

## DATA STRATEGY TRACKS

# From insight to decision automation

Most data strategies still stop at the dashboard: a person reads a number and decides what to do. This track decides which decisions should stay with people, which should be recommended and which should be taken by systems that act within guardrails, with people supervising.

## THE SO WHAT OF THIS TRACK

Pick the decisions first, set the mode for each one on frequency and the cost of being wrong, and fund the guardrails and outcome measures together with the models.

## Part of stage 3: Prioritise

Value is created when a decision changes, not when a report is published. As analytics, AI and agents mature, the bottleneck moves from producing insight to turning it into action, reliably and accountably. A data strategy that does not choose its decision modes deliberately will either automate the wrong things or leave its best models unused on a shelf.



### QUESTIONS THIS TRACK ANSWERS

- Which of our recurring decisions create or destroy the most value, and who makes them today?
- For each, what is the right mode: describe, diagnose, recommend, act with approval, or act within guardrails?
- What must be true of the data, the rules and the explanations before a system may act?
- Who is accountable when an automated decision goes wrong, and how is it reversed?
- How will we measure the outcome of a decision rather than the activity around it?
- Which partners can help us redesign decisions in our domain, rather than install more tools?

# 1

## The method

Decision modes, guardrails and closed-loop value

# Open loop versus closed loop

The same insight, used in two very different ways.

## Open loop: decision support

- A dashboard or report shows what happened
- A person interprets it, often late and inconsistently
- Action happens in another system, if at all
- Nobody records which insight drove which decision
- Success is measured in reports built and users logged in

## Closed loop: decision automation

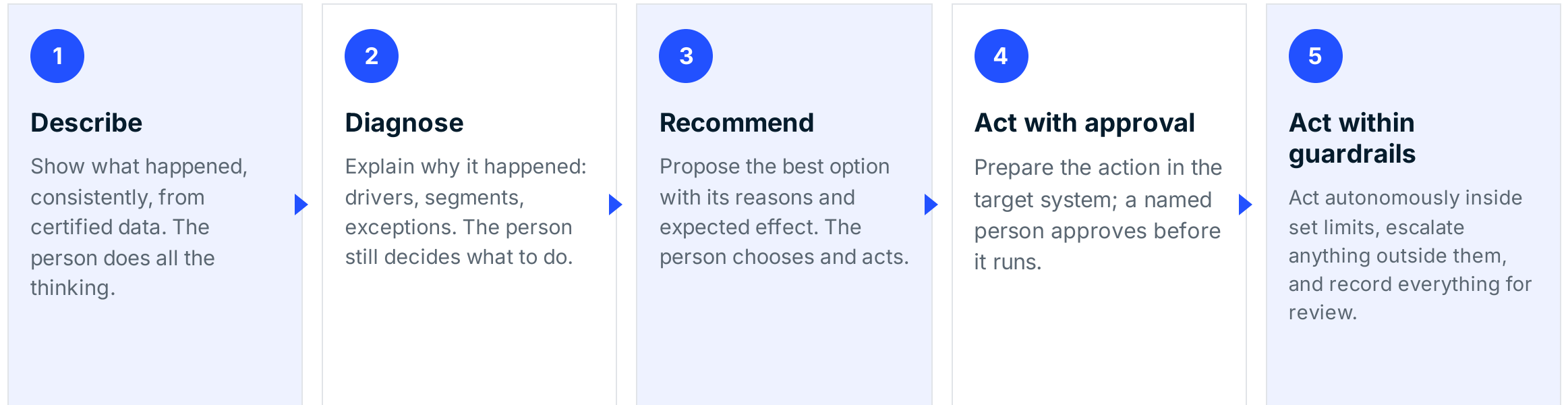
- The decision itself is modelled: inputs, rules, options, owner
- A system recommends or acts, within limits a person has set
- Action lands in the operational system directly
- Every decision is recorded with its evidence and outcome
- Success is measured in outcomes, and the loop learns from them

### SO WHAT

Closing the loop is not about removing people; it is about making every decision traceable from evidence to outcome.

# The decision ladder: five modes

Each rung hands a little more of the decision to the system, and asks a little more of the data and the guardrails.



**SO WHAT**

Move a decision up the ladder one rung at a time, and only when the evidence from the rung below supports it.

