

How to Improve Data Storytelling in Reports:

A Practical Workflow



- A practical workflow, not a theory-heavy lecture



- Poor storytelling risks ignored insights and delayed decisions



- Deadline pressure leads analysts to default to data dumps



- The goal: reports that drive a specific decision or action

Why Most Data-Driven Reports Fail Before Anyone Reads Them



- Reports fail as communication, not as data



- Built for live walkthroughs, but read alone by non-attendees



- Six patterns: translation, context, hierarchy, interpretation, trust, template rot



- The 90-Second Stranger Test: does it make sense without you?



- Accuracy alone doesn't make a report useful

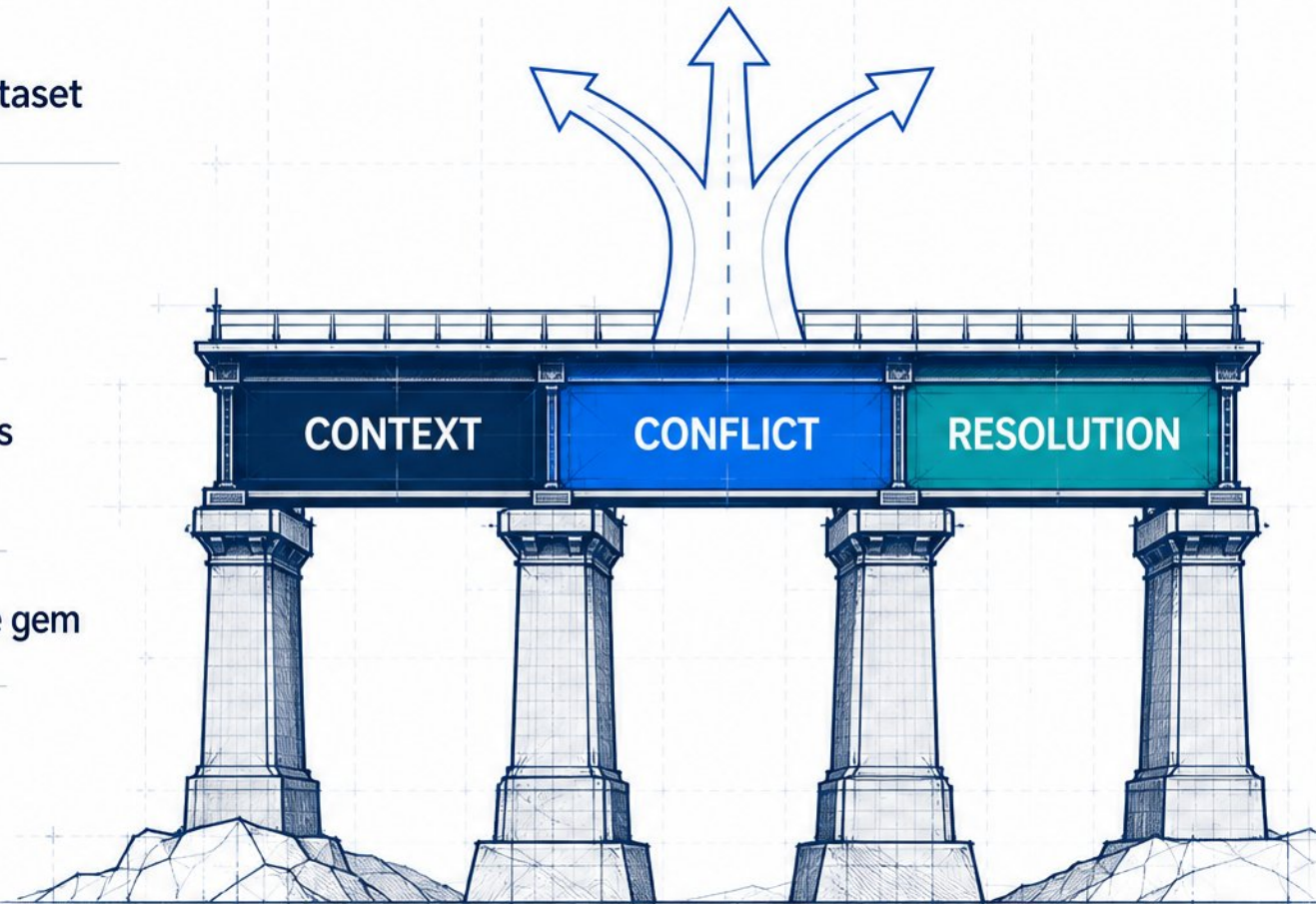


The Core Narrative Structure Behind Effective Reports

THE
DECISION
FORK



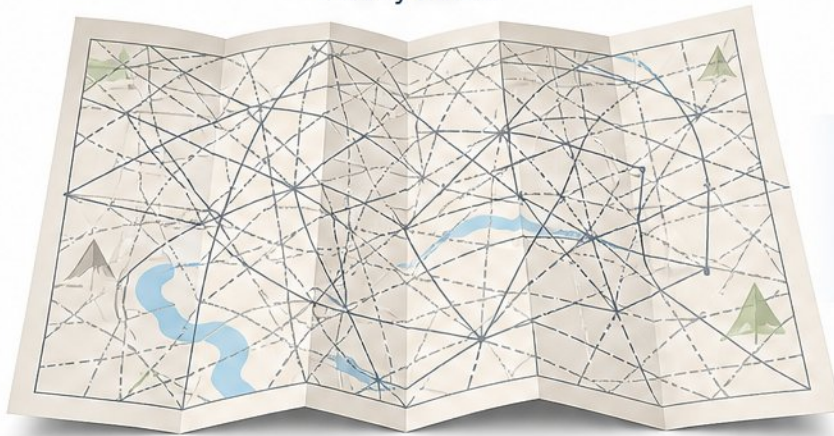
- Start with the decision, not the dataset
- Build a three-part spine: context, conflict, resolution
- Exploratory is for you: turn 100 rocks to find 1 gem
- Explanatory is for them: point out the gem
- Match framework: SCQA, Setup-Conflict-Resolution, or What Is/What Could Be



From Exploratory Analysis to Explanatory Story

Exploratory Analysis

Wander widely. Many paths.
Mostly noise.



Explanatory Story

Guide with clarity.
One route to what matters.



