RED BEAR: ENTERPRISE ONTOLOGY MANAGEMENT · DATA SHEET · 4 · DECISIONS AND RECOMMENDATIONS

# Recommendations with their reasons, decisions with their evidence and outcome

The product proposes patterns, answers questions and estimates impact. It never decides; a named person does, and the record shows who, on what authority, and what happened next.

KEY POINTS

- Every recommendation follows one rule: customer requirement, customer ontology, Red Bear pattern and external evidence, each kept as a link, and none is accepted without a named approver
- Questions are answered from the ontology with a citation for every fact, or refused; general knowledge is never presented as a customer fact
- Every change carries two labels, whether it changes the essential model and the TOGAF change class, and is routed to the level its impact reaches
- Decisions run a lifecycle from discovery to outcome review; impact is estimated on five dimensions with an uncertainty statement, and lessons resurface when a new proposal resembles an old one
- Vendor sources can be queried under control: configured sources only, cited passages, no fallback to the open web, and no effect on the ontology until a Group EA accepts

## What it is

Decisions and recommendations is the layer of Red Bear: Enterprise Ontology Management that turns the ontology into advice and the advice into governed change. It holds the Red Bear Solution Architecture Catalogue and proposes patterns against a customer requirement, each with its reasons, when not to use it and its trade-offs. It answers natural-language questions from the ontology with the evidence for each fact. It classifies, routes and records every change, and it keeps the decision itself, its options, its rationale, its estimate and, later, its outcome.

The organising rule is the one on the cover of every Red Bear product. The AI can find, compare, draft and recommend. It cannot confirm a fact, accept a recommendation or approve a change. Each of those carries the name and authority of a person.

## The pain point

Architecture decisions are taken, and their reasons evaporate. A pattern is chosen because a consultant liked it; a vendor is retained because nobody remembers why it was selected; a change to what an entity is responsible for slips through as an IT project because it was never recognised as a governance matter. Six months later nobody can reconstruct the decision, defend it or learn from it, and the next proposal repeats the last mistake.

Dietz and Mulder separate the two kinds of change sharply: a change to what an entity is responsible for is governance, a change to how it is implemented is management, and the two need different authority and different evidence (Dietz and Mulder, Ch 9 §9.6.2 to §9.6.3). Most groups have one approval path for both, so boards decide operational detail while essential changes slip past them.

## How it works

**Propose with reasons, accept by name.** The pattern catalogue holds every field of the pattern record, and *derived from* is mandatory on every pattern. Given a customer requirement the product proposes one or more patterns with their reasons, when not to use them and their trade-offs; asked *why*, it returns the pattern's sources and the customer facts it relied on, grouped by knowledge kind. A recommendation is not marked accepted without a named approver. Ask EOM answers questions from the ontology and cites the evidence for each fact; when the ontology cannot answer, it says so, and every answer states which knowledge kinds it used. Vendor questions run through Claude against sources a Group EA has configured and return cited passages with source, date and uncertainty; there is no fallback to the open web, every query is logged, and any resulting recommendation has no effect until a Group EA accepts it.

**Classify twice, route by impact.** Every change request carries two labels: *governance* when it changes the essential model, otherwise *management*, and the TOGAF change class, simplification, incremental or re-architecting. Governance-class changes go to the level their impact reaches, the team, the entity board or the federation board when more than one entity is affected; management-class changes go to the delegated manager. Routing uses a delegated-authority table per entity, with an approver per decision class, and changing the table is itself a governance decision for the owning board. Compliance reviews record a

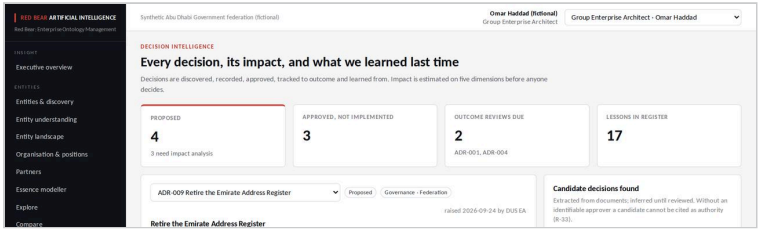
conformance level and one outcome, comply, dispensation or halt; every dispensation has an expiry and conditions, and an expired one appears as a risk.

