

Video-Layer Build-vs-Buy Comparison Sheet

Pick the telemedicine video layer — buy a managed API (CPaaS) or build on an open-source SFU. Run the BAA gate first, then license, cost, and the four axes. Engineering guidance, not legal advice.

1 · THE BAA GATE (run this first)

- Any media server touches the patient's audio/video — it is PHI; the server is a business associate
- BUY: the API must sign a BAA before any real patient call — no signed BAA = HIPAA violation, even if encrypted
- BUILD: no third-party BAA for the SFU, but it sits in YOUR covered environment + a BAA to the cloud host
- Confirm BAA + eligible plan: Twilio (addendum) · Vonage (Enterprise) · Daily (add-on) · Agora (Enterprise)
- ...Whereby · Zoom Video SDK (qualifying plans) · Pexip · LiveKit Cloud (Scale/Enterprise) — verify on vendor's page

2 · OPEN-SOURCE LICENSE CHECK (build path)

- mediasoup — ISC (permissive): free in a closed-source product, no source-disclosure obligation
- LiveKit — Apache 2.0 (permissive): same; the same code also runs as managed LiveKit Cloud
- Janus — GPLv3 (copyleft): can force source release of derivatives — buy the commercial license for closed products
- Read the license against your product BEFORE you build — it is a legal constraint, not a feature

3 · THE COST MODEL (per-minute vs fixed)

- BUY \approx \$0.004 / participant-minute (Twilio/Daily/Agora HD, 2026) — rises linearly with usage; \$0 when idle
- Math: 50,000 consults \times 20 min \times 2 people = 2,000,000 part-min \times \$0.004 = \$8,000 / mo
- At 10 \times volume: 20,000,000 part-min \times \$0.004 = \$80,000 / mo \approx \$960,000 / yr — grows with every patient
- BUILD = fixed servers (scale with peak concurrency) + engineering salaries — nearly flat as volume grows
- Crossover is in the high hundreds of thousands of part-min/mo: below \rightarrow buy; above \rightarrow build. Model your own.

4 · THE FOUR AXES (when it is close)

- Time-to-market — BUY wins: a BAA-covered consult in days vs a multi-month SFU build
- Control & features — BUILD wins: own codecs, recording, data residency, custom clinical tools
- Operational burden — BUY wins: the vendor carries the pager for media-server outages
- Vendor / roadmap risk — BUILD wins: open source can't be discontinued (see Twilio's 2024 EOL-then-reversal)

THE QUESTIONS THAT DECIDE IT

Will the API sign a BAA on a plan you can afford? · Does your projected volume cross the cost line? · Can you operate a real-time SFU on-call? · Is the open-source license safe for a closed product? · Did you wrap a swappable abstraction so the vendor is never an emergency? · Re-verify all BAA terms and prices before you commit.