

invincible.

Published 22 September 2026

A GUIDE FROM INVINCIBLE DIGITAL

The CRO Playbook.

Psychology principles for landing pages that convert, with the evidence behind each one and the caveat nobody prints.

Twelve principles that hold up, and the order to work in them

Most conversion rate advice is a list of psychology tricks with a made-up statistic attached. This guide gives you the actual study behind each principle, and the caveat or failed replication the marketing internet leaves out.

WHY THE ORDER MATTERS

A page that loads in five seconds does not need loss aversion. It needs to load faster.

Three facts frame everything that follows

19.1%

of A/B tests reach statistical significance.
Roughly one in five.

ConversionTeam, 2,288 tests, 71 engagements, 8
June 2026

~70%

of carts are abandoned. The top reason is
extra costs at checkout, cited by 40%.

Baymard Institute, 50 studies 2006 to 2025,
retrieved August 2025

+74%

desktop conversion over mobile (3.4%
against ~2.0%), while mobile is 70%
of traffic.

Contentsquare, 99bn sessions, 6,500+ sites, 9
March 2026

If you fix nothing else, fix the costs shown at checkout and the mobile experience.

01

PART 1

The four things that decide conversion before psychology matters

Work in this order. Each stage is worth more than every stage below it.

Work in this order: speed, clarity, friction, trust

Each stage is worth more than every stage below it. Psychology comes after all four.

1

Speed

Does the page load fast on a real phone, on 4G?

2

Clarity

Can a stranger say what you sell, who it is for and what happens next in five seconds?

3

Friction

How many steps, fields and extra costs sit between the page and the money?

4

Trust

Does the payment step look safe, with the full cost and returns shown plainly?

Speed: a 0.1 second gain on mobile moved every sector measured

37 brand sites, more than 30 million sessions, mobile performance monitored hour by hour over 30 days.

