QEval

ETS LABS · AN ETECH GLOBAL SERVICES COMPANY

SPEECH ANALYTICS SPECIAL STUDY · 2026 H1

# Queue time costs CSAT twice.

Once at second six, again at sixty. What waiting actually does to customer sentiment, measured on every inbound call across nine industry verticals.

**750,000**

INBOUND CALLS ANALYZED · NINE INDUSTRY VERTICALS · 2026 H1

| 9 | 4 | 1 | 2 | 29.6 |
|---|---|---|---|---|
| Industry verticals represented in the call set | ASA tiers: immediate, short, moderate, long wait | Tier where positive sentiment beats negative | Distinct failure modes in the curve | Point gap between an immediate answer and the worst tier |

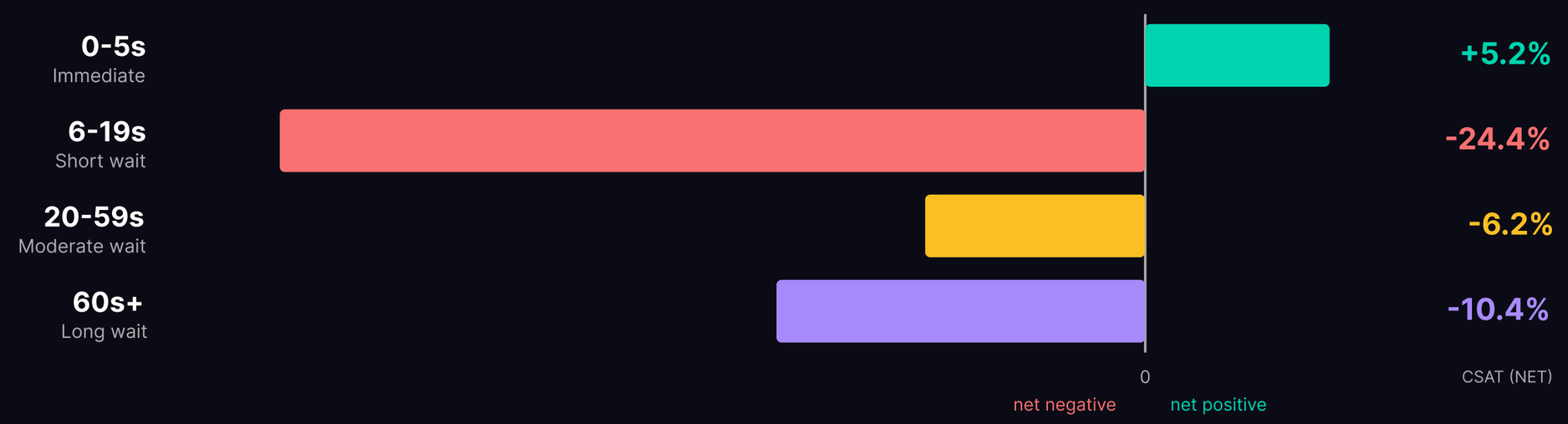
THE STUDY AT A GLANCE

# 750,000 calls. One question: what does waiting cost?

Every inbound call across nine industry verticals was scored for sentiment and grouped by queue time at the point of connection. Sentiment stands in for CSAT in the absence of a post-call survey. At this scale the pattern is not a sample; it is the population.

EXHIBIT 1

## Net sentiment by ASA tier: introduce any queue at all and sentiment flips negative




NET SENTIMENT = % POSITIVE MINUS % NEGATIVE · N=750,000 · NINE VERTICALS · 2026 H1

**01** **Do calls answered immediately score better than calls that wait?** CONFIRMED

Calls answered in 0 to 5 seconds are the only tier with more positive than negative sentiment (52.6% vs. 47.4%, net +5.2%).

**02** **Does sentiment keep getting worse the longer a customer waits?** CONFIRMED · NOT LINEAR

Not linearly. The worst tier is 6 to 19 seconds at -24.4%; sentiment recovers 18.2 points at 20 to 59 seconds, then slides again past 60 seconds.

**03** **Is the pattern consistent enough to act on?** YES

129,784 calls sit in the worst-performing tier alone, 6.1 times the volume of the moderate-wait tier and 17.3% of all inbound calls.

TAKEAWAY

Waiting costs CSAT, and it costs it twice. The first cost is **uncertainty**, concentrated in the first 6 to 19 seconds. The second is **endurance**, which reappears past 60 seconds once customers have recalibrated. One threshold cannot manage both.

