

# Surveillance Project Scoping Worksheet

Turn a use case into a scoped, costed surveillance project in five steps. Fill it in per site, then pair it with the surveillance cost model. Companion to the article.

## The rule: build the number up from the job, not down from a budget

Decide what each area must see, turn that into a camera count and mix, apply the four multipliers, then add the people who design, install, and tune it. The result is a defensible range with named assumptions - not a single guessed figure. Compare to a budget last, when you can see what a cut would sacrifice.

### Step 1 - Requirements per zone: what must each area see?

DORI pixel density (IEC 62676-4): Detection 25 - Observation 63 - Recognition 125 - Identification 250 px/m. Higher detail over the same distance needs a tighter lens or more cameras.

Zone / area	Distance	DORI goal	# cameras

### Steps 2-3 - Camera count and the four multipliers

- Camera count and mix totalled from the zone table - count identification-grade cameras separately; they cost the most.
- Resolution -> bitrate: give each camera a planning bitrate (4 MP H.265 = 2-4 Mbps), not just a resolution.
- Retention -> storage: storage = bitrate x cameras x hours x retention days; pick continuous vs motion/event (motion cuts 40-60%).
- Analytics: list each one and where it runs (edge / server / cloud); FLAG any biometric (face; often LPR) as a legal gate (GDPR Art. 9 / BIPA), not just a licence.
- Deployment model chosen: on-prem CapEx (buy once) or cloud / VSaaS OpEx (per camera per month) - they cross over around year 2-3.

### Step 4 - Cost stack: fill every layer, not just the cameras

Cost layer	What it covers	Your estimate
Cameras + mounts	Camera, lens, housing, mount, accessories	
Network + cabling	PoE switch ports, cable, drops, conduit	
Servers + storage	N+1 recording servers, RAID storage for retention	
VMS licences	Per-channel software + first-year support	
Analytics	Edge / server / cloud analytics, per analytic	
Professional services	Design, install labour, commissioning, PM (often largest)	
Contingency	The named unknowns, about 10-15%	
TOTAL	A range with assumptions, not a single number	

### Step 5 - Timeline & assumptions: plan the tail

- Five phases laid out: design & requirements -> procurement -> installation -> commissioning & tuning -> handover (~3-5 months for ~60 cameras).
- Procurement lead times noted (enterprise gear can run weeks); order early and in parallel with site prep.
- Commissioning & analytics tuning budgeted in weeks, not days - the most-cut, most-underestimated phase.
- Assumptions register written (retention days, recording mode, DORI levels, labour rate, deployment model) + the one or two swing factors named.

Engineering guidance, not legal advice. Biometric analytics (face recognition; in many places licence-plate recognition) process special-category / biometric data restricted under GDPR Art. 9 and Illinois BIPA (740 ILCS 14, with a private right of action and statutory damages); confirm specifics with qualified counsel before scoping them.