


iCAROS – 1st implementation Workshop

27 June 2018

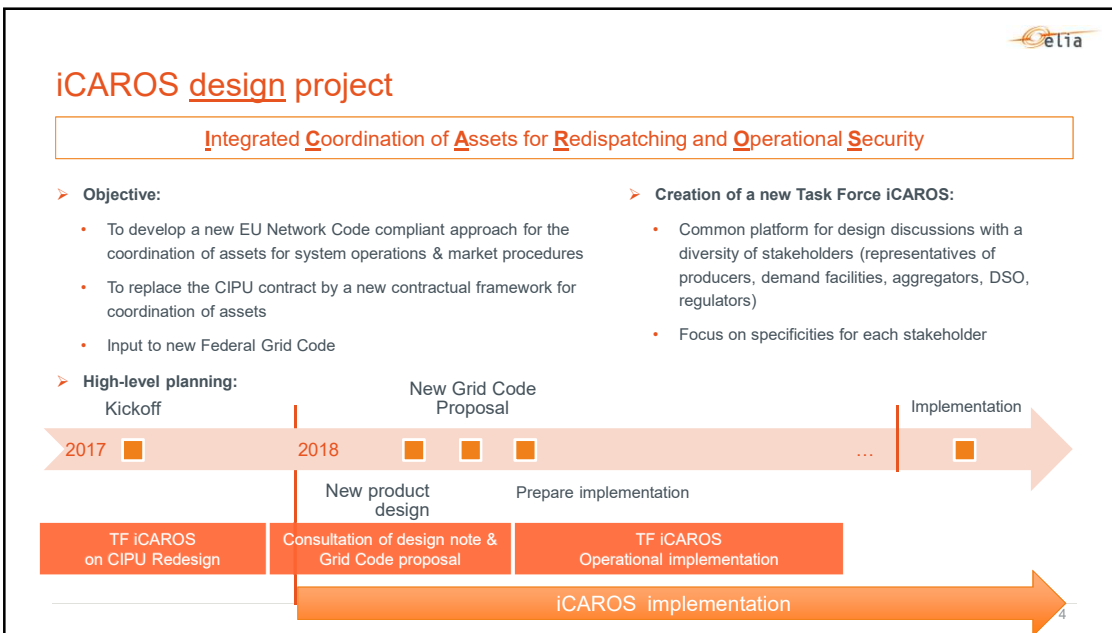
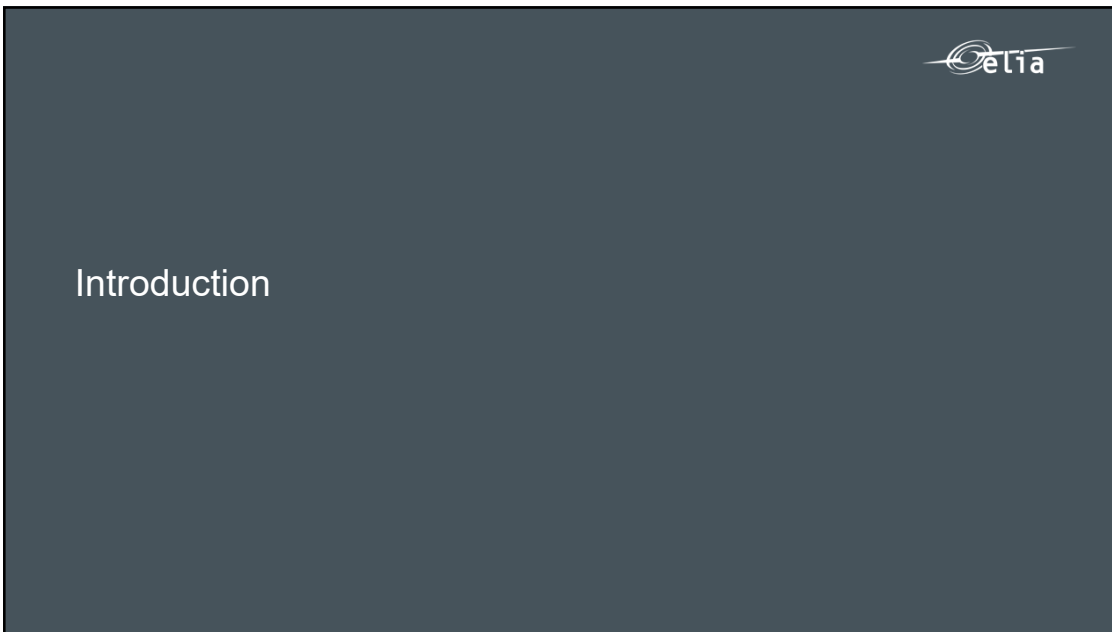
The slide features a light grey header with the elia logo in the top right. Below the header is a dark grey horizontal bar containing the title 'iCAROS – 1st implementation Workshop'. Underneath this bar is a large orange rectangular area with the date '27 June 2018' in the top left corner.



Agenda

1. Introduction
2. High level planning
3. Future Roles & Responsibilities
4. Design Outage Planning
5. Implementation Proposal Outage Planning
6. Next Steps

The slide has a white background with the elia logo in the top right corner. The word 'Agenda' is written in orange. Below it is a numbered list of six items. A thin horizontal line is located at the bottom of the slide.





Design Notes iCaros



FUTURE ROLES AND RESPONSIBILITIES FOR THE SCHEDULERS OF ANCILLARY SERVICES



DESIGN NOTE FOR THE COORDINATION OF ASSETS: PART I - OUTAGE PLANNING



DESIGN NOTE FOR THE COORDINATION OF ASSETS: PART II - SCHEDULING AND REDISPATCHING



DESIGN NOTE FOR THE COORDINATION OF ASSETS: PART II - CONGESTION RISK

Design notes part I Outage Planning – II Scheduling & Redispatching

- > proposal for assets connected to the ELIA grid (transmission and local grids) & ELIA-connected CDS


Design notes part III – CRI: general link between congestion management & balancing

