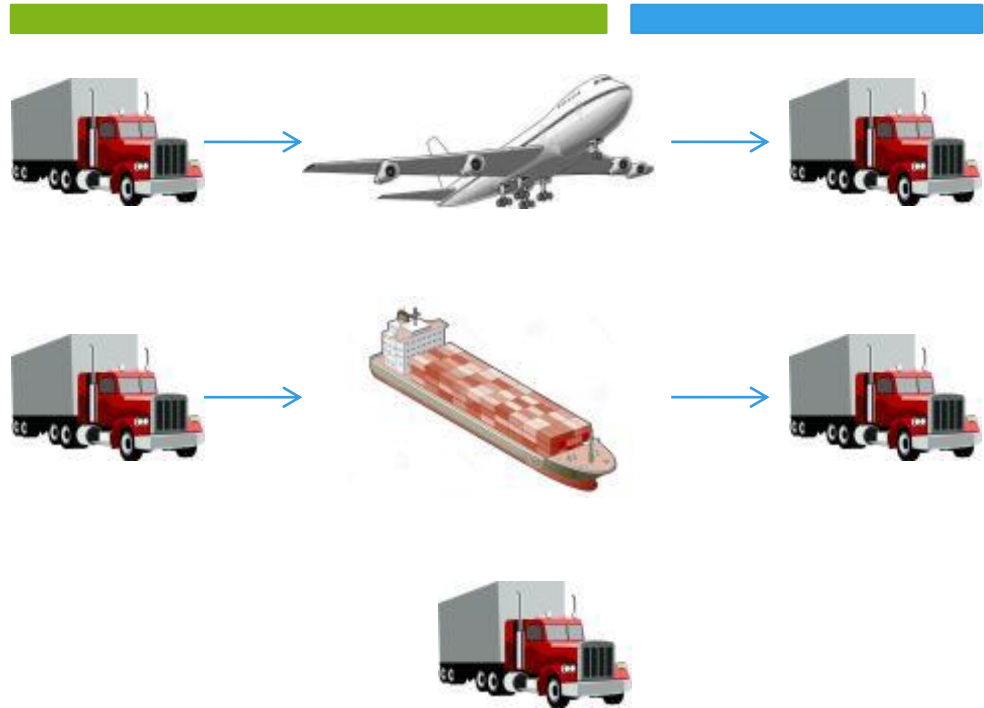
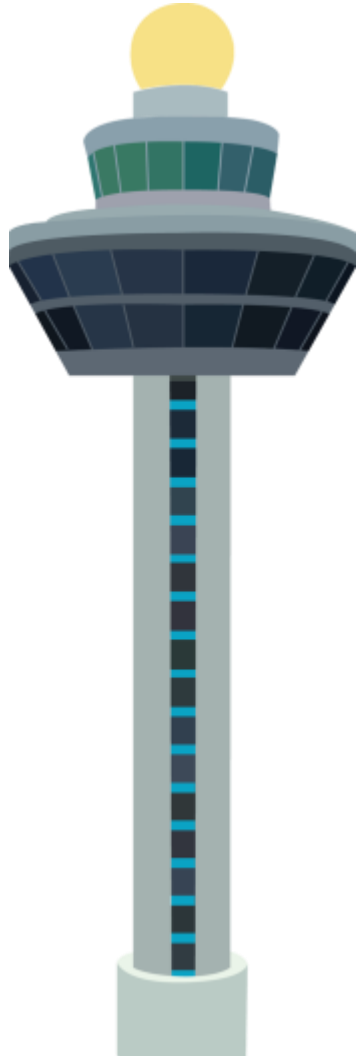




