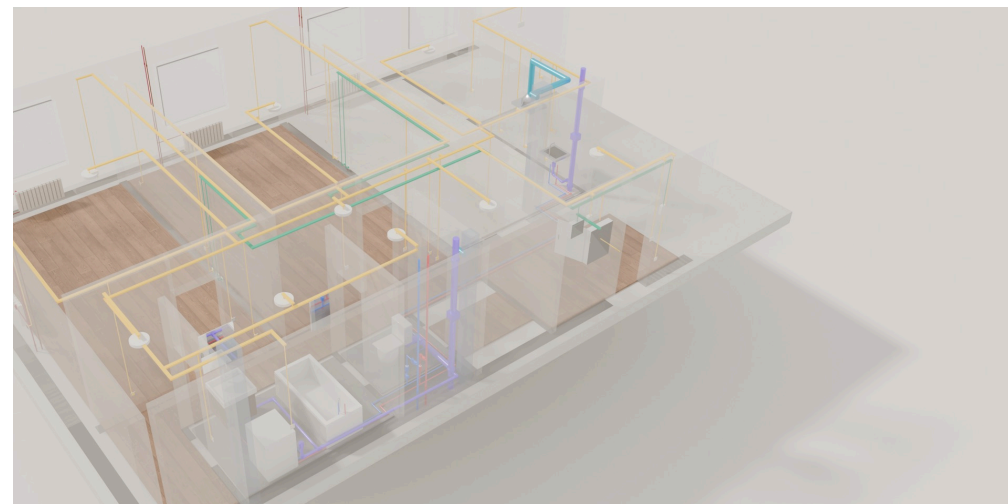
Actual site progress is marked separately: the image of 3 Oct 2026 shows frames without roofs.

[dvoynik.ordanio.ru/
karakol/stroyka](https://dvoynik.ordanio.ru/karakol/stroyka)

A flat can be shown to a buyer before the building is completed: the developer's plan, utilities in the walls, window views, what is nearby



Visualisation from the GIK plan: furniture and finishes are typical, utility connections follow the codes; GIK will provide the design.