THE EXECUTIVE READ

# Two failure modes, two different fixes.

| | |
|---|---|
| THE FINDING | Queue time and CSAT are correlated, with a specific shape: a cliff at the first second of hold, a partial recovery as customers recalibrate, then a second decline once the wait becomes genuinely long. |
| WHY IT MATTERS | Service-level targets are usually set at a single threshold, commonly 20 or 30 seconds. This data says the customer reacts twice, and neither reaction happens at that threshold. |
| WHAT TO DO | Treat the two modes separately. Eliminate or explain the short, unexplained wait; cap the long tail through capacity and routing. Sizing for both is in section 3. |
| CONFIDENCE | 750,000 calls across nine verticals over the half year. The relationship is correlational, not causal, and the limits are stated in full on the final page. |

## How the study was built

Population-scale observational analysis on production scoring data. No sampling frame, no survey instrument; every figure is computed on the full call set. Queue time was grouped into four tiers, consistent with prior passes of this study: 0 to 5 seconds (immediate), 6 to 19 seconds (short wait), 20 to 59 seconds (moderate wait), and 60 seconds or more (long wait).

Each tier's net sentiment is % positive minus % negative, using positive and negative as mutually exclusive counts that sum to the tier's total volume.

WORKED EXAMPLE

The short-wait tier, step by step

| STEP | CALCULATION | RESULT |
|---|---|---|
| Calls in the tier | 80,726 + 49,058 | 129,784 |
| Share positive | 49,058 / 129,784 | 37.8% |
| Share negative | 80,726 / 129,784 | 62.2% |
| Net sentiment | 37.8 - 62.2 | -24.4% |

WHAT THIS STUDY DOES NOT DO

It does not randomly assign wait times, so it establishes association rather than proven causation. It does not translate sentiment into a survey CSAT score, and it does not control for agent, handle time, or first-call resolution, because those fields are not present in the dataset.

SECTION 1 · THE DATA

# Sentiment splits cleanly along ASA tiers.

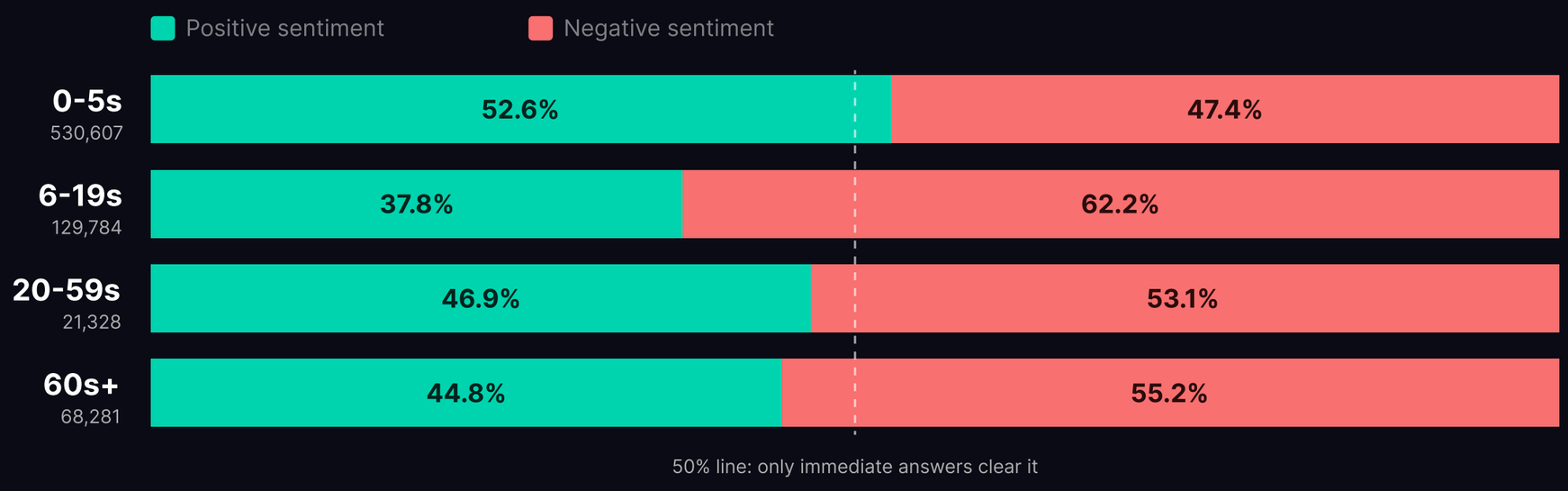
Two things stand out: the crossover point at five seconds, and the size of the swing immediately after it.

