

ObliMapper

Actionable Intelligence at the Push of a Button

WHAT IT IS

ObliMapper

With its 360 degree view of an area, ObliMapper transforms images into accurate, meaningful and actionable visual intelligence



**OFF-THE-SHELF
DRONES**



**HIGH DATA
SECURITY**



**OFFLINE IN
COMBAT**

**IMAGE
CAPTURE**

**IMAGE
HANDLING**

**IMAGE
ANALYSIS**

**COMBAT PROVEN FOR THE
PAST 20 YEARS**

THE LEGACY CONTINUES

Not new to oblique. We defined it.

Thirty years of oblique analysis — from operational software to a global licence to today's drone workflow.

1996

2006

2007

TODAY

Oblivision developed by IDAN.
Battlefield-tested.

Pictometry licenses Oblivision
for exclusive worldwide
distribution.

Joint patent filed.
US 8,531,472 granted 2013;
inventors Joseph G. Freund, Ran Gal.

the same oblique-first
analysis, on drone imagery.

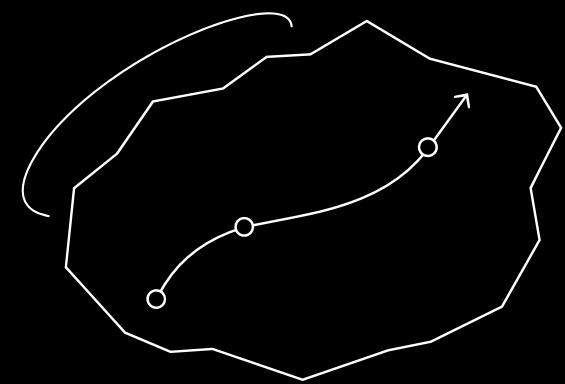
IDAN DID NOT ENTER OBLIQUE IMAGERY AFTER IT BECAME FASHIONABLE.

Four steps, one operator

No survey team, no geospatial cell, no connection at any stage.

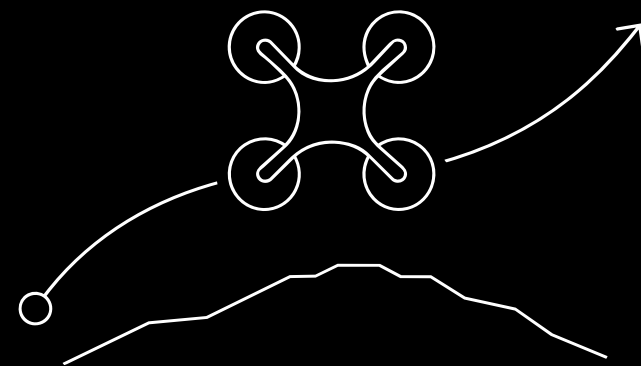
PLAN

Mark the area and pick the plan: oblique orbit or vertical grid. ObliMapper generates it.



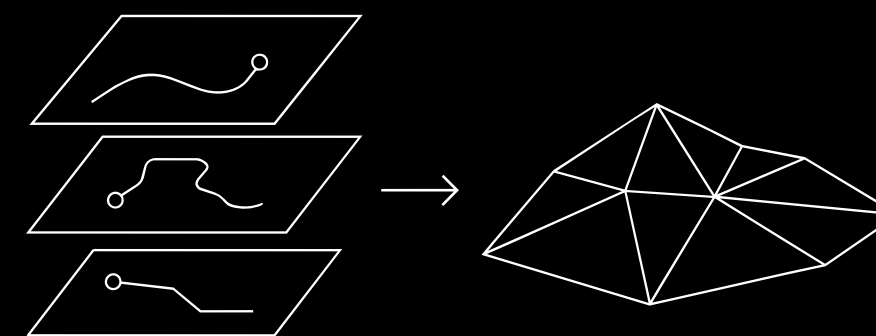
FLY

Autonomous, terrain-following, on the drone's own camera.



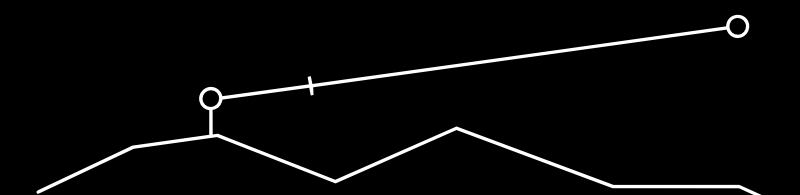
PROCESS

Automatic solving and alignment on landing. No manual tie-pointing.



ANALYSE

Measure, model and plan. Planning on Android, processing on Windows.



The Site

A three-storey school around a central courtyard, in a low-density residential district. Hostages held on the 3rd floor, guarded and watched. Negotiation is running and will hold into the night; the assault goes at 0210.

A drone is available and the imagery will be current.

- No dimensions for the roof parapet, the windows, the arcade or the court fence.
- Rooftop heights unknown across every surrounding block — and the target is at a high point.
- Two candidate overwatch positions, neither checked for mutual visibility with the roof.
- A night execution time with no modelled illumination.

ONE DRONE. ONE OPERATOR. THIRTY MINUTES.

