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From Ad-hoc to Standardised

Improving analytical consistency and stakeholder confidence

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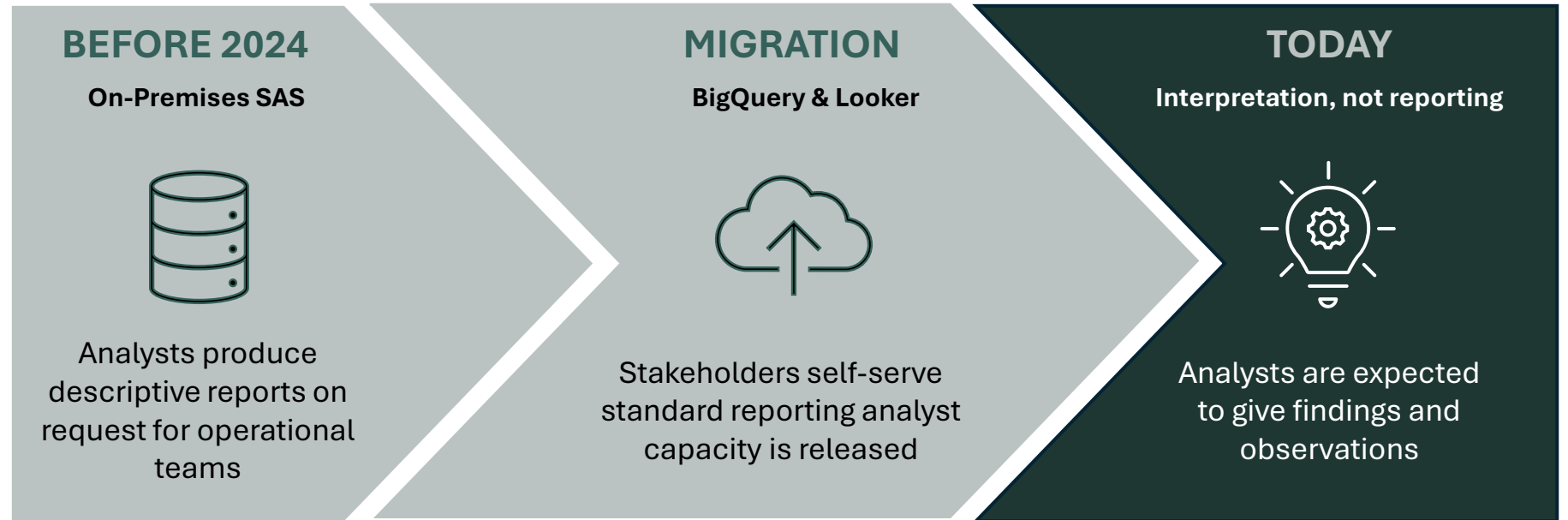
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Research context

How platform migration transformed the Analyst role



Stakeholder-facing teams now translate analytical products into business interpretation, whatever the complexity of the request.



Researcher context: 8 Years within Admiral, Data manager in Data & Analytics Customer Operations with sight of analyst practice and departmental direction.

