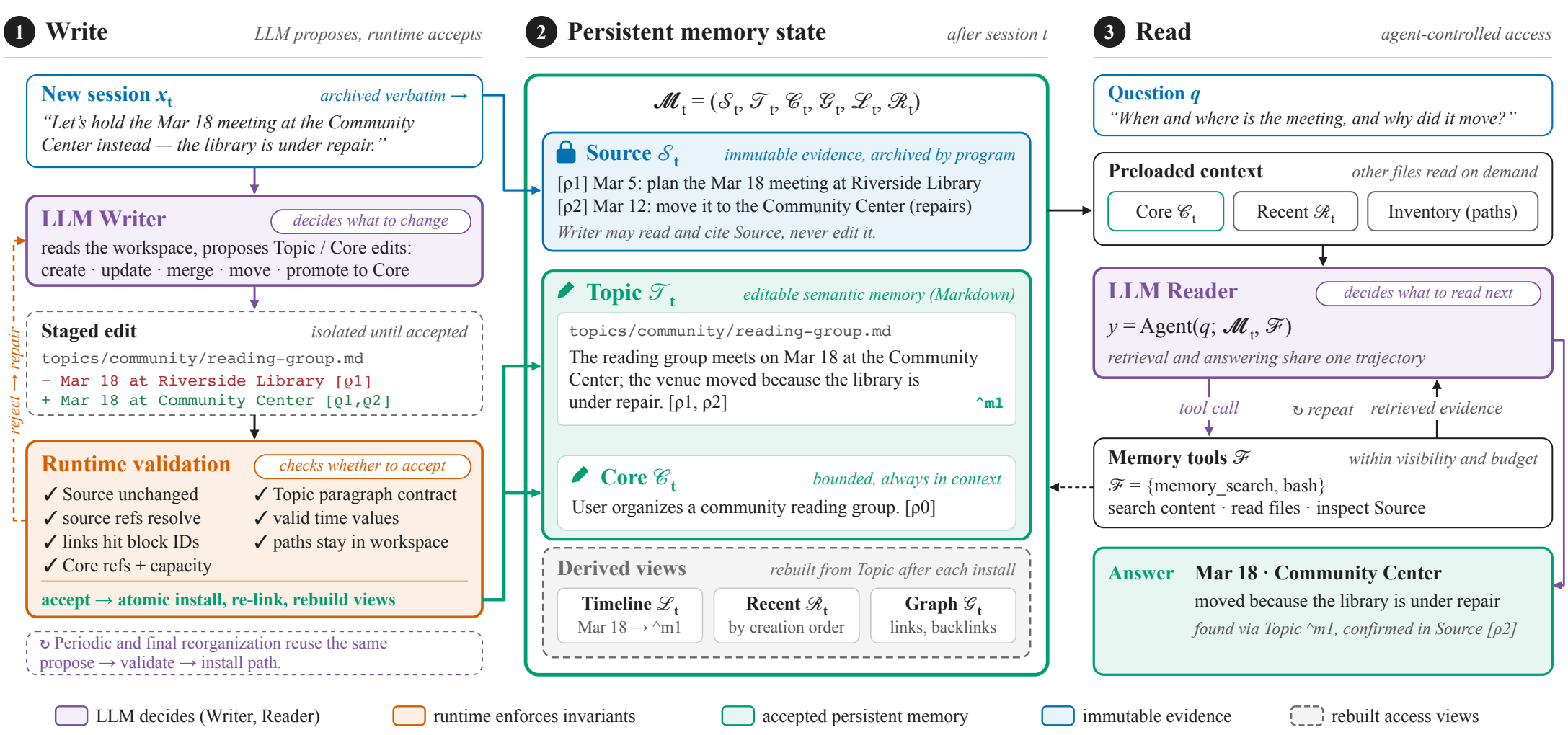

1 Write
LLM proposes, runtime accepts
New session x_t
archived verbatim →
"Let's hold the Mar 18 meeting at the Community Center instead — the library is under repair."
LLM Writer
decides what to change
reads the workspace, proposes Topic / Core edits:
create · update · merge · move · promote to Core
Staged edit
isolated until accepted
topics/community/reading-group.md
- Mar 18 at Riverside Library [ρ1]
+ Mar 18 at Community Center [ρ1,ρ2]
reject → repair
Runtime validation
checks whether to accept
✓ Source unchanged
✓ source refs resolve
✓ links hit block IDs
✓ Core refs + capacity
✓ Topic paragraph contract
✓ valid time values
✓ paths stay in workspace
accept → atomic install, re-link, rebuild views
↻ Periodic and final reorganization reuse the same propose → validate → install path.
2 Persistent memory state
after session t
$\mathcal{M}_t = (\mathcal{S}_t, \mathcal{T}_t, \mathcal{C}_t, \mathcal{G}_t, \mathcal{L}_t, \mathcal{R}_t)$
Source $\mathcal{S}_t$
immutable evidence, archived by program
[ρ1] Mar 5: plan the Mar 18 meeting at Riverside Library
[ρ2] Mar 12: move it to the Community Center (repairs)
Writer may read and cite Source, never edit it.
Topic $\mathcal{T}_t$
editable semantic memory (Markdown)
topics/community/reading-group.md
The reading group meets on Mar 18 at the Community Center; the venue moved because the library is under repair. [ρ1, ρ2]
^m1
Core $\mathcal{C}_t$
bounded, always in context
User organizes a community reading group. [ρ0]
Derived views
rebuilt from Topic after each install
Timeline $\mathcal{L}_t$
Mar 18 → ^m1
Recent $\mathcal{R}_t$
by creation order
Graph $\mathcal{G}_t$
links, backlinks
3 Read
agent-controlled access
Question q
"When and where is the meeting, and why did it move?"
Preloaded context
other files read on demand
Core $\mathcal{C}_t$
Recent $\mathcal{R}_t$
Inventory (paths)
LLM Reader
decides what to read next
$y = \text{Agent}(q; \mathcal{M}_t, \mathcal{F})$
retrieval and answering share one trajectory
tool call
↻ repeat
retrieved evidence
Memory tools $\mathcal{F}$
within visibility and budget
$\mathcal{F}$ = {memory_search, bash}
search content · read files · inspect Source
Answer
Mar 18 · Community Center
moved because the library is under repair
found via Topic ^m1, confirmed in Source [ρ2]
LLM decides (Writer, Reader)
runtime enforces invariants
accepted persistent memory
immutable evidence
rebuilt access views