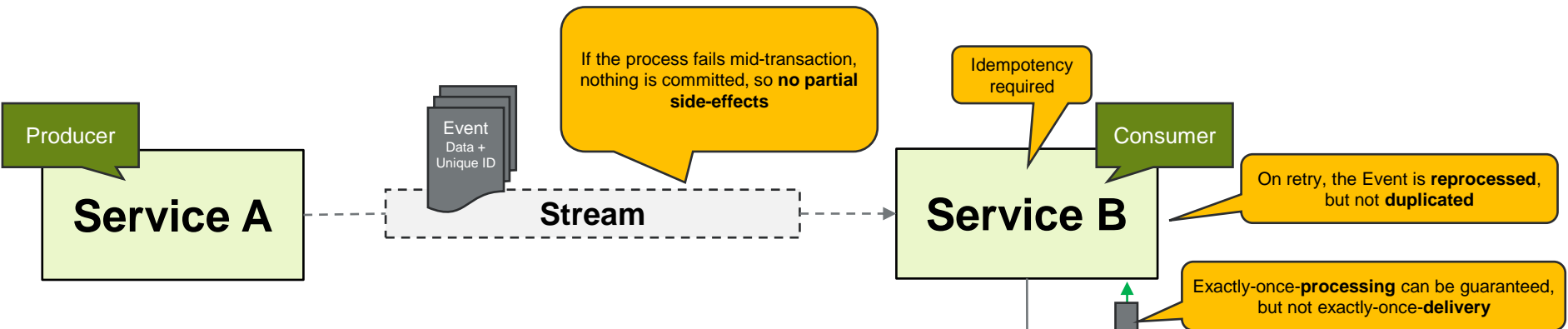


# Software Frameworks

## Event-Driven Delivery Guarantees

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<https://github.com/Cadezzz/SoftwareFrameworks>



**Shortcomings:**

- State Management:** Service B needs to persist processed ID's
- Idempotency required:** Retries must not cause side-effects
- Latency:** DB-Lookups, Store-Logic
- Complexity:** Deduplication needs additional code and operational burden

**? Why it is more complicated in async-systems**

Sync	Async
<b>Request/Response:</b> Clear start & end	<b>Fire and Forget:</b> Don't know when processing done
Retries handled in <b>one process/thread</b>	Retries <b>span</b> systems, queues, or brokers
Memory- <b>local</b> state sufficient	Requires <b>distributed</b> state tracking
Easier to <b>block &amp; recover</b>	Async systems favor <b>availability</b> over coordination