RETAIL

+8.4%

conversion

Average order value +9.2%, add-to-basket +9.1%

TRAVEL

+10.1%

conversion

Booking rates +10%, checkout completion +2.2%

LUXURY

+40.1%

product page to add-to-basket

"Contact us" +20.6%

LEAD GENERATION

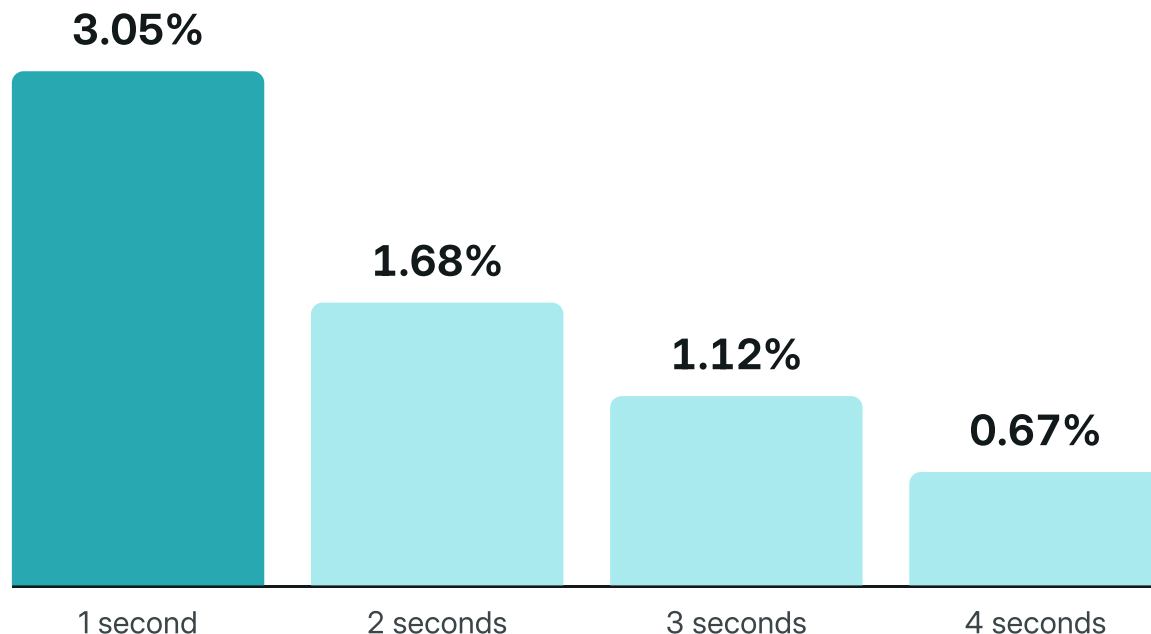
+21.6%

form submission progression

Source: Deloitte Digital and Google, "Milliseconds Make Millions", data collected end 2019, published 2020.

Speed: e-commerce conversion falls with every second of load time

E-COMMERCE CONVERSION RATE BY LOAD TIME



2.5x

A page loading in 1 second converted 2.5 times better than one loading in 5 seconds.

-7%

conversion from a 100 millisecond delay. A 2 second delay doubled bounce rate (Akamai).

Sources: Portent, 27,000+ landing pages, published 20 April 2022, updated 5 September 2024. Akamai and SOASTA, ~10bn visits, 19 April 2017.

Speed: say “associated with”, not “causes”

THE CAVEAT

All of these are observational datasets, not randomised speed experiments. Fast pages and high-intent users co-occur: a user on a good connection who already wants your product also loads pages faster.

The Deloitte study is closest to causal because it compares within the same site hour by hour, and it was commissioned by Google.

The direction is not in doubt. The magnitude probably is.

WHAT TO DO

- 1 Measure Largest Contentful Paint on a real mobile device on a 4G connection, not on your office wifi.
- 2 Compress images and defer non-critical scripts.
- 3 Remove one third-party tag before you add another.

Clarity: can a stranger say what you sell in five seconds?

On a phone, without scrolling, within five seconds of the page loading. If not, nothing else on this list will save the page.

1

What do you sell?

2

Who is it for?

3

What happens next?

THE TEST

Show the page to five people who do not work for you, for five seconds each. If fewer than four get all three right, rewrite the top of the page before you test anything.

Friction: the average checkout is roughly 40 per cent over-specified

5.1

steps in the average checkout

11.3

form fields in the
average checkout

8

fields most sites need in total

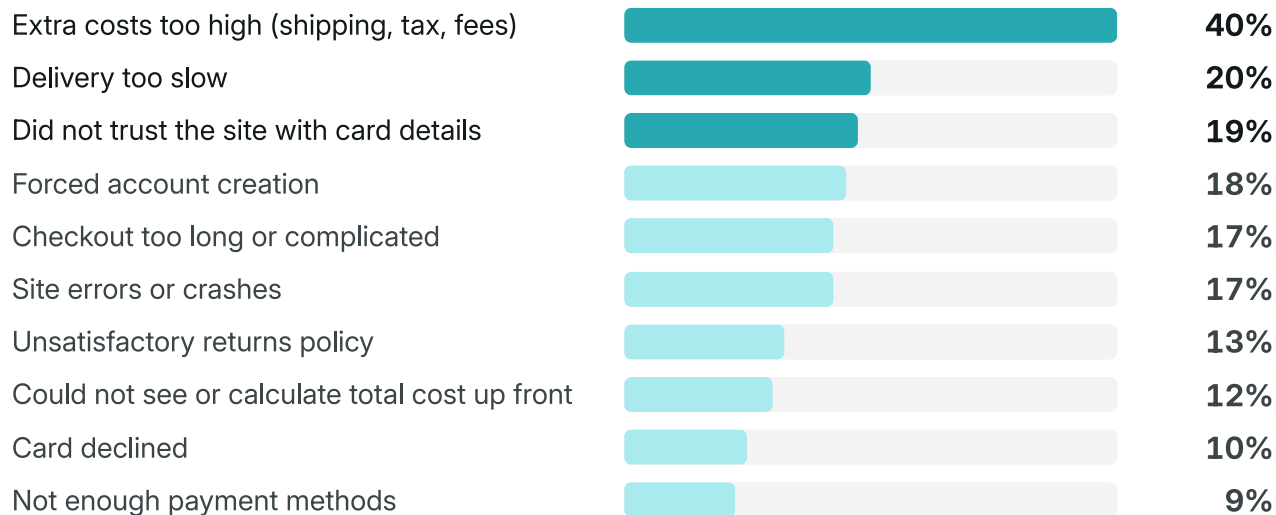
~35%

conversion improvement
available to the average large
site through checkout UX alone

