

*ABL Digital Technologies*

# **OUTBOUND DIALER SIZING**

*A Practitioner's Guide*

*Dial economics · Pacing maths · TCPA compliance  
Every input explained · The Excel workbook · Worked example*

*Companion to the Erlang and Multi-Skill explainers.*

# OUTBOUND DIALER SIZING

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## 1 · What This Tool Does

Sizes an outbound contact-centre operation. Given dial economics and a productivity target, computes the agents needed, the dial volume that must be sourced, the predictive pacing ratio, and the expected abandon rate. Three dial modes are supported: predictive (high pacing for maximum throughput), progressive (1:1 pacing for simple campaigns), and preview (slow pacing for high-touch sales).

Built for the three main outbound use cases:

- Collections — chasing accounts at various delinquency stages
- Sales outbound — cold and warm prospecting campaigns
- Survey operations — post-interaction CSAT, market research

*Inbound staffing (Erlang C) does not apply here — outbound is a fundamentally different problem because the operation generates its own load by dialling.*

## 2 · Dial Economics

### Per-dial outcome probabilities

Every dial ends in one of three states: no answer (rings out or goes to a closed system), voicemail, or live person. Of live answers, a fraction reach the right party (the intended person). The tool composes these into useful probabilities:

$P(\text{connect}) = \text{Connect Rate (dial answered, any kind)}$

$P(\text{live}) = \text{Connect} \times \text{Live Answer (dial} \rightarrow \text{live human)}$

$P(\text{RPC}) = P(\text{live}) \times \text{RPC Rate (dial} \rightarrow \text{right person)}$

$\text{Dials per RPC} = 1 \div P(\text{RPC})$  (8-15 typical)

### Typical rate ranges

- Connect rate: 25-45% (consumer voice; lower for mobile-only)
- Live answer rate: 50-75% (rest is voicemail)
- RPC rate: 30-50% (varies wildly by data quality)

- Composite RPC per dial: usually 5-12%

## 3 - Pacing and Predictive Dialing

### What pacing means

A progressive dialer makes one outbound dial per agent who becomes available — the simplest model, no abandons by design. A predictive dialer dials more than one attempt per available agent because most dials will not result in a connection. The "pacing aggressiveness" is the extra dials over the 1:1 baseline.

### The trade-off

More pacing means more connections per available agent (higher throughput) but also more cases where a live human answers and no agent is available — an abandon. The tool approximates the abandon-vs-pacing curve linearly: roughly 1% abandon per 10% pacing, accelerating above 50%.

`Throughput boost ≈ pacing × 50% (rough rule of thumb)`

`Abandon ≈ pacing × 10% + extra above 50%`

### TCPA compliance

Under TCPA (Telephone Consumer Protection Act, US), outbound campaigns are capped at 3% abandon rate. Many operations target 1-2% as buffer against measurement noise. Other jurisdictions have different rules — Indian Telecom Regulatory Authority guidance is broadly similar.

## 4 - The Inputs

### 4.1 Dial Economics Card

#### Connect Rate (%)

Fraction of dials that get answered, including both live answers and voicemail. Easy to measure from dialer telemetry. 25-45% typical for consumer voice; lower if you are dialling mostly mobiles in late hours.

#### Live Answer Rate (%)

Of answered dials, fraction that go to a live human (not VM). 50-75% typical. Below 50% suggests your data is stale or your dial windows are wrong.

#### Right-Party Contact Rate (%)

Of live answers, fraction that reach the intended contact (not a roommate, child, wrong number). Hugely variable by data source: clean banking files 50%+; aged collections files 15-30%.

#### AHT — Connected Call (sec)

Average handle time for a connected, RPC call. Long for sales (5-15 minutes), short for collections confirmation (1-3 minutes).

### **Wrap Time (sec)**

After-call work — disposition coding, payment recording, CRM updates. 20-60 sec typical.

### **No-Answer Time per Dial (sec)**

How long the dialer holds a no-answer or voicemail outcome before moving to the next dial. Tightly tuned dialers: 15-25 sec. Looser configs: 30+ sec.

## **4.2 Targets & Pacing Card**

### **Dial Mode**

Three modes: Predictive (high pacing for maximum throughput), Progressive (1:1 pacing for simple campaigns), Preview (agent reviews record before dial, slowest pacing).

### **Target Variable**

What you are sizing FOR:

- RPC contacts per hour (most common — pure productivity target)
- Connected calls per hour (talk-time productivity)
- Available agents (reverse-direction sizing — what can N agents produce?)

### **Target Value**

Interpreted per the variable selected. For example, 120 with "RPC per hour" means size the operation to produce 120 RPC contacts per hour.

