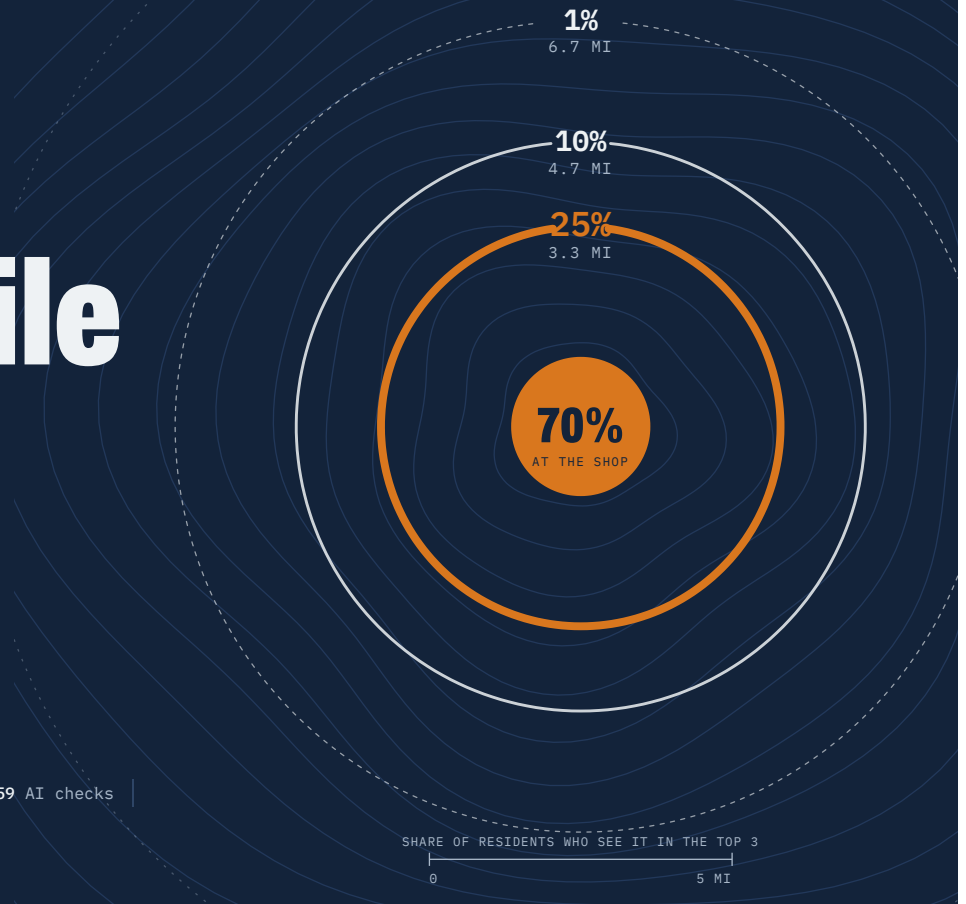


The Three-Mile Map

How far 138 Charlotte-area home service companies reach on Google Maps, and which ones AI assistants recommend.

By Neil, founder, Isoline Growth · October 16, 2026

7,056 Maps searches | 141,120 ranked results | 159 AI checks |
2020 Census weights



READ THE MAP IN 60 SECONDS

70% → 1%

Residents who see a typical company in Google's top 3: 70% near its shop, about 1% at 6.7 miles.

3%

Residents within 10 miles, outside its own neighborhood, for whom the typical company ranks top 3.

51% vs 21%

Top-3 rate 3.3 miles out, in quieter versus busier areas. Busier areas are harder to win.

27 of 53

Companies ChatGPT named at least once. Gemini named 31, Google's AI Overviews 2.

Thirteen findings

Counted by where people live, most companies in this study are visible on Google Maps only in their own neighborhood. **AI assistants follow different rules**, and each leaves many companies out.

70% → 1%

The three-mile rule.

76% of companies rank top 3 at their own address. Counted by residents: 70% near the shop, 25% at 3.3 miles, about 1% at 6.7.

PLATE 3 →

3%

A sliver of the market.

Outside its own neighborhood, the typical company ranks top 3 for about 3% of residents within 10 miles.

PLATE 3 →

51% vs 21%

Busier areas are harder to win.

3.3 miles out, companies made the top 3 in 51% of less-populated areas but 21% of more-populated ones.

PLATE 4 →



Even #1 at home isn't safe.

19 of 78 companies ranked #1 at their own address were out of the top 3 at every point 3.3 miles away.



The winner is usually close.

The #1 result sat a median 2.6 miles from the searcher, and within 5 miles 87% of the time.



Small shops still win close to home.

About one in five #1 spots went to a business with fewer than 50 reviews, typically about 2 miles away.



AI ASSISTANTS · FINDINGS 10-13



Gemini repeats a few names.

Five HVAC companies received 31% of Gemini's HVAC recommendations. On Maps, the top five held about 7%.



ChatGPT's sources lean on directories.

Thumbtack, Angi and HomeAdvisor were among the cited sources in every ChatGPT check.



HVAC is the tightest market.

Beyond 9 miles from the shop, HVAC companies made the top 3 in 3 of 2,296 searches.



Under 50 reviews, companies were mostly invisible.

Their median was zero top-3 spots. Above about 150, review count showed no relationship with reach.



The map is fragmented.

1,338 companies held a top-3 spot somewhere in our searches. National brands and franchises held 6%.



About half went unnamed.