- > applicable to all asset types connected on all grids

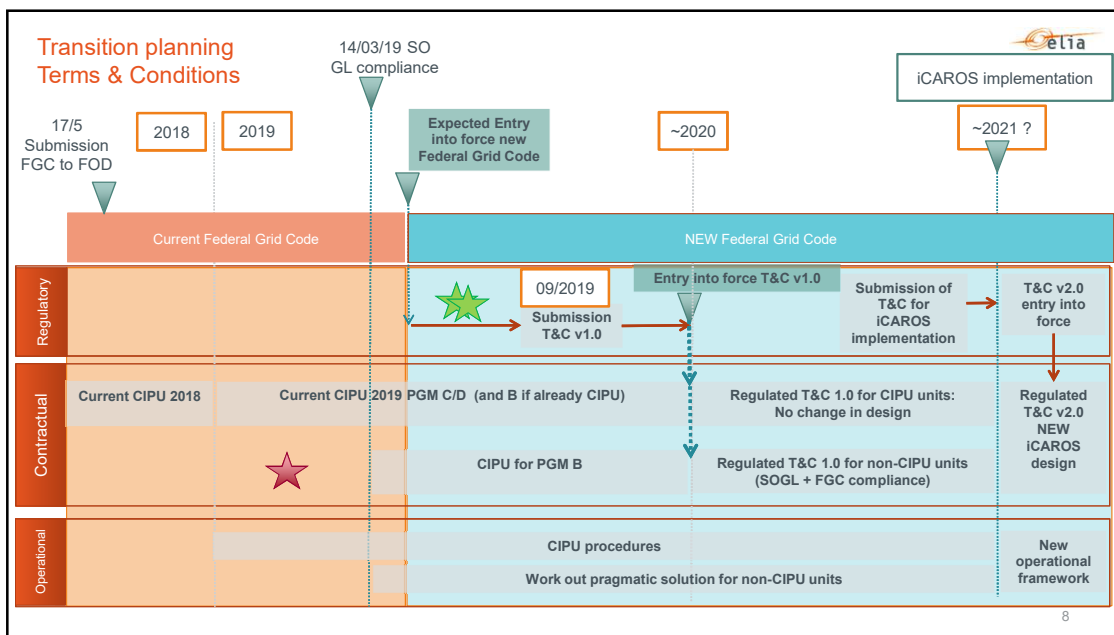
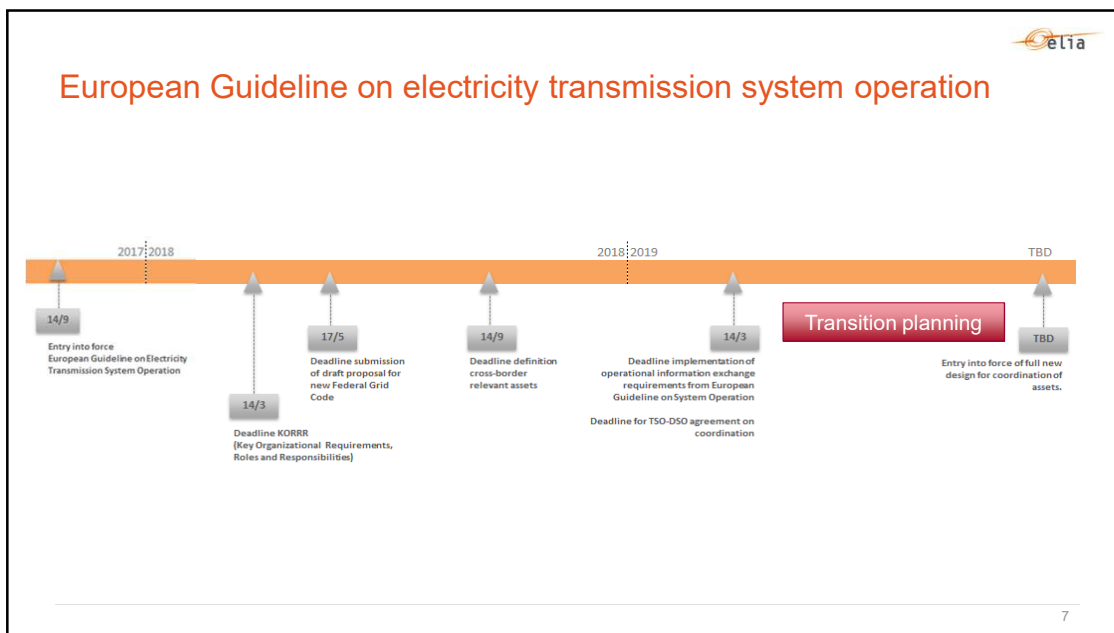
Design on outage planning, scheduling and redispatching on DSO-connected assets:

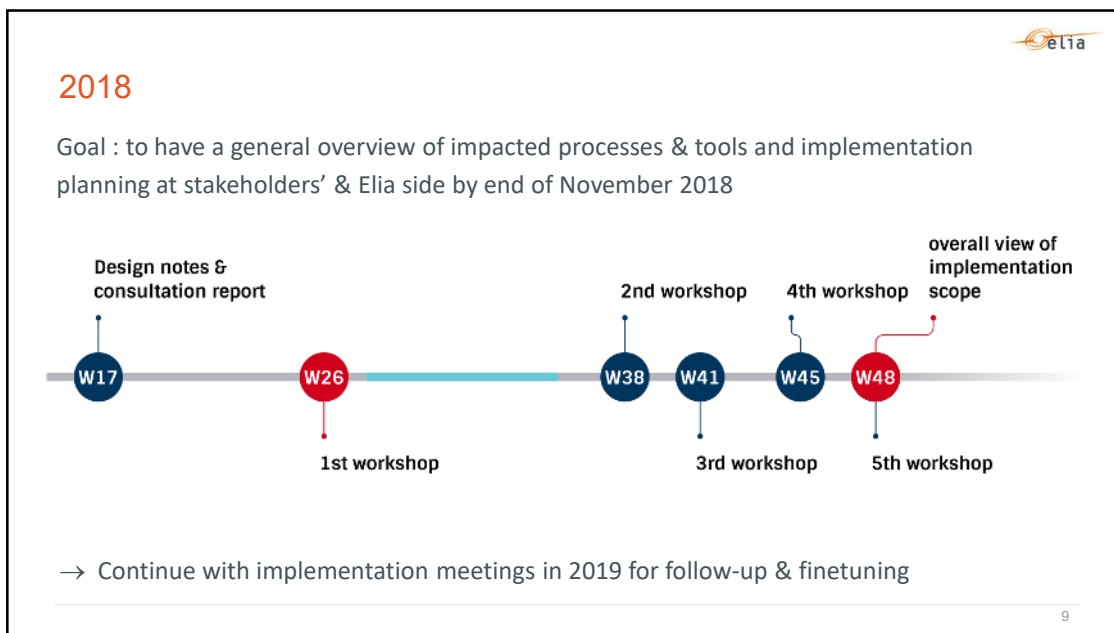
- > ongoing separate trajectory in Synergrid C8- WG iCAROS

<http://www.elia.be/en/about-elia/publications/Public-Consultation/Archives/New-eu-guideline-compliant-approach-for-the-coordination> 5

