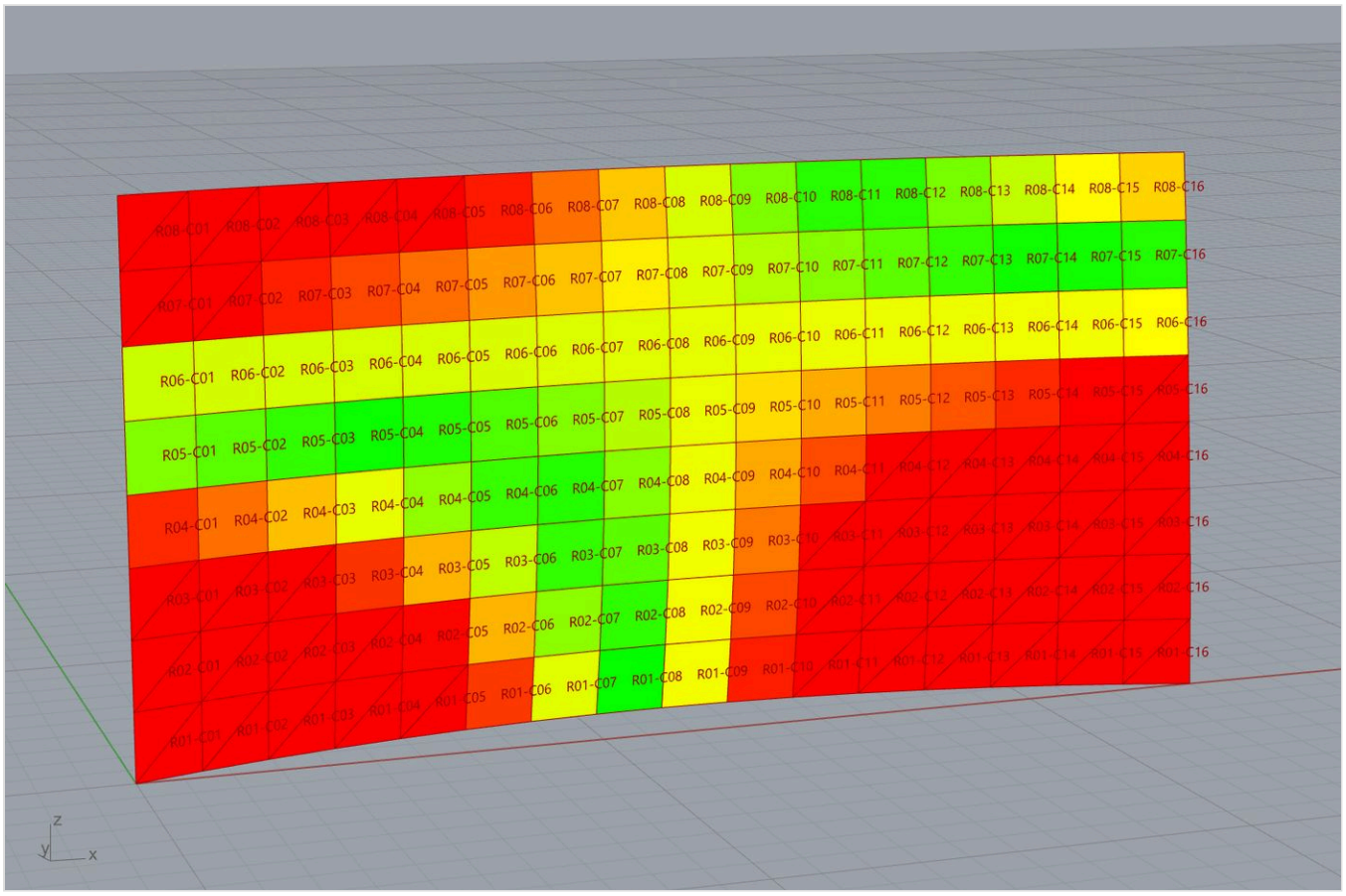
FACADE AND FABRICATION

FACADE PANELS

Panelise a double-curved facade, planarize with Kangaroo, schedule flat and warped panels



FREE | RHINO 7 · RHINO 8 | NATIVE + KANGAROO2 (INCLUDED) | VERSION 1.0 · NOVEMBER 2026

The facade surface is divided into quad panels and Kangaroo tries to make them flat while their corners slide on the surface. Each panel is then measured: within the tolerance it is a flat quad, beyond it is split into two flat triangles. A schedule gives code, area and deviation for every panel.

Free to use in your own projects, commercial ones included. Please do not resell or re-upload the files: share the link instead.

HOW TO USE

1. Open the file: a sample curved facade appears, panelled.
2. Right-click 'Facade surface' > Set one Surface and pick your facade.
3. Set columns, rows and the flat tolerance in millimetres.
4. Read 'Summary' and the 'Panel schedule': green panels are planar, red ones at the tolerance.
5. Bake 'Cut outlines'.

BAKE

Cut outlines

GOOD TO KNOW

- On a regular UV grid planarization gains little: the honest answer is often 'split the warped ones into triangles', and the definition does exactly that.
- Uses Kangaroo2, included with Rhino 7 and 8.