ChatGPT named 27 of 53 companies and Gemini 31. Google's AI Overviews named only 2.



Maps success didn't guarantee a mention.

Of the 45 companies with any Maps top-3 spot, 21 weren't named by ChatGPT in our check.

The map

Google shows most companies near their own shop and almost nowhere else.

1.1 One company's map 1.2 The three-mile rule 1.3 Busier is harder
1.4 Each trade's cliff

70% → 1%

1.1

Visibility isn't a number. It's a map.

When a homeowner in Matthews searches for AC repair, Google doesn't show the best AC company in Charlotte. It shows well-matched companies near where that homeowner is. Google lists relevance, distance and prominence as the three factors behind local results.

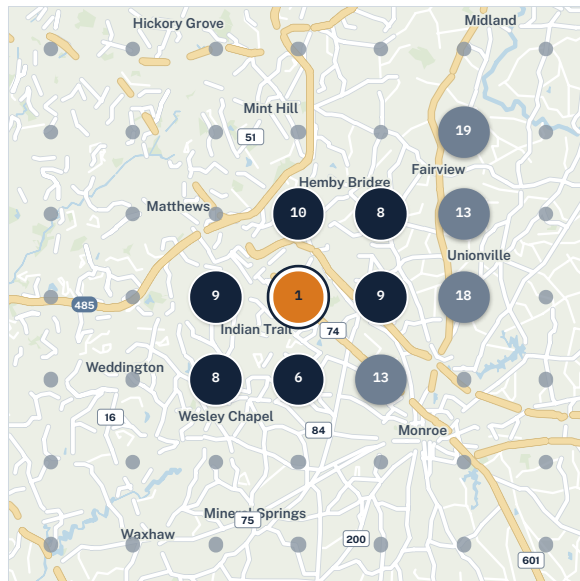
So visibility changes block by block. Most owners only see one point on that map, the search from their own office, which is usually where they look best. We measured the whole map for 138 companies, weighted it by where people live, and asked three AI assistants the same question.

PLATE 1

#plate-1

One real company: #1 at its shop, invisible a few miles out

Where one company ranked for "ac repair" at 49 points around its shop. Real scan, name removed.



Top 3 at 1 of 49 points

Its own shop, where it ranks #1.

Ranks 4–10 at 6 points, 11–20 at 4

Visible only if the homeowner scrolls.

Outside the top 20 at 38 points

Each small grey dot is a spot where it isn't in Google's top 20 for "ac repair."

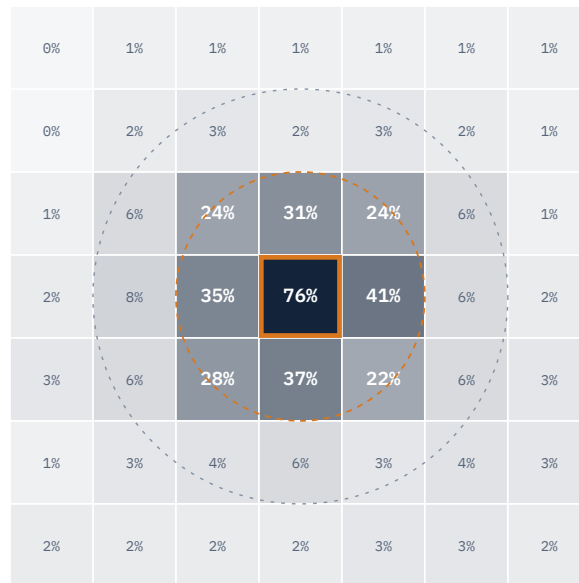
● Top 3 ● 4–10 ● 11–20 ● Not in top 20

Each dot = one spot we searched from, about 3.3 miles apart · Rank data collected with Local Falcon · Map data © OpenStreetMap contributors

Isoline Growth · The Three-Mile Map

The average map: 76% at the shop, single digits two rings out

Share of all 144 company scans ranking top 3 at each grid point, with the shop at the center.
Darker squares mean more companies won that spot.



The shop: 76%

Three in four companies rank top 3 at their own address.

First ring, 3.3 mi: 22-41%

Already well under half, on every side.

Second ring, 6.7-9.4 mi: 2-8%

Single digits at every point.