**Record, estimate, review, learn.** Candidate decisions found in documents, minutes and answers enter review as *inferred* with the page cited; without an identifiable approver they cannot be cited as authority. Each decision carries its question, options, rationale, approvers, class labels, affected elements, estimates, status and dates, and an implemented decision gets an outcome review task. Impact is estimated on five dimensions, cost, risk, governance, compliance and solution-scope completeness, each with an uncertainty statement, and a dimension without data is *not estimable*. When an outcome is reviewed, estimate is shown against observed. Lessons are stored on the decision and in a searchable register, and when a new proposal resembles a past decision by pattern, capability, vendor or class, the past decision and its lessons are shown with the reason for the match.

## What you get

| Capability | What it does | Requirements |
|---|---|---|
| **Pattern catalogue and recommendations** | The Red Bear Solution Architecture Catalogue; patterns proposed with reasons, contra-indications and trade-offs; *why* answered by knowledge kind; a named approver required | FR-RP-01 to FR-RP-04 |
| **Ask EOM** | Natural-language questions answered from the ontology with evidence per fact, refused when it cannot answer, and labelled by knowledge kind | FR-RP-05, FR-RP-06, FR-RP-07 |
| **Two-label classification and routing** | HOS class and TOGAF change class on every change; routing to team, entity or federation board; the delegated-authority table with an approver per class | FR-GV-01, FR-GV-02, FR-GV-03 |
| **Compliance, dispensations and the log** | Conformance level and one outcome per review; dispensations with expiry and conditions; every outcome logged with decision-maker and authority; explainable from any element | FR-GV-04 to FR-GV-07 |
| **Decision lifecycle and lessons** | Past decisions discovered as inferred; question to outcome review on every record; lessons in a register and resurfaced on similar proposals | FR-DI-01, FR-DI-02, FR-DI-03 |
| **Five-dimension estimate** | Cost, risk, governance, compliance and completeness risk with uncertainty; *not estimable* when there is no data; estimate against observed after review | FR-DI-04, FR-DI-05 |
| **Vendor knowledge** | Questions against configured vendor sources only, cited with uncertainty; logged; no effect until a Group EA accepts | FR-DI-06, FR-DI-07 |

## Screens




**S-18 Decision intelligence**: Decision intelligence: one decision record with its options, approvers, class labels and five-dimension estimate, and the past decisions and lessons it resembles. Prototype render on synthetic data for fictional entities.

### RETURN ON INVESTMENT

Two measures carry this pillar, both reported by the product and neither carrying a target in this document: **the share of governance decisions with an impact estimate attached** before approval, and **the share of implemented decisions with an outcome review**, with estimate against observed cost and risk on each (FR-DI-04, FR-DI-05). What the pillar makes possible is a recommendation whose customer facts, patterns and external evidence can be separated by a reviewer; an

essential change recognised as one and routed to a board rather than approved as an IT change; a dispensation that expires visibly instead of quietly becoming policy; and a decision that can be reconstructed, defended and learned from because its reasons were written down when they were still true.

## Platform engines

Decisions and recommendations consumes the Red Bear Platform's Decision Intelligence engine (RBP FR-DI-01 to RBP FR-DI-04, RBP FR-DI-07), the Decision Learning engine (RBP FR-DL-01, RBP FR-DL-02, RBP FR-DL-05), the Research engine (RBP FR-RS-01, RBP FR-RS-02, RBP FR-RS-04, RBP FR-RS-06) and the Audit service (RBP FR-AU-02). Platform behaviour is specified in the platform functional specification, not here.