



EUROPEAN AVIATION SAFETY AGENCY
AGENCE EUROPÉENNE DE LA SÉCURITÉ AÉRIENNE
EUROPÄISCHE AGENTUR FÜR FLUGSICHERHEIT

The new EU Fatigue Management Regulation Key Issues

Implementation Workshop
Air Ops Regulation (EU) No 965/2012

Warsaw, 15-16 May 2014

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Content

Implementation

Flight time specification schemes

FDP at night

FRM

Approval of individual flight time specifications schemes



The new EU fatigue management framework

When?

Reg. 83/2014 Art. 2 – **18 February 2016**

To whom?

CAT operations by aeroplane **except**
Air Taxi, Single Pilot & EMS

Opt out

In-flight rest until **17 February 2017**



Cover Regulation

Recitals

**FTL without prejudice to
more protective social
legislation**

Continuous review of effectiveness

**Impact of new rules
on aircrew alertness**



Implementation

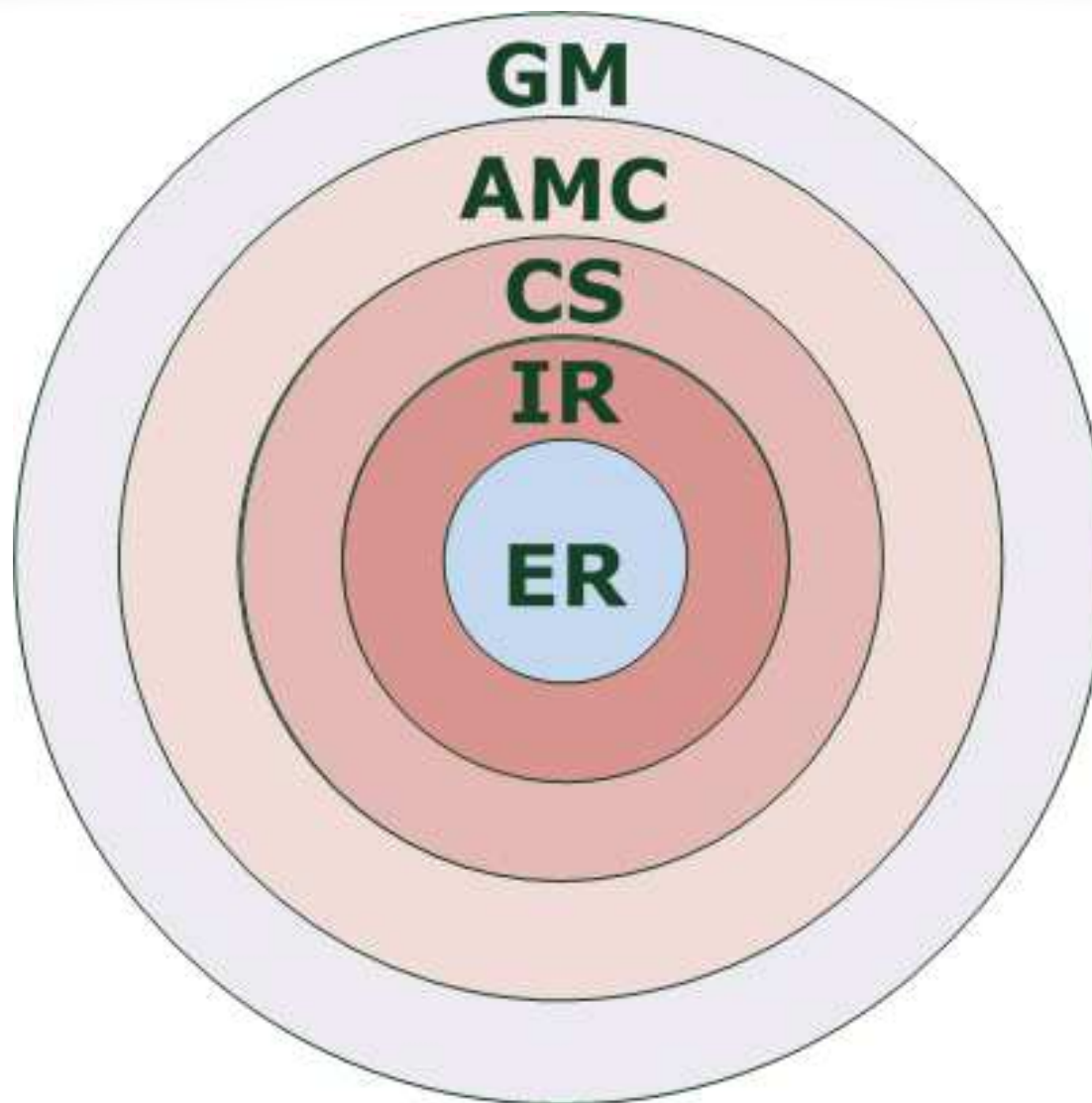
ARO.OPS.230
Determination of
disruptive schedules