Only 2 per cent of the sites Baymard rates are “good”.

Friction: why shoppers abandon their carts

REASONS FOR CART ABANDONMENT, EXCLUDING BROWSERS



READ THAT LIST AGAIN

Six of the top ten are commercial or technical, not psychological.

The fix for most of them is a business decision, not a landing page tweak.

Friction: fewer fields does not always mean more conversions

-14%

Unbounce removed form fields and conversion fell.

+19.21%+109%

Restoring those fields with better labels.

+109%

A 15-field form beat an 11-field form (MarketingExperiments).

53%

completion for a 30-plus question form split into four steps (Venture Harbour).

THE DEFENSIBLE CLAIM

Remove fields that add friction without adding perceived value, and consider multi-step. Not “shorter is better”.

CLAIMS WE DO NOT USE

“Expedia removed one field and made \$12m” and “11 fields to 4 lifted conversions 120 per cent”. Neither has a primary source.

Trust: card safety and returns policy shape the decision

19%

of cart abandoners did not trust the site with their card details.

Baymard, n=1,026, US adults, 2025

13%

of cart abandoners cited an unsatisfactory returns policy.

Baymard, 2025

77%

of European consumers base their initial purchase decision on the return policy.

Signifyd, 2024

Trust: shoppers judge security by visual cues and familiar brands

A fake, homemade seal outperformed most genuine SSL vendor seals.

Baymard, comparative test of eight site seals

25%

chose PayPal as giving the best sense of security, ahead of every dedicated security vendor.

CXL, n≈3,137, 2016, updated 2020

WHAT TO DO

- 1 Put the card fields in a visually distinct block with its own background.
- 2 Put one or two recognisable payment marks inside that block.
- 3 Show the full cost, including delivery, before payment.
- 4 Put the returns policy in plain words next to the buy button.

What we do not claim: no controlled test in the public record quantifies the lift from a trust badge or money-back guarantee. We use the mechanism, not a fabricated number.

02

PART 2

Twelve principles that hold up

Each one has the study, the caveat, the landing page application, the test and the failure mode. Read the caveats.

Twelve principles, one repeating structure

Principle

The evidence

The caveat

On a page

How to test it

How it goes wrong

01

Loss aversion

02

Social proof

03

Anchoring

04

Choice architecture

05

Defaults

06

Goal gradient

07

Endowment effect

08

Peak-end rule

09

Scarcity and urgency

10

Hick's law

11

Isolation effect

12

Zeigarnik effect

Principle 1: Loss aversion

People weigh a potential loss more heavily than an equivalent gain when deciding under risk.

THE EVIDENCE

Prospect theory, Kahneman and Tversky (1979). The “losses feel 2.25 times stronger” coefficient comes from Tversky and Kahneman (1992), not the 1979 paper. Attribute it correctly.

THE CAVEAT

Gal and Rucker (2018) argue loss aversion is contingent and overstated, not a general principle. Rebuttals ran in the same issue. The debate is live.

ON A PAGE

Frame the cost of inaction in the customer’s own terms, once, specifically. Not “don’t miss out”.

HOW TO TEST IT

Same offer, two framings: gain against loss in the headline and subhead. Nothing else changes.

HOW IT GOES WRONG

Applied to everything, it reads as fear-selling. Use it once, near the decision point.

Sources: Kahneman and Tversky (1979), *Econometrica* 47(2). Tversky and Kahneman (1992), *Journal of Risk and Uncertainty* 5. Gal and Rucker (2018), *Journal of Consumer Psychology* 28(3).