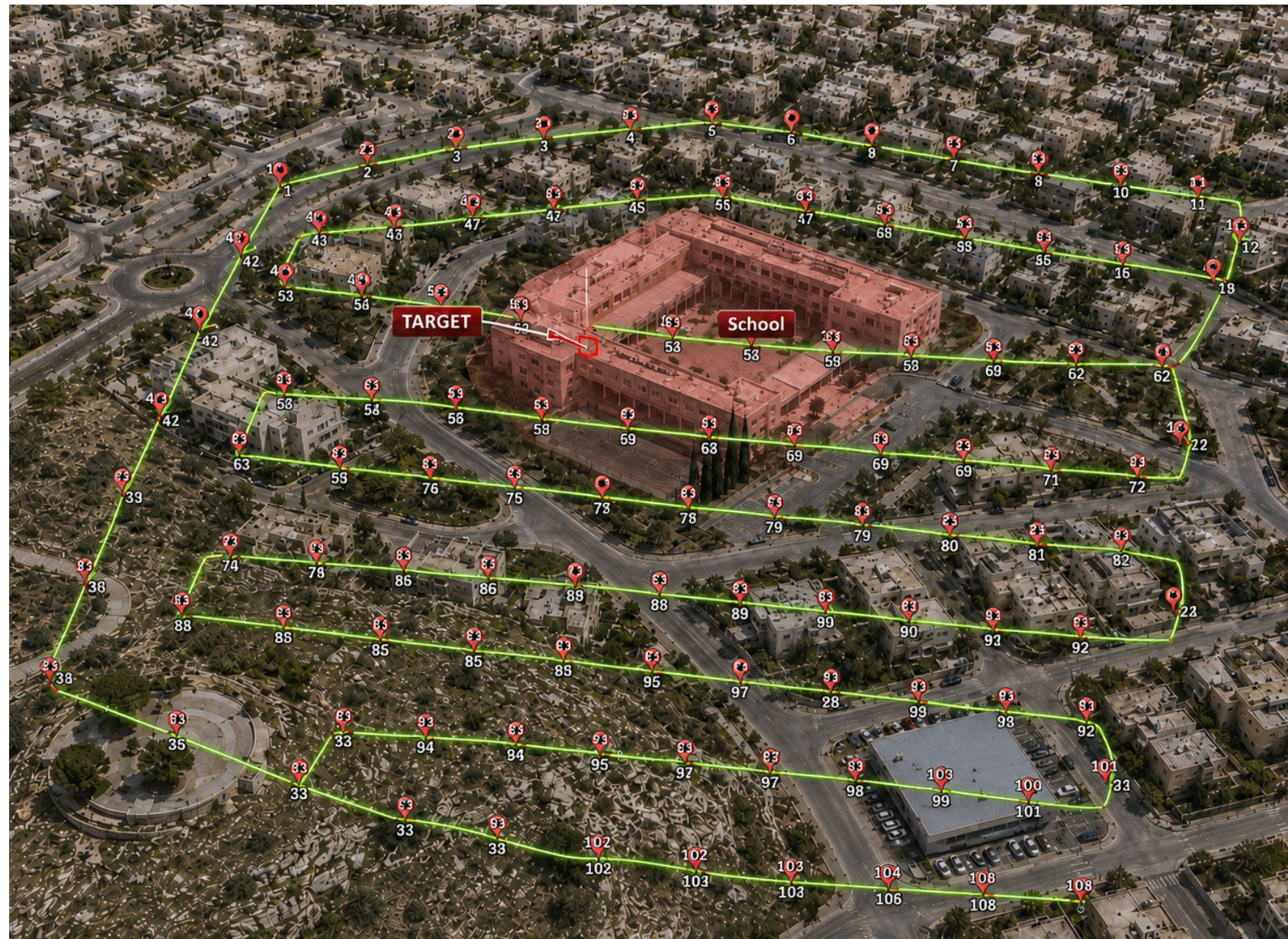


00:04 / THE SORTIE

Flight Plan

A 250-meter radius is marked around the school.

ObliMapper generates the plan, the drone flies it and lands.



