

# OTT Codec Strategy Worksheet

Choose your codec set before you commit a transcode pipeline: set an H.264 floor, add an AV1 (or HEVC) efficiency tier per device class, park VVC, then run the one egress sanity check. Engineering guidance — confirm codec licensing and device support live, they change.

## 1 · SET YOUR FLOOR (H.264 — the reach you never trade away)

- Encode H.264 for every title.** It decodes on essentially every phone, tablet, laptop, TV, and set-top built in the last 15 years. A codec a device can't decode is a blank screen, not a slow stream.
- Use it as the floor, not the workhorse.** H.264 is the least efficient of the four codecs — keep it for universal reach and as the live-streaming default, not to save bytes.
- Note the cost.** H.264 licensing (Via LA) saw steep streaming-fee increases in 2025. Not free — but it is the price of guaranteed reach. Floor set? \_\_\_

## 2 · ADD AN EFFICIENCY TIER (AV1 first; HEVC where it fits)

- AV1 is the 2026 default efficiency tier.** ~50% smaller than H.264, royalty-free (AOMedia), now hardware-decoded on most phones, smart TVs, and sticks sold since 2022. Serve it to devices that support it.
- HEVC is the alternative tier.** Similar efficiency, strong on Apple and living-room devices, good for 4K/HDR — but fragmented, shifting patent licensing. Cheaper to encode than AV1.
- Let the player choose.** Each device announces what it supports; hand back the most efficient codec on its list. No device is ever stranded. Tier picked: \_\_\_

## THE ONE SANITY CHECK BEFORE YOU LOCK THE CODEC SET

Estimate the egress an efficiency tier saves. Egress = average delivered bitrate × watch-hours × audience, billed per GB. Worked: 10M monthly viewing hours at 3 Mbps (H.264) ≈ 13.5 PB ≈ \$540k/mo at \$0.04/GB. Move 60% of hours to AV1 at 40% lower bitrate (1.8 Mbps), keep 40% on H.264 → ~10.26M GB ≈ \$410k/mo — about \$130k saved every month (~24%), for a one-time encode-and-store cost. The saving grows as more devices gain AV1 hardware decode. Add efficiency without subtracting reach; tune the codec set to your real audience, not a default.

## 3 · CHECK LICENSING & ENCODE COST (the two hidden levers)

- Licensing.** H.264 and HEVC carry patent-pool royalties (HEVC's pools are fragmented and moving in 2026). AV1 is royalty-free, with minor unresolved third-party claims. Budget for legal review.
- Encode cost.** Newer = heavier. AV1 costs more compute than HEVC (SVT-AV1 narrows the gap); live AV1 needs hardware encoders. One-time per title, repaid by lower egress on every view.
- Storage multiplies.** Every codec you add re-encodes and re-stores the whole catalog. Match the codec set to the devices and content you actually have.

## 4 · PARK VVC / H.266 (watch, don't deploy — for streaming)

- Most efficient in the lab.** ~40–50% better than HEVC. If efficiency were the only lever, it would already win.
- But not for streaming yet.** ~3× AV1's encode cost, no browser support, almost no streaming-device reach, and the most fragmented licensing of all four codecs.
- Where it's moving:** broadcast and TV (Brazil TV 3.0, ATSC 3.0, Android 17). Revisit when browsers and a clear license arrive. VVC = watch item \_\_\_