A SOFTWARE ARCHITECTURE FOR A TRANSPORTATION CONTROL TOWER



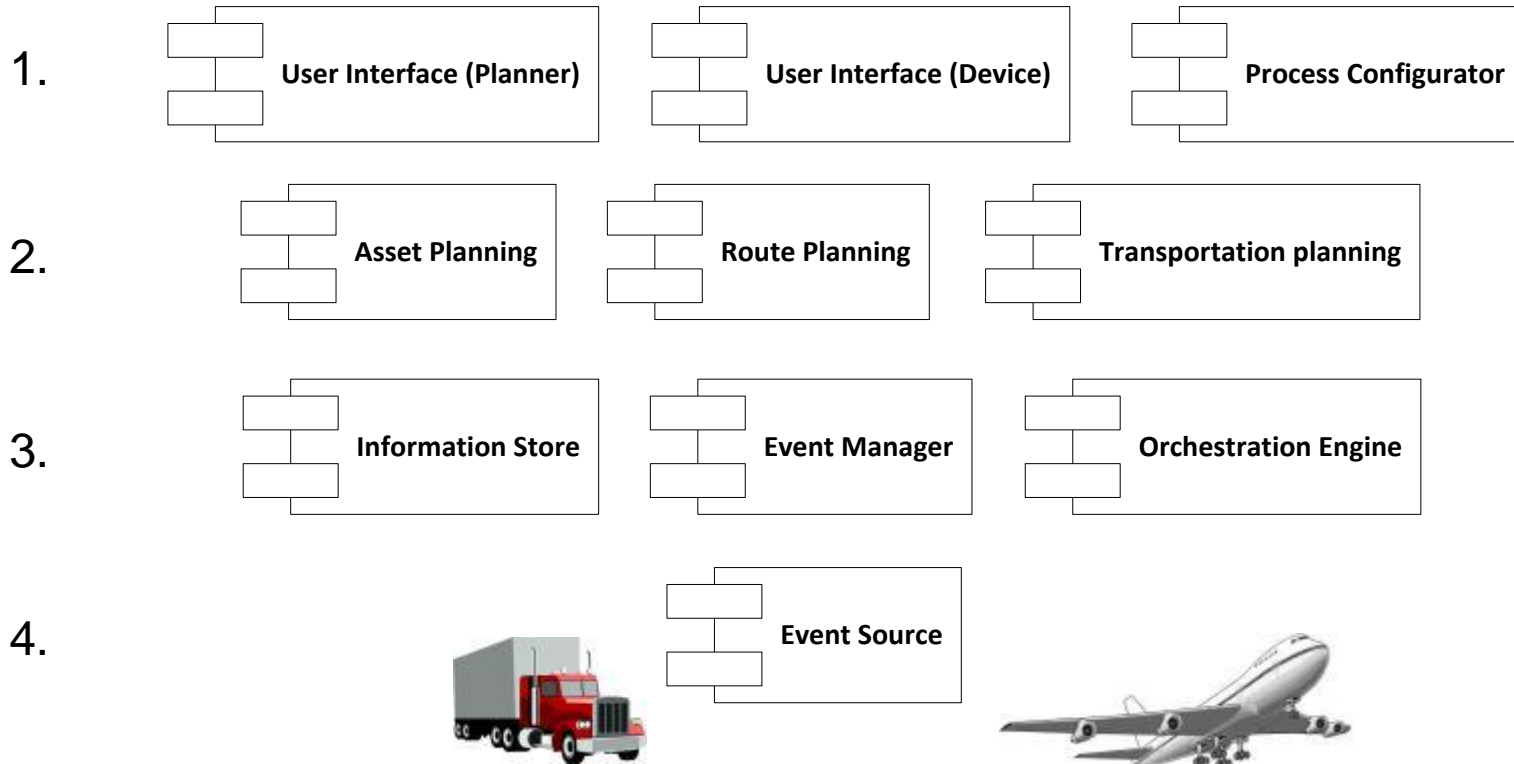
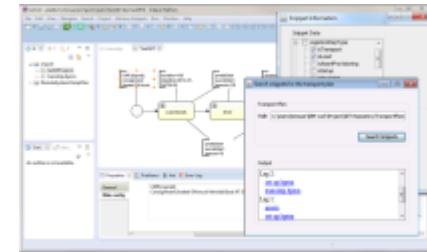
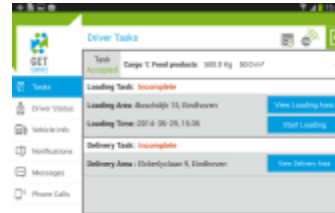
TRANSPORTATION CONTROL TOWER



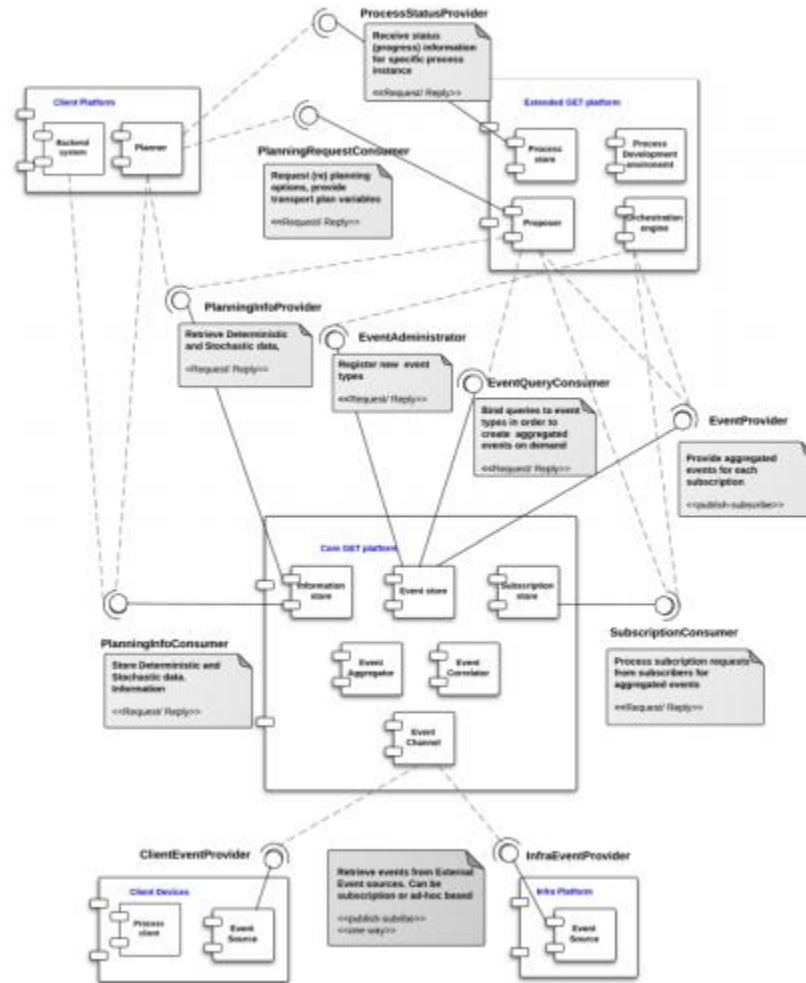
AGENDA

- **Architecture**
- **Transportation process**
- **Process enactment**
- **Process monitoring**
- **Conclusions**