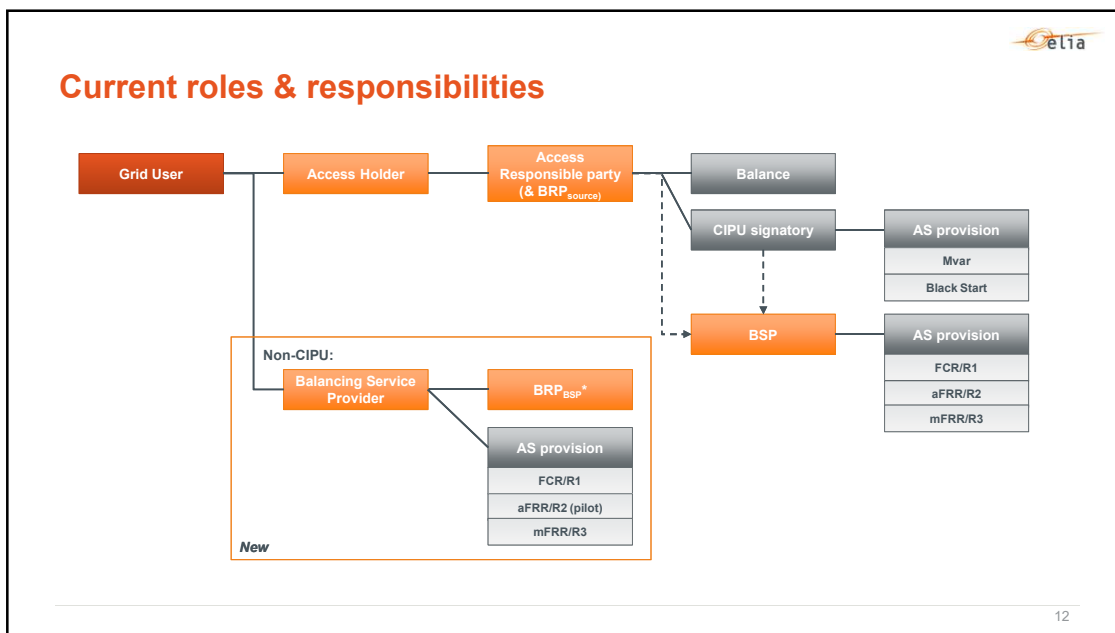
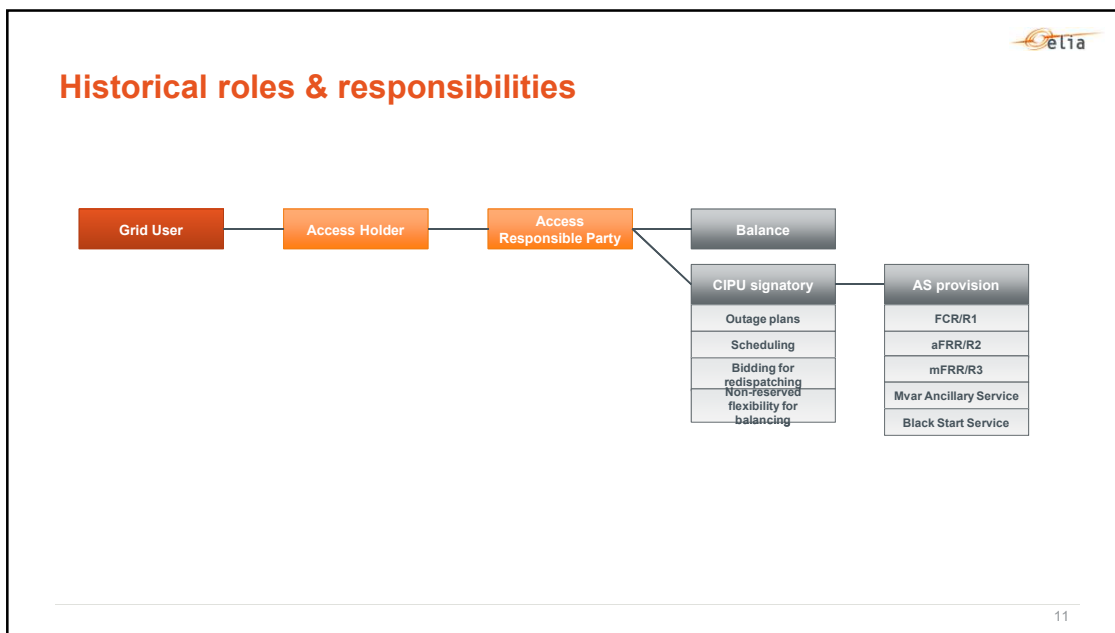


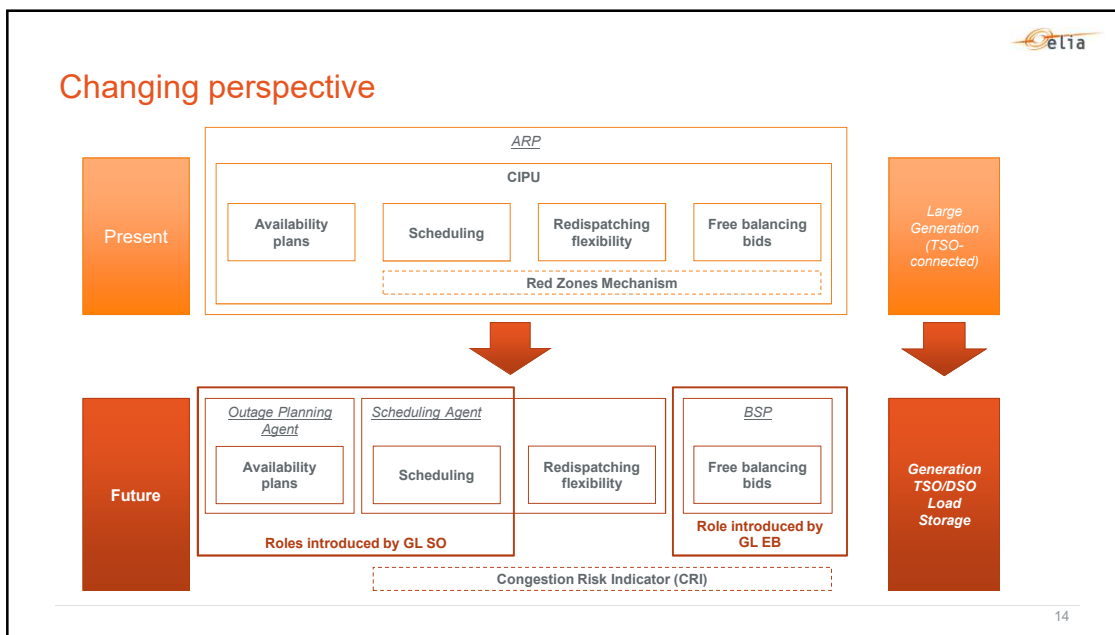
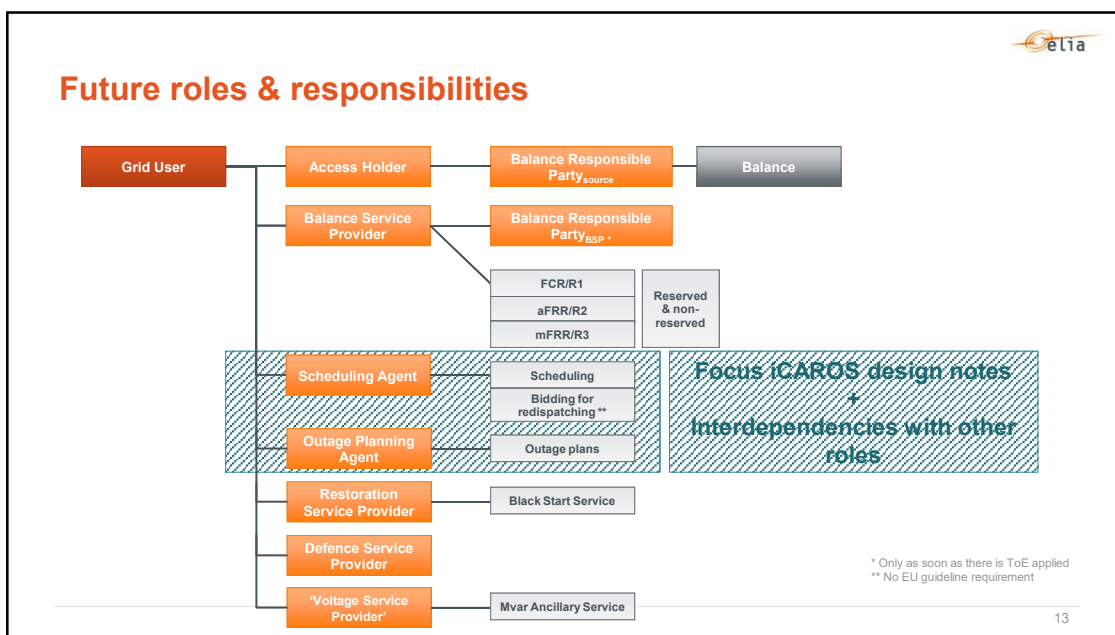
High Level planning





Future Roles & Responsibilities







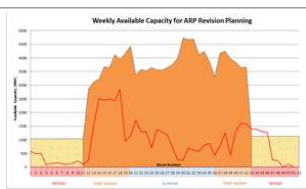
Design Outage Planning



Purpose of outage planning

Adequacy check

The goal is to reduce the risks for scarcity throughout the year.