From Noise
to Signal



- Exploratory analysis is yours: find 1–2 gems among 100 rocks



- Explanatory reporting is theirs: spotlight only the gems



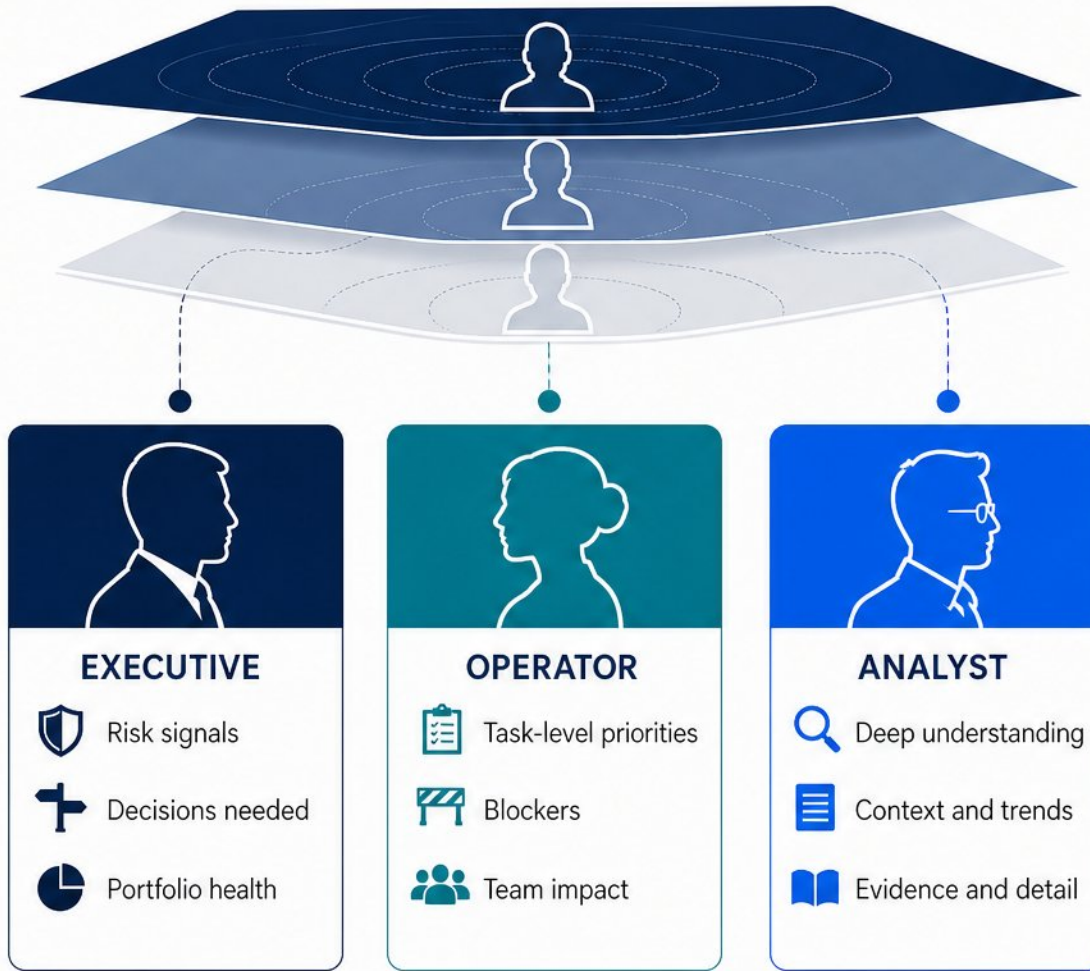
- Dashboards act like paper maps; data stories act like GPS



- Never paste raw notebook plots into a decision deck

Know Your Audience Before You Draft

THE LAYERED MAP



- ▶ Map primary audience, secondary readers, and decision owner first
- ▶ Executives want risk signals, decisions needed, and portfolio health
- ▶ Operational teams need task-level priorities and blockers
- ▶ Different roles need different formats, not just different detail levels
- ▶ Shorter, targeted reports drive more decisions than long decks

Building a Reusable Report Drafting Workflow



- - Outline the full narrative on one page before building slides



- - Write the headline insight for each section first



- - Build a Dummy Page skeleton, then fill in content later



- - Move through outline, slides, and polish in fixed time blocks



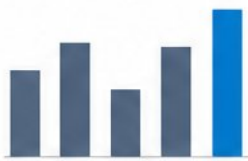
- - Run peer feedback checkpoints early, not after the deck is done

Choosing the Right Visual for Each Message

FROM NOISE TO SIGNAL

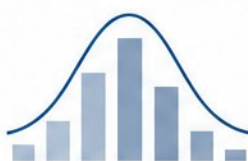
FIVE QUESTIONS, FIVE CHARTS

COMPARISON



Which items are different?

DISTRIBUTION



How are values spread?

COMPOSITION



What makes up the whole?

RELATIONSHIP



How are variables related?

TREND



How are values changing over time?



- Match chart to task: comparison, distribution, composition, relationship, or trend



- Start with the question; simple, familiar charts usually work best



- Remove clutter: non-informative gridlines, legends, and labels



- Use consistent visual hierarchy: title, insight, evidence, source



- Avoid dual axes and 3D effects unless truly required

Writing Headlines and Annotations That Drive Decisions



- Every chart needs a full-sentence headline stating the insight, not just a topic label



- Use annotations to guide attention toward the crucial data point or change



- Avoid neutral titles like 'Sales by Quarter'; use decision-friendly alternatives