| ASA TIER | NEGATIVE | POSITIVE | CALLS | % POS | % NEG | CSAT (NET) |
|---|---|---|---|---|---|---|
| 0-5s (Immediate) | 251,508 | 279,099 | 530,607 | 52.6% | 47.4% | +5.2% |
| 6-19s (Short wait) | 80,726 | 49,058 | 129,784 | 37.8% | 62.2% | -24.4% |
| 20-59s (Moderate wait) | 11,325 | 10,003 | 21,328 | 46.9% | 53.1% | -6.2% |
| 60s+ (Long wait) | 37,691 | 30,590 | 68,281 | 44.8% | 55.2% | -10.4% |

Calls = negative + positive · CSAT (net sentiment) = % positive minus % negative · source: inbound calls, nine verticals, 2026 H1

EXHIBIT 2

## Negative sentiment overtakes positive the moment any wait is introduced




POSITIVE AND NEGATIVE SENTIMENT SHARE BY ASA TIER · N=750,000 · 2026 H1

TAKEAWAY

Immediate answers score 11.4 points better on net sentiment than the next-best tier, 15.6 points better than the long-wait tier, and 29.6 points better than the worst. Every tier that involves waiting scores worse than the tier that does not.

SECTION 2 · FINDINGS

# Four findings, one threshold.

Waiting costs CSAT, and the bill arrives in the first few seconds.

FINDING 01

## Only immediate answers come out net-positive

At 0 to 5 seconds, positive sentiment outweighs negative. The moment a queue is introduced, sentiment flips net-negative and stays there through every longer tier.

THE ONLY TIER ABOVE WATER

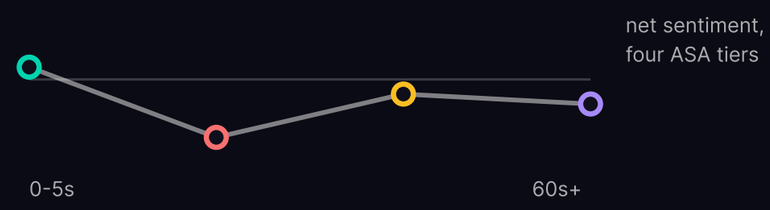
**52.6%** vs **47.4%**

positive vs. negative, 0-5s answers

FINDING 02

## The worst tier is not the longest wait

The 6 to 19 second tier scores -24.4% net, worse than both the 20 to 59 second tier (-6.2%) and the 60 second plus tier (-10.4%).




FINDING 03

## Zero to short is the biggest move in the data

A 14.8 point swing in both directions at once, in a single tier step. No other tier-to-tier transition comes close.

**14.8 pts**

Negative climbs 47.4% to 62.2%
as positive falls 52.6% to 37.8%

LARGEST TIER-TO-TIER MOVE IN THE DATA

FINDING 04

## The exposed population is large

The worst-scoring tier is not a rounding error, which is where the CSAT recovery opportunity sits.

**129,784**

calls in the worst-scoring tier
6.1x the moderate-wait tier

17.3% OF ALL INBOUND CALLS

TAKEAWAY

The core hypothesis holds, but the data does not support a simple longer-wait, worse-sentiment straight line. The damage is concentrated early, then partially recovers, then returns.

SECTION 3 · WHY WAITING HURTS

# The shape of the curve is a behavioral result.

A sharp early drop rather than a smooth decline is what decades of service-operations research on waiting would predict. Four principles apply directly, and together they explain both failure modes.

01

### Uncertain waits feel worse than known waits

A customer entering a queue does not know whether this is a five-second wait or a five-minute one. That uncertainty is its own source of anxiety, independent of clock time, and it peaks in the earliest seconds. The data matches: sentiment does not wait for a long hold to turn negative. It turns as soon as any hold begins.

02

### Anxiety compounds the perceived length of a wait

An anxious customer perceives the same wait as longer and more unpleasant than the clock would suggest. Anxiety runs highest early in an unexplained wait, before any signal about what is happening or how long it will last. That is consistent with the short-wait tier producing the sharpest drop in the dataset.

03

### Customers recalibrate the longer they wait

Once a customer realizes the wait will not be brief, they mentally adjust expectations, a well-documented coping response. It does not make a long wait pleasant, but it reduces the marginal frustration of each additional second. This explains the 18.2 point recovery at 20 to 59 seconds.

