

Cadence.

The cloud workbench for traffic-signal design.

Design, calculate, simulate and document signal-controlled intersections — in one model, in one place, together with your client.



Shorter queues

Find the signal timing that moves the most traffic with the least waiting.

Safer crossings

Every safety margin calculated and traceable — no guesswork, no hidden spreadsheets.

Faster approval

Your reviewer sees the design, the numbers and the result in one place.

Proven before built

Simulate and show the outcome before the first pole goes in the ground.

One intersection model. From first sketch to approved signal plan.

Designing a traffic-light installation today means jumping between drawing software, spreadsheets, a separate simulation package and a word processor — and re-typing every change in each of them. Cadence keeps the whole design in one shared model, so every screen is always in step with the others.

THE USUAL WAY

- Geometry, calculations and simulation in separate tools
- Clearance times in spreadsheets nobody else can check
- Every change re-entered by hand — and drifting out of sync
- Plans and reports e-mailed back and forth for review

WITH CADENCE

- Draw once — signal groups, conflicts and timings follow
- Every value shows its formula and its source in the standard
- Change the design and simulation, 3D and plans update with it
- Your client reviews in the same environment, in the browser

THE WORKFLOW

01

Draw

Lanes, crossings, stop lines, signal heads and detectors — on GRB, aerial photo or OpenStreetMap.

02

Signal groups

Proposed automatically from the movements, with standard numbering and detector names.

03

Conflicts & clearance

Conflict matrix and intergreen times, each traceable to formula and handbook page.

04

Phasing & capacity

Phase and interstage diagrams with a capacity check per peak period.

05

Programs

Fixed-time and vehicle-actuated control, state tables and a weekly schedule.

06

Simulate

Microsimulation in the browser with queues, waiting times, stops and throughput.

07

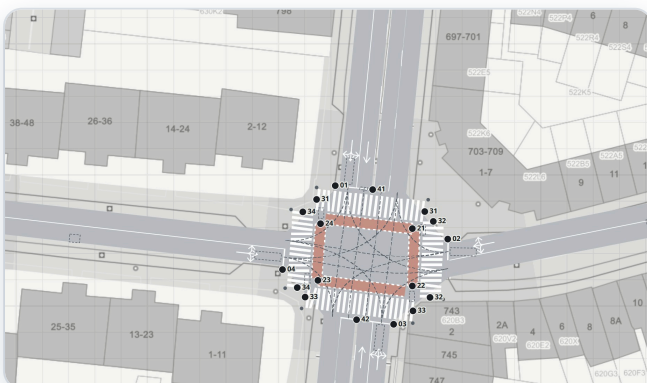
Visualise

Realistic 3D of the intersection and its surroundings — export to video.

08

Document

Signal-plan documents at true scale, from A0 to A3, ready for review and approval.



Plan view — the intersection drawn on the official base map, with signal heads and detectors.



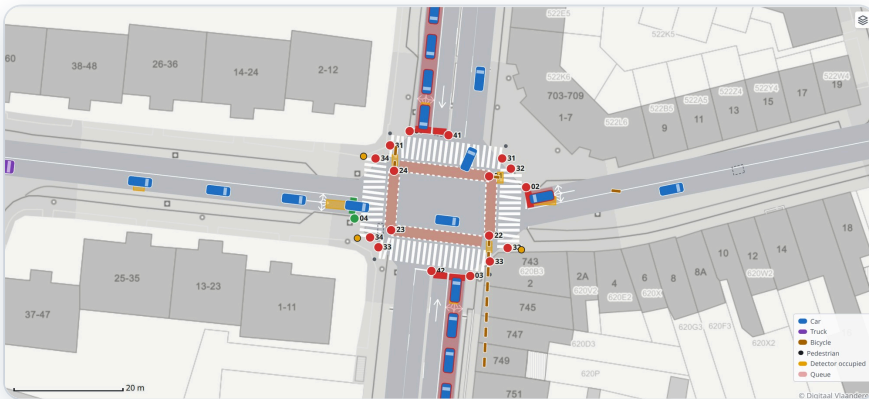
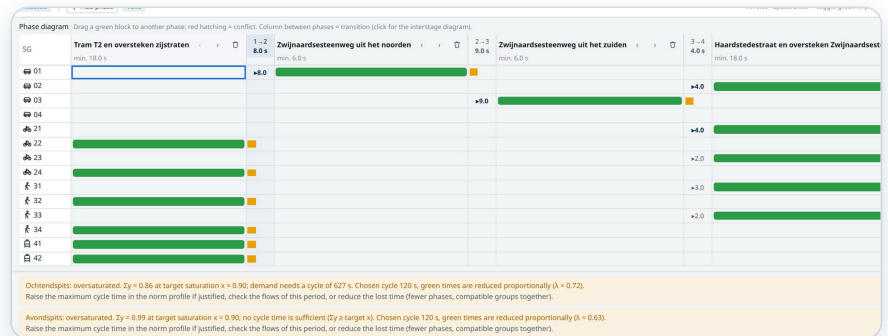
Conflict matrix — click any pair to see exactly how its intergreen time was calculated.

Test your design before a single pole goes in the ground.

Phasing that checks itself

Build the phase diagram by dragging green blocks; Cadence draws the interstages, enforces the minimum clearance and tells you immediately when a peak period is oversaturated.

- Phase, interstage and signal-plan diagrams
- Capacity check per period (cycle time, saturation)
- Clear advice instead of an empty result



Microsimulation in the browser

Run the control program you designed — fixed-time or vehicle-actuated — against real traffic and watch every road user respond to the signals and detectors.

- Cars, trucks, buses, trams, motorcycles, cyclists and pedestrians
- Waiting time, queue lengths, stops and throughput per signal group
- Compare fixed-time and actuated control over several runs

3D that people understand

Show residents, councils and clients what the new intersection will look like and how it will behave — with the surrounding buildings, day or night, from above or from the driver's seat.

- Orbit, top-down, follow and driver views
- Screenshots and MP4 video export
- Trams, buses and movable bridges



BUILT FOR ENGINEERS — AND THE PEOPLE WHO APPROVE THEIR WORK

Transparent, standards-based and made for teamwork.



Built on the standard

Norm parameters follow the Flemish AWW handbook for traffic-signal design (2026). Every calculated value can be traced back to its formula and source page.



Deviations, justified

Override a norm value where the situation demands it — the reason is recorded and every change lands in the audit trail.



Work together, live

Engineers, reviewers and clients in one project, each with their own role. Changes sync instantly and you see who is working where.



Nothing to install

Runs in any modern browser, secure cloud hosting in the EU. Available in English, Dutch and French.

WHO IT IS FOR

Engineering consultancies

Design and deliver signal schemes faster, with every number backed up.

Road authorities

Review designs in the browser and see exactly how each value was derived.

Cities

Understand and communicate the impact of a new layout before it is built.



From design to delivery

Turn the phasing into control programs and state tables, schedule them through the week and produce the true-scale signal-plan document (A0–A3) straight from the same model.

See Cadence on your own intersection.

Ask us for a demo. We will walk you through a live project — from plan view to simulation and 3D — and discuss how Cadence fits your way of working.



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