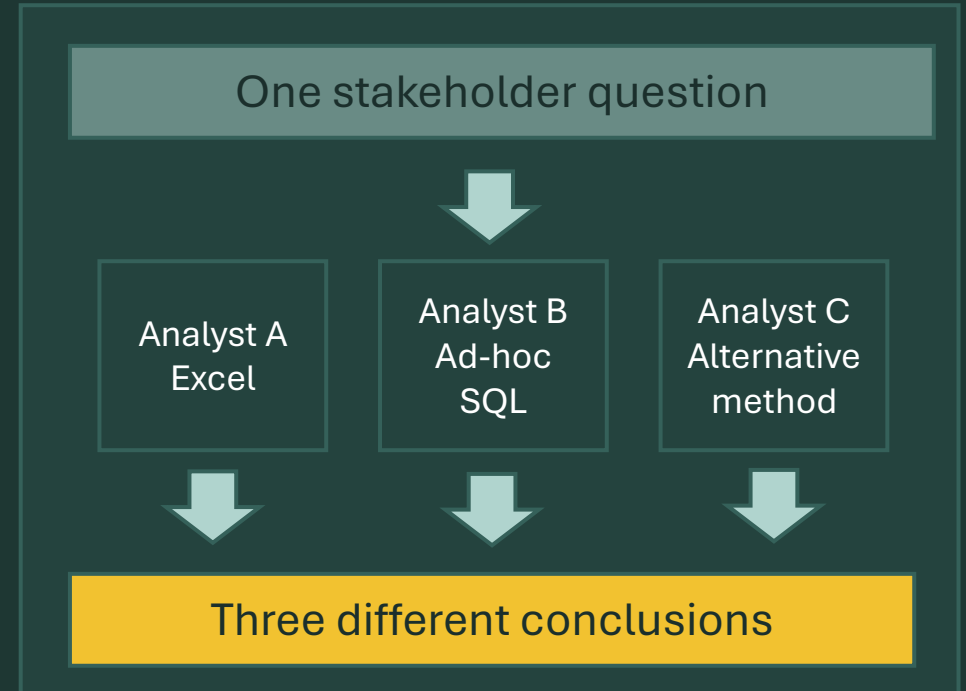
Research Problem

Without a standard approach, analysts select methods by preference and experience rather than by the needs of the question, producing inconsistent methods and uneven conclusions for stakeholders.

Capability: Newer analysts cannot yet turn a question into an output

Consistency: Method choice varies analyst to analyst

Confidence: Stakeholders cannot judge which answer to act on



Research Aim and Objectives

AIM

To develop and evaluate a standardised analytical framework for Customer Operations analysts at Admiral insurance, informed by a comparative review of industry analysis methods, improving consistency and stakeholder confidence in analytical outputs.

01

Review methods

Current departmental and industry practice: limitations, use cases and the capability factors behind consistent application.

02

Baseline the position

Survey analysts and stakeholders on pain points before designing the framework and its method-selection criteria.

03

Evaluate performance

Compare methods and tooling against six criteria: time, confidence, consistency, ease of use, accuracy, stakeholder-readiness.

04

Re-measure and recommend

Post-implementation feedback from the same participants, then a recommended model for adoption into standard practice.

Literature review

Analytical variability is documented, measurable and responsive to intervention

164

Independent teams, identical hypothesis and data. Non-Standard errors large enough to rival the effect sizes being tested [2]

~50%

Of that error removed by structured peer feedback, more reproducible work produced smaller errors overall [2]

10

Consensus-backed practices for multi-analyst work from a Delphi panel of methodology experts [4]

Most variation traces to a small number of causes above all questions never precisely defined by work begins [1]

Where many defensible choices exist and results are selectively reported, false positives rise [3]. A test mismatched to its measurement scale invalidates the conclusion [5]

Literature review

A documented framework is not sufficient on its own

GOVERNANCE

Across 75 governance studies, resistance to change, system complexity and skills gaps still limit adoption where frameworks exist [6]. Comparing 44 published models found substantial inconsistency in how components are defined [7].

TRUST AND RIGOUR

Trust in a result depends on the trustworthiness of the method producing it — consistent performance and willingness to be checked, not the tool used [8]. Embedding ethics and stakeholder participation in delivery strengthens trust [9].

CULTURE AND CAPABILITY

Data-driven culture mediates analytics capability and firm performance [10]. Greater data access improves decision quality but raises work stress, depending on autonomy and skill [11]; financial services adoption is already at scale [12].