Local Congestion Check

The goal is to reduce the risk that insufficient flexibility would be available in case of congestions.
 ⇒ Avoid simultaneous unavailability of main PU in the same electrical zone


Maintenance planning check

Based on the outage planning Elia checks when specific works for maintenance on the Elia grid can be planned.

Risk assessment for unavailability of Ancillary Services

1. aFRR: avoid the simultaneous unavailability of a number of units with aFRR capability
2. Black Start: only one power unit providing black start services in maintenance at a time (+ check rules Black Start contract)

Checks performed during main outage coordination period (August – December) as well as afterwards as part of systematic and ad hoc security analyses.



Outage Planning Agent

Who? *the owner or a third party appointed by the owner*

- Grid User (or signatory of the connection contract) is by default the OP-Agent
- The Grid User may delegate the task, but this is an operational delegation; the delegation does not relieve the Grid User from its obligations (Grid User remains liable)

Which assets? – Mandatory OP

- PGM B/C/D
- Storage B/C/D
- TSO-connected Demand facilities

What?

- The task of **planning the availability status** of a (relevant) power generating module, storage device unit, or demand facility
- The task of **delivery active power capacity restrictions**, i.e., temporary deviations from the structural Pmax & Pmin


➤ **OP-Agent** = the contact person for ELIA regarding Outage Planning

- Delivery of outage plans
- Amendments possible
 - By ELIA or by the OP-Agent
 - Conditions possible (e.g. cost-based remuneration)
- Real-time updates (i.e. full or partial forced outages)
- Settlement


➤ **Grid User** responsibility

- Coordination with other providers/agents
- Liable

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Statuses

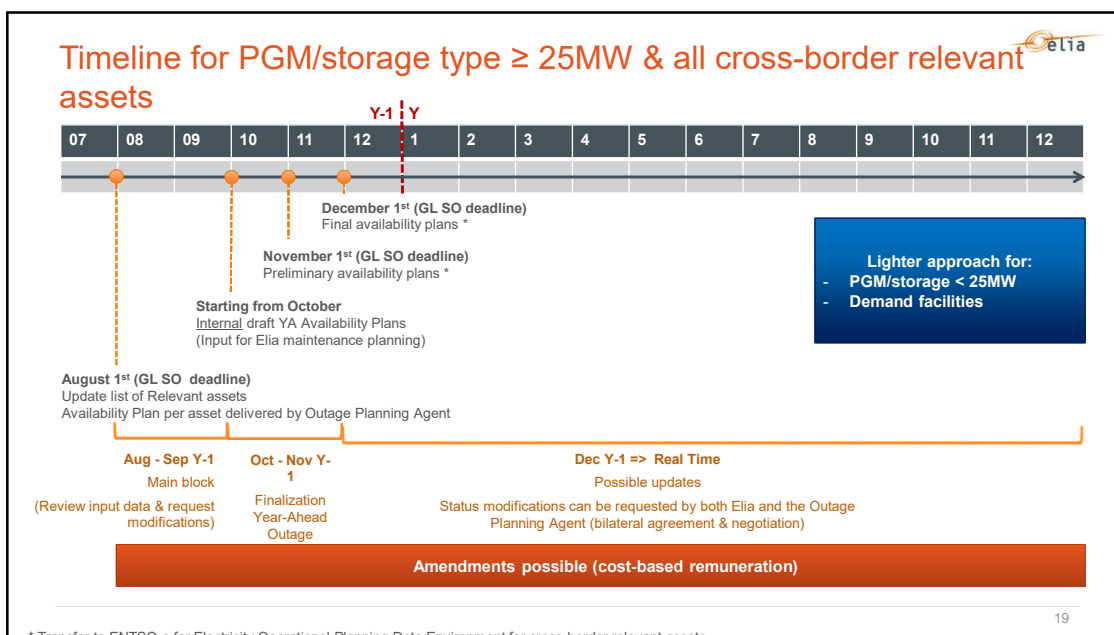


Impact on Scheduling & Bidding (for redispatching or balancing)