- Keep annotations brief, direct, and written in the audience's language

~~Sales by Quarter~~

*Too generic.
Doesn't drive action.*



**Sales increased in the most recent quarter
driven by stronger performance in key areas.**

*Insight-driven.
Drives decisions.*



*Sharp uptick in
the latest quarter
signals positive
momentum.*

Handling Uncertainty and Complexity Without Losing the Story



- Label each claim as: know, infer, or bet



- Show what would change the recommendation



- Keep complex methodology in an appendix



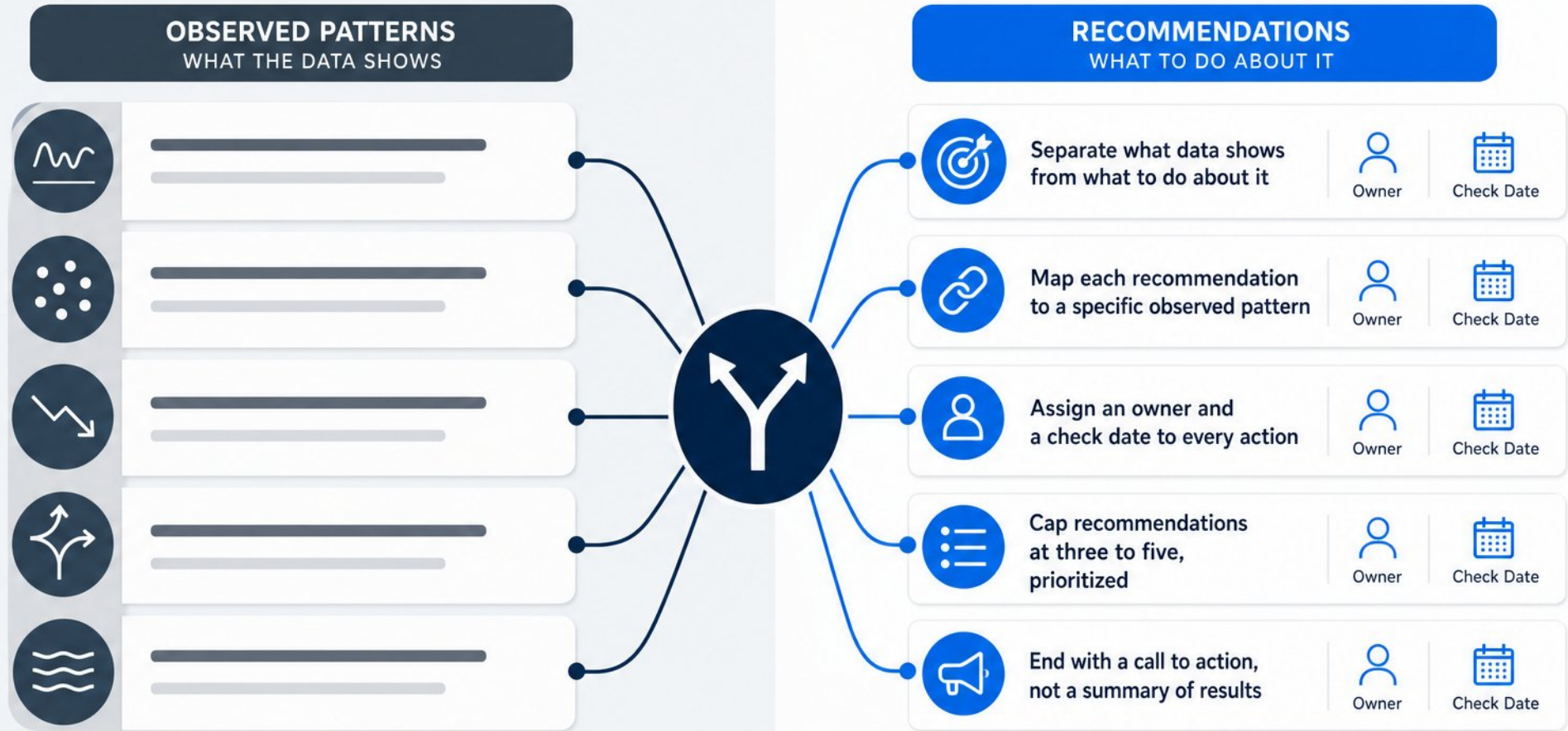
- Distinguish 'unknown' from 'unimportant' details