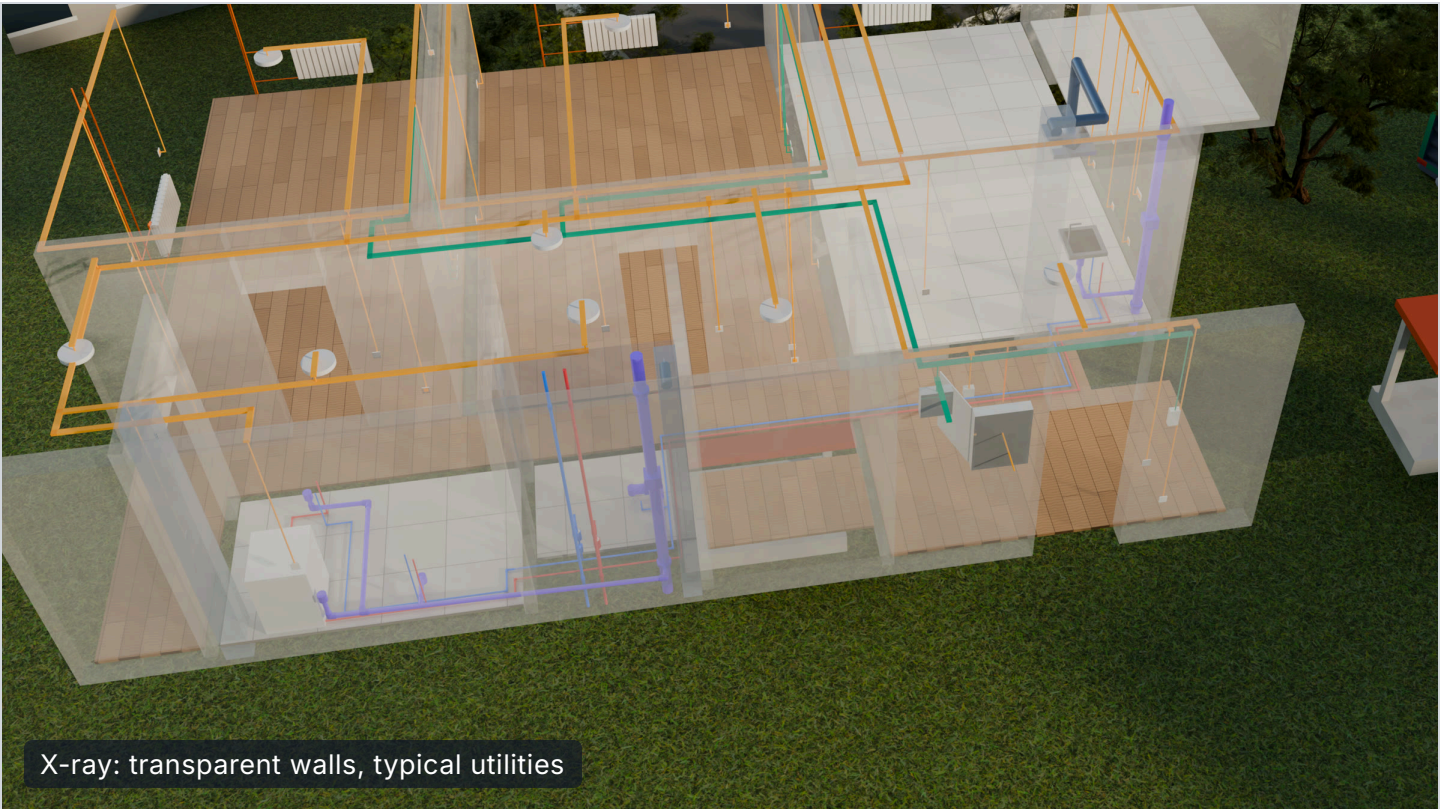


Visualisation from the GIK plan: furniture and finishes are typical, utility connections follow the codes; GIK will provide the design.

A 102.84 m² flat; room areas match the GIK plan. The page opens on a phone.

Next to the plan on screen: which way the windows face, what is within walking distance with minutes, and the list "What a buyer should check".

The flat's utilities follow a typical design: six systems inside the walls, each with fixtures, lengths and heights above the floor



X-ray: transparent walls, typical utilities

Visualisation from the GIK plan: furniture and finishes are typical, utility connections follow the codes; GIK will provide the design.

Visualisation in Blender Cycles, rendered 15 Oct 2026; the same networks are on the flat page under the system buttons. Codes: SP 31-110-2003, SP 30.13330.2020, SP 54.13330.2022 (Russian building codes) and typical HVAC practice. Electrical, water and HVAC designs are not publicly available.

Water	V1 cold and T3 hot: 5 fixtures, 2 meters, pipes 17.4 and 19.0 m
Sewerage	2 stacks Ø110, 5 fixtures, Ø50 branches 6.8 m and Ø110 1.1 m, slope 2–3 %
Electrical	29 sockets at 26 points, 8 switches, 10 light fittings, 10 panel circuits, 283 m of cable
Low-voltage	internet 2, TV 2, intercom 1, smoke detectors 4, leak detectors 3, 49 m of cable
Heating	T1 supply and T2 return: 4 radiators under windows, 4 two-pipe risers
Ventilation	3 vent ducts, 3 grilles, hood above the cooker

DATA walls and areas: GIK plan 2025 TYPICAL routes, fixtures, heights

Construction progress is checked against imagery: 31 dated images show where timing diverged from what was announced



Mar 2024
farmland



Nov 2024
first shells



Aug 2025
phase one handed over



May 2026
phase-two frames



Oct 2026
frames without roofs

Phase one	announced for December 2024, keys handed over on 8 Aug 2025
Phase two	announced for summer 2026 and for Q2 2027; as of 3 Oct 2026, frames without roofs

Four screens open by link today; we check the models against measurements on the first client's data

Link	What is there
dvoynik.ordanio.ru	Dubai, JVC: peak traffic, a new tower scenario, modelled networks, chat
dvoynik.ordanio.ru/karakol	Karakol: the city after the complex is occupied, construction monitoring, chat; Russian, Kyrgyz, English
.../karakol/stroyka	Khan-Tengiri: nine block stages, the flat, the data passport
dvoynik.ordanio.ru/dushanbe	Dushanbe: the city, the Dushanbe Tower site, traffic and networks after move-in; Russian only

What is not there yet. The twins have no paying clients yet: Dubai, Karakol and Dushanbe were built by us from open data, without an order. Traffic and network models have not been checked against measurements; that is done on the client's data. No drone survey of a site has been done yet: the processing pipeline was run on open video of another site and did not reach presentation quality there. The Kyrgyz translation is machine-made. The screens have not been tested on a physical phone, only in emulation.

The first step is free: a two-day demo on your project or a part of your district

01

Demo

Free, 2 days. Draft quality, with a watermark.

02

Contract

District, city or project per the price list, 50 % prepayment. The client's data stays with the client.

03

Work

Timing per the price list: from 10 working days to 10 weeks.

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Demonstration

dvoynik.ordanio.ru/karakol/stroyka

construction, on a phone

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Dubai, best on a computer



Dushanbe. Visualisation from open data, Blender