ARCHITECTURE

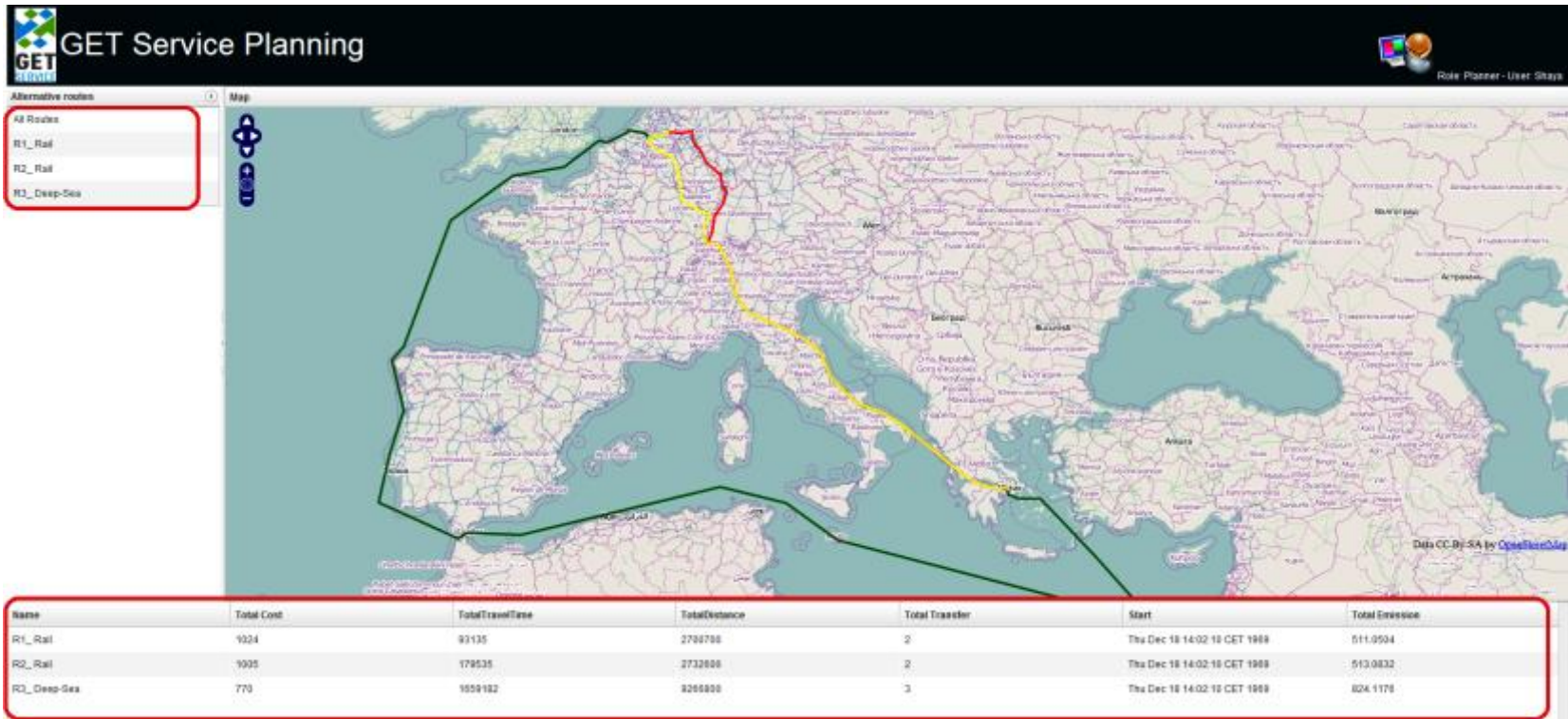


ARCHITECTURE

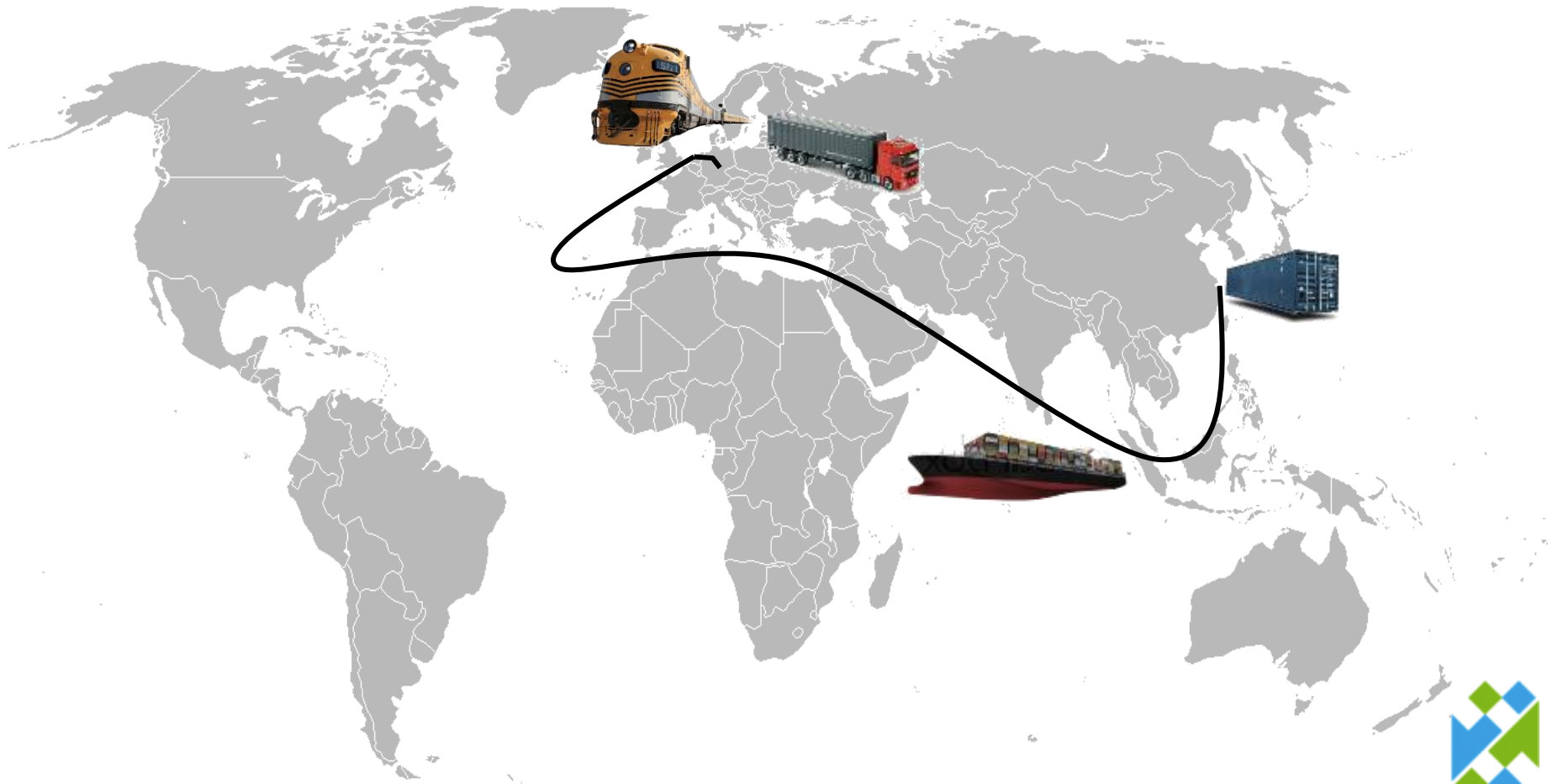


TRANSPORTATION PLAN

Truck to Frankfurt -> Train to Brindisi -> Ship to ...