Principle 2: Social proof

People use the behaviour of others as evidence for what is correct, especially under uncertainty.

THE EVIDENCE

Five reviews make purchase 270% more likely than none: 190% for low-priced items, 380% for high-priced. Likelihood peaks at 4.0 to 4.7 stars. A perfect 5.0 reads as fabricated.

THE CAVEAT

BrightLocal is US-only at n=1,002. Spiegel is 2017 and based on one review platform's clients. Neither is UK data.

ON A PAGE

Named reviewers, dated within 90 days, specific. An honest star average, even at 4.4, with the count.

HOW TO TEST IT

Proof above the fold against below it. Then three named testimonials against a star aggregate.

HOW IT GOES WRONG

Generic praise reads as fake. A 5.0 average from 6 reviews actively hurts you.

Sources: Spiegel Research Center, Northwestern, June 2017. BrightLocal, Local Consumer Review Survey 2026. Goldstein, Cialdini and Griskevicius (2008).

Principle 3: Anchoring

The first number a person sees shapes every later judgement about value, even when the anchor is arbitrary.

THE EVIDENCE

Tversky and Kahneman (1974), Science 185. One of the more robust effects: it survived large-scale replication in Many Labs 1 (Klein et al., 2014).

THE CAVEAT

The subliminal and incidental variants replicated poorly. Deliberate, visible anchoring works. Hidden anchoring is not reliable.

ON A PAGE

Highest-value plan first. Full price beside the offer price. Anchor against the cost of doing it in-house.

HOW TO TEST IT

Reorder the pricing table, highest first against lowest first. One of the highest-yield single tests.

HOW IT GOES WRONG

A fake “was” price is illegal in the UK under pricing practice rules, and obvious to customers.

Sources: Tversky and Kahneman (1974), Science 185(4157). Klein et al. (2014), Many Labs 1.

Principle 4: Choice architecture, handled honestly

The number and arrangement of options changes what people pick, and sometimes whether they pick at all.

THE EVIDENCE

Iyengar and Lepper (2000): 3% of shoppers bought from a 24-jam display, against 30% from a 6-jam display.

THE CAVEAT

A meta-analysis of 50 experiments and 5,036 participants found a mean effect of $D = 0.02$ (CI -0.09 to 0.12). Approximately zero, with high heterogeneity.

ON A PAGE

Three tiers with one recommended, because it makes comparison cheap. Reduce the effort of comparing.

HOW TO TEST IT

Three tiers against five, comparison table held constant. Then a “most popular” flag on the middle tier.

HOW IT GOES WRONG

Cutting your catalogue because of the jam study. Do not.

Sources: Iyengar and Lepper (2000), JPSP 79(6). Scheibehenne, Greifeneder and Todd (2010), Journal of Consumer Research 37(3).

Principle 5: Defaults

Whatever is pre-selected is what most people end up with.

THE EVIDENCE

Johnson and Goldstein (2003): organ donation consent clustered at 4 to 28% in opt-in countries and 86 to 100% in opt-out countries.

THE CAVEAT

Registration is not behaviour. Transplant rates are dominated by family veto and clinical infrastructure. The real-world effect is smaller.

ON A PAGE

Pre-select the option that serves the customer best. Keep the alternative obvious and one click away.

HOW TO TEST IT

Default subscription against default one-off, measured on 90-day revenue, not checkout completion.

HOW IT GOES WRONG

A pre-ticked upsell is a dark pattern, prohibited under UK consumer law for additional payments.

Source: Johnson and Goldstein (2003), "Do Defaults Save Lives?", Science 302(5649).

Principle 6: The goal gradient effect

People accelerate as they near a goal, and visible progress towards it is itself motivating.

THE EVIDENCE

949 loyalty cards: purchase intervals fell about 20% towards the last stamp. A 12-stamp card with 2 pre-applied was completed in 12.7 days against 15.6.