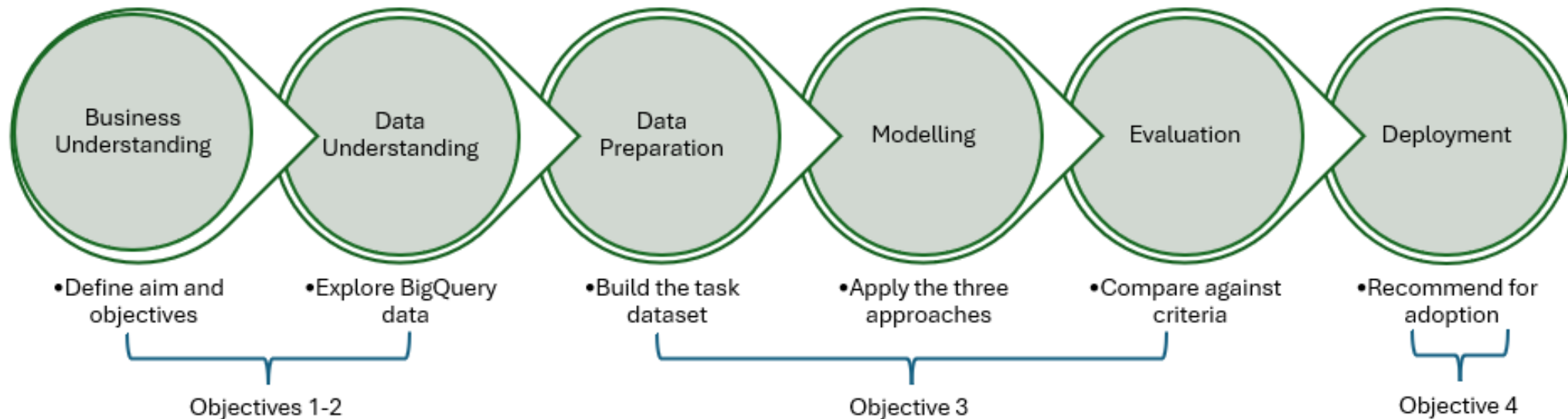
THE GAP

No framework connects specific analytical methods to observed stakeholder-confidence outcomes in a corporate, self-service BI environment.

Research and development methodologies

Objective	Lens	Approach	Evidence
2 & 4 – experience and confidence	Interpretivist	Inductive	Survey and semi-structured interview
3 – measurable performance	Positivist	Deductive	Comparative task exercise
Overall design	Pragmatist	Mixed methods	Triangulated

DEVELOPMENT METHODOLOGY: CRISP-DM – six phases mapped onto the four objectives



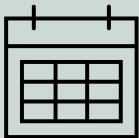
Comparative case study

Same tasks. Same requirements. Three approaches compared across six criteria

 Manual Excel Analysis		 Ad-hoc SQL in Big-Query		 Standardised Framework		
The default for many requests		Post migration self-service practice		The proposed consistent approach		
Criteria	 Time	 Confidence	 Consistency	 Ease of use	 Accuracy	 Stakeholder readiness



Tasks drawn from common Customer Operations requests rather than artificial exercises, requirements, data and expected outputs will remain consistent across approaches



Number and nature of tasks finalised during framework design keeping scope achievable within the academic timeframe.

Survey and Interview design

Baseline and post-implementation, same participants where possible

30 → 18–21

Analyst survey

All Customer Operations analysts invited; 60–70% response expected. Confidence ratings plus open responses on current practice and challenges.

6–8

Analyst interviews

Purposively selected across junior, mid-level and senior roles, keeping less-experienced analysts in the sample rather than only confident volunteers.

5–8

Stakeholders

Regular users of Customer Operations output, giving the external view on clarity, credibility and stakeholder-readiness.

PAIRED DESIGN

Baseline survey
and Interviews



Framework design,
build and rollout



Post-Implementation survey
and interviews

Within-subject comparison isolates the change in confidence instead of comparing independent groups

Scores show whether confidence moved, interviews explain why. An analysis can be accurate and still fail to give an actionable answer

Data evaluation

Test selection follows measurement scale

QUANTITATIVE STRAND

Task metrics and confidence ratings

Task-level performance from the comparative exercise;
structured confidence ratings via Microsoft Forms.

Wilcoxon signed-rank, $\alpha = 0.05$

Paired pre and post scores from the same participants.
Confidence is ordinal.

Friedman test, per criterion

Differences across the three approaches on each of the
six criteria.

QUALITATIVE STRAND

Open responses and interview transcripts

Recorded and transcribed with consent, then analysed
thematically, recurring themes compared against the
quantitative results

VALIDITY AND CONTROLS

Triangulation of measured performance with reported
confidence rather than inferring one from another.

GCP tenure, recorded by participants so findings are
stratified by experience not treated as uniform.

Risks, Limitations and Ethics

RISK	MITIGATION
Participant and response rate	• Manager-level backing for protected time. • Defined window • Reserve candidates at each level
Researcher's dual role	• Voluntary participation • Anonymised responses • Transparency on data use
Tooling access	• External proof of concept on synthetic data
Varied GCP exposure	• Tenure recorded and used when interpreting confidence results

ETHICAL POSITION

Participation is voluntary, requested in writing at department level, never individually.

