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Orchestrating CDM with Fluxnova

From CDM function calls to governed, human-readable workflows

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FINOS CDM × FINOS Fluxnova

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Two FINOS projects, one operational process

FINOS CDM

What the trade means

- Common trade and event semantics
- Translation and validation functions
- Qualification and lifecycle-event logic
- Reusable, standard business objects

+

FINOS FLUXNOVA

How the work moves

- Executable BPMN orchestration
- User tasks, roles and approvals
- Monitoring, history, exception paths
- Forms people actually work in

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Calling a CDM function doesn't finish the job

WHAT THE FUNCTION GIVES YOU

IN
An FpML trade message

→

CDM FUNCTION
Translate · validate · qualify

→

OUT
A CDM object and a result

↓ **...but operations still needs answers:**

Status
Where is each trade right now?

Ownership
Who reviews and approves it?

Exceptions
What happens when it fails?

History
Can we prove what happened?

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Orchestration stays separate from CDM logic

LAYER 1 · ORCHESTRATION

Fluxnova demo-app

Spring Boot · :8081

- 4 BPMN processes + forms
- User tasks per candidate group
- Tasklist, history, audit

external tasks ⟷

LAYER 2 · INTEGRATION

cdm-worker

External task client

- One orchestrator per FpML file
- Fetch, lock, complete topics
- Files classified valid / invalid

HTTP / JSON →

LAYER 3 · BUSINESS LOGIC

Rune services

CDM functions · :8080

- FpML → CDM WorkflowStep
- Validate and qualify events
- Novation, termination, split

CDM SERVICE TOPICS

`translate-to-cdm` `validate-cdm-object` `qualify-cdm-object` `full-novation` `full-termination` `partial-termination`

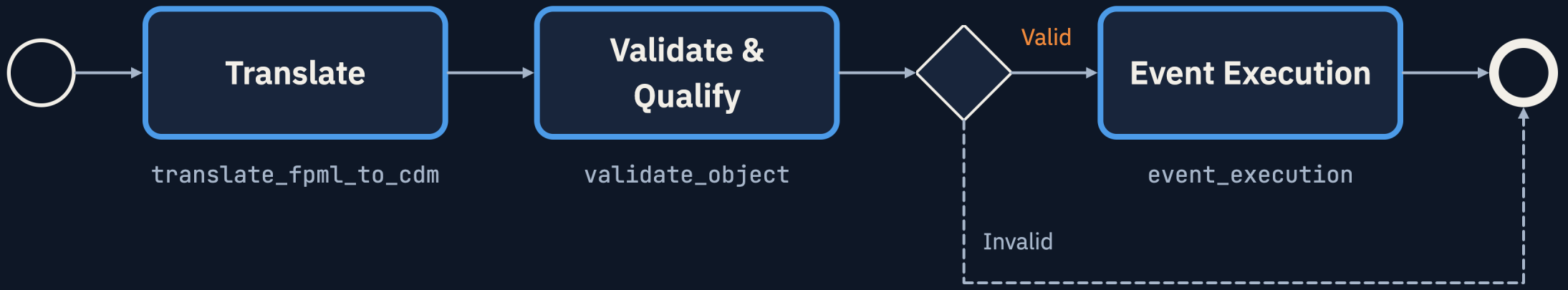
FILE AND STORAGE TOPICS

`save-cdm-objects` `copy-file-valid` `copy-file-invalid`

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One orchestrator, three child processes

`fluxnova_cdm_orchestrator.bpmn`



START

One instance per FpML file in the inbox

REUSE

Each step is its own callable BPMN

ROUTE

Gateway reads fileClassification

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Every decision has an owner

A

Alice

`translationreviewers`

Reviews the FpML → CDM translation and decides whether to save it

B

Bob

`cdmvalidators`

Approves or rejects objects that fail validation or qualification

C

Celes

`tradeoperations`

Chooses the lifecycle event and provides its inputs

D

Demo

`demoadmins`

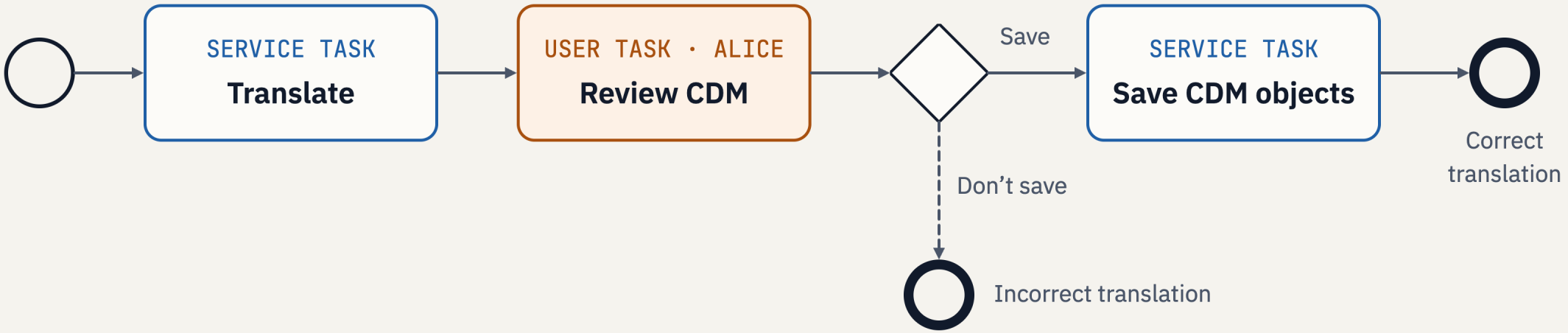
Process owner: monitors instances, exceptions and history

Every BPMN user task declares a **candidate group**, so each person's Tasklist shows only their work.