THE CAVEAT

17% of session terminations came immediately after completing a reward. Progress motivates, completion resets. Design for what happens next.

ON A PAGE

Step indicators with step 1 visibly part-complete. Progress bars on multi-step forms. Loyalty that starts above zero.

HOW TO TEST IT

Add a progress indicator to a multi-step form. Then start it at 20% rather than 0%.

HOW IT GOES WRONG

On a form that is genuinely too long, a progress bar just shows how much suffering remains.

Source: Kivetz, Urminsky and Zheng (2006), "The Goal-Gradient Hypothesis Resurrected", Journal of Marketing Research 43(1).

Principle 7: The endowment effect

People value something more once they feel they own it.

THE EVIDENCE

Kahneman, Knetsch and Thaler (1990), the mug experiments, Journal of Political Economy 98(6).

THE CAVEAT

Plott and Zeiler (2005) found the gap largely disappears under better controls. Fehr et al. (2015) failed to replicate them. Unresolved: a heuristic, not a law.

ON A PAGE

Free trials that need configuring. Product builders. "Your basket", not "the basket". Saved baskets.

HOW TO TEST IT

Personalised first-person framing against neutral framing, throughout a configurator flow.

HOW IT GOES WRONG

Hard-to-cancel free trials convert at the expense of the refund rate and review score.

Sources: Kahneman, Knetsch and Thaler (1990), JPE 98(6). Plott and Zeiler (2005), AER 95(3). Fehr, Hakimov and Kübler (2015).

Principle 8: The peak-end rule

People judge an experience by its most intense moment and its ending, not by its average or duration.

THE EVIDENCE

Redelmeier and Kahneman (1996), with a randomised follow-up in 2003, both in Pain. Original work: Kahneman et al. (1993), Psychological Science.

THE CAVEAT

A memory effect shown for pain and short episodes. Extension to pleasure is weaker. Applying it to a multi-week relationship is an extrapolation.

ON A PAGE

The order confirmation ends the experience and is usually the worst page on the site. Fix it.

HOW TO TEST IT

Test the proxy: 90-day repeat purchase after redesigning the confirmation and first email.

HOW IT GOES WRONG

A discount code on the confirmation page trains customers to wait for discounts.

Sources: Redelmeier and Kahneman (1996), Pain 66(1). Redelmeier, Katz and Kahneman (2003), Pain 104. Do, Rupert and Wolford (2008).

Principle 9: Scarcity and urgency

Perceived limits on availability or time increase desire and accelerate decisions.

THE EVIDENCE

Cialdini (1984), Influence: reciprocity, commitment and consistency, social proof, authority, liking and scarcity. Unity added in Pre-Suasion (2016).

THE CAVEAT

Influence is a trade book, not peer-reviewed, and several studies it popularised sit inside the replication crisis. A useful framework, weak evidence.

ON A PAGE

Real stock counts. Real deadlines tied to real events, like the last Christmas delivery date.

HOW TO TEST IT

A genuine delivery-deadline countdown against none, in the two weeks before a real cut-off.

HOW IT GOES WRONG

Fake timers that reset on refresh breach the UK DMCC regime on misleading practices.

Source: Cialdini (1984), Influence: The Psychology of Persuasion. Cialdini (2016), Pre-Suasion.

Principle 10: Hick's law, used correctly

Decision time increases logarithmically with the number of equally likely options.

THE EVIDENCE

Hick (1952) and Hyman (1953). Reaction time equals $a + b \log_2(n + 1)$.

THE CAVEAT

It covers simple, equiprobable, well-learned choices. Unordered, unfamiliar lists behave linearly. It does not license "always reduce navigation items".

ON A PAGE

One primary call to action per screen.
Order lists to scan: alphabetical, by price, by popularity.

HOW TO TEST IT

Single against dual call to action in the hero.
Then sorted against unsorted listings.

HOW IT GOES WRONG

Stripping navigation, and losing the customer who needed the delivery information.

Sources: Hick (1952), QJEP 4(1). Hyman (1953), JEP 45(3). Landauer and Nachbar (1985).