04

### Recalibration has a ceiling

Adjusted expectations absorb some frustration, but not indefinitely. Past 60 seconds, net sentiment turns down again, 4.2 points below the moderate tier. Once the wait exceeds what the customer has mentally budgeted, the cost of the wait itself reasserts.

### The first moments carry disproportionate weight

Service-quality research consistently finds the earliest moments of an interaction shape the overall impression out of proportion to their length. A slow start colors the sentiment of the whole call even when the resolution is satisfactory, which helps explain why a short wait scores so much worse than an instant answer, and why the penalty appears to persist well past the moment the agent picks up.

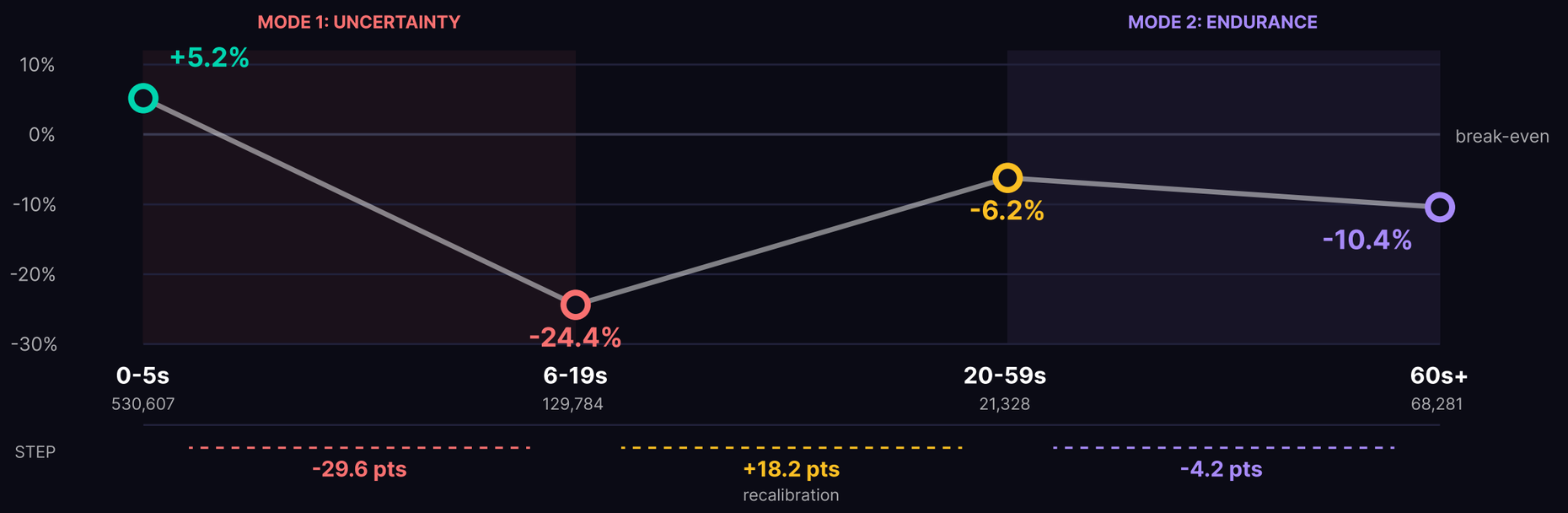
> TAKEAWAY
>
> None of this contradicts the hypothesis; it explains it. The literature predicts precisely this shape: a spike in the earliest, most uncertain seconds, partial stabilization as customers adjust, then renewed decline once the wait outruns the adjustment.

SECTION 4 · TWO FAILURE MODES

# Queue time costs CSAT twice, in two different ways.

EXHIBIT 3

## The double dip: an uncertainty cliff, a recalibration recovery, then an endurance slide




NET SENTIMENT BY ASA TIER · IF FRUSTRATION ACCUMULATED LINEARLY THE 60S+ TIER WOULD BE WORST; IT IS SECOND-WORST · 2026 H1

FAILURE MODE 1 · UNCERTAINTY

### The short, unexplained wait

Worst net sentiment in the study at -24.4%, and the largest single-step deterioration in the data. The customer has no information yet about how long this will take, and the anxiety of not knowing does more damage than the wait itself. This is a queue-design and expectation-setting problem, not a staffing problem.

**129,784 calls · 17.3% · 80,726 negative**

FAILURE MODE 2 · ENDURANCE

### The wait that outruns the adjustment

After customers recalibrate at 20 to 59 seconds, sentiment turns down again past 60 seconds, 4.2 points below the moderate tier. Recalibration buys tolerance, not immunity. This one is a capacity and routing problem: no amount of messaging makes a long wait acceptable indefinitely.

