

USE CASE

Parking Assessments

Inventory, compliance checking & scenario analysis



WHAT ARE PARKING ASSESSMENTS?

Parking assessments answer questions about the location, quantity, quality, and regulatory compliance of parking supply — on public streets, in private developments, or across an entire urban area. They inform a wide range of planning and regulatory decisions: from setting parking standards in zoning plans and managing on-street supply in district strategies, to checking individual building permit applications for compliance with setback and access rules.

Clients are typically municipalities, cantonal offices, and engineering firms supporting parking strategy, urban freight planning, or building permit workflows.

- How much parking exists, where, and of what type?
- Do the existing or proposed parking spots comply with the applicable design guidelines?
- How does the parking supply change under different regulatory scenarios or development proposals?

OUR SOLUTION

The agentic system automates the most effort-intensive steps of parking assessments — inventory, compliance checking, and scenario analysis. Planning teams use its outputs to produce consistent, traceable results, with the heavy analysis work executed in the background.

Our agentic system delivers:

WHAT YOU RECEIVE

- **Automated inventory:** A complete, spatially referenced inventory of parking on public land, derived from public data sources and official survey data
- **Compliance checking:** Automated verification of proposed or existing parking against the applicable design guidelines, with non-compliant situations flagged and quantified
- **Scenario analysis:** Parking supply assessed under multiple regulatory assumptions, for example different minimum setbacks, revised parking standards, or alternative land uses
- **GIS-exportable outputs:** All results available as geodata, compatible with standard GIS tools

ANALYTICAL PROCESS

1

BASE MODEL

The agentic system runs on a logically consistent spatial model of the built environment. For parking use cases, the base model combines the relevant geodata sources for the study area and regulatory context (e.g. street network and classification, parcel/building-line constraints, footpath geometry, and other official survey layers), and can be extended with client-provided datasets where available.

2

PARKING INVENTORY

The agentic system creates a parking inventory based on aerial imagery and/or existing datasets. This includes generating exact geometries for each individual parking space (where feasible) so results can be measured, filtered, and exported consistently.

3

CLASSIFICATION OF PARKING SPACES

Each parking space is classified by type and use, for example on-street vs. off-street, private vs. public, designated spaces (e.g. persons with disabilities), and other categories required by the client's dataset and workflow.

4

COMPLIANCE ASSESSMENT

Parking spaces are checked against the provided guidelines and standards. The compliance logic can vary by location and street type and can include, for example, remaining roadway width, necessary manoeuvring space, and sight distance constraints.

5

REPORT

Outputs are delivered as a slide deck plus GIS-ready geodatasets and tabular exports (e.g. Excel spreadsheets), so results can be reviewed, communicated, and integrated into standard planning workflows.

CASE STUDIES

- **P0014 — Review of on-street parking (Luzern/Lucerne)**