

# Retail Analytics Planning Worksheet

Scope a retail video-analytics build by job, by camera, and by the privacy line — before you buy hardware. Companion to the article; pair it with the surveillance cost model.

## 1 - Plan the cameras by job (the counting camera is not the identifying camera)

Job	Placement	Pixel target (DORI)
Entrance counter	Overhead at the door, ~2.7-4 m, facing straight down, line perpendicular to traffic	Detect ~25 px/m
Heatmap / floor	Ceiling cameras covering the sales floor	Detect ~25 px/m
Point-of-sale (LP)	Overhead at each till and self-checkout, framed on the scan zone	Observe ~62 px/m
Identification	Face height at choke points, exits, high-value displays	Identify ~250 px/m

## 2 - The pixel-density ladder (IEC 62676-4 / DORI)

Detect ~25 px/m -> Observe ~62 -> Recognise ~125 -> Identify ~250. Identifying a face needs roughly 10x the pixel density of detecting a body, so an overhead counting camera can never double as an identification camera. Buy cameras to the job, not the other way round.

## 3 - Accuracy: expect a range, not a number

A well-installed people-counter lands around 90-98% under good conditions; 3D stereo handles crowds and sunlight better than 2D. Accuracy degrades with crowding, shadows, poor light, and a tilted or low camera. Never accept a single '100%' figure - verify your own by checking that daily entries and exits balance within a few percent.

## 4 - The privacy gate - tick before you ship

- We are only counting anonymous people (no unique identification) - generally outside GDPR Art. 9.
- If we match faces to a watchlist: DPIA done, lawful basis set, GDPR Art. 9 condition identified.
- Illinois store with biometrics? BIPA consent obtained before any biometric capture (740 ILCS 14).
- Retention set to the minimum needed; anonymous counts not stored as personal data.
- Clear signage / notice in place for the processing being done.

## 5 - Rough loss-prevention ROI (fill in your store)

Store sales \_\_\_\_\_ x shrink % (NRF FY2022 ~1.6%) = annual shrink \_\_\_\_\_. A conservative 20% reduction from analytics = recovered \_\_\_\_\_ /yr. Worked example: \$5,000,000 x 1.6% = \$80,000 shrink; 20% cut = \$16,000/yr recovered.

Engineering guidance, not legal advice. The privacy gate names GDPR Art. 9 / Art. 4(14), EDPB Guidelines 3/2019, and Illinois BIPA as the controlling regime; confirm specifics with qualified counsel before deploying any face-matching analytic.