

## Finish Book Plan (v1.0) — Full System Specification and Technical Rules

### 1. Purpose of Finish Book

The Finish Book Plan is Politeia's primary planning mode for completing a specific book. Its purpose is to transform a static book object into a dynamic execution calendar that:

- distributes reading effort into scheduled sessions,
- tracks real reading through stopwatch evidence,
- locks past performance permanently,
- adapts the future workload continuously,
- enforces failure when the plan becomes unrealistic.

Finish Book is a commitment system: the past is frozen, failure is recorded, and only the future can be adjusted.

### 2. Core Philosophy: The Plan Has Memory

Past sessions become historical facts. They are never recalculated or erased (Freeze the Past invariant).

### 3. Key Entities and Database Tables

Evidence Layer — wp\_politeia\_reading\_sessions (source of truth for actual reading).

Scheduling Layer — wp\_politeia\_plans, wp\_politeia\_plan\_goals, wp\_politeia\_planned\_sessions.

### 4. Plan Creation: Initial Distribution

Effective Pages:  $Pe = pf - pi + 1$

Sessions Needed:  $St = \text{ceil}(Pe / ps)$

Derivation Engine: PlanSessionDriver::derive\_sessions()

### 5. Execution Layer: Stopwatch-Based Completion

Reading counts only if logged in wp\_politeia\_reading\_sessions.

### 6. Session State Machine

planned (editable future), accomplished, partial, missed (immutable past).

### 7. Daily Closure: Lazy Settlement Engine

PlanSettlementEngine::settle() runs when user interacts (no per-user cron).

### 8. Timezone Correctness

Sessions close at 23:59:59 in the user's timezone.

### 9. Determining Session Outcome

$A=0 \Rightarrow$  missed

$0 < A < E \Rightarrow$  partial

$A \geq E \Rightarrow$  accomplished

### 10. Redistribution of Workload

Deficits carry forward, excess reduces future load. Uniform redistribution.

### 11. Editing Rules

Users can only edit future planned sessions. Past is protected.

### 12. Missed Sessions Are Eternal

Missed remains as permanent record.

### 13. Failure Threshold

If future expected session > threshold (default 120 pages), plan fails.

### 14. Plan Completion

All sessions settled and pages completed  $\Rightarrow$  plan.status = finished.

### 15. Guarantees

Evidence-based reading, immutable past, adaptive future, timezone-correct closure, enforced failure.