Types of Marketing Analytics: An Overview

Objective: match the analytics approach to the question in front of you

Definition: measure marketing activity, then decide what to do next

Four types: descriptive (what happened), diagnostic (why), predictive (what's likely), prescriptive (what to do)

Each rung inherits the errors below it — small errors compound

Small teams have 3–5 data sources; the gap is connection, not volume

Roadmap: concepts → each type in depth → selection, tooling, guardrails, worked case



The Four Types at a Glance



Prescriptive: recommends action — budget shifts, next-best offer

Predictive: forecasts outcomes — lead scores, churn risk, projected CPA

Diagnostic: explains causes — segments, funnel drop-off, cohorts

Descriptive: summarizes past performance — spend, conversions, CPA

Each type answers a different question; pick the output you can act on

From Data to Decisions: A Shared Vocabulary

BETTER DATA
BRIGHTER
DECISIONS

Metric tracks activity; a KPI traces directly to a business objective

Business question → **metric** that answers it → **method** that produces it

Typical small-team stack: GA4, ad platforms, email tool, CRM, organic social

Maturity ladder

ad hoc → foundational → instrumented → predictive → optimized

Name pitfalls early: vanity metrics, vague objectives, correlation mistaken for causation

Self-check: list each data source, its owner, and the decision it informs

The data stack

collect → connect → consolidate → visualize

Descriptive Analytics: What Happened?

- Turns historical data into readable summaries
- Everyday outputs: campaign reports, channel summaries, KPI scorecards
- Metric families by funnel stage: awareness, consideration, decision, retention
- Practical tools: GA4, ad dashboards, Looker Studio, spreadsheets
- Risk: the descriptive plateau — dashboards grow, answers do not
- Limitation: shows the what, but not the why



Question → Analyze → Better Decisions

Diagnostic Analytics: Why Did It Happen?

GO DEEPER. FIND THE CAUSE. MAKE BETTER DECISIONS.

Explains the cause behind a change: a conversion drop, a channel spike, a segment that behaves differently

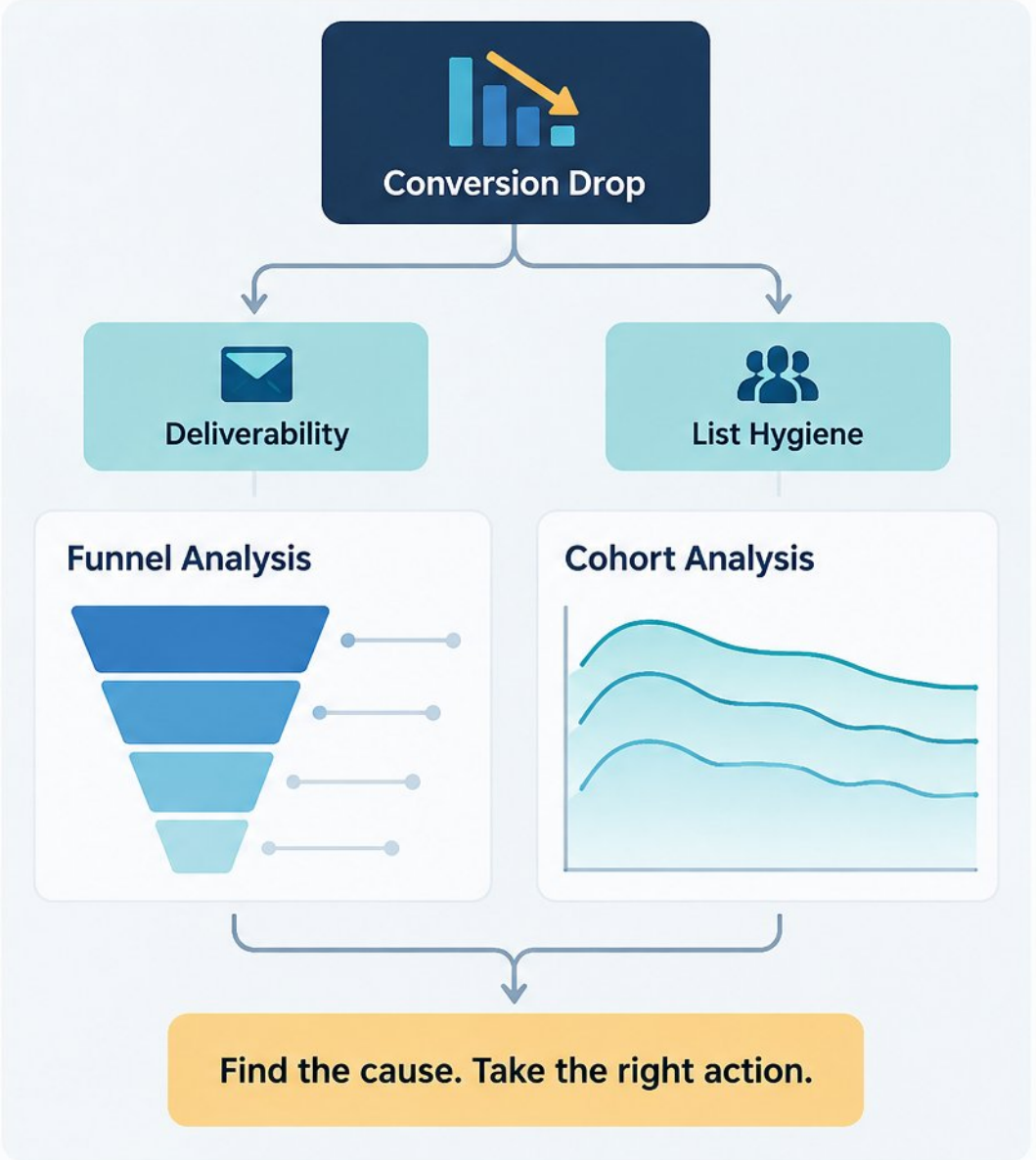
Core techniques: segmentation and drill-down, funnel analysis, cohort analysis, A/B test analysis, correlation