FLIGHT PLAN

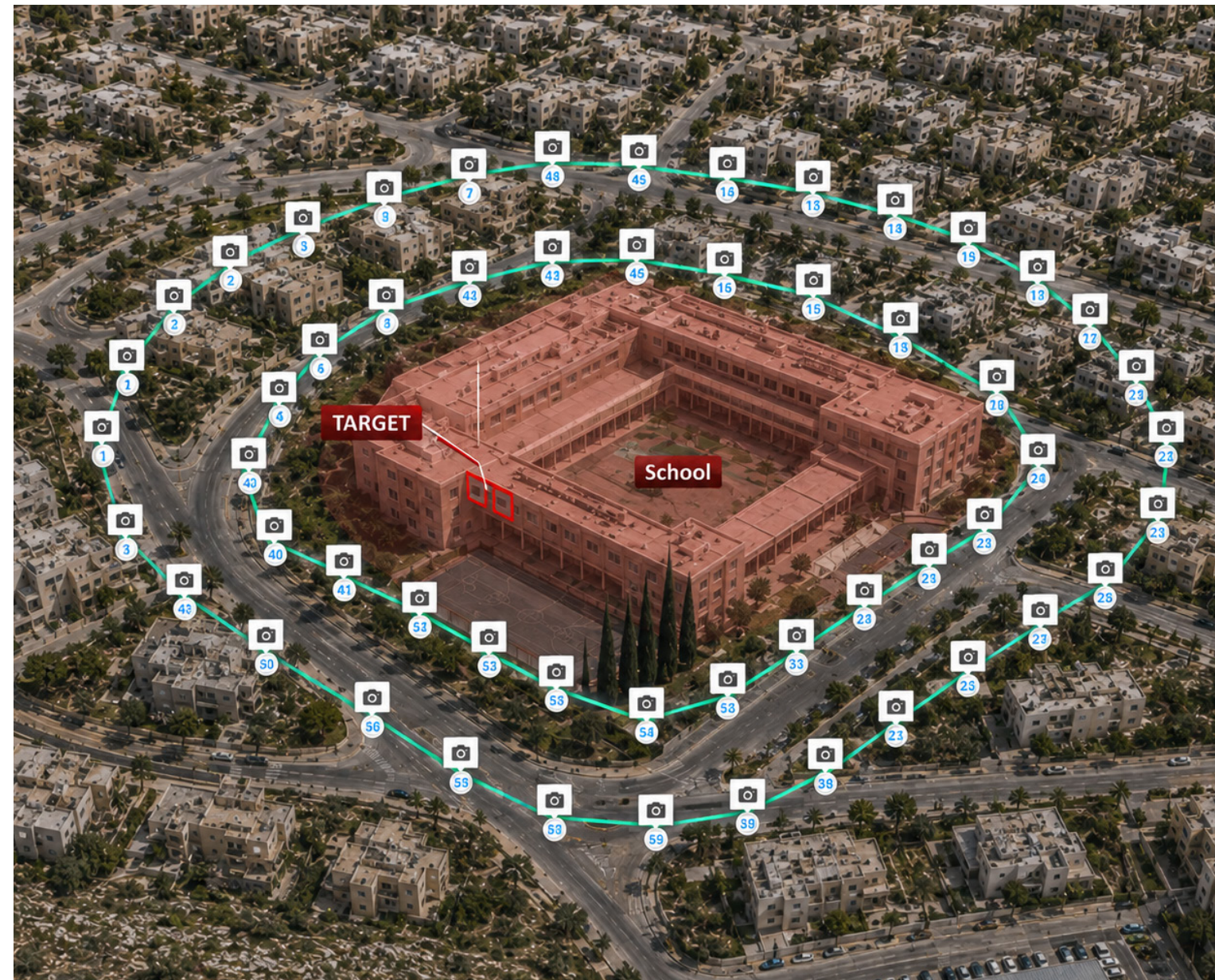


IMAGE CAPTURE PLAN

FLIGHT

Oblique orbit around the building, vertical grid across the surrounding blocks.

FAST

Autonomous, on the drone's own camera. Four minutes airborne, 310 frames.

SECURED

Nobody entered the block.
Nothing was transmitted.
Command center out of sight.

OFFLINE

Images transferred to the workstation and geocoded on landing.

00:05 / THE FRAMES

Every face of the building, from every direction

310 geocoded frames. Any point measured on
one is checked against the others.



Measurement before 3D model

Accurate measurements in 2 min from landing, before any 3D model exists.



MEASURED

0.65 m

Roof parapet - the only cover on the roof

3.15 m

Arcade opening

12.60 m

Building height to parapet

32.6 × 18.4 m

Sports court

1.10 × 2.20 m

West wing window -
sill 8.40 m above the court

VERIFICATION

- 01** Every frame carries its own azimuth, tilt and range.
- 02** Any point is verified on the other frames it appears in.

**SYSTEMS THAT MEASURE ONLY ON A RECONSTRUCTED MODEL
CANNOT PRODUCE THESE FIGURES FOR ANOTHER NINE MINUTES.**

The model

Orthophoto, digital surface model, 3D model and point cloud, generated automatically from the same 310 frames.