Principle 11: The isolation effect (Von Restorff)

An item that differs from those around it is more likely to be noticed and remembered.

THE EVIDENCE

von Restorff (1933), Psychologische Forschung 18: 299 to 342.

THE CAVEAT

A memory effect for isolated items in a list. Applying it to buttons is an analogy, not a finding. If every element shouts, nothing is isolated.

ON A PAGE

One element uses the accent colour, and it is the button. Every other emphasis is typographic.

HOW TO TEST IT

Accent-coloured elements on the page: one against several. Not button colour in isolation.

HOW IT GOES WRONG

The “red button beat green” school. The colour is not the variable. The contrast is.

Source: von Restorff (1933), Psychologische Forschung 18.

Principle 12: The Zeigarnik effect, as framing only

Incomplete tasks are remembered better than completed ones.

THE EVIDENCE

Zeigarnik (1927), Psychologische Forschung 9: 1 to 85.

THE CAVEAT

The weakest item in this guide. Modern replications are inconsistent and effect sizes small. Use it as framing. Do not cite it as proof.

ON A PAGE

Saved baskets and form progress. "You were looking at..." on return. Emails that name the item.

HOW TO TEST IT

An abandoned-basket email naming the product with its image, against a generic reminder.

HOW IT GOES WRONG

Six abandonment emails in four days is not the Zeigarnik effect. It is spam.

Source: Zeigarnik (1927), Psychologische Forschung 9.

03

PART 3

The teardown order

Work a page in this sequence. Do not skip ahead, and do not start at step 7 because it is the fun one.

Ten steps, from a real phone to a confirmation test

01 Measure on a real phone on 4G

Largest Contentful Paint under 2.5 seconds, or stop and fix that first.

02 Run the five-second test

Five strangers: what we sell, who it is for, what happens next.

03 Count steps and fields to the money

Compare against 8 fields and the fewest steps your payment provider allows.

04 Show the total cost early

Including delivery. It answers the most cited abandonment reason, at 40%.

05 Check mobile checkout on a real device

With a real card, to the point of payment. Every time.

06 Put the proof where the doubt is

Reviews by the price, security marks inside the payment block.

07 Apply the Part 2 principles

One at a time, in order of how close they sit to the money.

08 Write down what you expect

State the direction and rough size before launch, or you are fishing.

09 Run for two full business weeks

Regardless of when significance appears.

10 Rerun the winner

As a confirmation test, if the decision is expensive.

04

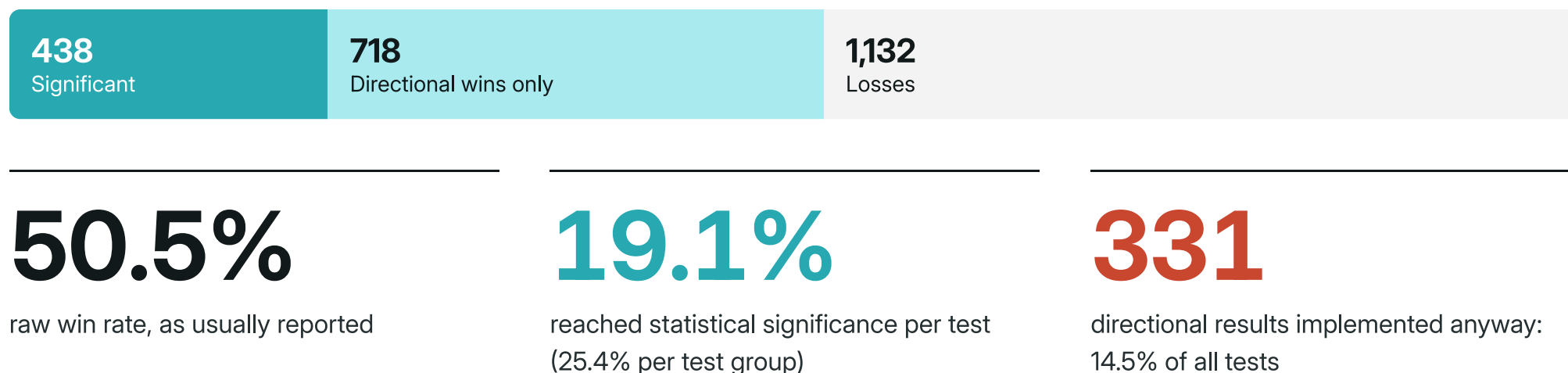
PART 4

Testing honestly

Most CRO reporting is wrong, and being right about it is a competitive advantage.

