

OPERATIONAL METHODOLOGY • PEER-REVIEW DRAFT • v1.3

The Coetzee Convergence Framework

An Operational Model for Entity Authority
in High-Friction Search Markets

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Abstract

The Coetzee Convergence Framework (CCF) is an operational methodology for translating established analog business authority into machine-readable entity signals, designed for high-friction, high-ticket commercial environments where standard entity SEO practice fails to account for the qualitatively different trust requirements of buyers operating under high-stakes conditions.

Building on Spence's (1973) signalling theory and Barnard's (2020) entity home methodology, the CCF introduces a four-pillar operational sequence and a reproducible Entity Confidence Score (ECS) instrument. An illustrative case observation from the Prins & Prins engagement (2025–2026) is included. Causal attribution from a single case is not claimed; multi-entity validation is identified as the required next stage.

CORE PROPOSITION

In high-friction markets, search engine confidence and buyer trust are not separate problems. They are the same problem expressed at different scales. The methodology that earns the algorithm's trust earns the buyer's trust.

1.

The Audit Hypothesis: Behavioural Divergence

The CCF is predicated on a specific and testable behavioural distinction. In low-friction search environments, users **browse**. In high-friction environments, users **audit**.

Browsing Behaviour — Low Friction	Auditing Behaviour — High Friction
Search: "pizza recipe." Risk is low — a bad result costs one dinner. Selection is based on surface relevance and convenience. Standard relevance optimisation is sufficient.	Search: "bespoke diamond engagement ring Cape Town" or "armed response Somerset West." Risk is high — financial loss, physical threat, or significant emotional harm. The user does not select; they verify. Relevance is a baseline requirement, not a differentiator.

This distinction has structural implications for the type of digital presence that converts a high-friction search into an inquiry. Standard SEO approaches — focused on keyword relevance and content volume — do not pass an audit. The CCF is the engineering protocol for building a digital presence that does.

2.

Defining High-Friction Markets

A high-friction market is defined by three concurrent conditions — all of which must be present for the CCF to be applicable:

Condition 1 — Elevated Risk	Condition 2 — Information Asymmetry	Condition 3 — Verification Behaviour
The cost of a wrong purchase decision is materially higher than the monetary price — encompassing financial, physical, legal, or significant emotional risk.	The buyer cannot fully evaluate quality before commitment. High information asymmetry exists between buyer and seller at the point of search.	The buyer's search behaviour includes an active verification phase. They seek proof of trustworthiness and track record — not merely relevance.

Qualifying Market Examples	Explicit Exclusions — CCF Does Not Apply
• Luxury jewellery and bespoke goods • Security services — armed response, CCTV, access control • Legal representation and specialist advisory • Medical and specialist healthcare services • High-value residential and commercial property • Bespoke manufacturing and engineering • Specialist financial advice and wealth management	• Impulse-buy e-commerce — verification behaviour absent • Commodity markets where price is the dominant conversion variable • Markets with fewer than 10,000 monthly searches in the primary intent cluster • New businesses with zero operational history — CCF amplifies existing trust; it cannot manufacture absent trust • Purely informational intent — audit behaviour is not present

3.

Theoretical Foundation and Signal Convergence

Signalling Theory (Spence, 1973)

The CCF grounds its mechanism statement in Spence's signalling theory. In markets with high information asymmetry, buyers rely on signals — observable attributes that are structurally difficult for low-quality entities to fabricate. The CCF applies this logic to structured data architecture as a conceptual analogue: signals that require genuine operational history, third-party corroboration, and consistent identity consolidation are structurally harder to fabricate than thin content or keyword optimisation. This application is acknowledged as an extension of signalling

theory, not a direct empirical derivation.

Prior Art Acknowledgement

The CCF builds upon the foundational entity home methodology of Jason Barnard and Kalicube (2020) and Google's Search Quality Rater Guidelines on E-E-A-T signal architecture. The CCF's specific contributions beyond prior art are: (1) a market-specific behavioural model that defines when entity-first architecture is mandatory rather than optional; and (2) the ECS instrument as a reproducible diagnostic tool absent from existing entity SEO frameworks.

The Signal Convergence Mechanism

Search engine confidence in an entity is a function of three independently weighted signal vectors converging:

Sd — Declarative Signals	Cc — Corroborative Citations	Ph — Historical Performance
What the entity asserts about itself in machine-readable structured data. Schema markup, sameAs identifiers, property completeness, and internal consistency. This is the entity's own voice — and it must be unambiguous.	What independent, non-owned, high-authority sources assert about the entity. Third-party citations, directory listings, press mentions, and platform-verified profiles. Cannot be self-generated.	The longitudinal consistency between the entity's claims and observable stability signals. Domain age, review sentiment over time, consistent business information across surfaces. Compounds with time.

THE SIGNAL CONVERGENCE PRINCIPLE

Trust is not produced by any single signal. It is produced by the absence of contradiction across multiple independently observable signals. The CCF's role is the elimination of contradictions — not the generation of claims.