Edge, 10-14 mi: 0-3%

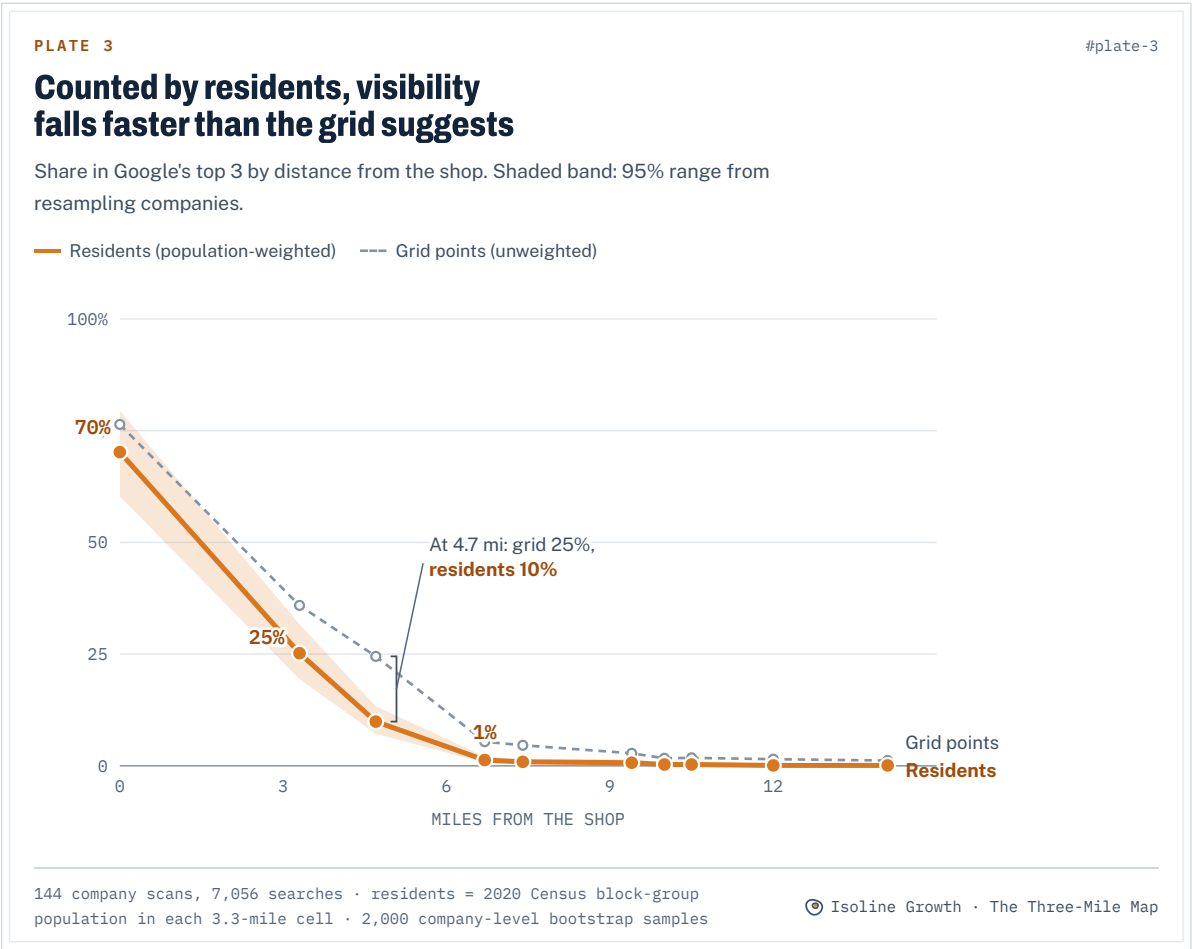
Most companies are invisible here.

Unweighted grid points, 144 company scans · Rank data collected with Local Falcon, Oct 15, 2026

© Isoline Growth · The Three-Mile Map

The three-mile rule

Counted by where people live, companies were top 3 for **one in four residents** 3.3 miles away, and about **one in a hundred** at 6.7 miles.



1/4

Not even in the list.

At 6.7 miles, the company appeared anywhere in the top 20 for about a quarter of residents.

3%

The typical reach.

Within 10 miles, outside its own cell, the median company ranks top 3 for 3% of residents. The average is about 10%, pulled up by a few far-reaching companies.

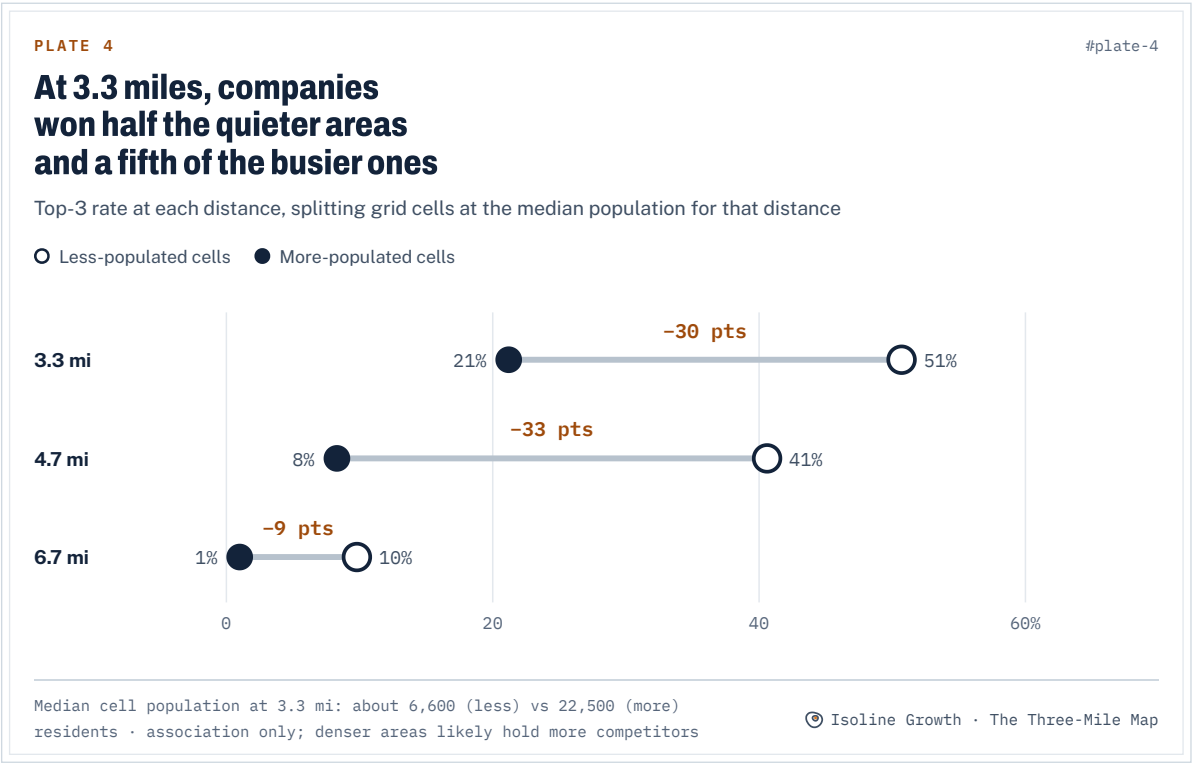
31 of 144

Never top 3.

