Where the sun is, hour by hour

Two models on one scene. **Direct sun hours**: how many hours of sun reach each point of ground, facades and roofs. **Daylight availability**: a 0 to 100 % score for how reliably direct sun reaches each place.

Same hours

as Radiance at every one of 20 test points, at Vienna and Hong Kong latitudes

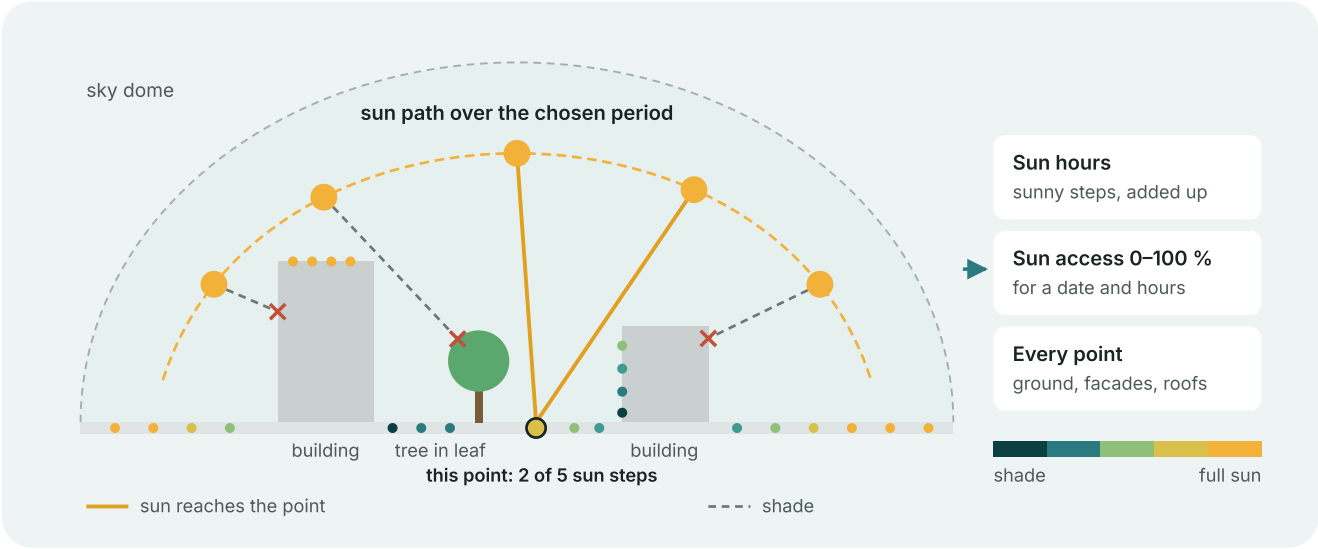
0 to 100 %

sun access score per place, for a date and an hour window you choose

1 to 4 s

per 512 m × 512 m tile, with buildings, trees and terrain

Checked against Radiance, the reference ray tracer for daylight, for 21 June and for the whole of June. Aligned with EN 17037 (sunlight exposure). The sun access score reaches 100 % at half of the maximum possible sun access.
Direct sun only; no diffuse light, and not annual daylight autonomy.



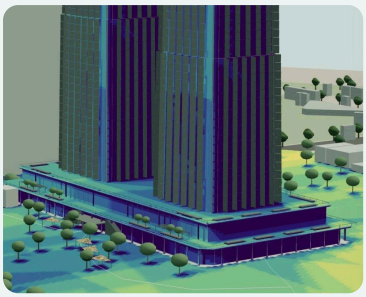


Vienna inner city: direct sun hours on streets, facades and roofs. Yellow gets the most sun; dark blue the least.



Hong Kong, August, 09:00 to 17:00: daylight availability. Orange places get reliable direct sun; streets between towers do not.

What your users could get from it



Which flats get enough sun?

Sun hours on every facade, floor by floor, for the day the rules ask for, e.g. 21 March for EN 17037.

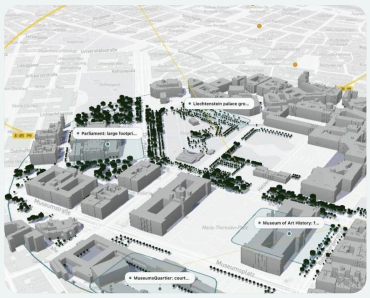
Sell it as: sunlight check per flat



Is the playground in the sun?

Find the sunny spots for playgrounds, terraces, outdoor dining and events, for the hours people use them.