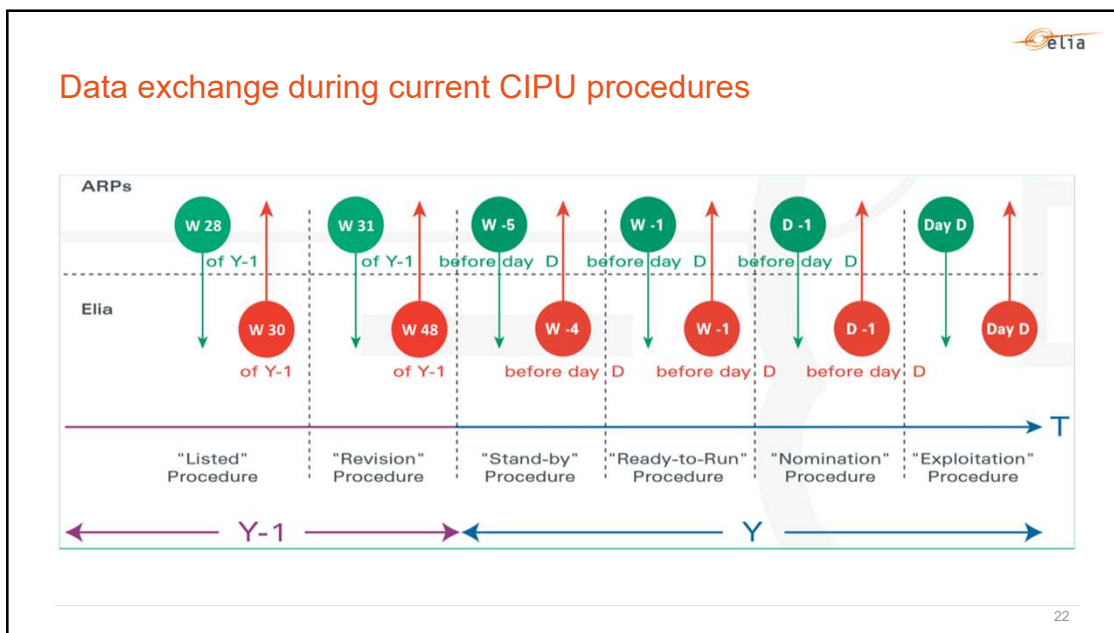
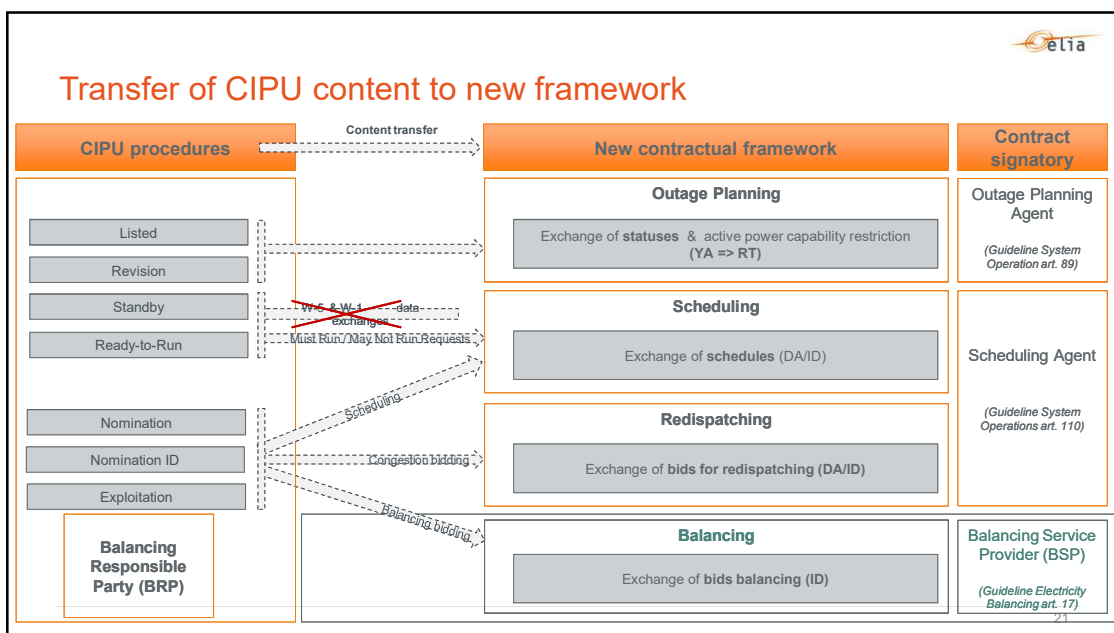
Scheduling	Schedule to be delivered ≥ 0 MW or ON/OFF
Bidding	Bidding possible (voluntary or mandatory)
Scheduling	Schedules = 0 MW or OFF
Bidding	No bidding
Scheduling	Test schedule to be delivered ≥ 0 MW or ON/OFF
Bidding	No bidding

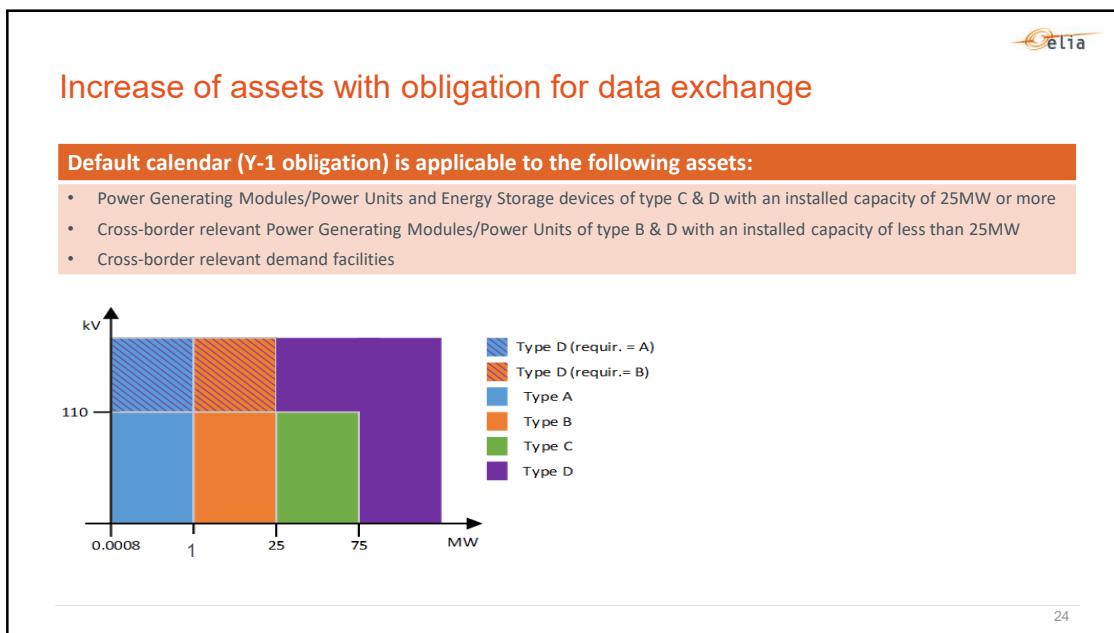
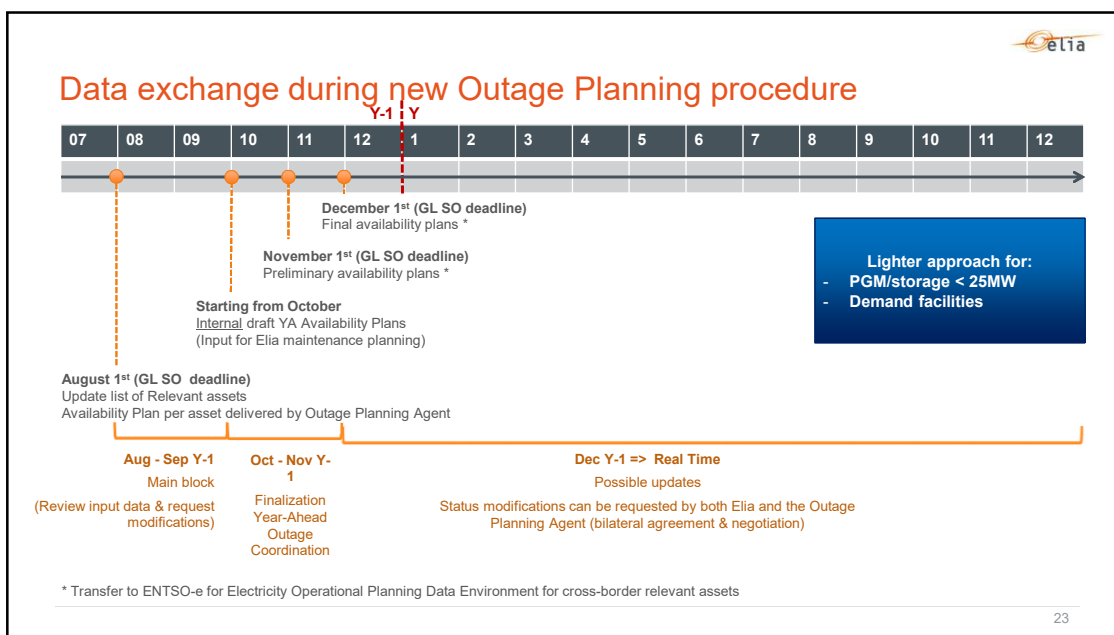
Time granularity:
 Year-Ahead => W-1 : daily
 W-1 => RT : quarter-hourly