Scans with no top-3 spot anywhere on the grid, not even at the shop.

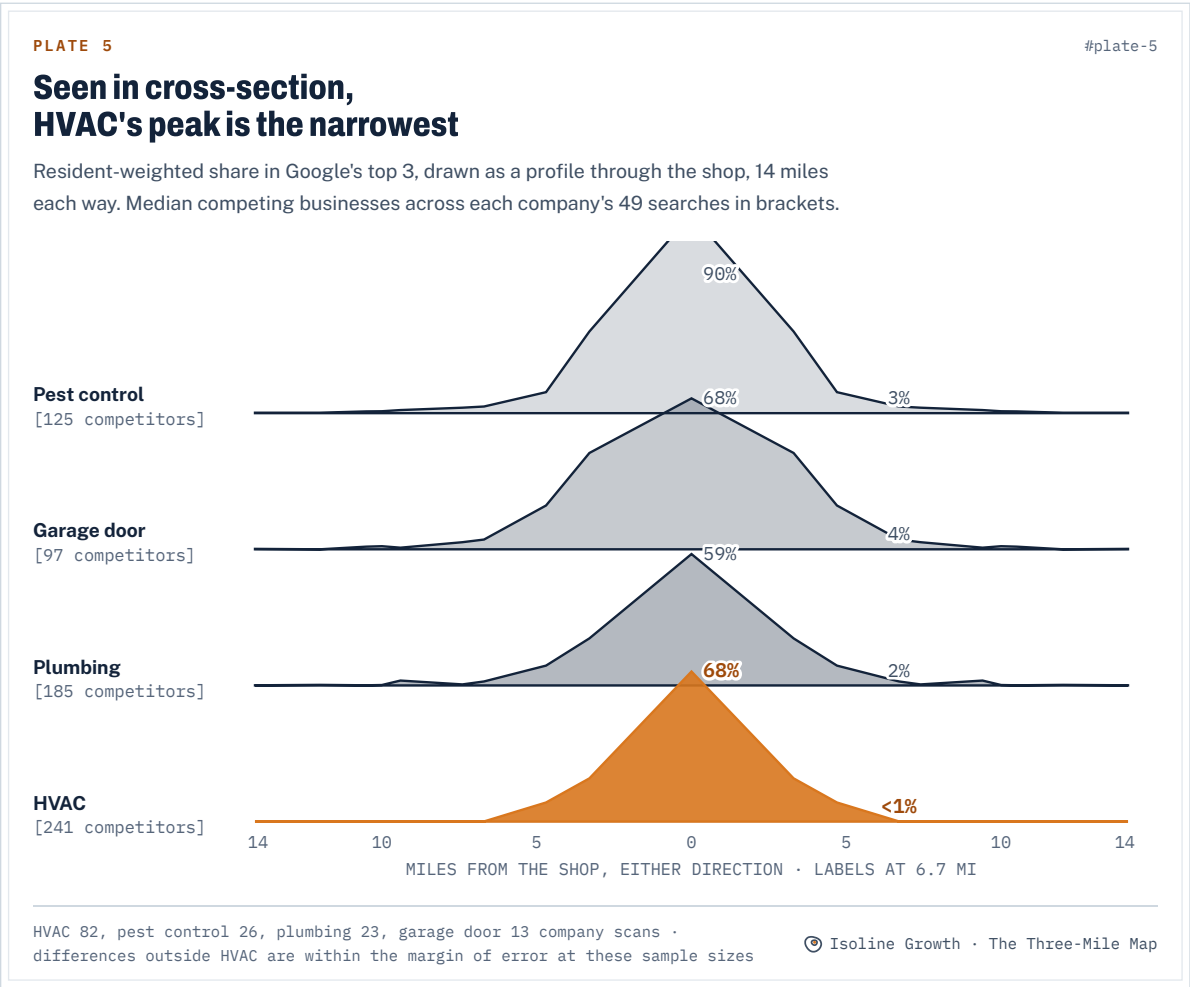
Where people live is hardest to win

At the same distance from the shop, companies were **far less likely** to rank in the busier parts of the map. That's why the resident curve falls faster.



Each trade has its own cliff

The drop shows up in every trade. **HVAC, the most crowded, falls off first:** about 0.1% of residents at 6.7 miles.



What wins

Closeness does the most. Reviews matter up to a point. No one owns the map.