OUTPUTS

3D MODEL OBJ • OSGB • SLPK • Cesium • FBX • STL • Collada

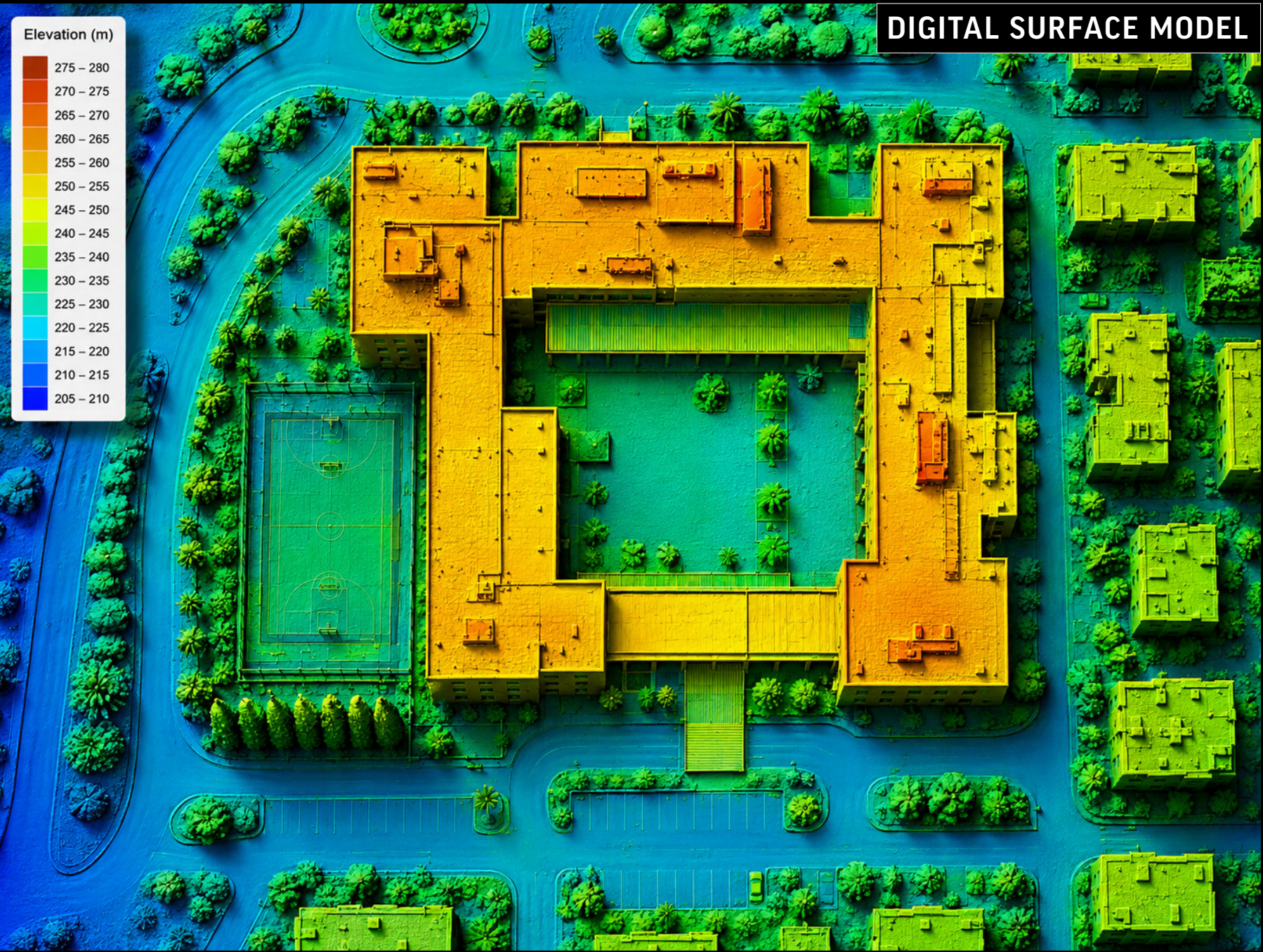
ORTHOPHOTO ECW • GeoTIFF

DIGITAL SURFACE MODEL GeoTIFF

POINT CLOUD

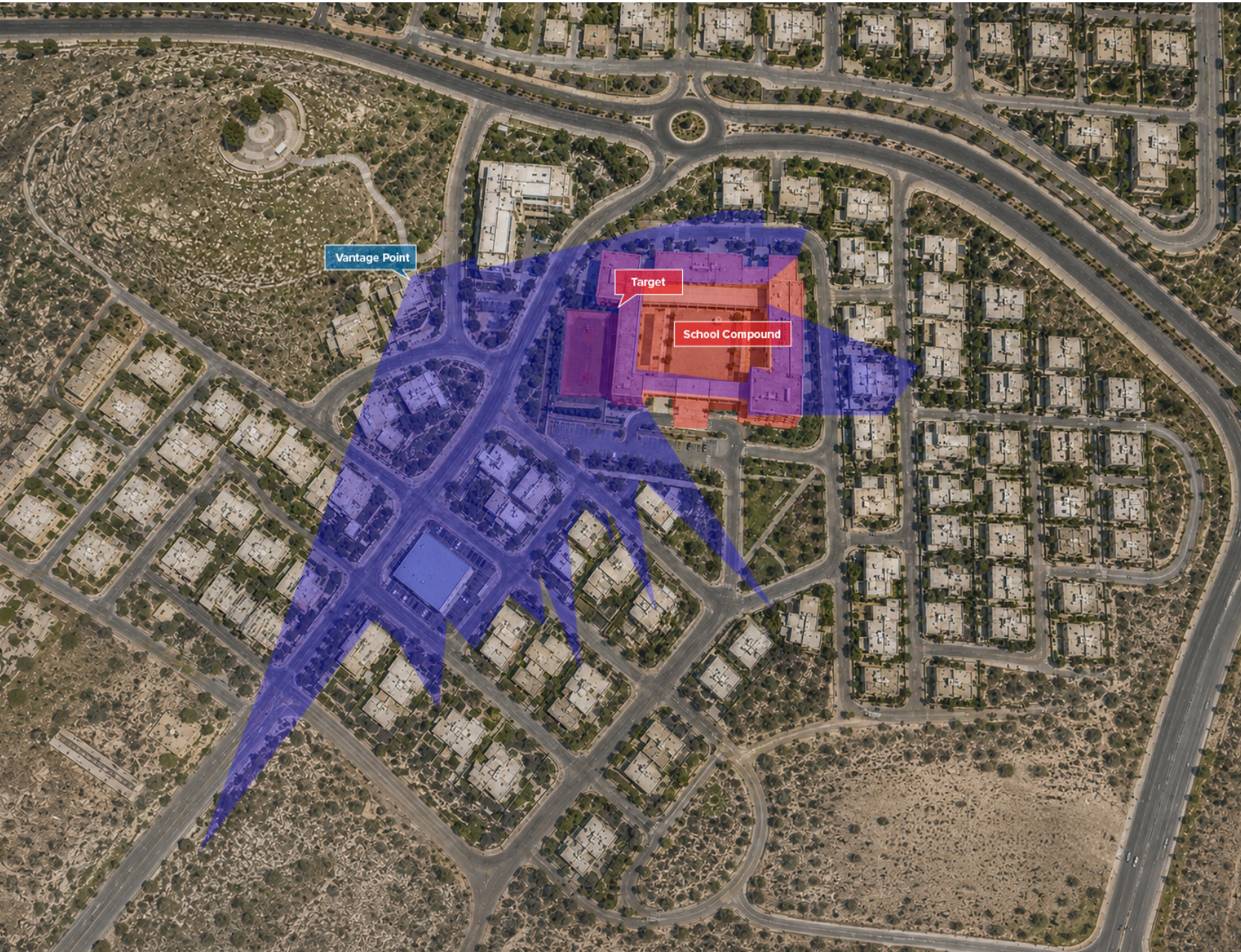
Standard formats, opening in the GIS you already run.

