Cost to operate Zen Surveillance

At scale, our cost is primarily determined by
- The cost of meditators
- The accuracy of the computer-vision system

Cost of meditators

Each meditator:

- Works 30 hours/week (6 hours/day)
- Makes $30k/year plus benefits worth $10k/year
    - = $40k/year/meditator
    - = $25.64/hour/meditator
- To cover a screen for 24 hours requires two meditators
    - 24 hours/day * 2 meditators * $25.64/hour/meditator
    - = $1230.72/screen/day

Accuracy of the computer-vision system

- CVFP = the number of CV false positives per day per camera
- RT = response time = the average amount of time it takes for a meditator to assess a CV false positive
- Z = CVFP * RT = the amount of "feed time" required per camera per day

Let's say:

- CVFP = 10/day/camera
- RT = 20 seconds
- Z = CVFP * RT = 200 seconds/day/camera

- There are 86,400 seconds in a day
- 86,400 / Z = 86,400 / 200 = 432
- One "feed" can support 432 cameras per day
- There are 7 feeds per screen, so one screen can support 3,024 cameras per day
- Each screen costs $1,231/day in labor
- $1,231 screen/day / 3,024 cameras/day = $0.41 per camera/day

But, this is operating the system at 100% max throughput. We need to add some cushion so that we can handle occasional bursts of CV false positives. So we halve the number of cameras per screen, which doubles the cost to $0.82, rounding up = $1 camera/day

Double that for other expenses, (software development, hardware, management, etc.) and we have $2 camera/day