### **Pacing Aggressiveness (%)**

Extra dials over 1:1 base. 0% in progressive mode; 25-50% typical in predictive mode. Higher = more abandons.

### **Max Abandon Rate (%)**

Hard cap, TCPA-style. The sensitivity table shows which pacing levels stay within this cap.

### **Shrinkage (%)**

Inflates agents to roster FTE. Standard 22-32%.

## **5 - The Outputs**

### **5.1 Sizing Summary**

- Agents Needed — in-seat headcount to hit the target
- Roster FTE — after shrinkage
- Dials per Hour — required dial volume
- Connected per Hour — productivity of connected calls

- RPC per Hour — RPC productivity (the headline outcome metric)
- Pacing Ratio — dials per agent-second (technical metric, useful for dialer config)
- Expected Abandon Rate — colour-coded red if over cap, green if under
- Agent Utilisation — fraction of productive time on calls

## 5.2 Per-Agent Economics Table

Decomposition of the unit economics: P(connect), P(live), P(RPC), dials per RPC, time per live contact, live contacts per agent-hour, RPC per agent-hour. Useful for "where would I focus to improve?" conversations — sometimes the bottleneck is RPC rate (data quality), sometimes AHT (handling efficiency), sometimes connect rate (dial windows).

## 5.3 Pacing Sensitivity Chart

RPC throughput and abandon rate plotted across 0-100% pacing. Two y-axes — RPC on the left (rising), abandon % on the right (rising faster after 50%). The selected pacing point is highlighted. Use this to visually find the sweet spot just below the abandon cap.

# 6 • The Excel Workbook — Four Sheets

- Summary — inputs and sizing output, with TCPA compliance flag
- Per-Agent Economics — the unit-economics decomposition table
- Pacing Sensitivity — RPC, abandon, dials/hour at each 10% pacing step
- Assumptions — methodology narrative, including the linear pacing-abandon approximation and what the tool does NOT cover

# 7 • A Worked Example

Sizing a collections outbound desk.

- Connect: 35%, Live: 65%, RPC: 40%
- AHT: 180 sec, Wrap: 30 sec, No-answer: 25 sec
- Mode: Predictive, Pacing: 35%, Abandon cap: 3%
- Target: 120 RPC contacts/hour
- Shrinkage: 25%

## 7.1 Per-dial outcomes

$$P(\text{connect}) = 35\%$$

$$P(\text{live}) = 35\% \times 65\% = 22.75\%$$

$$P(\text{RPC}) = 22.75\% \times 40\% = 9.1\%$$

$$\text{Dials per RPC} \approx 1 \div 9.1\% \approx 11$$

## 7.2 Per-agent throughput

Productive sec/hour =  $3,600 \times 0.75 = 2,700$

Time per live contact =  $180 + 30 = 210 \text{ sec}$

Live contacts per agent-hour =  $2,700 \div 210 \approx 12.9$

RPC per agent-hour  $\approx 12.9 \times 40\% \approx 5.2$

## 7.3 Sizing

Agents needed =  $\lceil 120 \div 5.2 \rceil = 24$

Roster FTE =  $\lceil 24 \div 0.75 \rceil = 32$

Dials/hour =  $120 \div 9.1\% \approx 1,319$

Pacing ratio =  $(1,319 \div 3,600) \div 24 \approx 0.0153$

## 7.4 Compliance

At 35% pacing, expected abandon  $\approx 3.5\%$ , marginally over the 3% TCPA cap. The sensitivity chart will suggest reducing pacing to  $\sim 30\%$  to stay under, losing a small amount of RPC throughput. Or hold pacing at 35% and accept the compliance risk.

# 8 - Limits

- Linear pacing-abandon approximation — real dialers use Markov queueing models and adapt to live conditions. Treat the abandon prediction as directional, not precise.
- No multi-pass campaign mechanics (retries, cooling periods between attempts)
- No state-by-state TCPA variations or international regulatory differences
- No DNC list filtering or compliance scrubbing
- Single contact type per campaign — for blended inbound+outbound, size each separately

# 9 - Tips

## Why is my abandon prediction so high?

Pacing aggressiveness has a steep upper end. If you are above 50%, every extra percent of pacing buys less throughput and adds more abandons. Below 35% is the sweet spot for most TCPA-compliant operations.

## How do I improve RPC throughput without breaking TCPA?

Three levers in order of typical impact: better data (raises RPC rate — the biggest lever), better dial-window timing (raises connect rate), shorter wrap (raises live contacts per hour). Pacing is the last lever to pull because of the abandon trade-off.

## **My AHT looks unstable — what to enter?**

Use the median, not the mean. Outbound AHT distributions are right-skewed (a few very long calls). The median is closer to the typical experience.