Funnel locates friction in one journey; a cohort is a film over months, showing whether value lasts

Worked example: a 12% email open-rate drop traced to deliverability and list hygiene — weeks of redesign avoided

Needs data joined across systems: ad spend + site behavior + CRM — where siloed tools fail

Limitation: correlation is not causation; confounding factors, calendar effects, small samples mislead



Predictive Analytics: What Is Likely to Happen?

Purpose: estimate probabilities and forecasts, not certainties

Fastest wins: lead scoring, CLV prediction, churn prevention, ROI forecasting

Methods: regression, classification, time series, decision trees, clustering

Needs: historical volume, clean outcome labels, relevant behavioral features

Small-team path: start with built-in scoring and forecasting before custom models

Watch out: fragmented data produces fragmented predictions



Question → Decision

Prescriptive Analytics: What Should We Do?

Purpose: recommend and optimize actions — budget allocation, next-best offer, scenario planning

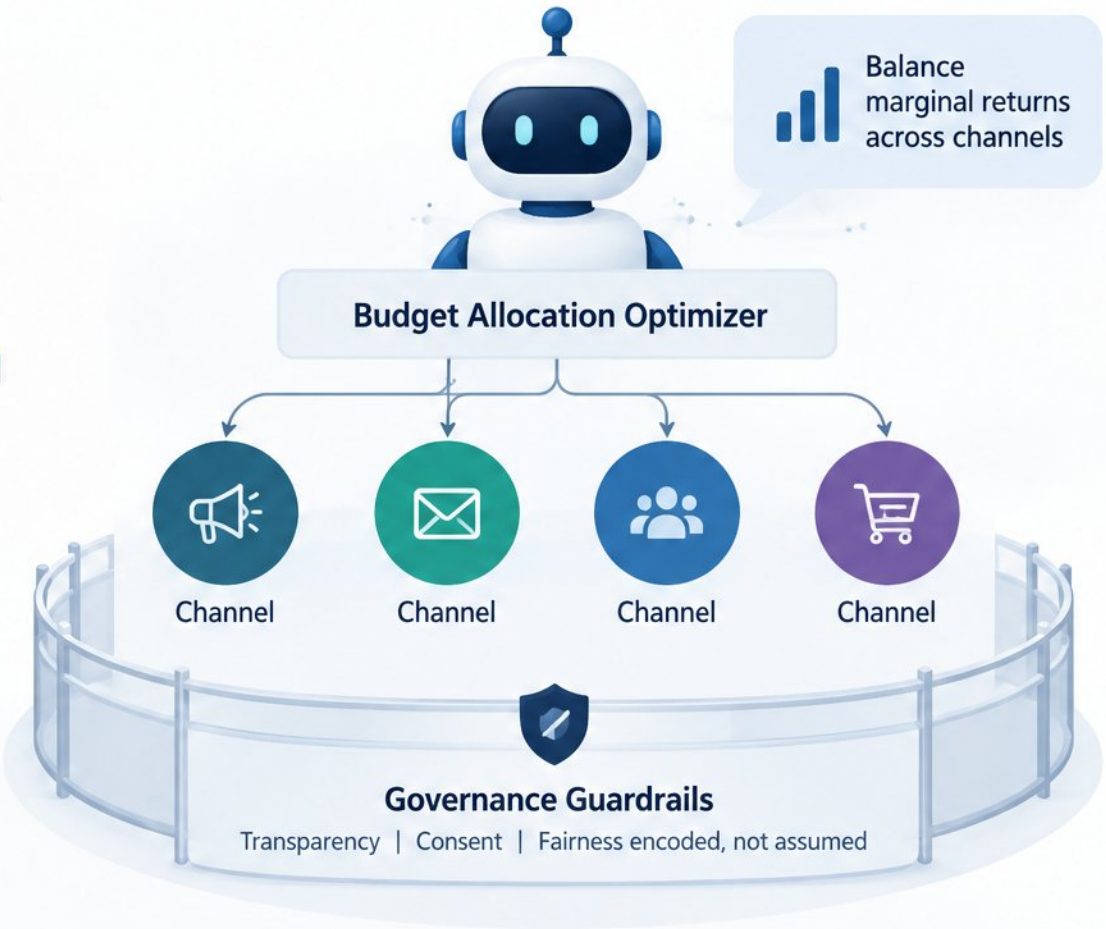
Techniques: constrained optimization, what-if analysis, test-and-learn, multi-armed bandits

Budget rule: shift spend until marginal return equalizes across channels, then stop