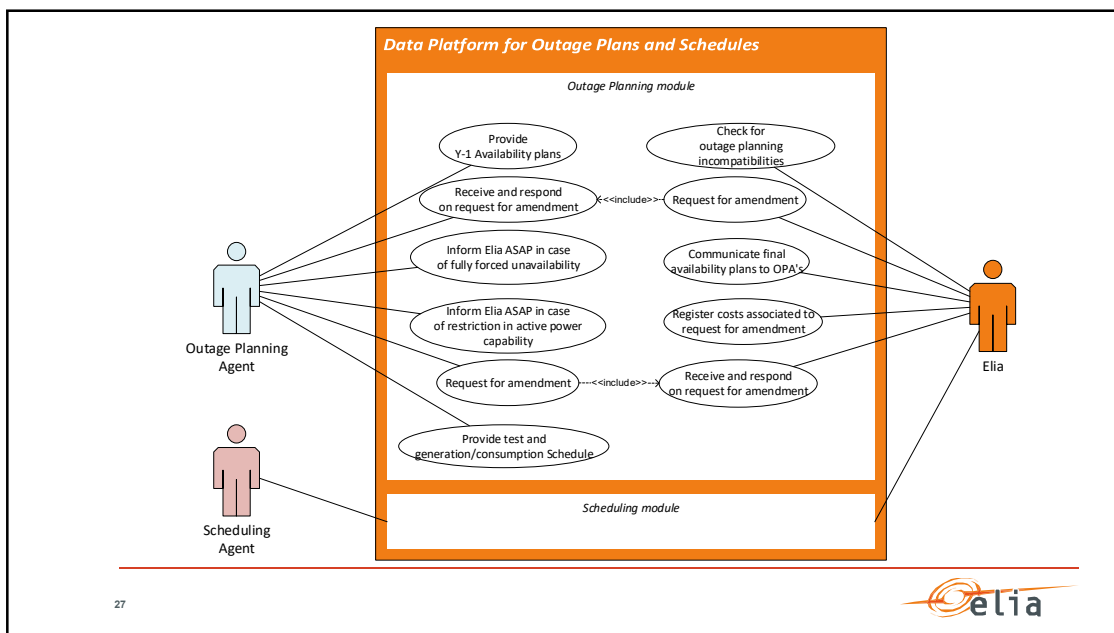
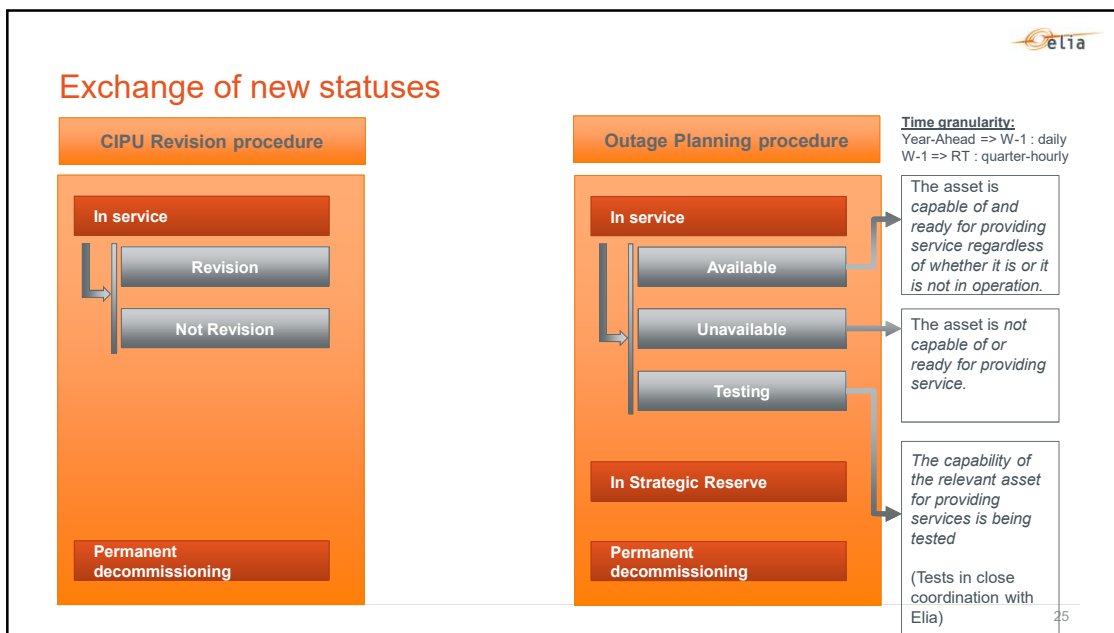
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Implementation proposal Outage Planning

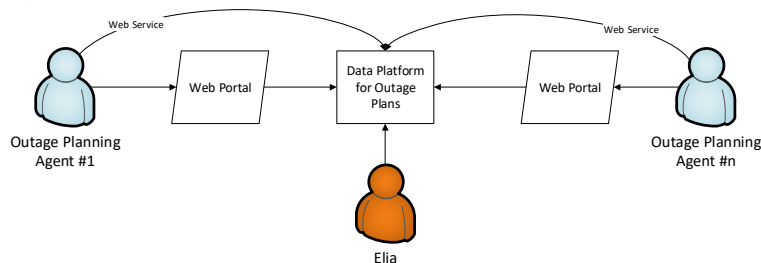




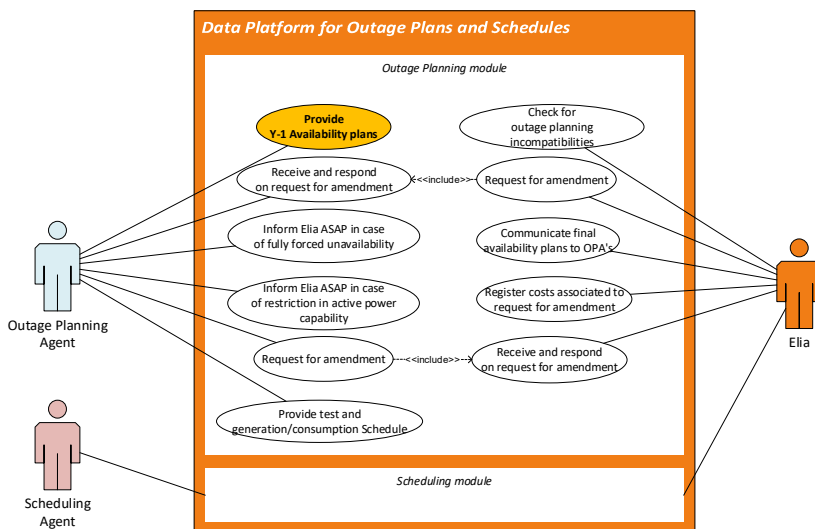


Platform interfaces

1. Web portal that can be used by Outage Planning agent to manage his outage plans, request and receive amendment requests. And inform Elia of a fully forced unavailability or a restriction in active power capability.
2. Web services that can be used by the Outage Planning agent to communicate directly between his own application and Elia's Data Platform for Outage Plans. (Still to be determined which functionalities will be supported.)