NO TIE-POINTING. NO INTERVENTION. NO UPLOAD.

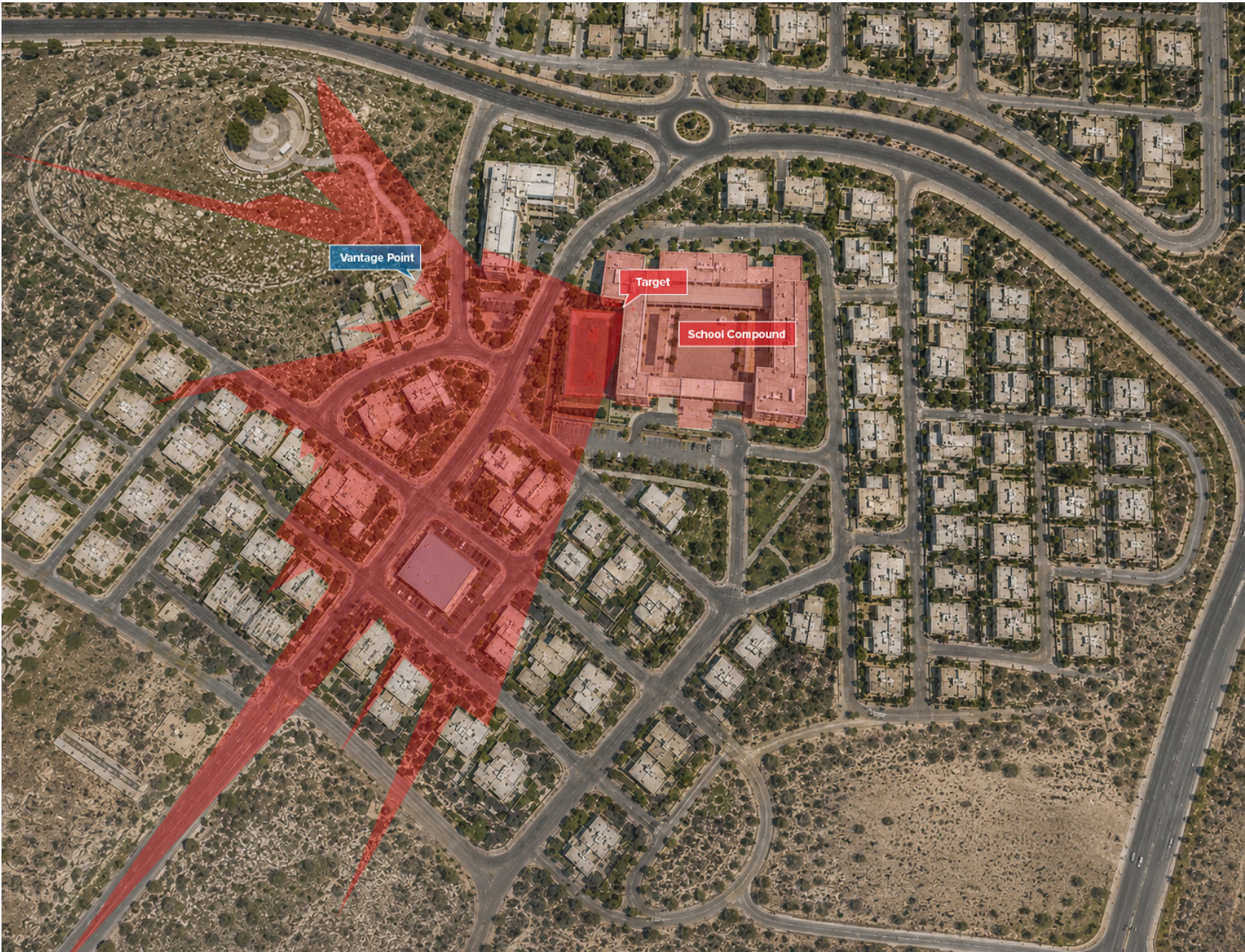


Every roof at its true height

Colour height map and slope, computed across the whole surveyed area.



LINE OF SITE – BLUE



LINE OF SITE – RED

300 m

The school's 3rd floor seems to be above all buildings within 300m.

+18 m

The hill, 310 m north-west, is 18 m above the target windows, but fully exposed.