# Three phases of the shift

How technology, skills and the operating model change as organisations move from analysis to action.

| Phase                     | What the technology does                                                                         | Skills that matter                                                  | Operating model                                                           |
|---------------------------|--------------------------------------------------------------------------------------------------|---------------------------------------------------------------------|---------------------------------------------------------------------------|
| Augmented analysis        | Automates data preparation, finds patterns and explains drivers in plain language                | Analysts who frame good questions and judge evidence                | A central team serving the business with faster answers                   |
| Augmented decision-makers | Puts recommendations inside the tools where decisions are taken, for everyone, not just analysts | Business owners who trust, challenge and override recommendations   | Domain teams own decisions; the data team owns the platform and standards |
| Generative and agentic    | Agents converse, plan and take governed actions across systems, with people supervising          | Decision designers, policy owners and supervisors of automated work | Decisions are products: designed, owned, monitored and retired            |

SO WHAT

Most organisations run all three phases at once in different domains; plan skills and governance for the most advanced one you intend to reach.

# Two ideas that are converging

Explained plainly, because both are often sold as products rather than understood as practices.

## Decision intelligence

Treat decisions as things you design, measure and improve: model the inputs, the options, the rules and the expected outcomes, then learn from what actually happened.

## Data fabric

Connect data where it lives through shared metadata and meaning, so any decision can draw on the right, governed data without a new pipeline each time.

## Why they meet

Decision intelligence says what a decision needs; the fabric delivers it, in context, at the moment of decision. One without the other stalls.

## Composable architecture

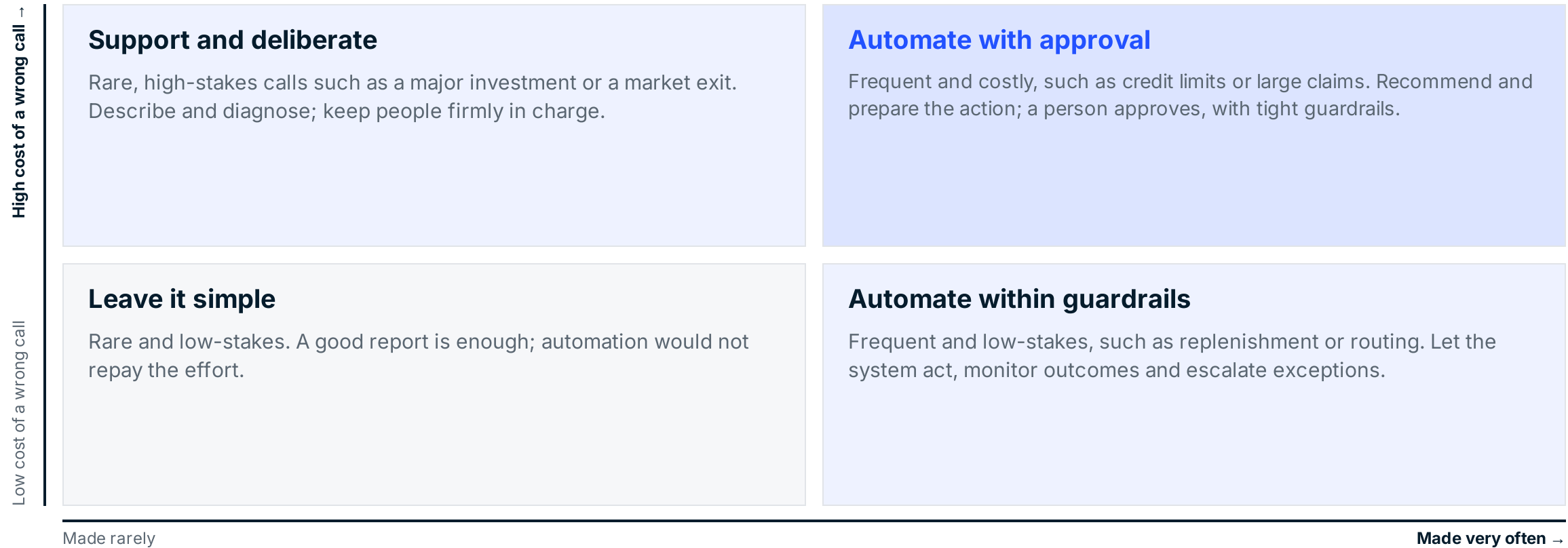
Build decisions from reusable parts: data products, rules, models and actions that can be recombined, rather than one monolith per use case.

### SO WHAT

Fund the shared meaning and the reusable parts once; every new automated decision then costs less than the last.

# Which decisions to automate

Place each candidate decision by how often it is made and how costly a wrong call would be.



**SO WHAT** Start where decisions are frequent and the cost of error is low: that is where automation pays back fastest and safely builds trust.

# Guardrails and accountability

What must exist before any system is allowed to act.