Roughly one in five A/B tests produces a real winner

Outcomes of 2,288 A/B tests across 71 client engagements.



Source: ConversionTeam, published 8 June 2026, updated 25 June 2026. 153 results were also reported as inconclusive. An agency publishing its own book of work.

Win rates vary by test type, and the largest platforms report lower

RAW WIN RATE BY TEST TYPE



RAW WIN RATE BY SECTOR



AT SCALE

~1/3

of Microsoft's tested ideas improved their target metric

~10%

of Google experiments lead to a business change

90%

of what Netflix tries is assumed to be wrong

How false positives appear without anyone noticing

Chance of a statistically significant positive result arising purely by chance.

2.5%

a single two-sided test, in the direction you wanted

~12%

five treatments in one experiment

>50%

six iterations of five-treatment experiments

PEEKING IS THE SAME PROBLEM

Under an O'Brien-Fleming correction, a seven-day test's day-one threshold is $p < 5 \times 10^{-8}$, rising to 0.040 only on the final day.

WHAT TO DO

Fewer variants. Pre-registered hypotheses. A fixed end date set before launch. Two-week minimum. Decide on the final scorecard, not on day three.

Sample size comes from business goals, not rules of thumb

ALPHA

0.05

Default significance level

POWER

0.80

Default statistical power

MDE

Set by you

Minimum detectable effect, from business goals

“Just get 100 conversions per variation” is unsound without a power calculation.

If a page cannot reach the required sample in four weeks, do not A/B test it.

Do qualitative research, fix the obvious friction, and move the budget to a page with the volume.

05

PART 5

The pre-launch checklist

Thirty checks across six areas. Tick every one before a page goes live.

Checklist: speed and clarity

SPEED AND TECHNICAL

- ☐ 1 Largest Contentful Paint under 2.5 seconds on a real phone on 4G
- ☐ 2 No layout shift as the page loads
- ☐ 3 Images compressed and correctly sized for the viewport
- ☐ 4 Third-party tag count audited, one removed for every one added
- ☐ 5 Tested in the Instagram and Facebook in-app browsers, not just Safari and Chrome

CLARITY

- ☐ 6 What we sell, who for and what next, answerable in five seconds without scrolling
- ☐ 7 One primary call to action per screen
- ☐ 8 Headline states the outcome, not the feature
- ☐ 9 Above-the-fold copy readable at arm's length on a phone

Checklist: friction and trust

FRICTION

- ☐ 10 Total cost including delivery visible before the payment step
- ☐ 11 Guest checkout available, no forced account creation
- ☐ 12 Form fields counted and every one justified
- ☐ 13 Multi-step considered for any form over eight fields
- ☐ 14 Delivery date, not delivery window, shown on the product page
- ☐ 15 Returns policy in plain words next to the buy button

TRUST

- ☐ 16 Card fields in a distinct block with recognisable payment marks inside it
- ☐ 17 Reviews dated within the last 90 days, named, specific
- ☐ 18 Star average shown honestly, including if it is 4.4
- ☐ 19 Review count shown, and above 20 where possible
- ☐ 20 A real phone number or contact route visible

Checklist: psychology and measurement

PSYCHOLOGY, APPLIED ONCE EACH

- ☐ 21 One anchor, visible and honest
- ☐ 22 One piece of social proof adjacent to the price
- ☐ 23 One progress indicator if the flow has steps
- ☐ 24 One genuine scarcity or deadline claim, or none
- ☐ 25 One accent-coloured element on the page, and it is the button

MEASUREMENT

- ☐ 26 Hypothesis written down with expected direction and size before launch
- ☐ 27 Sample size calculated, end date fixed
- ☐ 28 Cross-domain tracking configured if checkout sits on another domain
- ☐ 29 Conversion measured net of returns and refunds
- ☐ 30 Confirmation page and first post-purchase email designed, not default

SOURCES



Sources: industry research

All sources retrieved and checked on 22 September 2026.