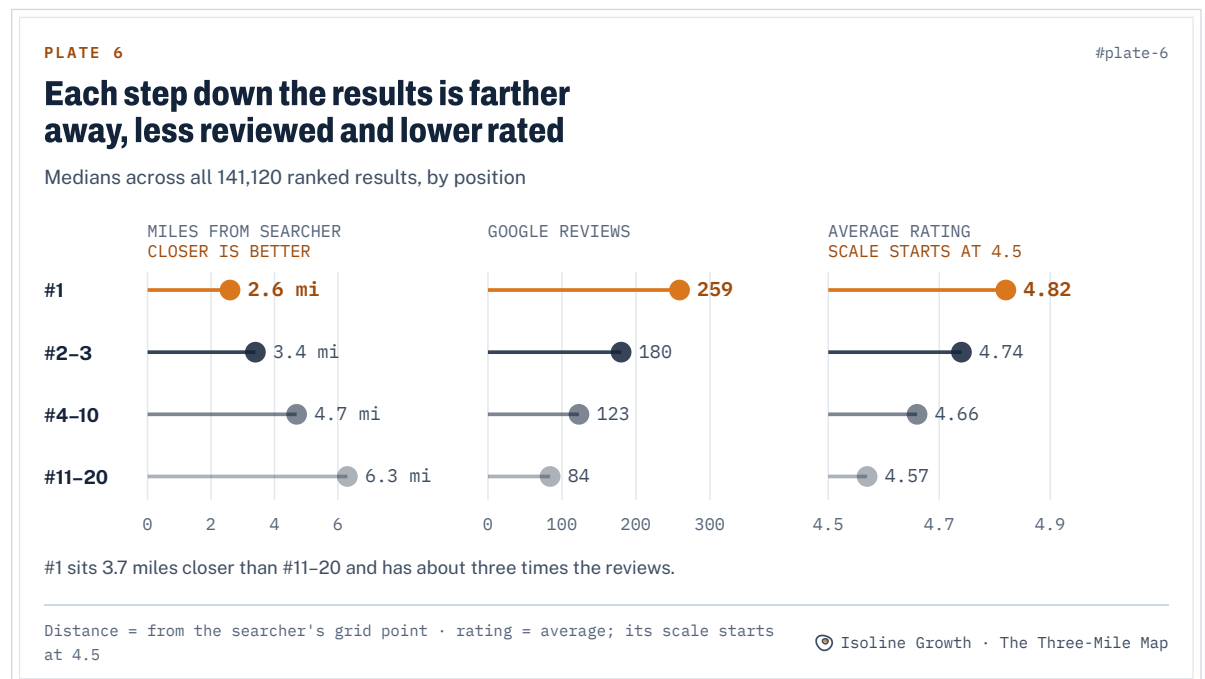
2.1 Who holds each position 2.2 Reviews and reach
2.3 Nobody owns the map

150

2.1

What it takes to win a search

Distance shows the strongest link to winning. **#1 sat 3.7 miles closer** than #11–20, with three times the reviews.



4.5★

The rating floor.

93% of top-3 results carried a rating of 4.5 or higher.

99%

Category is an entry ticket.

Of #1 results, 99% had a primary Google category matching the trade searched.

503

Plumbing winners carry the most reviews.

Median reviews of the #1 plumbing result, about twice HVAC's 259. In garage door, 80.

2.2

Reviews get you on the map

Under 50 reviews, companies were mostly invisible.

Past about 150, more reviews showed no relationship with reach.

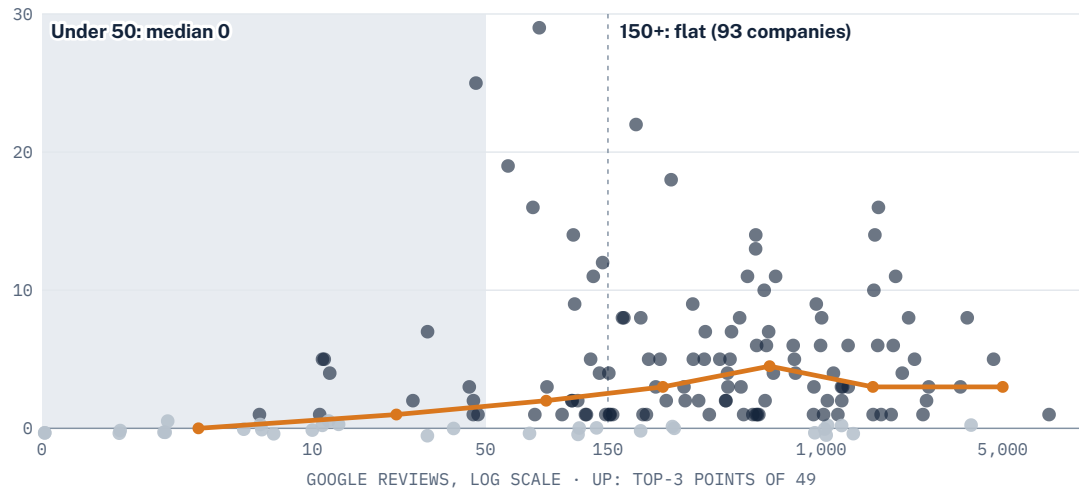
PLATE 7

#plate-7

Past about 150 reviews, the line goes flat

Each dot is one company: its Google reviews (log scale) and the grid points, of 49, where it ranked top 3. Line: running median.