Quotes will be generalised – no individual identifiable in reporting.

Only data already authorised to the participants, no personally identifiable customer information.

Finding framed at process level. Admiral sign off before academic submission.

Resources and Materials

No incremental cost, the cost is operational time

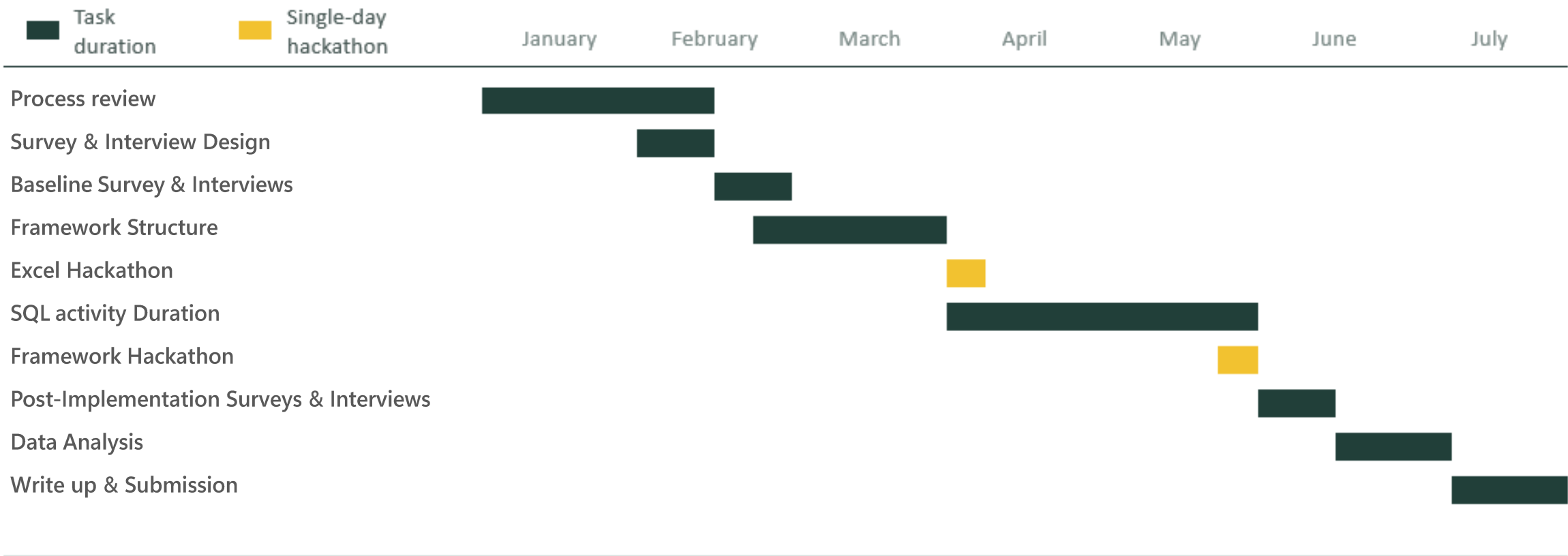
Resource	What the project uses	Cost Projection
Hardware	Standard network PC with BigQuery and internet access	None
Software	BigQuery, Looker, Excel, Python notebook environment, Microsoft Forms	Fronted by Admiral or GCP free tier for external proof of concept
Information	Anonymised Customer Operations datasets already accessible via BigQuery	None
Human	30 analysts surveyed, 6-8 interviewed, 5-8 stakeholders Data collation time	Opportunity cost in operational time

Tooling is contingent on the framework choice: GCP notebook functionality through Admirals existing environment at no incremental cost, or the free tier if internal access is not granted in time.

Five delivery risks are logged separately for the methodological ones: Notebook access, free-tier limits, competing BAU work, scope creep and the fixed deadline.

Project Plan

10 activities across 28 weeks, January to July



Baseline front-loaded so the interval before follow-up is long enough for genuine change in confidence to emerge.

Expected contribution

A tested framework for method selection, and evidence of whether it moves analyst and stakeholder confidence.

For Admiral

A method-selection framework for Customer Operations, a recommendation on adoption, and a business case where tooling access is required.

For the literature

Evidence linking analytical methods to stakeholder-confidence outcomes in a self-service BI environment, the gap no current framework fills.

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