- Present uncertainty claim-by-claim, not in one disclaimer



From Findings to Recommendations



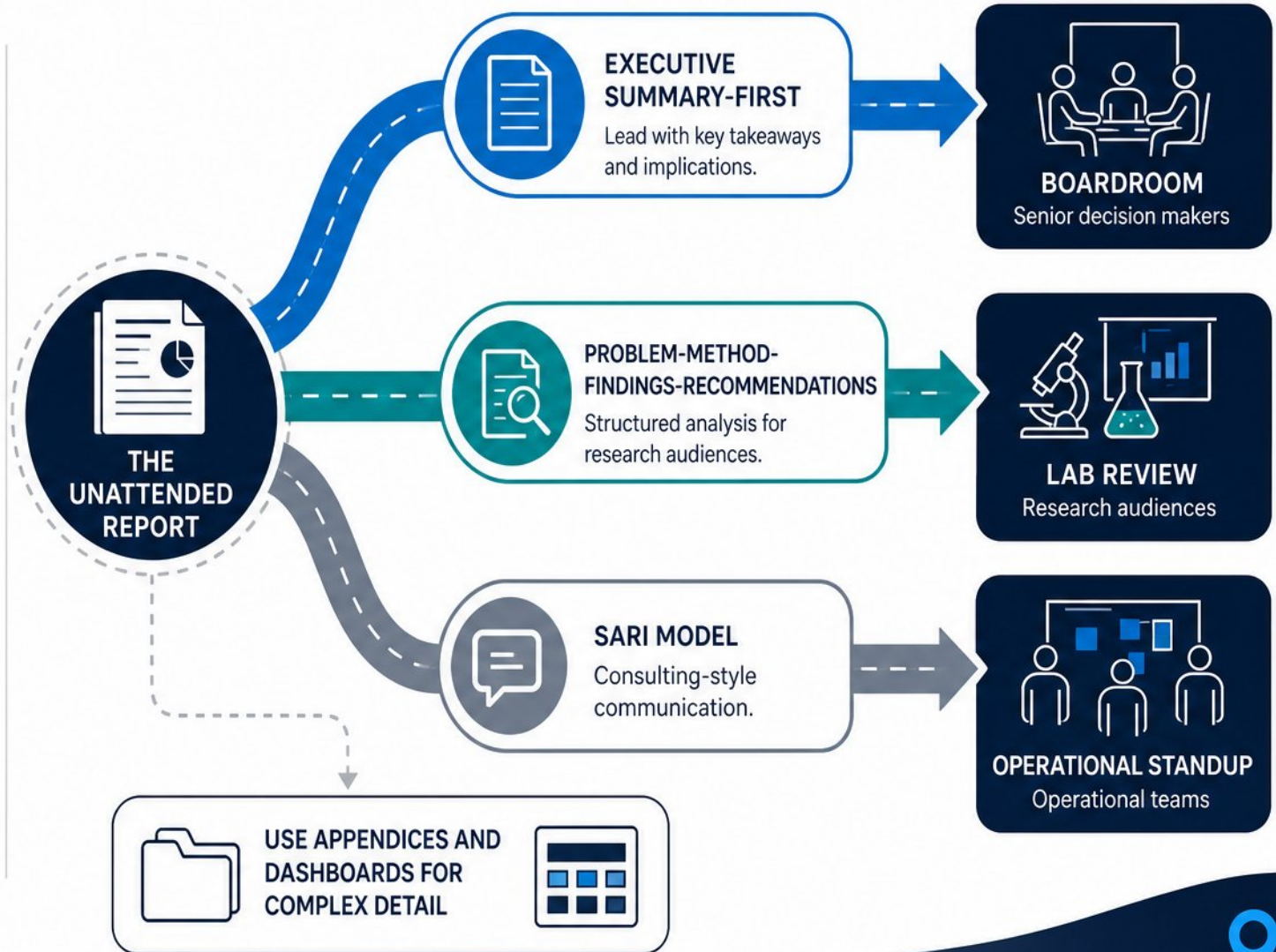
..... **THE DECISION FORK**



Choose actions
that drive change.