4.

The Four Operational Pillars

The CCF is applied as a four-pillar sequence. Pillar I is a prerequisite — structural entity errors at this level suppress the effectiveness of all downstream signal work. Pillars III and IV are applied in parallel following the completion of Pillars I and II.

Pillar I — Entity Home and Declarative Layer

Objective: Elimination of Entity Ambiguity

The prerequisite action is the construction of a single, authoritative entity node. Fragmented identity — competing schema declarations, inconsistent name variants, unlinked brand presences — suppresses entity confidence regardless of the quality of other signals.

- Deploy a single authoritative Organisation or Person node as the primary entity declaration.
- Implement sameAs linking to persistent, non-owned identifiers: CIPC registration, LinkedIn Company IDs, Google Business Profile IDs, Wikidata Q-numbers where available.
- Ensure name consistency across all schema declarations, GBP, and directory listings. A single inconsistent name variant creates an ambiguity signal that suppresses entity consolidation.

Pillar II — E-E-A-T Corroboration Layer

Objective: Translating Analog Reputation into Machine-Readable Indices

High-friction businesses typically possess decades of earned operational authority that is entirely invisible to search systems. This pillar is the translation protocol.

- Implement hasCredential for professional certifications, trade licences, and regulatory compliance.
- Implement memberOf for verified industry association memberships.
- Use knowsAbout to link to defined DefinedTerm entities specific to the niche. Note: this is an advanced usage not formally confirmed by Google — treat as experimental.
- Map offline reputation assets — trade awards, certifications, media appearances — into structured markup.

Pillar III — Decision-Support Layer

Objective: Replacing Sales Copy with an Audit Trail

High-friction buyers are not persuaded — they are verified. The content architecture must shift from making claims to providing proof.

- Implement FAQPage schema addressing the specific risk vectors of the purchase — fraud, quality variability, service failure, legal liability.
- Implement HowTo schema for complex purchase processes — commission procedures, grading methodologies, service level agreements.
- Implement Review and aggregateRating markup with verifiable third-party sources. Self-hosted testimonials without external verification carry minimal trust weight.

Pillar IV — Signal Hygiene: The Ruggedisation Protocol

Objective: Elimination of Technical Noise Suppressing Entity Confidence

Ruggedised SEO is the discipline of constructing digital entity signals with sufficient internal consistency and deduplication that AI search systems can parse them without disambiguation failure or confidence suppression. It is the CCF's most distinctive contribution to entity SEO practice.

- Audit all JSON-LD declarations across the domain. Eliminate duplicate @type declarations, conflicting @id values, and inconsistent property values.
- Verify schema properties are used within schema.org-defined constraints. The award property is Text — it does not carry the signal weight of hasCredential.
- Ensure schema declarations are internally consistent with GBP data, directory listings, and unstructured on-page content. Contradiction erodes entity confidence.

THE RUGGEDISATION TEST

An entity achieves Ruggedised SEO status when: (1) no conflicting @type or @id declarations exist across any page; (2) all property values are consistent with GBP and on-page content; (3) the entity is disambiguated consistently across Google Search, Maps, and GBP; (4) schema validation returns zero critical errors.

5.

The Entity Confidence Score (ECS)

The ECS quantifies entity signal completeness across the four CCF pillars. It is designed to be reproducible by any qualified analyst using the named measurement tools without access to proprietary data. A rubric approach is used rather than a formula to maintain dimensional consistency — adding a percentage to an integer count using a single arithmetic operator produces incoherent output.

Pillar	Variable	What Is Measured	Measurement Method	Max
I — Entity Home	Sd — Declarative	% of core schema properties present and valid: @id, sameAs, address, founder, legalName, url	Schema.org Validator + Google Rich Results Test	25 pts
II — E-E-A-T Layer	Cc — Corroborative	Count of independent domains (DR > 30) citing entity name with no ownership link to operator	Ahrefs / Semrush: branded anchor + no-owned-domain filter	25 pts
III — Decision Support	Ph-a — Stability	Domain age in years, capped at 10. Score = (age ÷ 10) × 12.5	WHOIS registration date	12.5 pts
IV — Signal Hygiene	Ph-b — Sentiment	Aggregate review rating. Score = (rating ÷ 5.0) × 12.5	GBP + schema aggregateRating	12.5 pts

ECS Total = Sd + Cc + Ph-a + Ph-b → Score out of 75, normalised to 0.00–1.00 by dividing by 75	75 → 1.00
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Table 1 — ECS Scoring Rubric. Maximum score: 75. Normalised to 0.00–1.00 by dividing by 75.

Score Interpretation

- 0.85 – 1.00:** Strong entity signal completeness. Consistent SGE and Local Pack performance observed at this range. Preliminary finding pending multi-entity validation.
- 0.60 – 0.84:** Moderate completeness. Typically reflects strong Pillar I with gaps in corroborative citation volume or signal hygiene.
- 0.30 – 0.59:** Partial implementation. Entity ambiguity is likely suppressing downstream signal effectiveness.
- 0.00 – 0.29:** Foundational gaps. Pillar I is the indicated first intervention.