## A named decision owner

A business person is accountable for each automated decision, its limits and its results.

## Written limits

Thresholds, amounts and conditions beyond which the system must stop and escalate.

## Explanations

Every recommendation or action carries the evidence and the rule that produced it, in business language.

## Reversal and override

A known, fast way to undo an action and to switch the automation off.

## A complete record

Inputs, decision, approver, action and outcome are logged for audit and for learning.

## Outcome monitoring

Drift, bias and unexpected effects are watched continuously, not discovered in the next audit.

### SO WHAT

If you cannot name the owner, write the limit and reverse the action, the decision is not ready to automate.

# Choosing delivery partners

Judge partners on the decisions and outcomes they can change in your domain, not on the number of tools they install.

| Look for                                  | Instead of                           | Ask them                                                         |
|-------------------------------------------|--------------------------------------|------------------------------------------------------------------|
| Outcome-based measures in their proposals | Effort, licences and milestones only | Which business measure will move, and how will we both know?     |
| Depth in your industry and its decisions  | Generic platform skills              | Which decisions in our industry have you redesigned before?      |
| A view beyond the current project         | Delivery of the brief as written     | What will we need in two years that this design prepares for?    |
| Willingness to adapt their team to yours  | A fixed delivery model               | How will you staff alongside our domain owners?                  |
| Focus on a few strengths                  | Claims to do everything              | Where would you recommend another partner instead of yourselves? |

**SO WHAT** No partner is strong in every part of data and analytics; choose for the decisions you are changing, and say no to the rest.

# 2

## Tools and evidence

Score it, measure it, see it in six industries

# Decision mode picker

Pick one recurring decision and answer six questions. The picker suggests the rung of the ladder it is ready for today.

| Question                                           | Options                                                                                                               |
|----------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| How often is this decision made?                   | A few times a year; Weekly or monthly; Daily; Continuously, many times a day                                          |
| If it is wrong, can it be reversed easily?         | No, it is effectively permanent; With effort and some cost; Yes, quickly and cheaply                                  |
| How trusted is the data it depends on?             | Patchy, disputed or undefined; Mostly reliable, some known gaps; Owned, certified and monitored                       |
| How regulated or sensitive is it?                  | Heavily regulated or affects individuals' rights; Some rules apply; Lightly regulated                                 |
| How much must the decision be explained to others? | Fully, to a regulator, customer or court; Internally, to managers and auditors; Rarely; the outcome speaks for itself |
| How fast must it be made?                          | Days or weeks are fine; Within hours; In seconds or minutes                                                           |

# What each answer points to

## Describe and diagnose

Keep the decision with people and give them consistent, explained facts. Certify the measures the decision relies on Show drivers and exceptions, not just totals

## Recommend

Let the system propose the best option with its reasons; people choose and act. Put the recommendation where the decision is taken Track how often it is accepted and why it is overridden

## Act with approval

Let the system prepare the action; a named person approves before it runs. Write the approval limits and the approver per limit Record evidence with every approval

## Act within guardrails

Let the system act inside set limits, escalate exceptions and record everything. Name the accountable owner and the switch-off route Monitor outcomes and drift continuously

SELF-CHECK

# Is this in place today?

Score each statement 1 (not at all) to 4 (fully, evidenced).

| # | Statement                                                                                             | Score |
|---|-------------------------------------------------------------------------------------------------------|-------|
| 1 | We have a list of our most valuable recurring decisions, each with a named business owner.            |       |
| 2 | Each important decision has a deliberately chosen mode, from describe to act within guardrails.       |       |
| 3 | Automated decisions have written limits, explanations and a known way to reverse them.                |       |
| 4 | Every recommendation or automated action is recorded with its evidence and its outcome.               |       |
| 5 | We judge analytics and AI work, and our partners, on decision outcomes rather than outputs delivered. |       |