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INPUTS

PARAMETER	RANGE	DEFAULT
Columns	2 – 60	16
Rows	2 – 40	8
Flat tolerance (mm)	0.5 – 50.0	10.0
Planarize strength	0.00 – 1000.00	1.00
Stay-on-surface strength	0.000 – 10.000	0.100
Keep panel sizes	0.000 – 10.000	0.100
Max iterations	100 – 20000	5000

GEOMETRY YOU CAN REPLACE

Facade surface · Surface

RESULTS AT DEFAULT VALUES

PANEL SCHEDULE

```
R01-C01   2.27 m2   dev 27.8 mm   warped: 2 triangles
R02-C01   2.26 m2   dev 22.1 mm   warped: 2 triangles
R03-C01   2.26 m2   dev 15.7 mm   warped: 2 triangles
R04-C01   2.26 m2   dev 9.2 mm   flat quad
R05-C01   2.27 m2   dev 2.6 mm   flat quad
R06-C01   2.28 m2   dev 4.0 mm   flat quad
...
```

SUMMARY

```
Panels: 128   flat (< 10 mm): 85   warped: 43 -> 86 triangles
Max deviation: 33.9 mm before, 32.8 mm after
Max distance from design surface: 4.8 mm
Total area: 291.4 m2
```


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INSIDE THE DEFINITION

STAGES, LEFT TO RIGHT AND TOP TO BOTTOM

1 INPUT

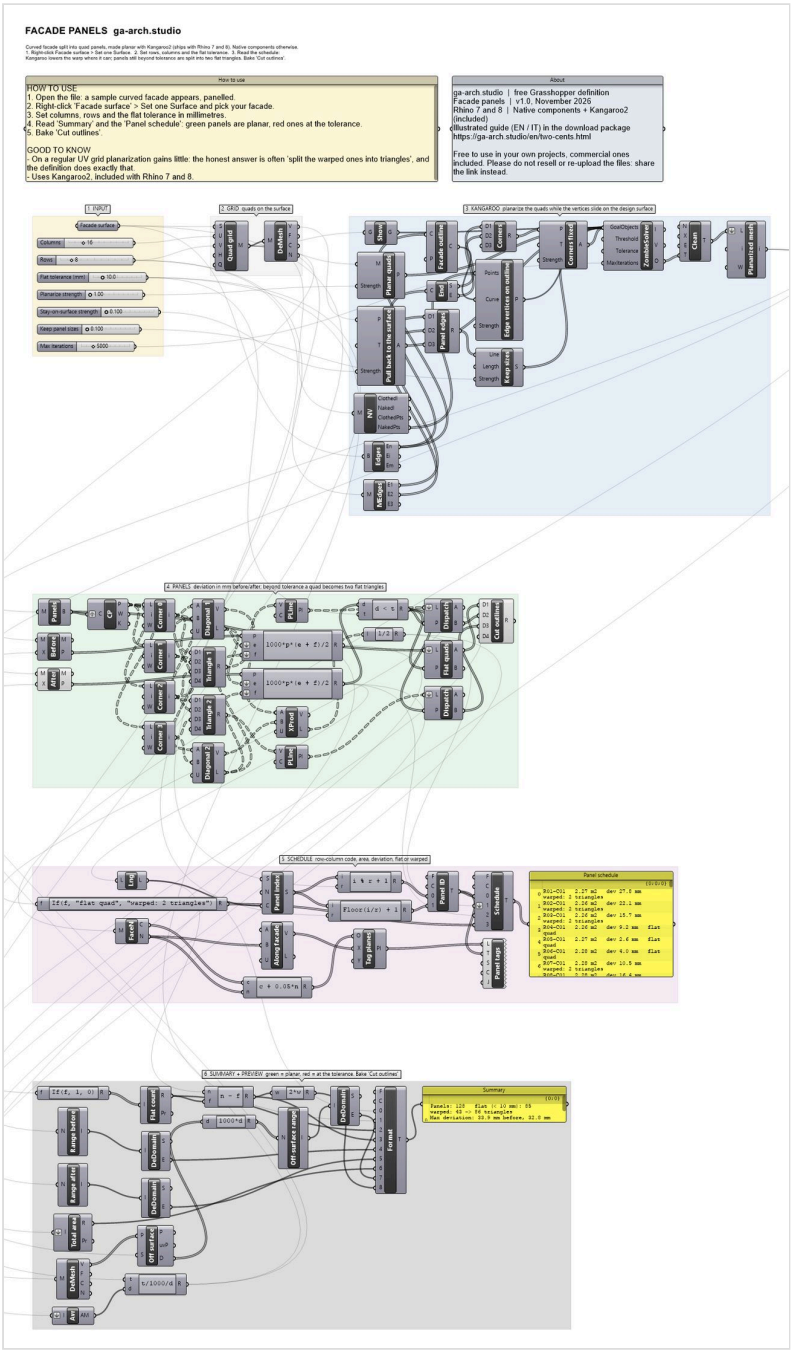
2 GRID quads on the surface

3 KANGAROO planarize the quads while the vertices slide on the design surface

4 PANELS deviation in mm before/after; beyond tolerance a quad becomes two flat triangles

5 SCHEDULE row-column code, area, deviation, flat or warped

6 SUMMARY + PREVIEW green = planar, red = at the tolerance. Bake 'Cut outlines'



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