ARO.OPS.235
Approval of individual flight
time specification schemes



Flight time specification schemes

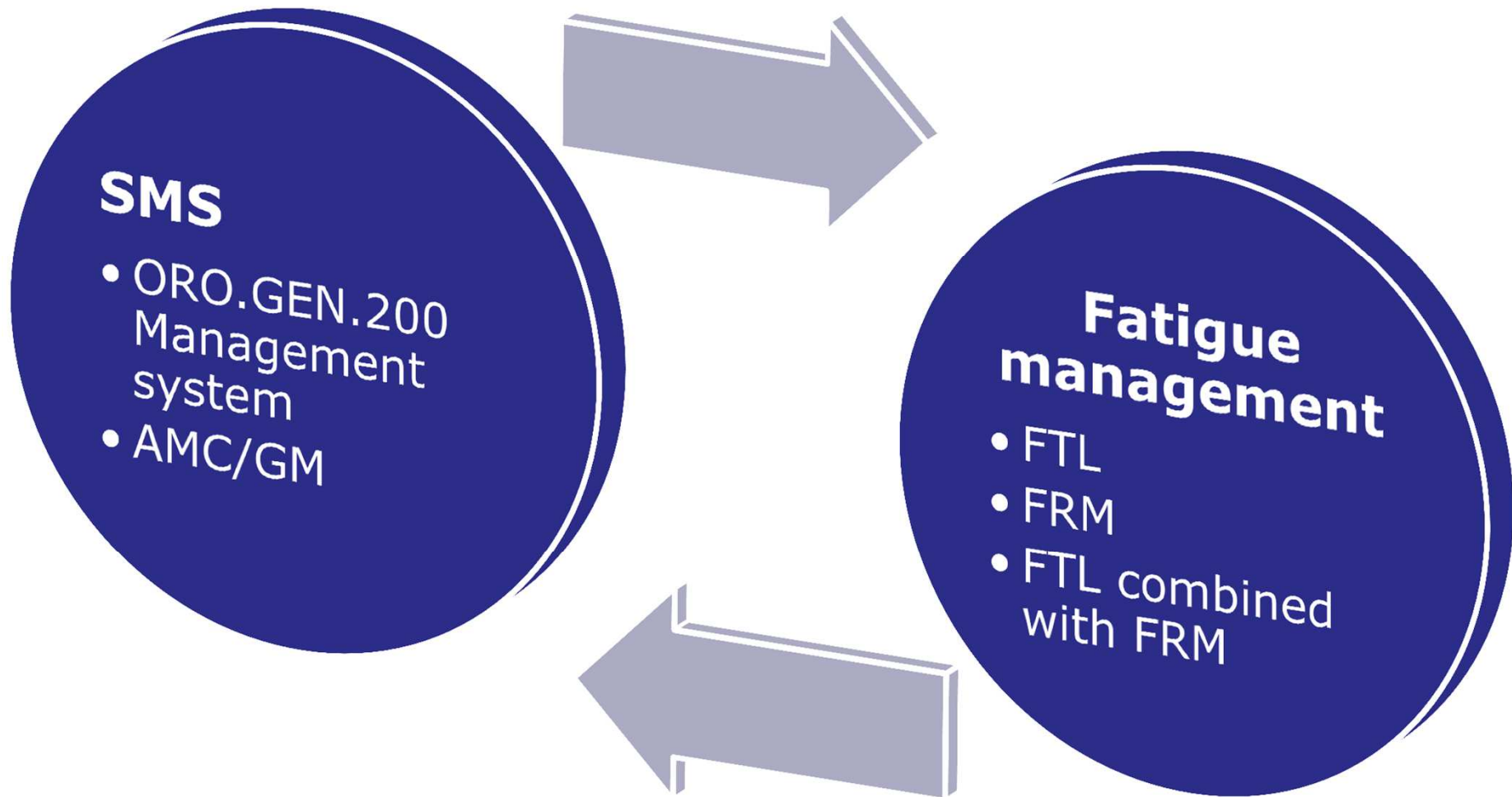
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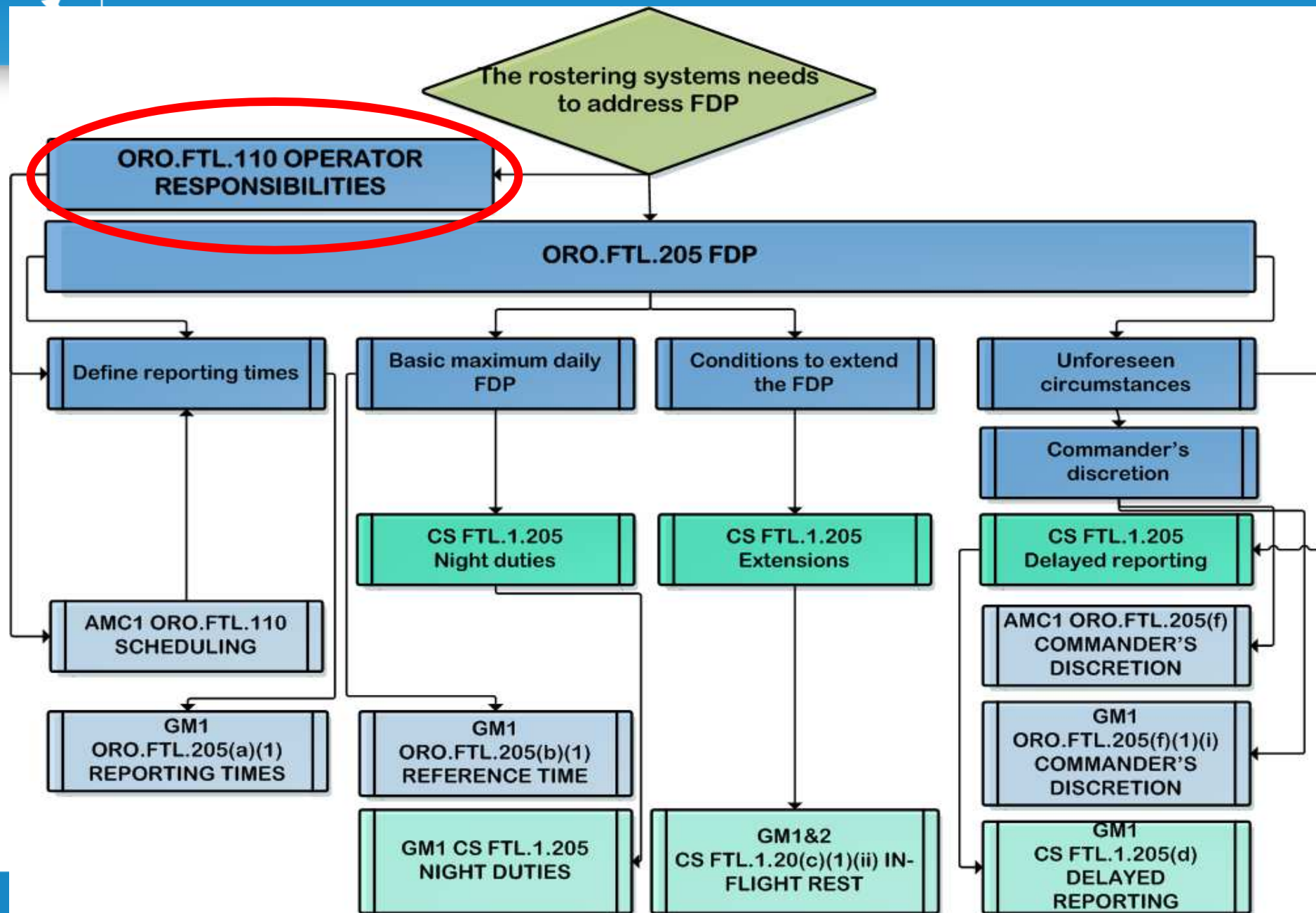