- | | | | |
|----------|---|-----------|--|
| 1 | Deloitte Digital and Google, "Milliseconds Make Millions", 37 sites, 30m+ sessions, published 2020. web.dev | 8 | Spiegel Research Center, Northwestern, "How Online Reviews Influence Sales", June 2017. |
| 2 | Portent, site speed and conversion research, 27,000+ landing pages, 2022, updated 2024. portent.com | 9 | BrightLocal, Local Consumer Review Survey 2026, n=1,002 US adults. brightlocal.com |
| 3 | Akamai and SOASTA, Online Retail Performance Report, ~10bn visits, 19 April 2017. | 10 | Contentsquare, 2026 Digital Experience Benchmark, 99bn sessions, 9 March 2026. |
| 4 | Baymard Institute, cart abandonment rate, mean of 50 studies 2006 to 2025. baymard.com | 11 | Kohavi, Deng, Frasca, Walker, Xu and Pohlmann, "Online Controlled Experiments at Large Scale", KDD 2013. |
| 5 | Baymard Institute, checkout form fields benchmark, 26 June 2024. baymard.com | 12 | ConversionTeam, A/B test win rate analysis, 2,288 tests, 8 June 2026. conversionteam.com |
| 6 | Baymard Institute, perceived security of the payment form, n=1,026, 2025. baymard.com | 13 | VWO, A/B test sample size guidance, 1 May 2025. wingify.com |
| 7 | CXL Institute, trust seals study, n≈3,137, 2016, updated 2020. cxl.com | 14 | Kahneman and Tversky (1979), <i>Econometrica</i> 47(2). Tversky and Kahneman (1992), <i>JRU</i> 5. |

Sources: academic research

All sources retrieved and checked on 22 September 2026.

15 Gal and Rucker (2018), Journal of Consumer Psychology 28(3).

16 Iyengar and Lepper (2000), Journal of Personality and Social Psychology 79(6).

17 Scheibehenne, Greifeneder and Todd (2010), Journal of Consumer Research 37(3).

18 Johnson and Goldstein (2003), Science 302(5649).

19 Kivetz, Urminsky and Zheng (2006), Journal of Marketing Research 43(1).

20 Kahneman, Knetsch and Thaler (1990), JPE 98(6). Plott and Zeiler (2005), AER 95(3).

21 Redelmeier and Kahneman (1996), Pain 66(1). Redelmeier, Katz and Kahneman (2003), Pain 104.

22 Tversky and Kahneman (1974), Science 185(4157).

23 Cialdini (1984), Influence. Goldstein, Cialdini and Griskevicius (2008), JCR 35(3).

24 Hick (1952), QJEP 4(1). Hyman (1953), Journal of Experimental Psychology 45(3).

25 von Restorff (1933), Psychologische Forschung 18. Zeigarnik (1927), Psychologische Forschung 9.

26 Signifyd, European returns policy research, 2024. signifyd.com

27 Venture Harbour, form length and conversion compendium. ventureharbour.com

About Invincible Digital

A performance marketing agency and a badged Meta Business Partner, with offices in Barcelona, London and Granada.

We run paid social, paid search, Klaviyo email and creative strategy for hospitality, fitness, beauty and e-commerce brands.

We wrote this guide because these twelve principles turn up in every CRO deck on the internet, and almost none of them carry the caveat.

A principle you understand the limits of is a tool. A principle you do not is a superstition.

Want this run on your page?

We will take one landing page through the ten-step teardown and send you the fixes in priority order. Free, 45 minutes, no pitch.

[Book the page teardown →](#)