**68,281 calls · 9.1% · 37,691 negative**

TAKEAWAY

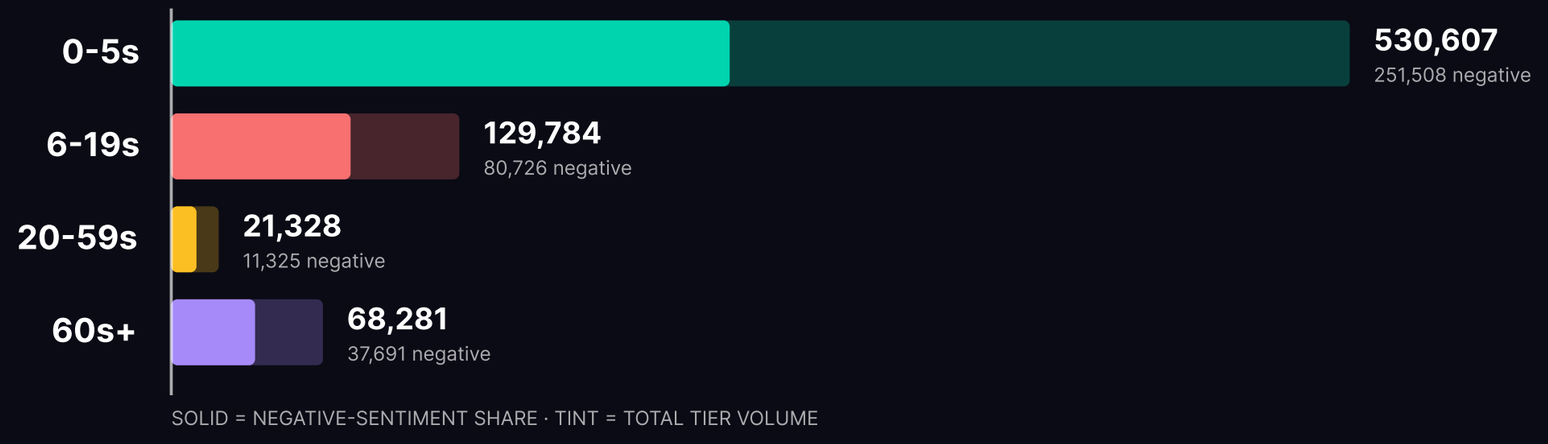
Two modes, two fixes. For uncertainty: remove the short unexplained hold, or resolve the uncertainty inside it with position and time-to-answer information at the very start of the queue. For endurance: cap the long tail through capacity and routing.

SECTION 5 · EXPOSURE, CORRELATION, LIMITS

# Where the exposure sits, and what it proves.

EXHIBIT 4

**Where the calls sit, and how many of them end in negative sentiment**




CALL VOLUME AND NEGATIVE-SENTIMENT VOLUME BY ASA TIER · N=750,000 · 2026 H1

## Testing the correlation

| COMPARISON | NET GAP | READING |
|---|---|---|
| 0-5s vs. any wait | 11.4 to 29.6 pts worse | Waiting costs CSAT |
| 6-19s vs. 20-59s | 18.2 pts better | Damage is early |
| 6-19s vs. 60s+ | 14.0 pts better | Short beats long |
| 20-59s vs. 60s+ | 4.2 pts worse | Ceiling on tolerance |

## Summary

The two modes together account for 198,065 calls and 118,417 negative-sentiment calls. As ASA moves from zero to any measurable wait, CSAT drops sharply and immediately, the clearest part of the relationship. Within the waiting tiers it is not linear, but it stays directionally consistent, and 750,000 calls across nine verticals make it a reliable basis for operational decisions.

L1 Quality · L2 Customer · L3 Revenue · L4 Operational · L5 Training · L6 Strategic

## Limitations

### Correlational, not causal

ASA tier was not randomly assigned, so call reason, time of day, day of week, and staffing may explain part of the pattern.

### Moderate-wait sample

The 20 to 59 second tier is the smallest cell. Its -6.2% net figure should be read as directional rather than exact.

### Sentiment as a proxy

Speech-analytics sentiment stands in for CSAT without a survey, but it is not identical to it. A parallel survey would quantify the translation.

Produced by the QEval® Speech Analytics team from production scoring data. Sentiment scoring and queue-time classification were performed by the QEval® platform, built by ETS Labs, an Etech Global Services company. Correlational estimates from 2026 H1 inbound call data across nine verticals, provided for informational purposes.