● Won a top-3 spot somewhere ● Never top 3 — Running median

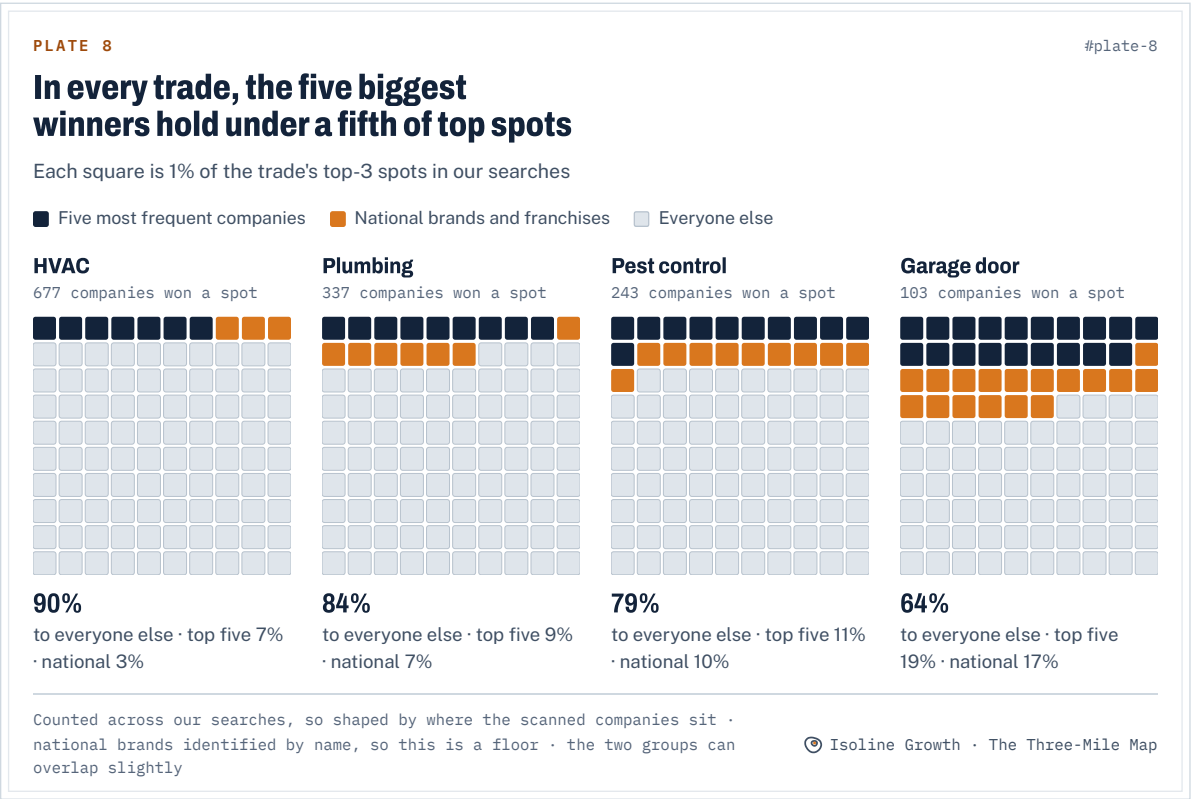


144 company scans · rank correlation 0.28 overall; -0.02 among the 93 with 150+ reviews (not significant) · association, not cause

© Isoline Growth · The Three-Mile Map

Nobody owns the map

Across 7,056 searches, 21,168 top-3 spots went to **1,338 different companies**. The company beating you three miles away is usually another local shop.



The AI layer

AI assistants don't follow the map. Gemini repeats a few names everywhere; each assistant leaves many companies out.

3.1 Who gets named 3.2 A few names everywhere
3.3 Where the answers come from

Half left out

3.1

Who gets named

ChatGPT and Gemini each left about **half the companies** unnamed. Google's AI Overviews named two.

PLATE 9

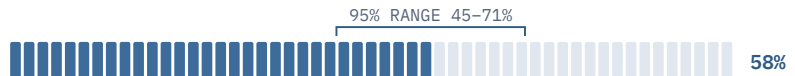
#plate-9

ChatGPT and Gemini each named about half of 53 companies

Each square is one company we checked; filled squares were named at least once. The bracket shows the 95% range.