Requires clean outcome data, causal measurement, feedback loops, experimentation culture

2026: agentic execution within guardrails — capped autonomous spend, human review

Governance: transparency, consent, fairness encoded, not assumed



The Analytics Ladder

Descriptive → Diagnostic → Predictive → **Prescriptive**

Choosing the Right Analytics Type

Six-dimensional fit

Match your decision needs to the right analytics type.

Dimension	Descriptive	Diagnostic	Predictive	Prescriptive
Decision	●	●	●	●
Evidence	●	●	●	●
Method	●	●	●	●
Capability	●	●	●	●
Governance	●	●	●	●
Feedback	●	●	●	●

Four gates

Check these before moving forward.

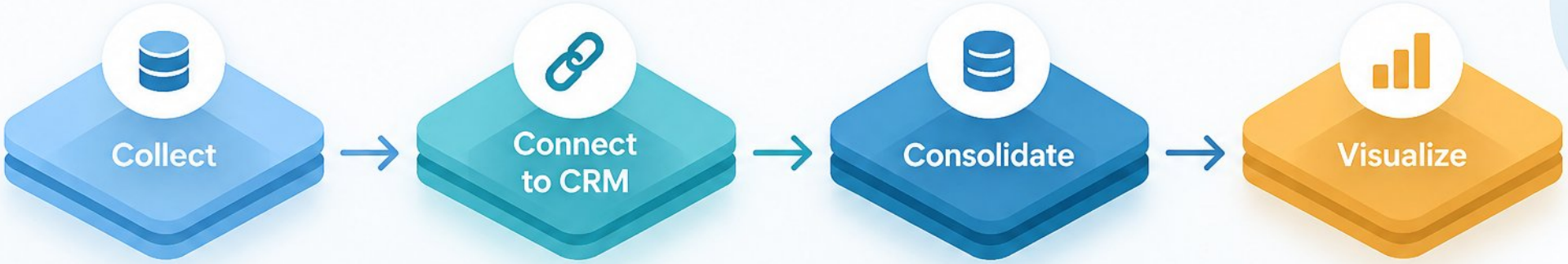
- Available data
- Decision speed
- Who acts
- Can we verify

Question → **Analytics** → **Action**

- Start with the decision: name the question and the action it changes
- Six-dimensional fit: decision, evidence, method, capability, governance, feedback
- Make trade-offs explicit: speed vs. rigor, cost vs. value
- Four gates: available data, decision speed, who acts, can we verify
- Anti-pattern: predictive tooling before descriptive and diagnostic trust
- Walk one problem through all four types to see the gaps