Fatigue management & SMS



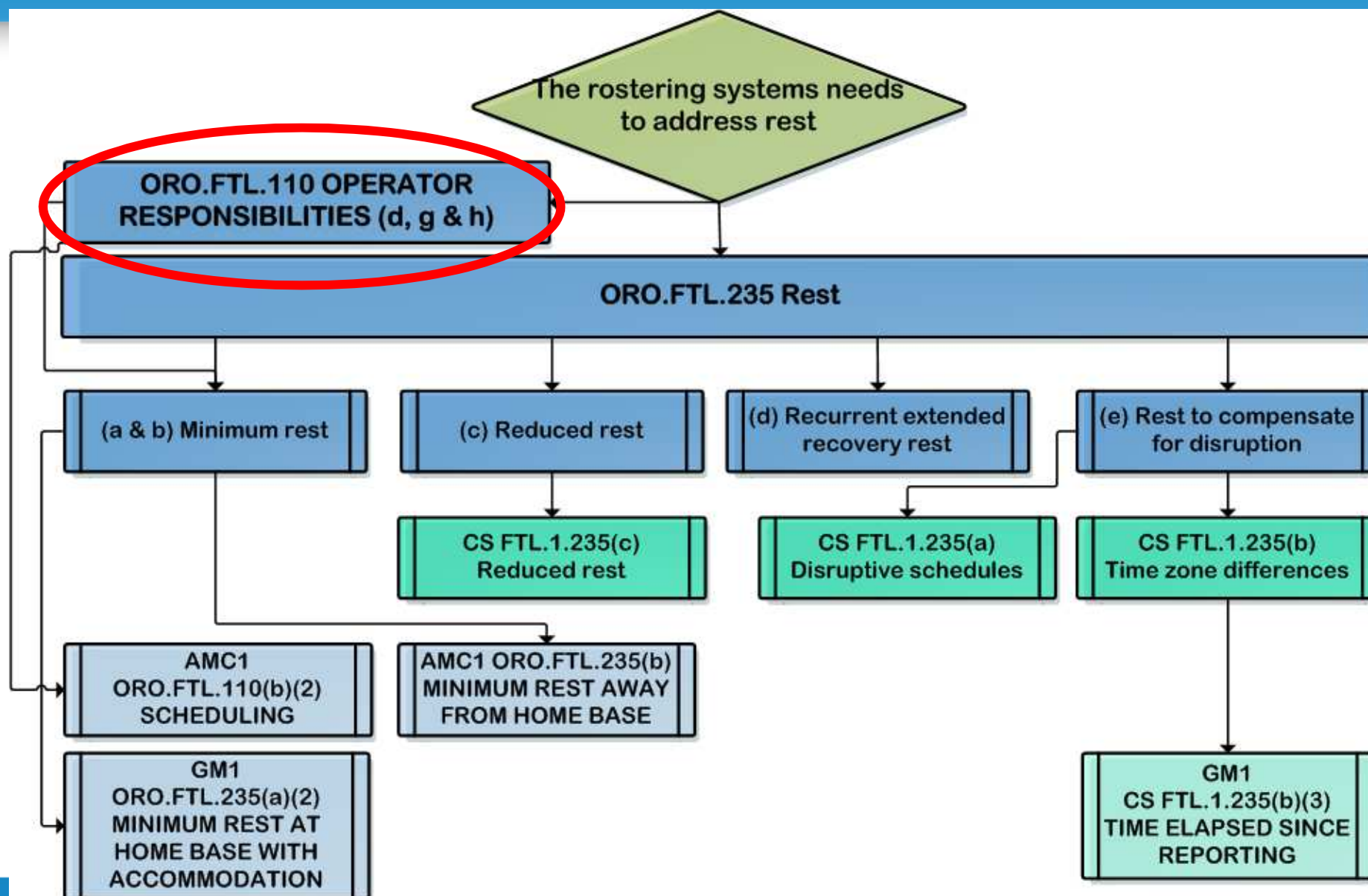


Example: FDP





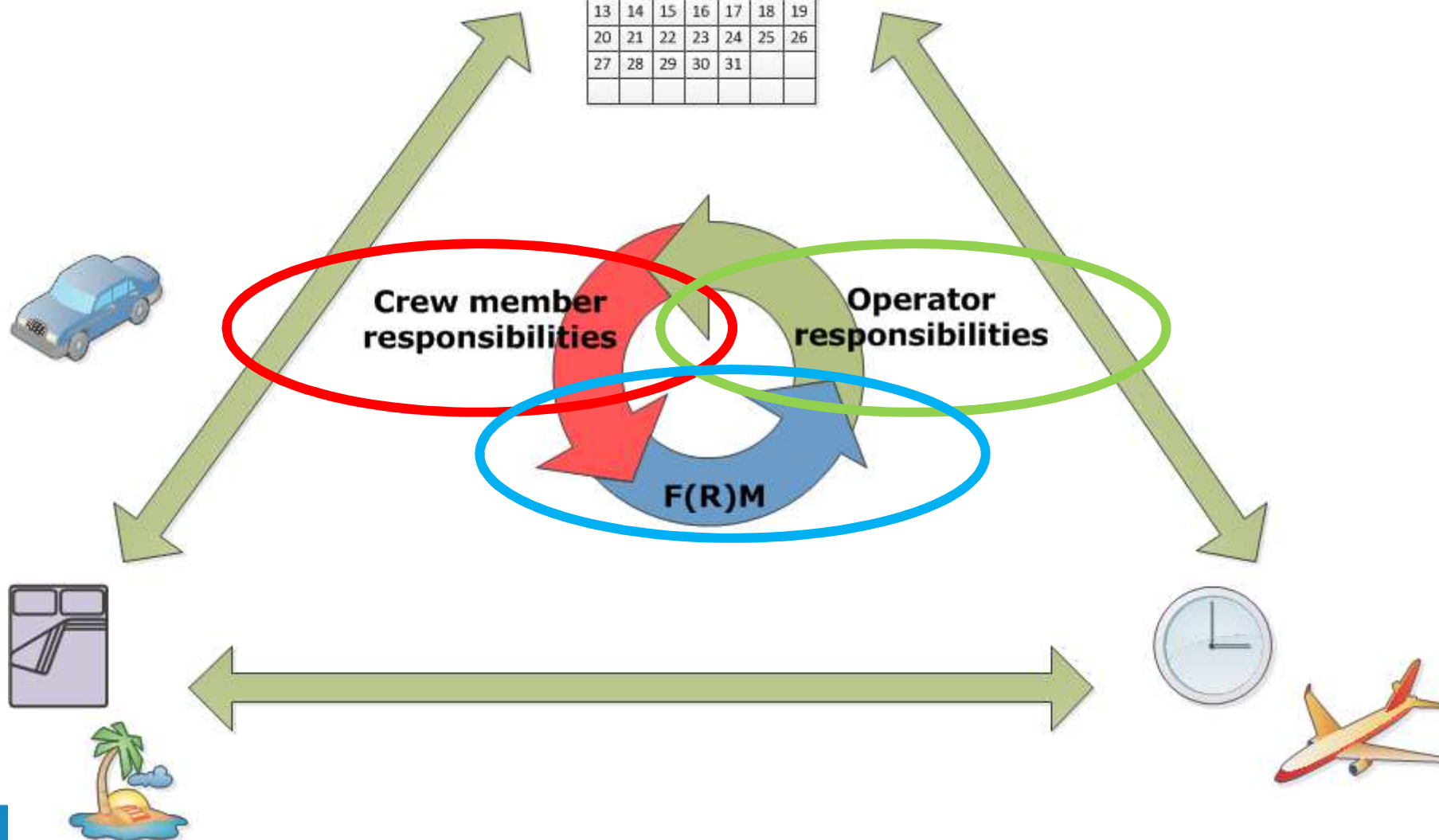
Rest





Flight time specification scheme

January 14						
Mo	Tu	We	Th	Fr	Sa	Su
		1	2	3	4	5
6	7	8	9	10	11	12
13	14	15	16	17	18	19
20	21	22	23	24	25	26
27	28	29	30	31		





FDP and Night Duty

Night duty

- Acclimatised
- Appropriate fatigue management

Unknown state of acclimatisation

- Max FDP = 11h
- Effect on fatigue of rotations monitored



Stby other than Airport

- 23:00 – 07:00 does not count towards FDP reduction if:
- Stby starts between 23:00 - 07:00



What is fatigue risk management?





Fatigue Risk Management

A data-driven, business risk management approach to fatigue

Processes for measuring, mitigating and managing fatigue risk

More effective than FTL alone

Based on scientific principles and knowledge, data collection and analysis, and so enables to maintain an equivalent level of safety whilst allowing greater operational flexibility.