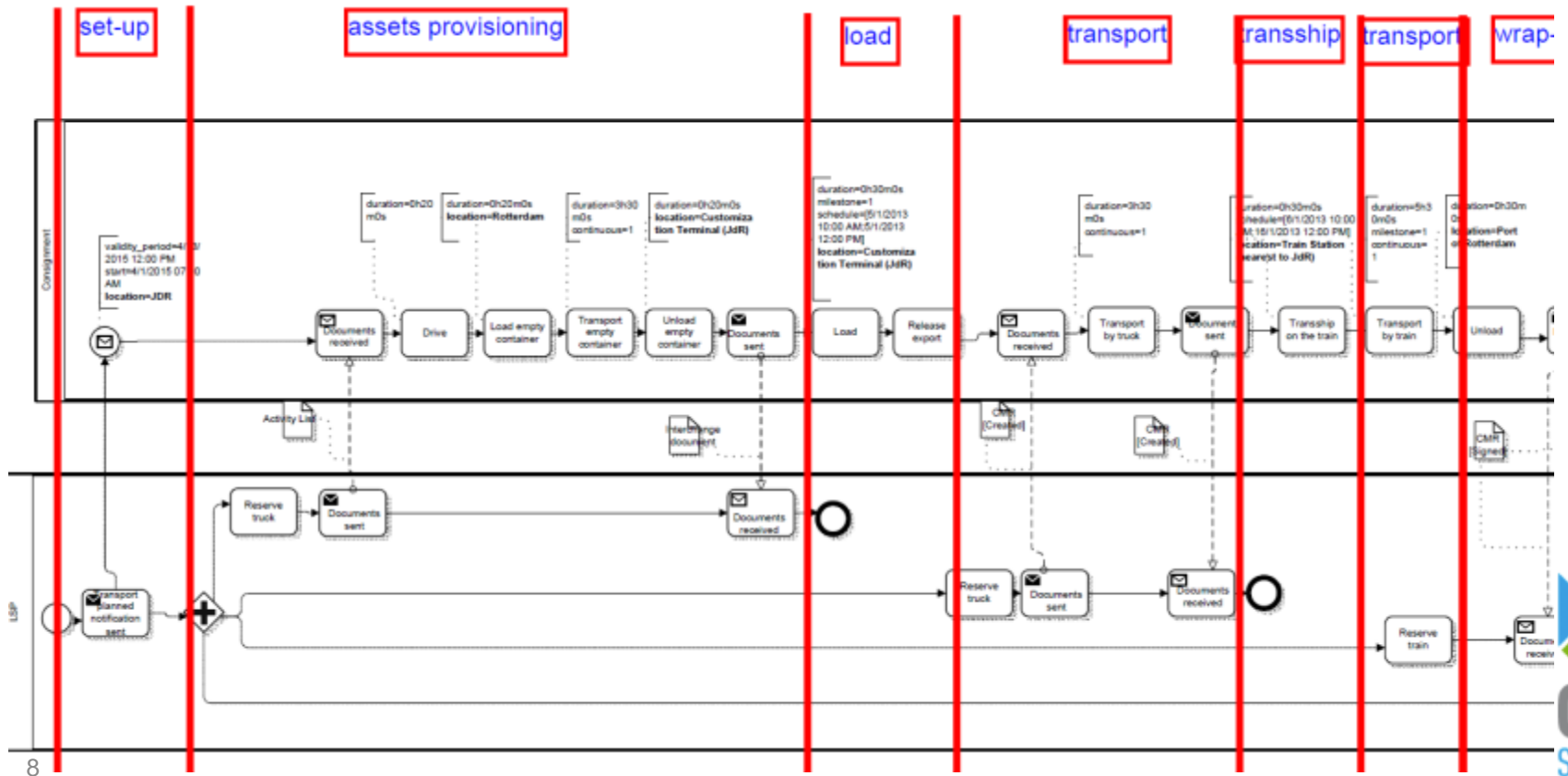


PLAN <-> CONTROL

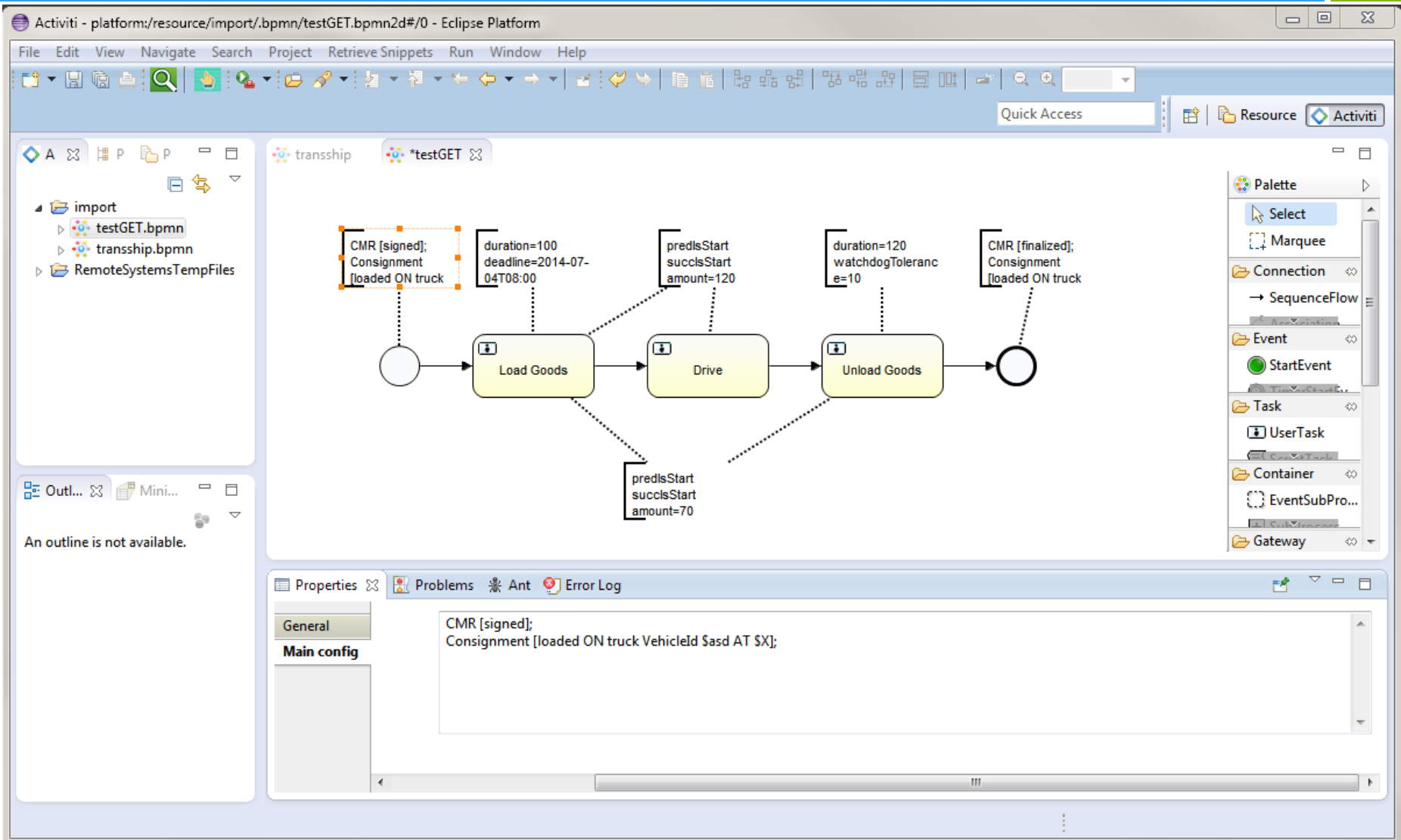


TRANSPORTATION PROCESS

A more detailed version of the transportation plan



TRANSPORTATION PROCESS



PROCESS ENACTMENT

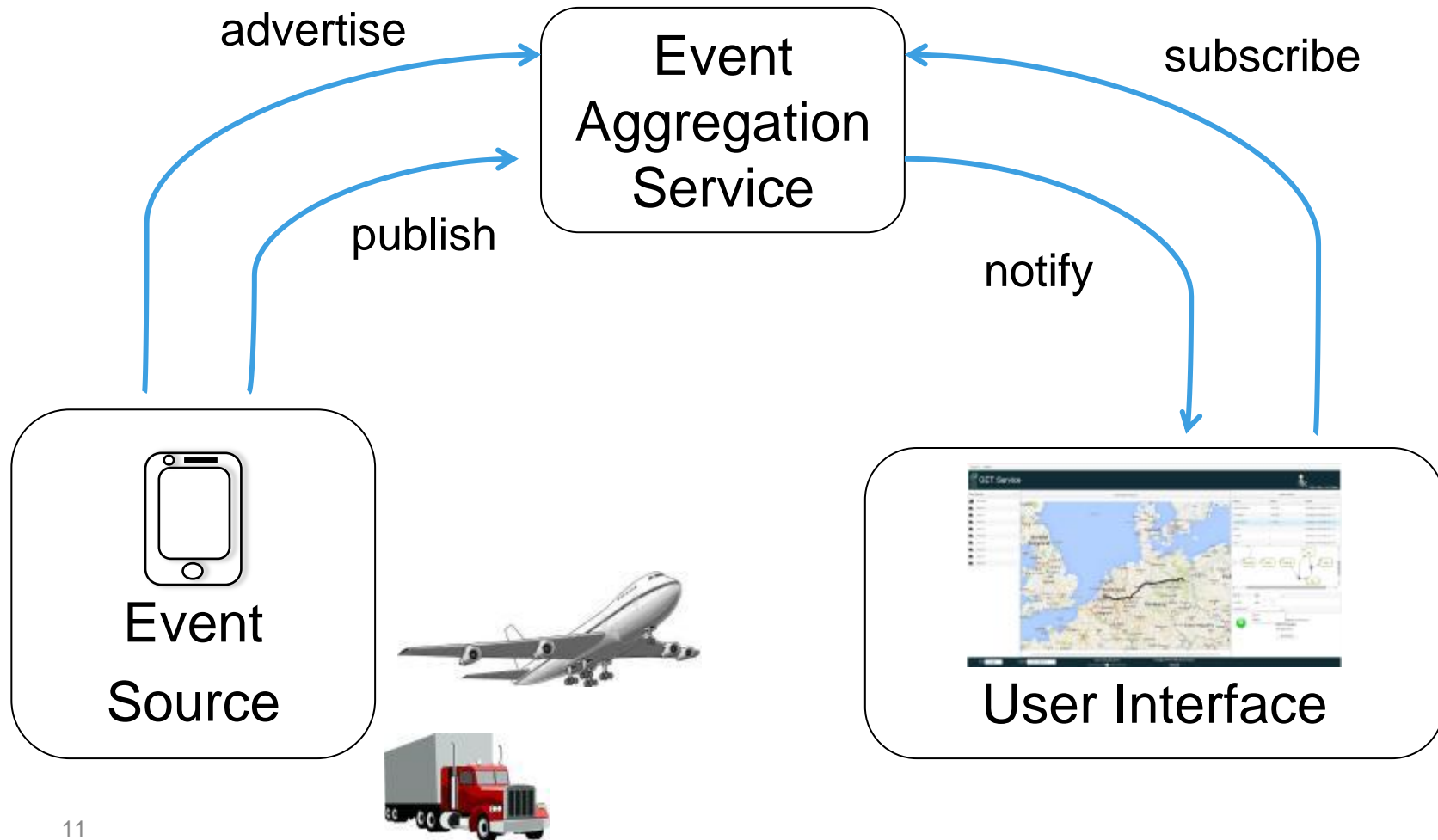
- Integration of orchestration engine

The screenshot displays the GET Service interface. On the left, a 'Case Handler' sidebar lists cases from Case 48 to Case 40, with 'Case 21' highlighted. The main area features a 'Live map for case 21' showing a map of Europe with a red line tracing a path across Germany. On the right, a 'Task Handler' table lists tasks with their status and model IDs. Below the table is a process flow diagram with nodes like 'wait', 'http', and 'http'. At the bottom right is a control panel with a 'Ready' indicator, a 'Wait' value of 9.93, a 'Send Rest?' dropdown set to 'Draw', and an 'Execute' button.