150 m

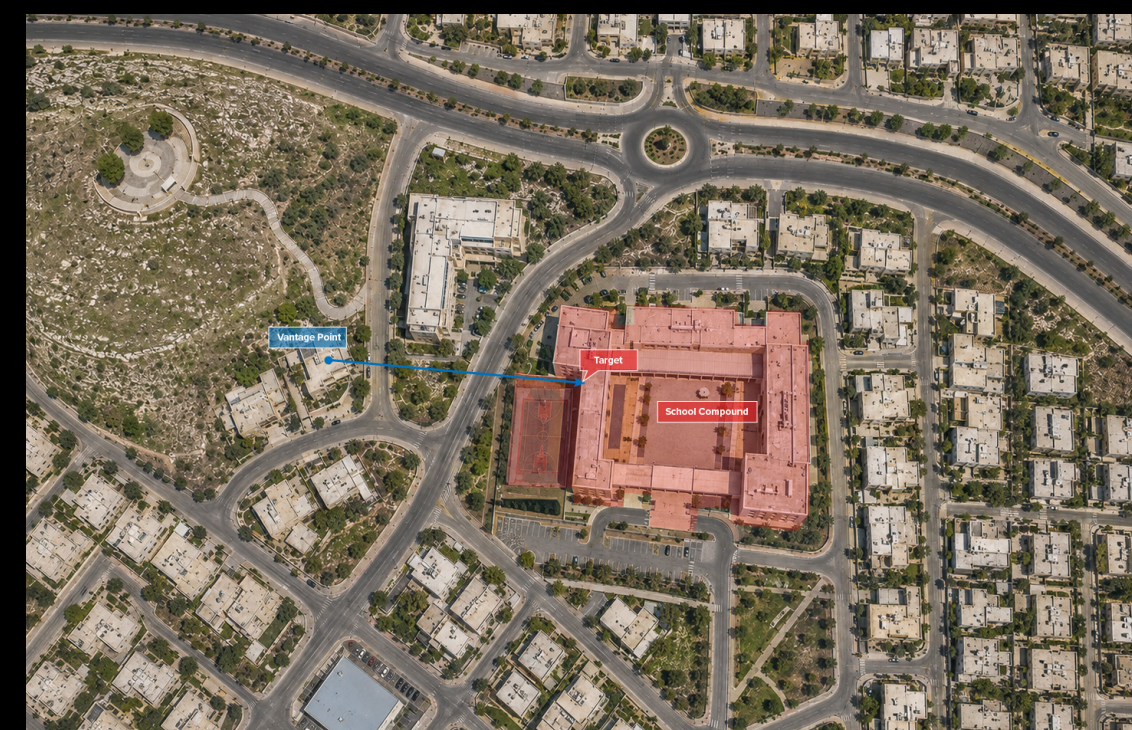
Only one vantage point is cleared: one corner of a rooftop 150 m away.

On a vertical image every roof is a rectangle. The surface model gives each one its height.

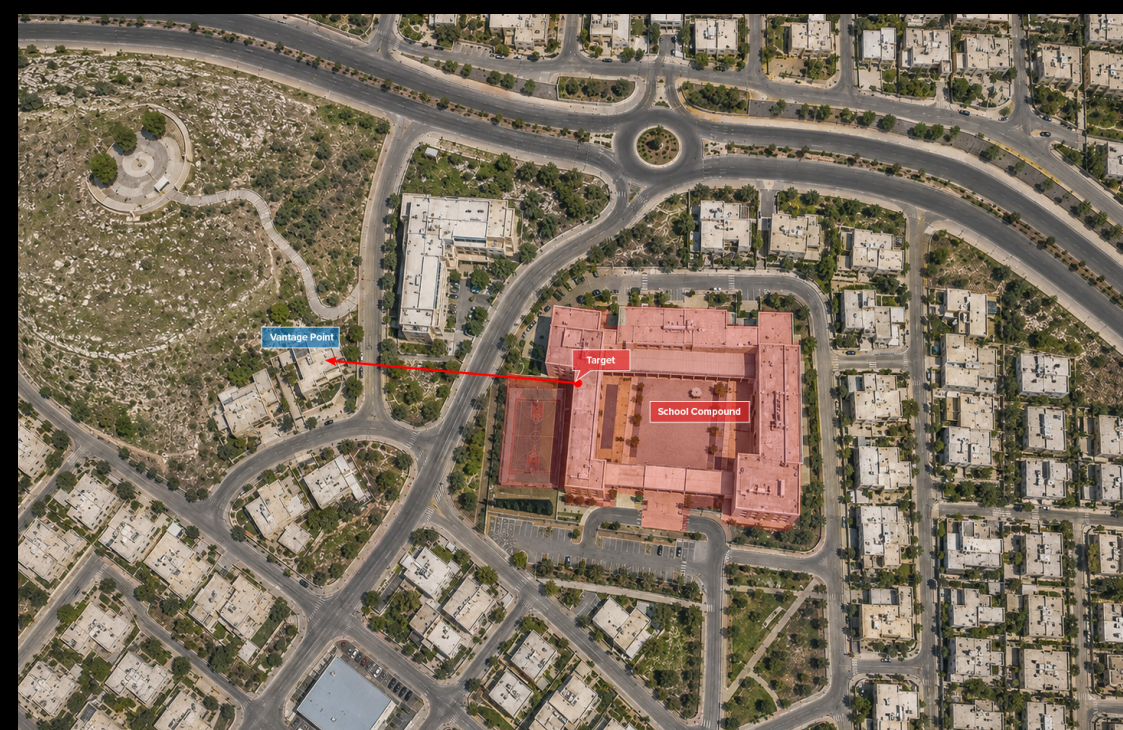
Visibility computed in both directions

One position, eye level checked both ways: what the position can see, and who can see it.