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Outage Planning Agent provides Y-1 Availability plans

Motivation: Extract from DN Outage Planning pg 7

*In compliance with articles 3 and 89 of the European Guideline on Transmission System Operation **ELIA enters into an agreement with the Outage Planning Agent** as the party responsible for delivering the information related to the availability of Power-Generating Modules/Power units, Energy Storage devices, and Demand Facilities:*

- *the availability plan, i.e., “the combination of all planned availability statuses of a relevant asset for a given time period” (GL SO, art. 3, definition 70);*
- *the active power capability restrictions in case the asset concerns a PGM, i.e., temporary restrictions on the PGM’s structural installed capacity;*
- *without any delay, updates to availability statuses or active power capability restrictions when changes occur in real-time.*

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Data exchanges



- Availability status
- Restrictions in the possible active power exchange
- The conditions that may lead to the unavailability of the asset in real-time, if such conditions are identified

In case of ‘unavailable’

- The reason of unavailability
- Time required to regain the status “available”

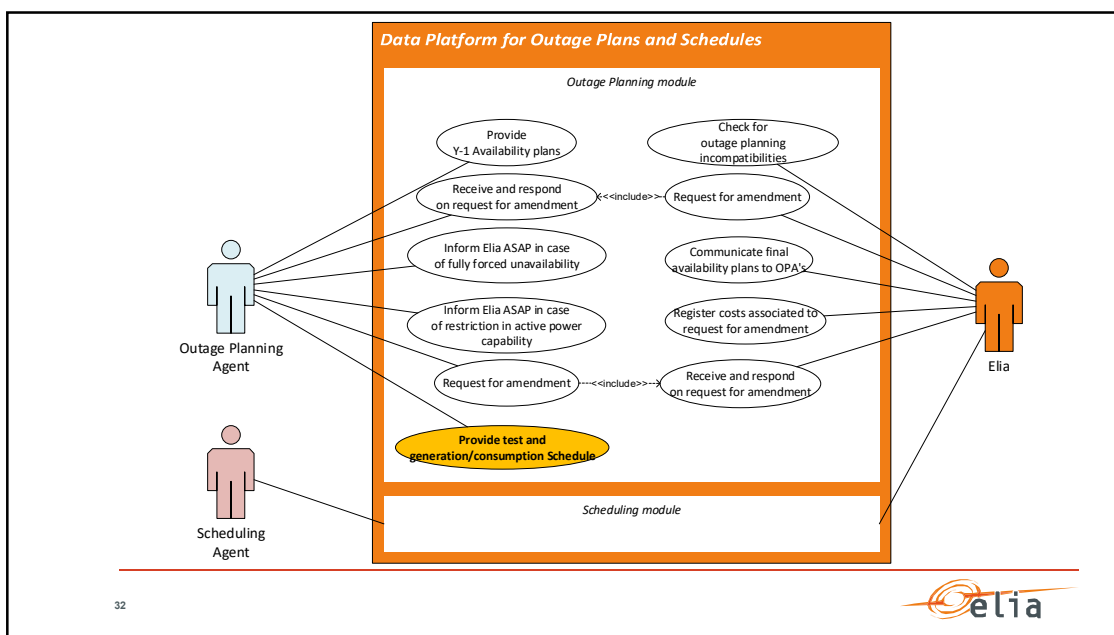
In case of ‘Testing’

- A detailed test plan
- An indicative generation or consumption schedule (within the period of one month before the start of the “Testing” status and at the latest one week in advance)

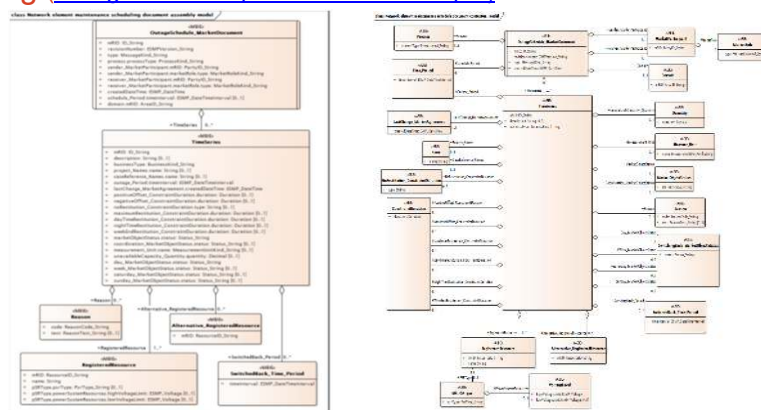
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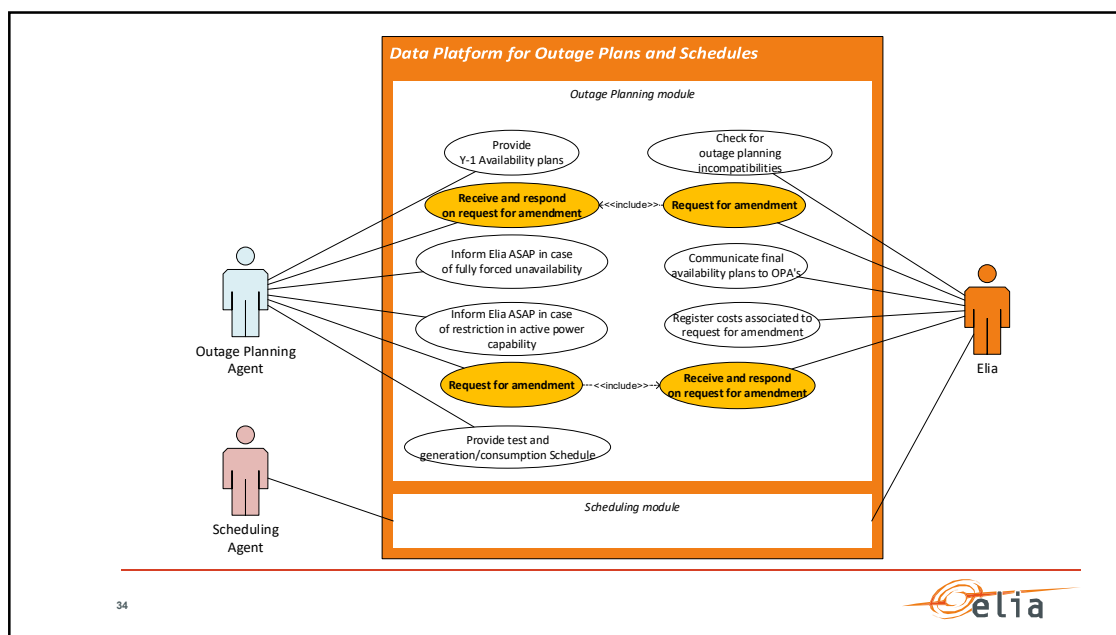
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Ambition to base on the standard ENTSOe file format for Outage Planning ([Outage business process and format.pdf](#))