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DEMO · PHASE 1 · translate_fpml_to_cdm

Translate, then a person decides



UNDER THE HOOD

```
POST /cdm/translate/workflow-step
→ Create_AcceptedWorkflowStepFromInstruction
```

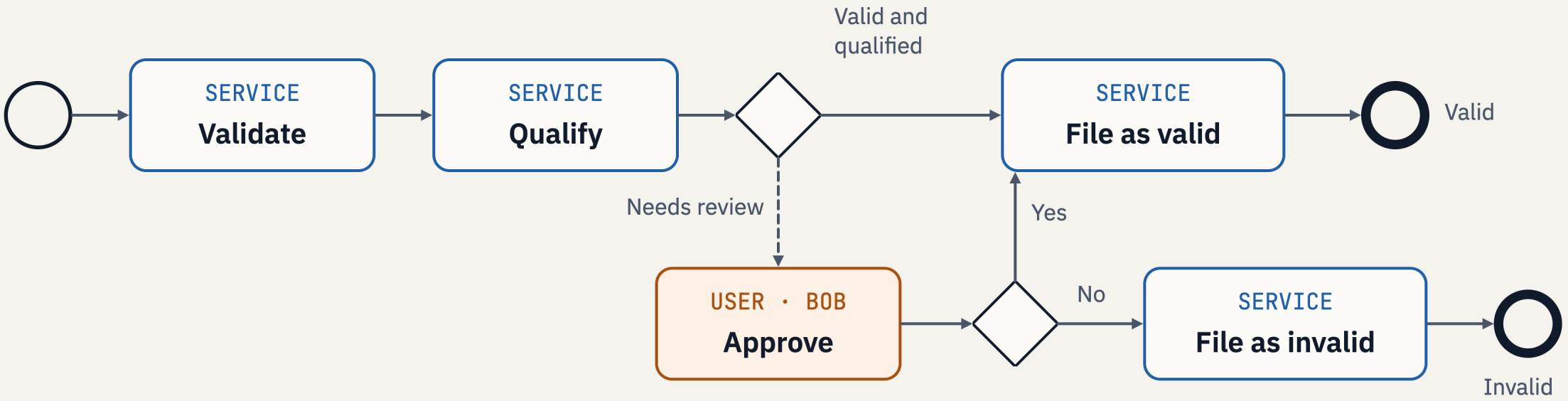
ALICE’S CHECKPOINT

Reads the translation result in the Review CDM form and sets **saveDecision** to yes or no

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DEMO · PHASE 2 · validate_object

Only exceptions reach a person



UNDER THE HOOD

```
POST /cdm/validate/workflowStep
POST /cdm/qualify/event
```

BOB'S APPROVAL GATE

Sees validation and qualification results in one form; sets **approvalDecision**

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DEMO · PHASE 3 · event_execution

Celes picks the lifecycle event

Full novation DEMO

Moves the trade to a new counterparty

`currency · transferor · transferee · new trade ID`

Full termination

Closes out the remaining trade

`currency`

Partial termination

Reduces the trade quantity

`currency · quantity · direction`

FULL NOVATION, END TO END

1. Form: JPY · Party1 → AMAG · IR/CONTR5678
2. `POST /cdm/events/fullNovation`
3. `POST /cdm/events/split`
4. `POST /cdm/validate/workflowStep`
5. `POST /cdm/qualify/event`
6. Full Novation Summary for Celes

Orange: user task · Blue: CDM service call

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LIVE

Live demo

FpML in → CDM out → a governed process in Fluxnova

Tasklist · alice · bob · celes

FINOS CDM × FINOS Fluxnova

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The four questions, answered

Status	One process instance per FpML file, visible in Tasklist and history
Ownership	Candidate groups in the BPMN: reviewers, validators, trade operations
Exceptions	An explicit approval gate and an invalid path, modeled, not improvised
History	Every task, decision and variable recorded by the engine

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From demo to reusable components

NEAR-TERM COMPONENT SET

- CDM translation
- CDM validation
- Event qualification
- Valid / invalid classification
- Novation events
- Termination events

PRODUCTIZATION ROADMAP

01 Stable input, output and error contracts

02 Reusable connectors and BPMN patterns

03 Role-aware forms and task visibility

04 Correlation, retries and observability

05 One end-to-end process as the first production blueprint

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OVER TO YOU

Which CDM process should become your first native Fluxnova blueprint?

STEP 1

Pick a priority CDM function

STEP 2

Map standard integration components

STEP 3

Publish a native Fluxnova blueprint

TRADE HEADER

Thank you

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