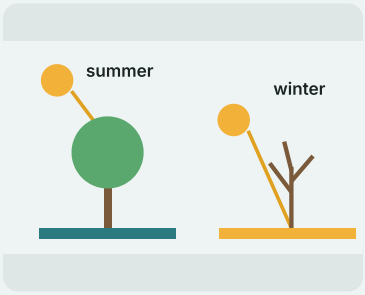
Sell it as: sunny-spot finder



What does a new building take from its neighbours?

Run with and without the new block. See the lost sun hours on each neighbour facade and garden.

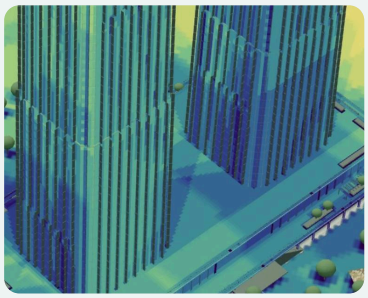
Sell it as: shadow study



Shade in summer, sun in winter?

Trees with their leaf season: plan parks and street trees that cool in summer and let the sun through in winter.

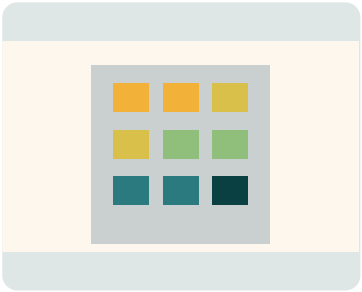
Sell it as: tree planting planner



Where do PV panels pay off?

Sun hours on every roof and facade show where panels get the most direct sun, and where neighbours shade them.

Sell it as: PV siting map



How much sun gets in each window? Next

Sun hours per window, not only per facade point. One number per flat for sales and approvals.

Sell it as: sun per window

Three ways into your web app

1 · A layer while you design

Sun hours or sun access on ground, facades and roofs, in the 3D view. Move a block and see the change in seconds.

2 · One number per option

"Playground: sun in the afternoon." "Neighbour facade keeps its sun." Easy to compare between options.

3 · A check against the rules

Pick the date and the hours the rules ask for. Mark each flat or place that passes or fails.

One upload, more answers. The same buildings and trees also give wind, heat comfort and solar radiation. Sun and shade feed the felt heat on every street.

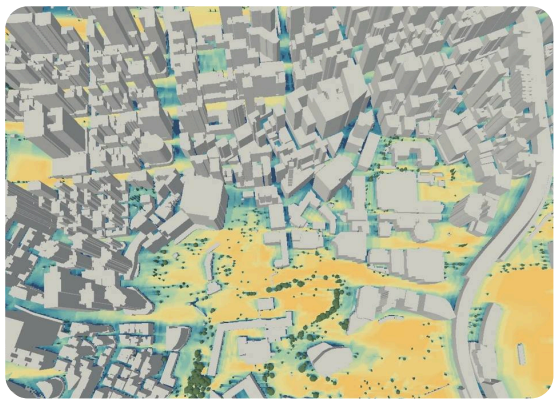
What goes in, and how it is tested

INPUT	WE GET IT AUTOMATICALLY	BETTER, IF YOU HAVE IT
Buildings Now	Your massing model, and the neighbours from OpenStreetMap or open 3D city models	Your own context model
Trees Now	Open tree data, with a leaf season: in leaf in summer, bare in winter	City tree register with species
Terrain Now	Open world terrain model	National terrain model
Installations Now	Canopies and shading elements from your model	Detailed facade model with fins and balconies
Period and hours Now	Sun positions from the site location, for any date range and hour window	The dates your rules ask for, e.g. 21 March for EN 17037

Sun hours: our model vs Radiance, 20 test points

	21 June	whole of June
Vienna	20 of 20 the same	20 of 20 the same
Hong Kong	20 of 20 the same	20 of 20 the same

● = same sun hours as Radiance. Daylight availability: same values too.



Hong Kong: direct sun hours on the ground between towers, with trees as shade.

What it does

- Direct sun hours on ground, facades and roofs, for any period
- Daylight availability: a 0 to 100 % sun access score for a date and hour window
- Shade from buildings, trees, terrain and installations
- Trees with a leaf season; a fast leaf-off pass for winter, 6 to 8 times faster on dense-tree tiles
- About 1 to 4 s per 512 m × 512 m tile
- Same sun hours as Radiance at every test point
- Aligned with EN 17037 (sunlight exposure)
- Through our SDK, ready for your web app

Next step: pick one site where sun matters, a housing block, a school yard or a square. We run it and show you the sun hours.

Images: Vienna and Hong Kong study sites, demo towers (simulated, our model).