# How it looks in six industries

| Industry         | Situation                                                                                                                | The move                                                                                                                                            | Measure                                                                                               |
|------------------|--------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------|
| Manufacturer     | Input costs swing, price-downs bite and service decisions on the installed base are made case by case from spreadsheets. | Recommend price and surcharge moves to account managers, and automate spare-part replenishment within stock and value limits.                       | Share of pricing decisions taken on the recommendation; parts availability at agreed stock cost       |
| Retail bank      | Supervisors question risk data, and relationship offers are decided by campaign calendars rather than customer need.     | Keep credit decisions at act with approval with full explanations, and let next-best-action recommendations reach advisers in their tools.          | Approval decisions fully evidenced on first review; offers accepted per relationship                  |
| Retailer         | Markdowns rise and stores and online plan stock separately, so price and allocation calls are late and inconsistent.     | Automate store replenishment within guardrails, and recommend markdown timing and depth to merchants who approve by category.                       | Full-price sell-through; share of replenishment orders placed without manual change                   |
| Hospital group   | Delayed discharges block beds and every automated step touching patients raises privacy and clinical questions.          | Diagnose and recommend discharge readiness to ward teams; never automate clinical decisions, only scheduling within agreed rules.                   | Discharges completed before midday; recommendations reviewed by the ward team each day                |
| Telecom operator | Churn is high and retention offers are generic; network spend is spread evenly rather than where it earns most.          | Automate low-value retention offers within margin limits, and recommend network investment cases to a monthly capital forum.                        | Saves per retention contact at target margin; capital approved against modelled return                |
| Insurer          | Claims inflation, leakage and fraud slip through a high-volume operation, and brokers wait on slow referrals.            | Fast-track simple claims within guardrails, route suspected fraud to investigators with explanations, and recommend referral terms to underwriters. | Simple claims settled without handling; leakage found per investigated claim; broker quote turnaround |

# Measures for the data scorecard

| Measure                         | Definition                                                                            | Lead or lag |
|---------------------------------|---------------------------------------------------------------------------------------|-------------|
| Decisions inventoried and owned | Share of high-value recurring decisions with a named owner and chosen mode            | Lead        |
| Recommendation acceptance       | Share of recommendations accepted, with override reasons captured                     | Lead        |
| Decision latency                | Time from the triggering event to the decision being acted on                         | Lead        |
| Guardrail coverage              | Share of automated decisions with written limits, explanations and a reversal route   | Lead        |
| Hand-back rate                  | Share of automated decisions handed back to a person, tracked against the agreed band | Lead        |
| Decision outcome                | The business measure each decision exists to move, against its baseline               | Lag         |
| Reversed decisions              | Automated decisions reversed or overturned on review, by cause                        | Lag         |
| Value realised from automation  | Benefit confirmed with finance for decisions moved up the ladder                      | Lag         |

# 3

## Making it happen

Traps, the first 90 days and where SCIKIQ fits

# Traps to avoid

## Automating the dashboard

Teams add alerts to existing reports and call it automation, but nothing acts. Counter-move: Model the decision first: its inputs, options, owner and the system where the action lands.

## Jumping to autonomy

A model goes straight to acting on its own, the first bad call makes headlines and the programme is frozen. Counter-move: Climb the ladder one rung at a time, with evidence from the rung below before moving up.

## No owner, no off switch

When an automated decision goes wrong, nobody can say who is accountable or how to stop it. Counter-move: Name the decision owner, write the limits and test the reversal route before go-live.

## Measuring activity

Success is reported as models deployed and recommendations served. Counter-move: Report the outcome each decision exists to move, and the acceptance and override rates behind it.

## Buying tools instead of redesigning decisions

Partners and platforms multiply but decisions stay the same. Counter-move: Choose partners on the decisions they can change in your domain, and measure them on outcomes.

# The first 90 days

## Days 1-30: Inventory the decisions

- List the recurring decisions behind each strategic theme
- Name an owner and record the current mode for each
- Place them on the frequency and cost-of-error grid
- Pick two frequent, low-risk decisions as pilots

## Days 31-60: Design two decisions

- Model inputs, options, rules and the target system for each pilot
- Write limits, explanations and the reversal route
- Set the outcome measure and its baseline
- Agree the approval path with risk and the decision owner

## Days 61-90: Run and prove

- Run the pilots at recommend or act with approval
- Record every decision, override and outcome
- Review results with the owner and decide whether to move up a rung
- Add the decision portfolio to the quarterly strategy review

# Where SCIKIQ fits

## Decision and Reasoning Engine

Uses business context, rules and models to determine what should happen, so each decision is explicit and explainable.

## Governance Gate

Checks policy, limits and approvals before anything runs, which is what makes act with approval and act within guardrails safe.

## Action Fabric

Executes approved actions in the enterprise systems where the decision lands, closing the loop instead of stopping at a report.

## Outcome and Observability

Measures the outcome of every decision and feeds it back, so modes can be moved up or down the ladder on evidence.

# Take it further

- The SCIKIQ Data Strategy Framework: the cascade this track plugs into
- Strategy Cascade and Scorecard Workbook: add this track's objectives and measures
- Run the interactive tool and self-check at [scikiq.org/data-strategy#track-decisions](https://scikiq.org/data-strategy#track-decisions)

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