Tools, Data, and Skills by Team Size

Think in layers: collect → connect to CRM → consolidate → visualize



Minimum viable stack

Minimum viable stack: GA4, Search Console, ad reporting, email tool, free CRM, free dashboard



Add tools only when triggered

Add tools only when triggered: cross-channel dashboards, A/B testing past ~1,000 monthly visitors



Build vs. buy

Build vs. buy: spreadsheets for simple setups; BI tools need analyst support



Skills ladder

Skills ladder: reporting → funnel/cohort analysis → experiment design → predictive literacy

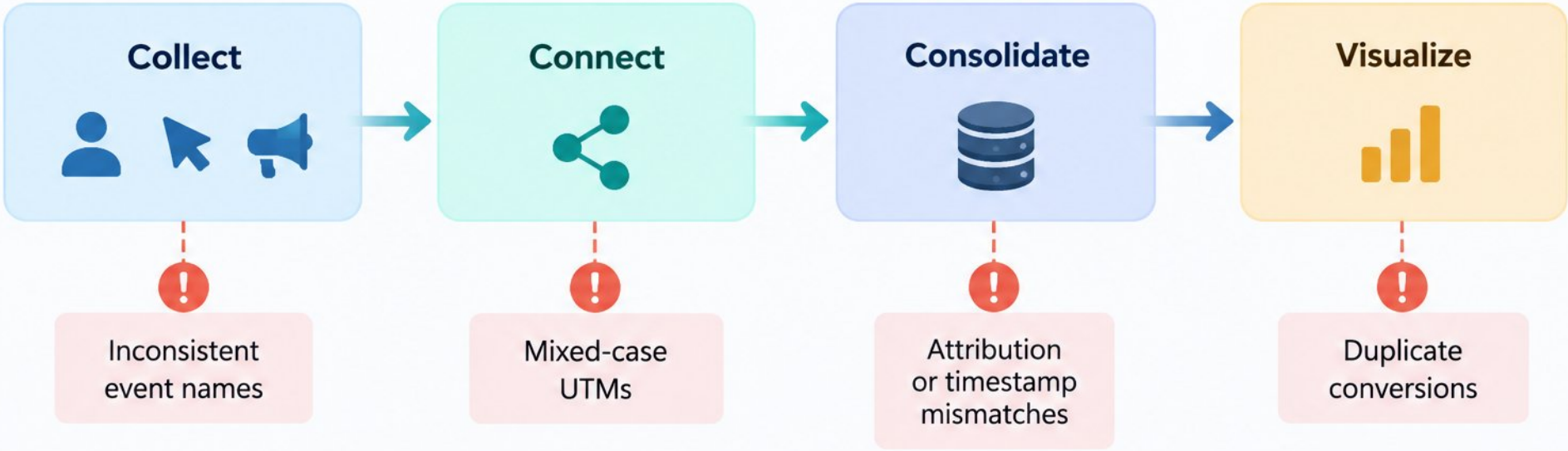


90-day rhythm

90-day rhythm: align 5–7 core metrics, ship one dashboard, then add diagnostic views

Data Quality and Tracking Hygiene

Accurate decisions start with clean, consistent, well-tracked data.



Reports can be wrong even when every platform is right

Gaps appear at the joins: counts, names, attributions, timestamps

Trace one core metric end-to-end; measure what is stale or duplicated

Frequent issues: inconsistent event names, mixed-case UTMs, duplicate conversions

Governance: metric dictionary, naming conventions, change control, post-change validation

Red flags: metric drops to zero, diagonal cohort spikes, numbers disagree with finance

Privacy, Bias, and Responsible Use

- Consent gaps distort data before they become a legal or reported problem
- Untrackable users mean behavioral data is a sample, not a census
- Keep personal data out of URLs, dimensions, and event text
- Models learn past targeting choices: check who is excluded or over-targeted
- Document inputs, actions, rules triggered, and explanations for automated decisions
- Guardrails: purpose limitation, consent enforced at decision time, model risk review, audit trail