A • BLUE TEAM VIEWPOINT



B • TARGET VIEWPOINT



A •

150 m FROM THE TARGET WINDOWS

Windows, approach and entry points all in view.

B •

THE SAME LINE, REVERSED.

The target sits just slightly below the firing position.

1.3 m The difference between the two viewpoints.

Sun and moon shadow

Illumination simulated across the area for any date and any hour, sun and moon alike.

LUNAR ANALYSIS

Lunar phase, rise, set, azimuth and altitude, rendered as shadow over the model.



SIMULATED ILLUMINATION · 0210

AT 0210

71%

Waxing
gibbous

38°

Altitude

315°

Azimuth

ROOF

Fully lit from 0150. Anyone on it is visible, and so is anyone reaching it.

SPORTS COURT

The shortest line to the building — lit end to end.

APPROACH

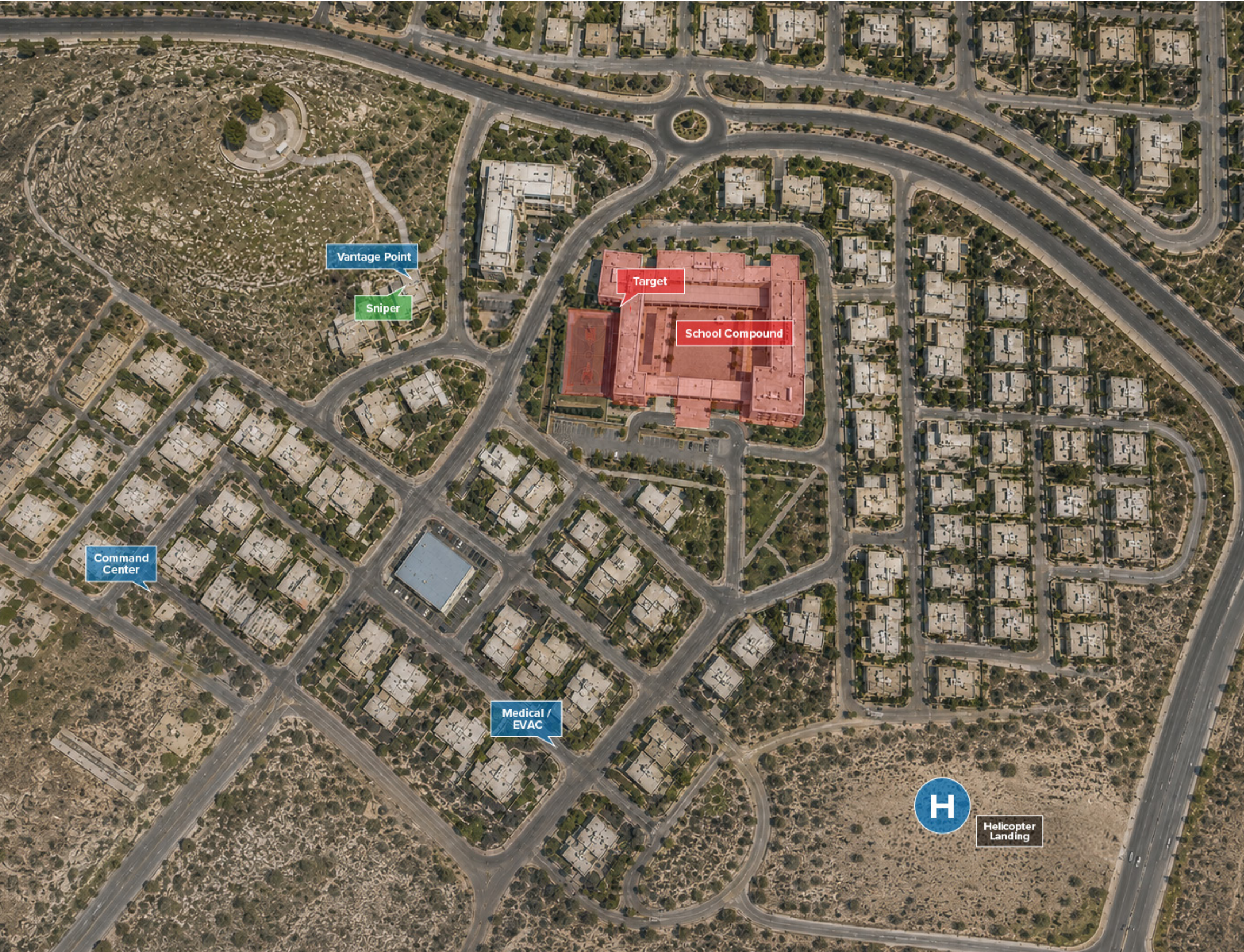
The south parking and east approach stay in the building's own shadow.

LINE OF SIGHT

The moon sits behind the firing position — the target facade is lit, the team is in the shadow.

The scene, built and briefed

Every position marked into the 3D model, and a rendered fly-through for the assault teams.