Elia can request for an amendment of the availability plan

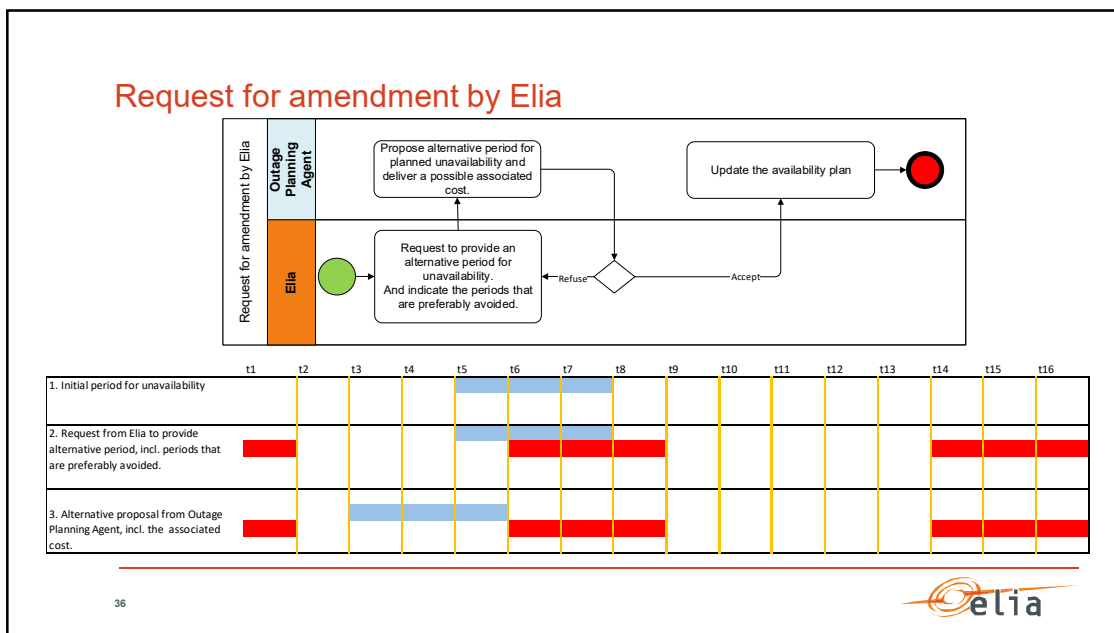
Motivation: Extract from DN Outage Planning pg. 26

9.3. Amendments by ELIA

When detecting that a planned outage on an asset may pose problems for adequacy, congestion management, the availability of ancillary services, or ELIA's own grid maintenance planning, **ELIA can request Outage Planning Agents to modify availability plans.**

The Outage Planning Agent will search for and discuss an alternative planning with ELIA, including possibly the conditions for the Outage Planning Agent associated to the amendment. In this last case, the **Outage Planning Agent will provide ELIA a price offer that is subject to further negotiation.**

The Outage Planning Agent is to update the availability status or active power capability accordingly without delay after ELIA and the Outage Planning Agent have agreed on the terms of the amendment.



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Outage Planning Agent can request for amendment of the availability plan

Motivation: Extract from DN Outage Planning pg. 24

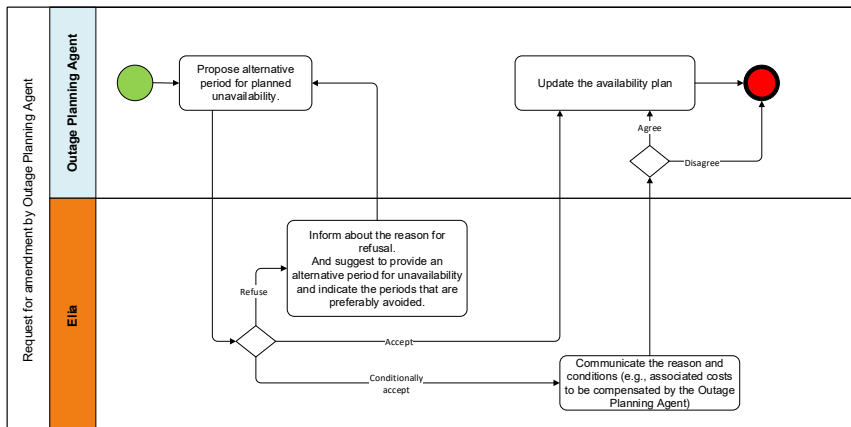
9.1. Amendments requested by the Outage Planning Agent for approval by ELIA

The Outage Planning Agent may request to modify the availability status or active power capability of an asset in year Y in the permitted periods as previously described. Typically such amendment is requested to change the maintenance of an asset or to optimize the availability of the asset portfolio of the Outage Planning Agent for the delivery of ancillary services.

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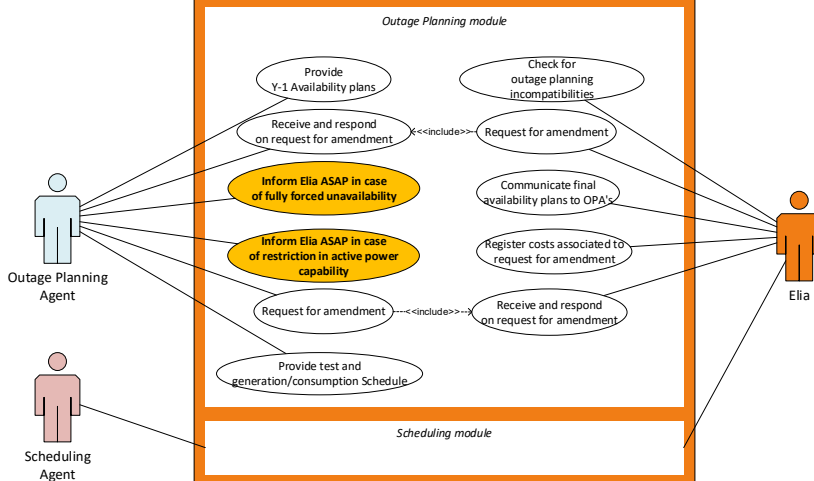
Request for amendment by Outage Planning Agent



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Data Platform for Outage Plans and Schedules



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Outage Planning Agent must inform Elia ASAP in case of fully forced unavailability or a restriction in active power capability

Motivation: Extract from DN Outage Planning pg. 25

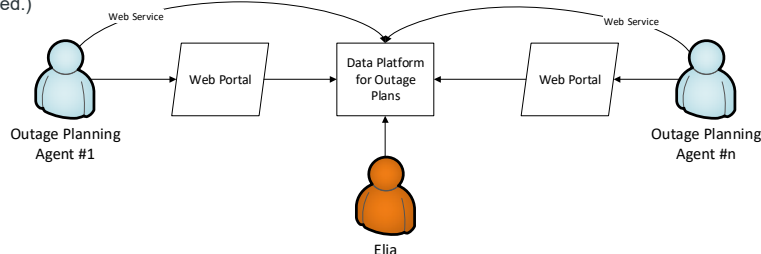
The Outage Planning Agent is obliged to inform ELIA without delay of the forced full unavailability of the asset (status modification to "Unavailable") and of the forced restriction in active power capability of the asset (without leading to a modification of the "Available" status).

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Platform interfaces

1. Web portal that can be used by Outage Planning agent to manage his outage plans, request and receive amendment requests. **And inform Elia of a fully forced unavailability or a restriction in active power capability.**
2. Web services that can be used by the Outage Planning agent to communicate directly between his own application and Elia's Data Platform for Outage Plans. (Still to be determined which functionalities will be supported.)



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Questions

- Which other functionalities, that were not presented, you believe would have an added value?
- Which functionalities are preferably supported via the web service interface?
- How do you assess the process flows that are proposed for amendment requests?

Please provide your feedback by 15/10/2018

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Next Steps