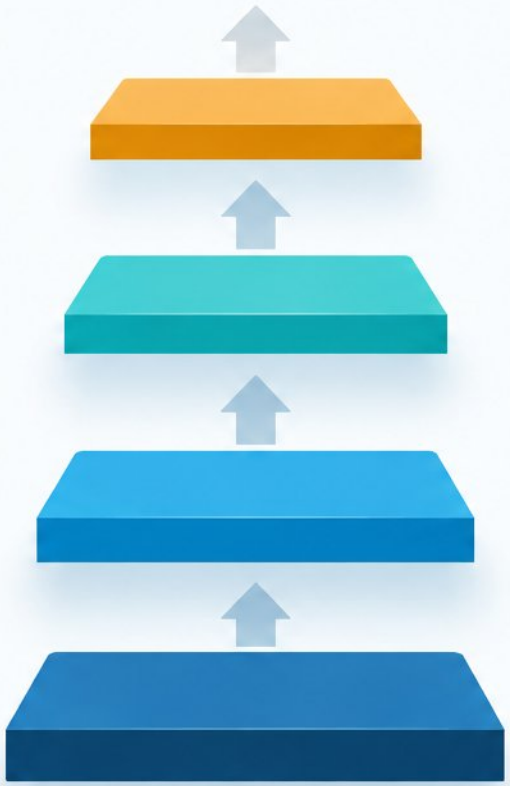
Common Mistakes and Practical Guardrails

BETTER QUESTIONS
BRIGHTER INSIGHTS
BIGGER IMPACT

Common Mistakes

- Starting with no defined objective: activity, not insight
- Vanity metrics over decision-relevant ones: followers matter only if traceable
- Overpromising model accuracy; ignoring base rates and simple rules
- Siloed data and static frameworks decay silently

THE ANALYTICS LADDER
FROM DATA TO IMPACT



Five Guardrails

- Question first
- Validate data
- Document assumptions
- Set review cadence
- Retire unused metrics

Log every insight → action → outcome to prove impact

TURN INSIGHTS INTO ACTION

Case Study: One Campaign Through All Four Types

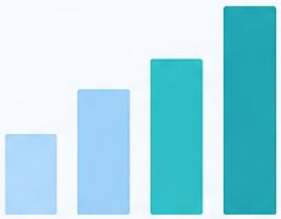
Setup

- Setup: local search, paid social, email, and referral on a modest budget



Descriptive

- Descriptive: paid social wins clicks; referral traffic converts better



Diagnostic

- Diagnostic: funnel drop-off sits between interest and purchase



Predictive

- Predictive: model projects CPA at higher spend; scores likely converters



Prescriptive

- Prescriptive: shift budget to marginal-return mix, keep a holdout

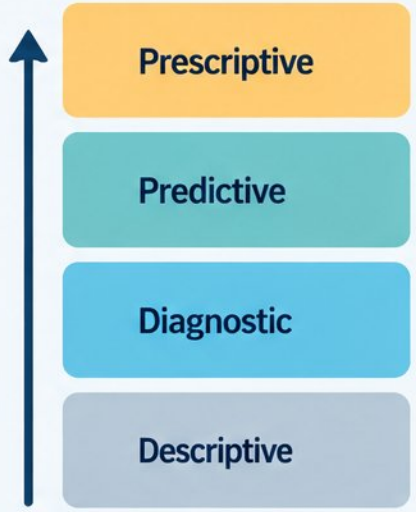


Discuss: which type would you pick at each step?

Action Plan and Next Steps

- **Takeaways:** four types, one ladder; choose the type from the decision
- **Template:** question → source → type → method → tool → owner → review date
- **Days 1–30:** define 5–7 metrics, fix tracking and naming, ship one weekly report
- **Days 31–90:** add funnel and cohort views, run one documented test
- **Beyond:** one predictive use case, then a prescriptive recommendation with a holdout
- **Keep learning:** GA4 docs, analytics fundamentals courses, maturity-model literature

The Analytics Ladder



Template: From Question to Review

question → source → type → method → tool → owner → review date



Days 1–30
Define 5–7 metrics, fix tracking and naming, ship one weekly report

Days 31–90
Add funnel and cohort views, run one documented test

Beyond
One predictive use case, then a prescriptive recommendation with a holdout

Build → Learn → Advance

PersonWise.

PersonWise • AI digital-human course platform

Scan the code or click anywhere to watch this course live, with voice Q&A

personwise.ai/t/a7eb0db4/public