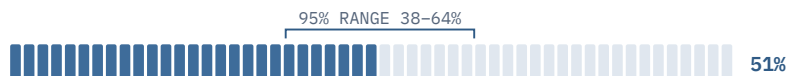
Gemini

31 of 53 companies



ChatGPT

27 of 53 companies



Google AI Overviews

2 of 53 companies

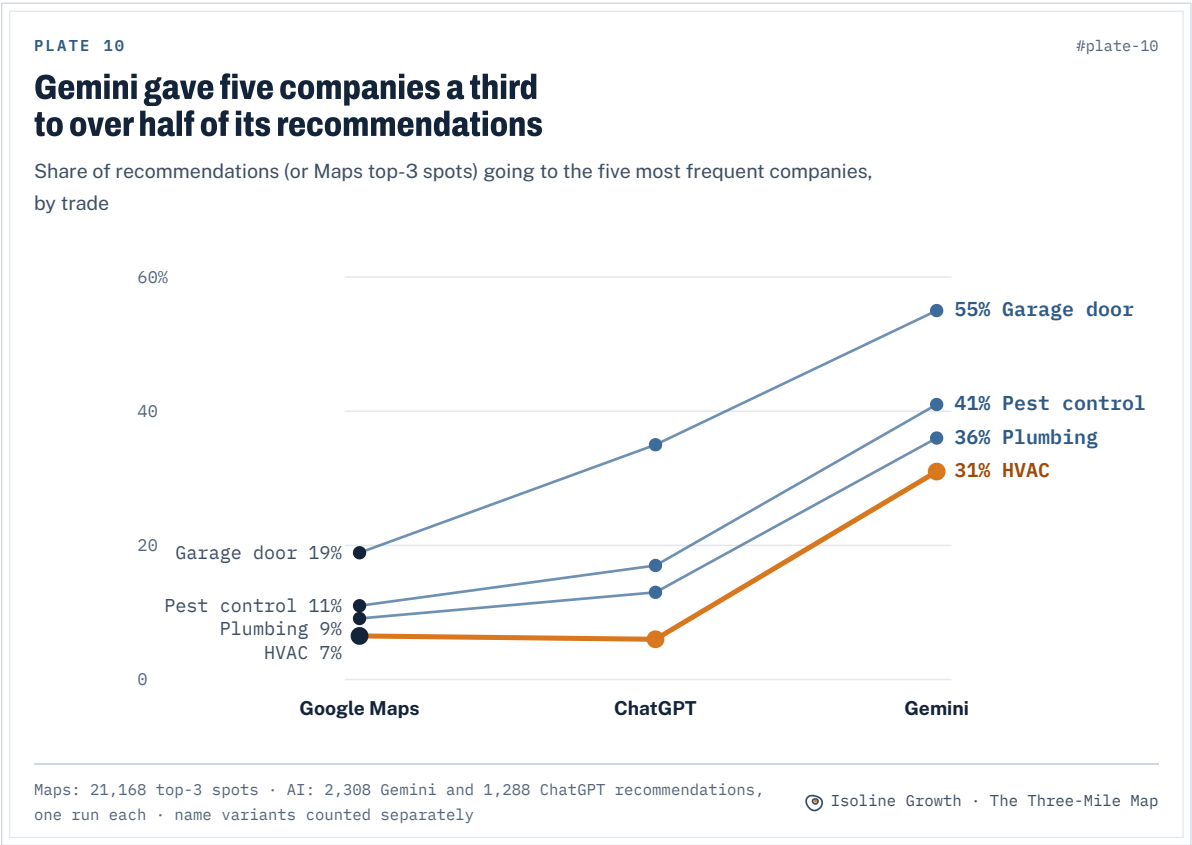


One check per assistant on a 3x3 grid · one company named by all three, eleven by none · AI Overviews returned sources in 16 of 53 checks; our data can't separate low coverage from companies not being chosen

© Isoline Growth · The Three-Mile Map

A few names, everywhere

On Maps, the five biggest HVAC winners held 7% of top spots. On Gemini, **31% of HVAC recommendations** went to five companies.



9 of 9

Gemini's picks covered the grid.

When Gemini named a company, it named it at a median of 9 of 9 points. ChatGPT: 1 of 9.

24 of 45

Separate scoreboards.

Companies with any Maps top-3 spot that ChatGPT named. A Maps lead didn't carry over reliably.