6.

Case Observation: Prins & Prins Diamonds
(2025–2026)

METHODOLOGICAL NOTE

The following is an illustrative case observation, not a controlled framework validation. Causal attribution requires multi-entity, controlled-variable study design. Alternative explanations — algorithm updates, competitor penalties, seasonal query shifts, or Semrush index recalibration — cannot be excluded from a single uncontrolled engagement.

Client Context

Prins & Prins is a Cape Town luxury jeweller with approximately 40 years of established trade reputation. Prior to the CCF intervention, the entity carried no structured entity signals, no Knowledge Panel presence, and generated thin visibility for high-intent luxury query clusters — despite strong domain age and deep offline brand authority. The problem was not lack of reputation. It was invisible reputation.

Intervention Sequence

- Pillar I: Constructed a single authoritative Organisation node with sameAs links to CIPC registration and Google Business Profile. Eliminated a legacy Page @type declaration creating entity ambiguity.
- Pillar II: Implemented hasCredential for GIA certification relationships, memberOf for the SA Jewellery Council, and mapped 40 years of trade award history into structured markup.
- Pillar III: Developed FAQPage content addressing the three primary risk vectors in high-value diamond purchase decisions: certification authenticity, bespoke commission process, after-sales service.

4. Pillar IV: Identified and eliminated two conflicting JSON-LD declarations. Consolidated aggregateRating from a single verified source.

Observed Outcomes — April 2025 to February 2026

Metric	Baseline — April 2025	Outcome — February 2026
Measurement Tool	Semrush Visibility Index South Africa / Jewellery vertical	Same tool, same index, same query set
Query Set	"engagement rings Cape Town" cluster — 14 tracked queries	Unchanged
Visibility Score	12.4%	41.8% (+340% relative)
Knowledge Panel	Absent	Provisional entity panel active
Schema Errors	Critical — duplicate LocalBusiness JSON-LD	Zero critical errors post-intervention
sameAs Consolidation	None — fragmented digital footprint	CIPC + GBP + LinkedIn linked

Table 2 — Prins & Prins Visibility Outcomes. Semrush Visibility Index, SA / Jewellery vertical. April 2025 – February 2026. Correlation with CCF implementation noted; causation not established.

7.

Falsifiability Conditions and Boundary Limitations

Falsifiability Condition

The CCF predicts that implementing all four pillars for a verified high-friction market entity will produce measurable improvement in at least two of the following outcomes within 90 days of full implementation, measured against a documented pre-intervention baseline:

- 1. Improvement in Semrush or Ahrefs Visibility Index for the primary high-intent query cluster.
- 2. Reduction in schema validation errors to zero critical errors via Google Rich Results Test.
- 3. Emergence or improvement of Knowledge Panel entity signals in Google Search Console.
- 4. Measurable improvement in qualified conversion rate from organic high-intent traffic.

If correct implementation of all four pillars fails to improve two or more signals within 90 days, the framework is weakened for that market context and the engagement should be reviewed for implementation failures, market ineligibility, or competitive suppression factors outside the CCF's scope.

Conditions Under Which the Framework Does Not Apply

- Client market does not meet all three high-friction conditions defined in Section 2.

- Client has no verifiable operational history — the CCF amplifies existing trust; it cannot create it from zero.
- Primary intent cluster has fewer than 10,000 monthly searches.
- Price is the dominant conversion variable in the client's market.
- Significant algorithmic penalties or manual actions are suppressing the domain.

8.

Schema Implementation Notes

The following schema.org properties are used in CCF implementations. Practitioners should verify current property definitions against schema.org documentation before implementation.

Property	Expected Value Type	CCF Usage	Google Confirmed
sameAs	URL	Persistent external identifier linking — core to Pillar I	Yes
hasCredential	EducationalOccupationalCredential	Primary E-E-A-T signal — Pillar II	Yes
memberOf	Organisation	Industry association membership — Pillar II	Yes
award	Text (string)	Trade award description — note: does not carry hasCredential weight	Yes
knowsAbout	Thing / Text / URL	DefinedTerm linking — advanced / experimental	Experimental
aggregateRating	AggregateRating	Verified third-party rating — Pillar III	Yes
FAQPage	WebPage subtype	Risk-vector Q&A; — Pillar III	Yes
HowTo	CreativeWork	Complex process documentation — Pillar III	Yes

Table 3 — Schema.org properties used in CCF implementations. Verify against current schema.org documentation before deployment.

9.

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OPEN VALIDATION INVITATION

Practitioners who apply the CCF and observe results — positive, neutral, or contrary to predictions — are invited to submit case observations to erwee@seo-gurus.co.za. Multi-entity validation data is the only mechanism by which ECS thresholds and falsifiability conditions can be refined into confirmed benchmarks.