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.

Companion to: 'Estimating a Surveillance Project: Scope to Number'
www.forasoft.com/learn/video-surveillance/articles-vms/estimating-a-surveillance-project

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This worksheet turns a use case into a camera count, multipliers, a cost stack and a timeline for one site. Our seven-volume handbook explains the parts behind each line: Volume 1 for codecs and bitrate that drive storage, Volume 6 for detection and analytics, Volume 7 for real-time pipelines and running cost.

WHAT YOU WILL FIND INSIDE

- H.265 and AV1 bitrates for storage maths
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- Edge vs server analytics and what each costs
- Real-time pipelines and cost per stream-hour

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