Common Report Structures and When to Use Them

- -Executive summary-first for senior decision makers
- -Problem-method-findings-recommendations for research audiences
- SARI model for consulting-style communication
- Use appendices and dashboards for complex detail
- Match structure to audience need



Stakeholder Alignment and Report Tailoring

- ✓ Map primary audience, secondary readers, and decision owner first
- ✓ Tailor structure and language by role, not just detail level
- ✓ Executives want risk signals, decisions needed, and portfolio health
- ✓ Anticipate unstated questions each audience will ask
- ✓ End with a consistent recommendation section they can act on



A Bad-to-Good Report Transformation, Step by Step

FROM NOISE TO SIGNAL >>>

BAD: DATA DUMP



1 Start with a data dump:
neutral titles, no hierarchy,
no recommendation



2 Apply the workflow:
audience decision, narrative
outline, message-first
drafting



3 Run visual audit and
recommendation review

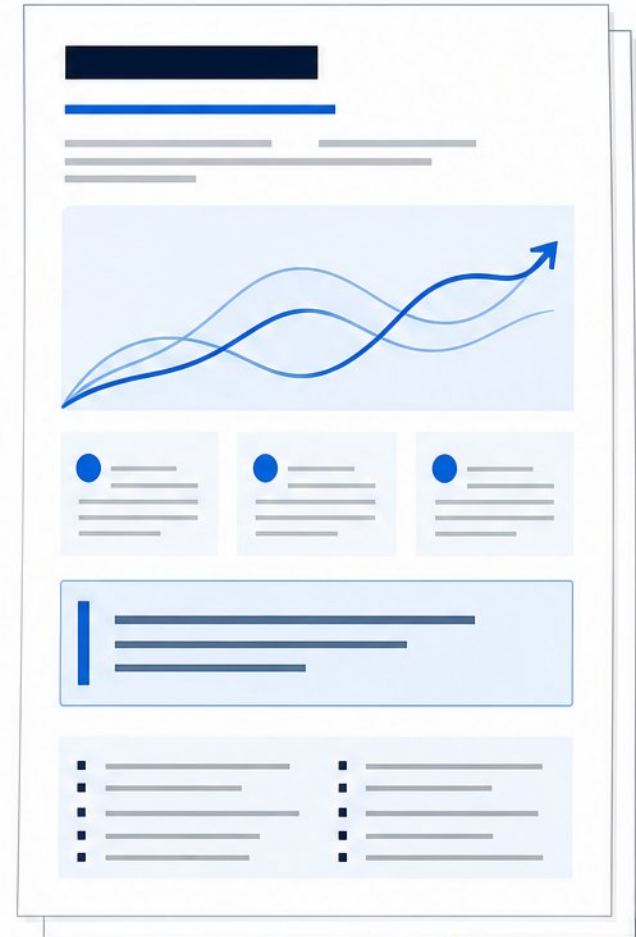


4 Same data, different
report, different decision
outcome



5 Use the 90-Second
Stranger Test to catch
misalignments

GOOD: MESSAGE-FIRST REPORT



Practical Workflow Checklist and Next Steps

Use this five-part checklist for every report:



**THE 90-SECOND
STRANGER**

- 
- ✓ Audience decision, narrative outline, message-first drafting
 - ✓ Visual audit, recommendation review
 - ✓ Compress time leaks: rework, repurposing, manual assembly
 - ✓ Set a 30-day target: redesign one recurring report
 - ✓ Rewrite one chart title daily, run the 90-second test

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