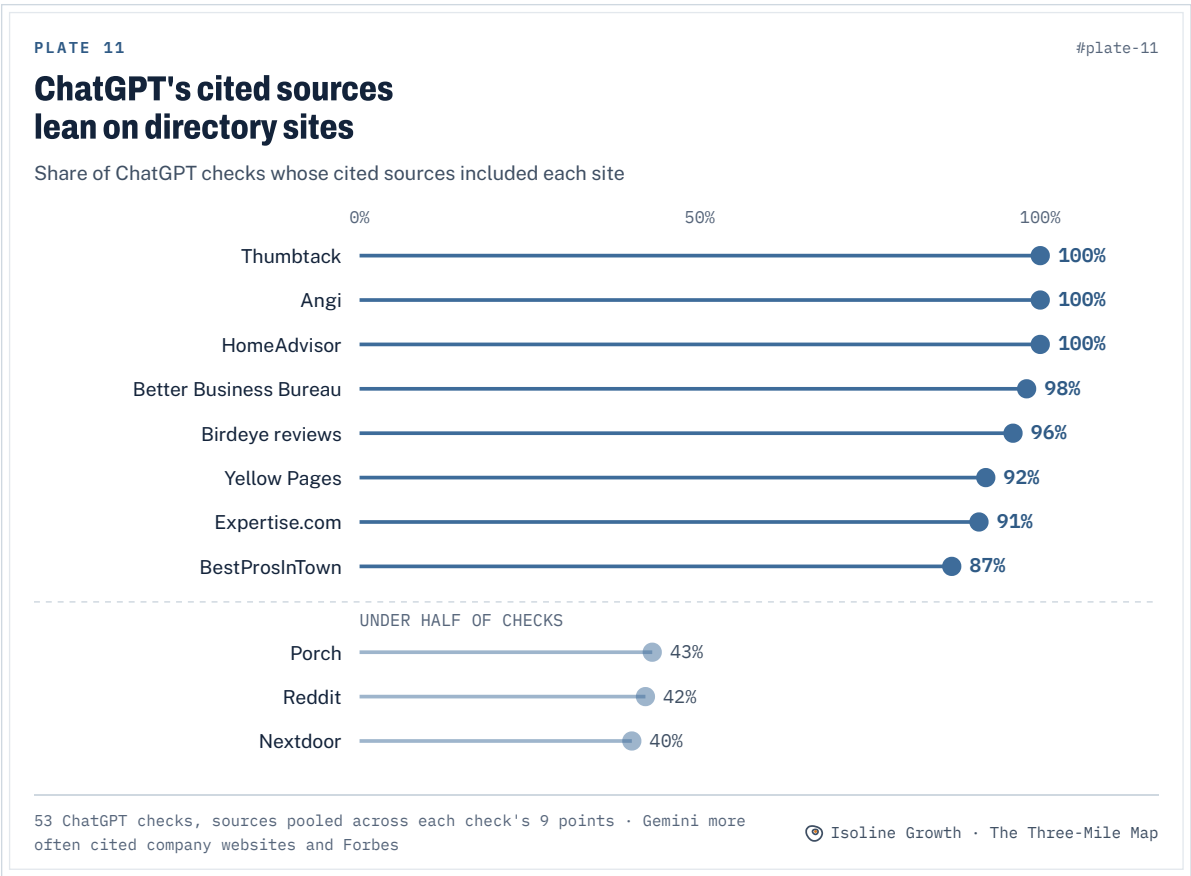
1 run

A snapshot, not a rule.

AI answers vary between runs. These are one run per company, through simulated queries.

Where the answers come from

Three directory sites showed up in the sources of every ChatGPT check.



What it means for owners

A safe working assumption: Google shows you well in your own neighborhood and poorly a few miles out, **especially where most of your customers live.**

1 Look at your map, not your search.

Your own search shows your best spot. Check what homeowners see five and ten miles out.

2 Compare yourself with the neighbor.

The company ahead of you in Matthews is usually a local shop closer to Matthews.

3 Hold 4.5 stars and the right category.

Both are close to an entry ticket. Your primary category should name your main trade.

4 Get past 50 reviews.

In our sample, companies under 50 had a median of zero top-3 spots. Beyond about 150, count alone showed no link to reach.

5 Pay where the map won't reach.

Local Services Ads and search ads can target the zip codes the free map doesn't carry you to.

6 Keep directory profiles accurate.

Thumbtack, Angi, HomeAdvisor and the BBB showed up in ChatGPT's sources across our checks.

7 Ask the AI yourself.

Ask ChatGPT and Gemini who to call for your service in your town, and see who they name.

YOUR MAP

Measure your three-mile map

We'll run the same 49-point scan for your main money search and show where you drop out, who takes those searches, and the one change most likely to move it.

Free One-page map Back in 2 business days No sales call required

How we measured

COMPANIES 138 Charlotte-area HVAC, plumbing, pest control and garage door companies; 144 company-and-search pairs.	MAPS GRID 7 × 7 49 points, 10 miles each way from the shop, 3.3 miles apart. Top 20 results recorded at each.	WEIGHTING 2020 Census Each point weighted by residents in its 3.3-mile cell, from block-group population centers.
UNCERTAINTY 2,000 Bootstrap resamples of whole companies give the 95% ranges shown.	AI SAMPLE 53 Companies checked once on ChatGPT, Gemini and Google AI Overviews, 3×3 grid, same radius.	DATE Oct 15, 2026 About 7 to 11:10am Eastern. Searches: hvac repair, plumber, pest control, garage door repair.

How this compares with other research

4 agree · 2 partly · 1 differs —

Distance decides most rankings	Google lists distance among its three local ranking factors. In Whitespark's 2026 expert survey , proximity ranked #2 of 187 factors.	Agrees
Visibility drops within a few miles	Rankings.io (2025) found law firm rankings hold about a mile, then fall about 8 positions. A different industry, same shape.	Agrees
Primary category is near-mandatory	Whitespark's experts rank the primary Google category the #1 local pack factor.	Agrees
93% of top-3 results rated 4.5+	In BrightLocal's 2026 survey , 31% of consumers only use businesses rated 4.5+, up from 17%.	Agrees
Gemini's picks didn't vary with distance	Local Falcon (2025) found almost no link between distance and position in Google's AI Overviews, a different product from Gemini.	Partly
ChatGPT's sources lean on Thumbtack, Angi, HomeAdvisor	BrightLocal (2026) , across 1.9 million AI citations, found Google Business Profile and Yelp cited most. Our check counts presence; theirs counts share.	Differs
AI Overviews named 2 of 53 companies	Whitespark saw AI Overviews on about 15% of local-intent searches in its 2025 sample; Local Falcon reported 40% across its own sample.	Partly

Limitations

6 notes —

- **Not a random sample of Charlotte.** The 138 companies come from our research list, lean toward independent shops, and 57% of company scans are HVAC. The 2,933 other businesses in their results were not chosen by us.
- **One day, one search term per company.** Rankings change daily and by wording ("AC repair" may differ from "hvac repair").

- **Residents, not searches.** Population weighting approximates where demand is. It doesn't measure actual search volume.
- **Associations, not causes.** Reviews, density and reach move together here; other factors, such as competition and location, may explain the patterns.
- **AI checks are a snapshot.** One run per company through Local Falcon's simulated queries, which may differ from the consumer apps. Name matching between AI and Maps results is approximate.
- **Overlapping grids.** Nearby companies' grids overlap, so busy areas count more than once in the fragmentation figures.

Next editions

Raleigh–Durham, Upstate SC, Columbia —

The same method runs in any metro. Planned: Raleigh–Durham, Greenville–Spartanburg and Columbia, then a Carolinas comparison. Future editions will add a second search term per trade and repeat the AI checks three times.

Sources

10 —

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- Capstone Partners, [Residential Services M&A Update, October 2026](#), October 9, 2026