OPERATIONAL SCENE

01 • POSITION

Firing positions, approach, breach point, casualty collection, command element.

02 • CHECK

Each one checked against what it sees and what sees it.

03 • BRIEF

A fly-through of the building and its approaches, rendered for briefing.

00:30 / DISTRIBUTION

It reaches the team without a network

The model exports as a single file that opens in any phone or desktop browser.

NO APPLICATION TO INSTALL.

NO ACCOUNT TO CREATE.

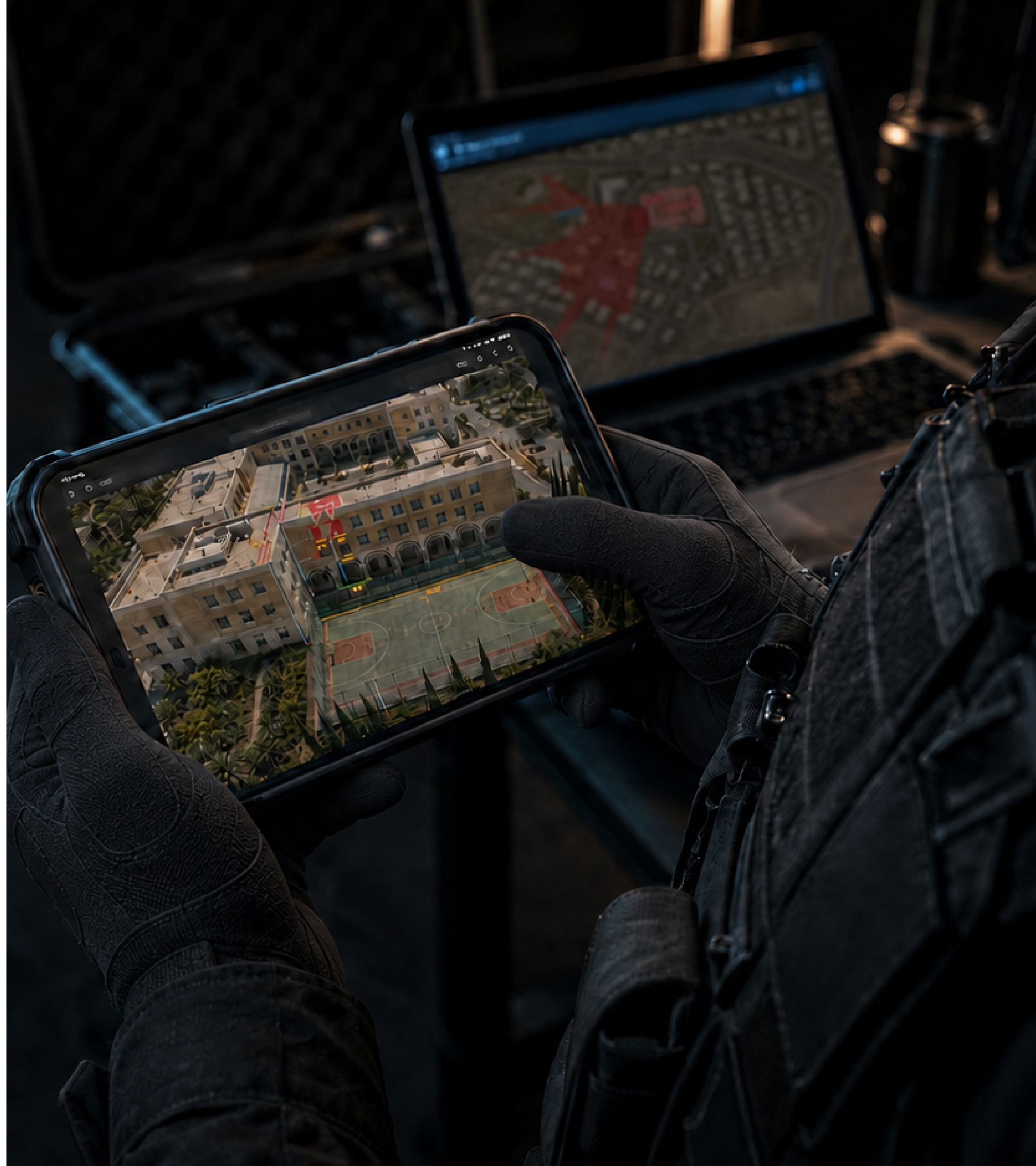
NO SERVER TO REACH.

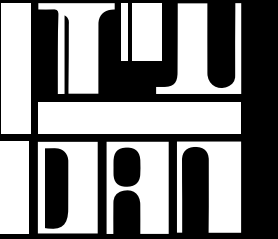
30 MINUTES

after launch

LOCAL THROUGHOUT

Processing was local throughout, and nothing was uploaded at any point.





In service

Twenty years of combat experience stand behind the analysis in ObliMapper

CUSTOMERS

Defense Forces

Government Defense Ministries

Internal Security

Police Forces

First Responders

SWAT Units

Homeland Security

GLOBAL

Worldwide

MINIMAL REQUIREMENTS

WINDOWS LAPTOP

Intel i7 or equivalent

16 GB RAM

NVIDIA GTX 3070 or better

DRONE

Any off the shelf drone

FOR MORE INFORMATION

www.idan.com • info@idan.com • +972 54 481 1750