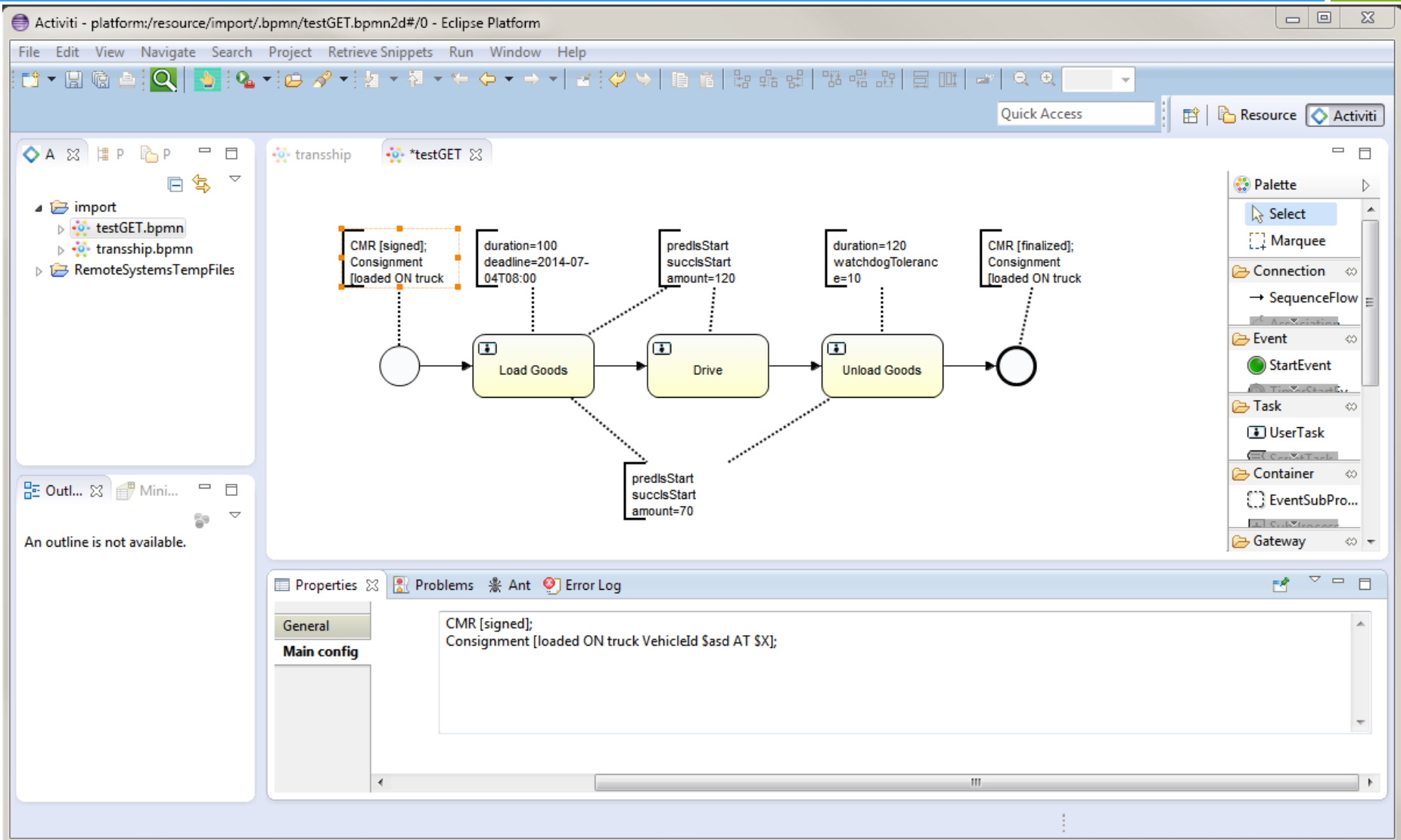
Item	Status	Model
Process Asset	Completed	jdktype:taskModel:1.4
Do Admin	Completed	jdktype:taskModel:1.4
Load Goods	Enabled	jdktype:taskModel:1.4
Draw	—	jdktype:taskModel:1.4
Unload	—	jdktype:taskModel:1.4

Ready: YES
Wait: 9.93
Send Rest?: Draw
Status: Enabled
New instance of
Execute

MONITORING

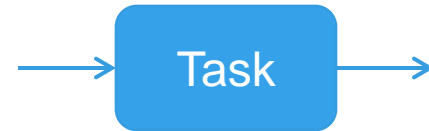


TRANSPORTATION PROCESS



MONITORING

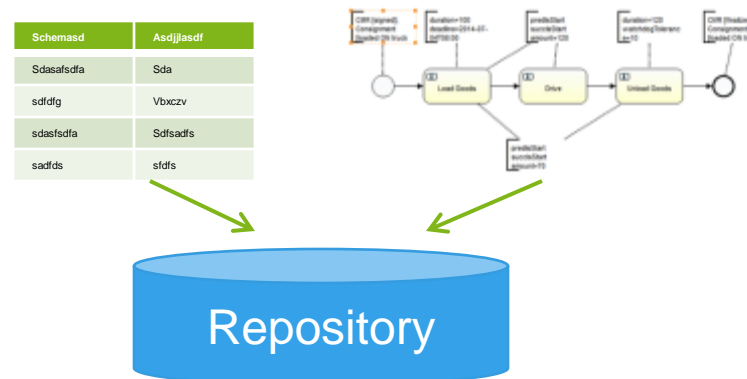
Based on monitoring statements:



- **SELECT * FROM VehiclePositionUpdate(operatorID = \$truckID)**
- **INSERT INTO TaskNotExecuted**
SELECT * FROM PATTERN
[EVERY a=TaskLog(taskName = \$taskName,
taskState = 'Enable')
-> (timer:interval(\$deadline - current_timestamp)
AND NOT TaskLog(taskName=a.taskName,
taskState = 'Terminated'))]

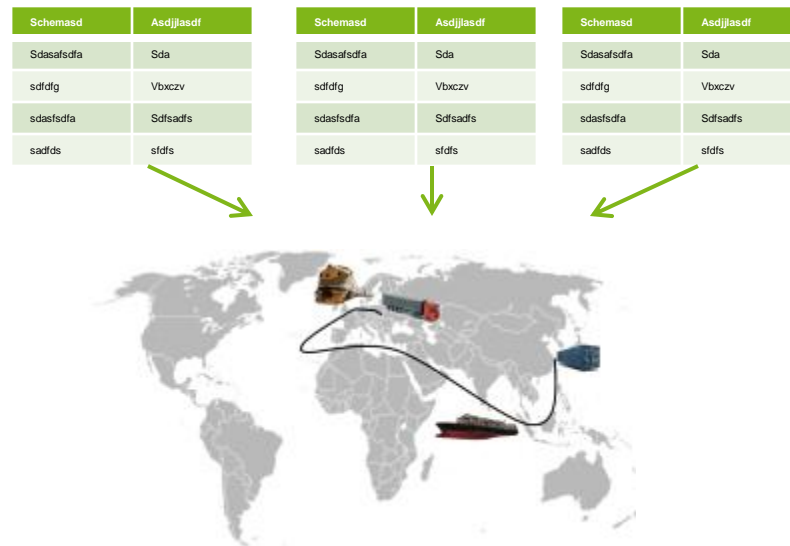
SCENARIO

1. Stakeholders register schemas AND snippets
2. Transportation plan is made based on schema's
3. Transportation plan is a basis for composing snippets
4. Snippets are executed and drive monitoring



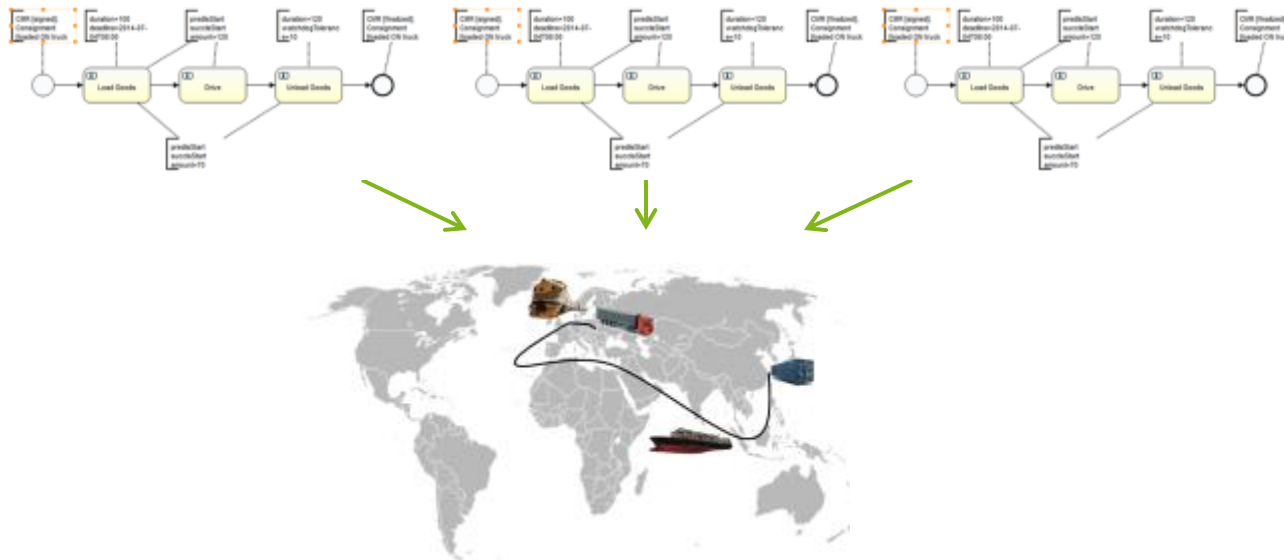
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CONCLUSION

Transportation plan



Transportation process



Enactment



Monitoring