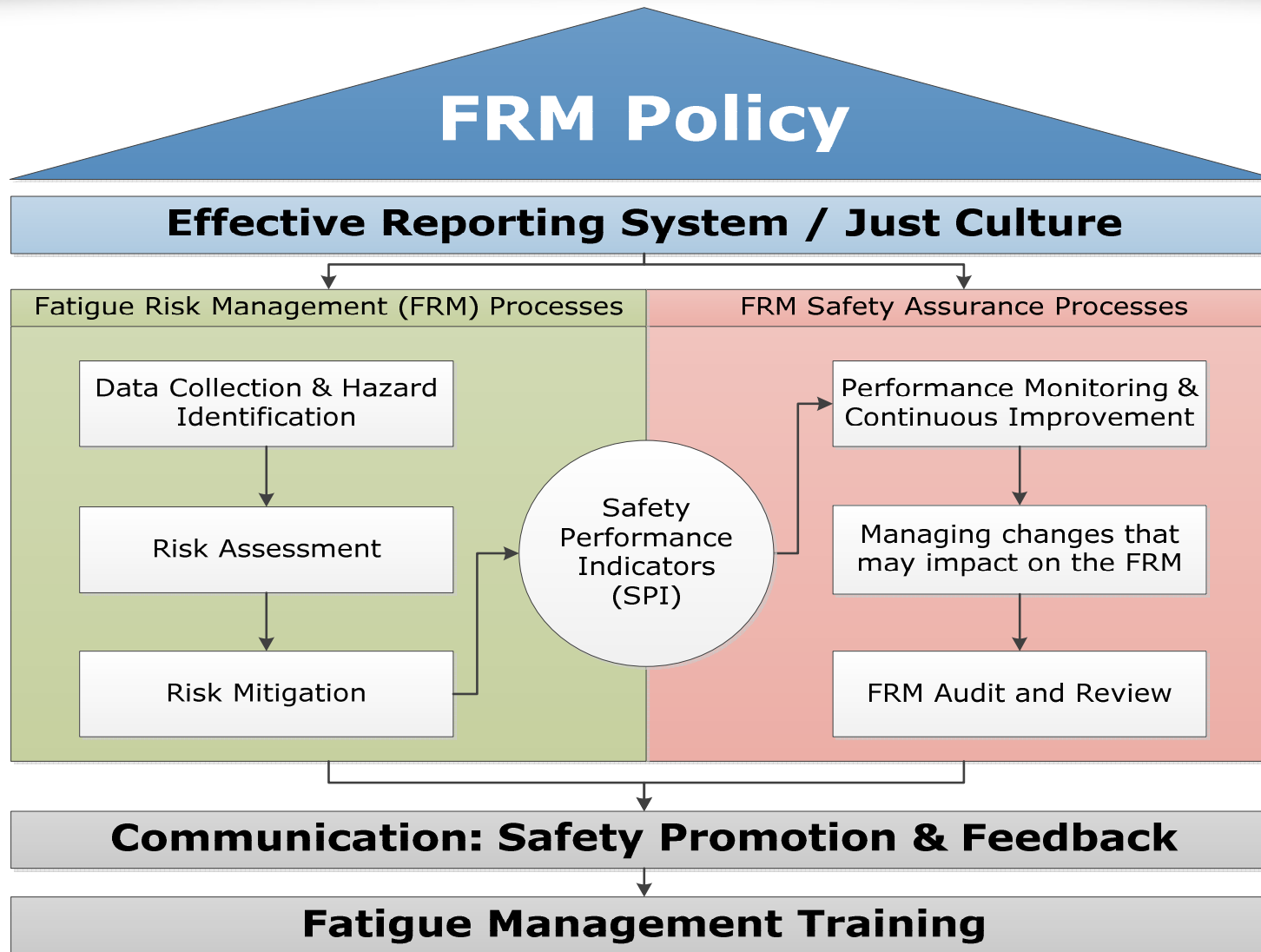


FRM is an integral part of SMS

SMS	FRM
Safety policy & objectives	FRM policy & documentation
Safety risk management	Fatigue risk management process <ul style="list-style-type: none">• Identification of hazards• Risk assessment• Risk mitigation• Implementation
Safety assurance	Fatigue safety assurance <ul style="list-style-type: none">• Monitor effectiveness of FRM• Management of change• Continuous improvement of FRM
Safety promotion	FRM promotion process <ul style="list-style-type: none">• Training programmes• FRM communication plan



FRM Structure





Example sources of data on fatigue

Roster metrics e.g. stability, standby usage, number of sectors

Statistics: absenteeism, sickness, turn-over, commute

Fatigue reports and incident investigations

Ergonomic assessment of work and sleep environment

Fatigue model analysis of rosters

Crew surveys and focus groups

Scientific studies e.g. sleep diaries, actigraphy



Approval & Oversight (1)

Aesthetics versus Substance

Substance

Balanced communication
Clear reporting process
Appropriate reporting forms
Manual relevant to the operator
Assurance finding
Access to all

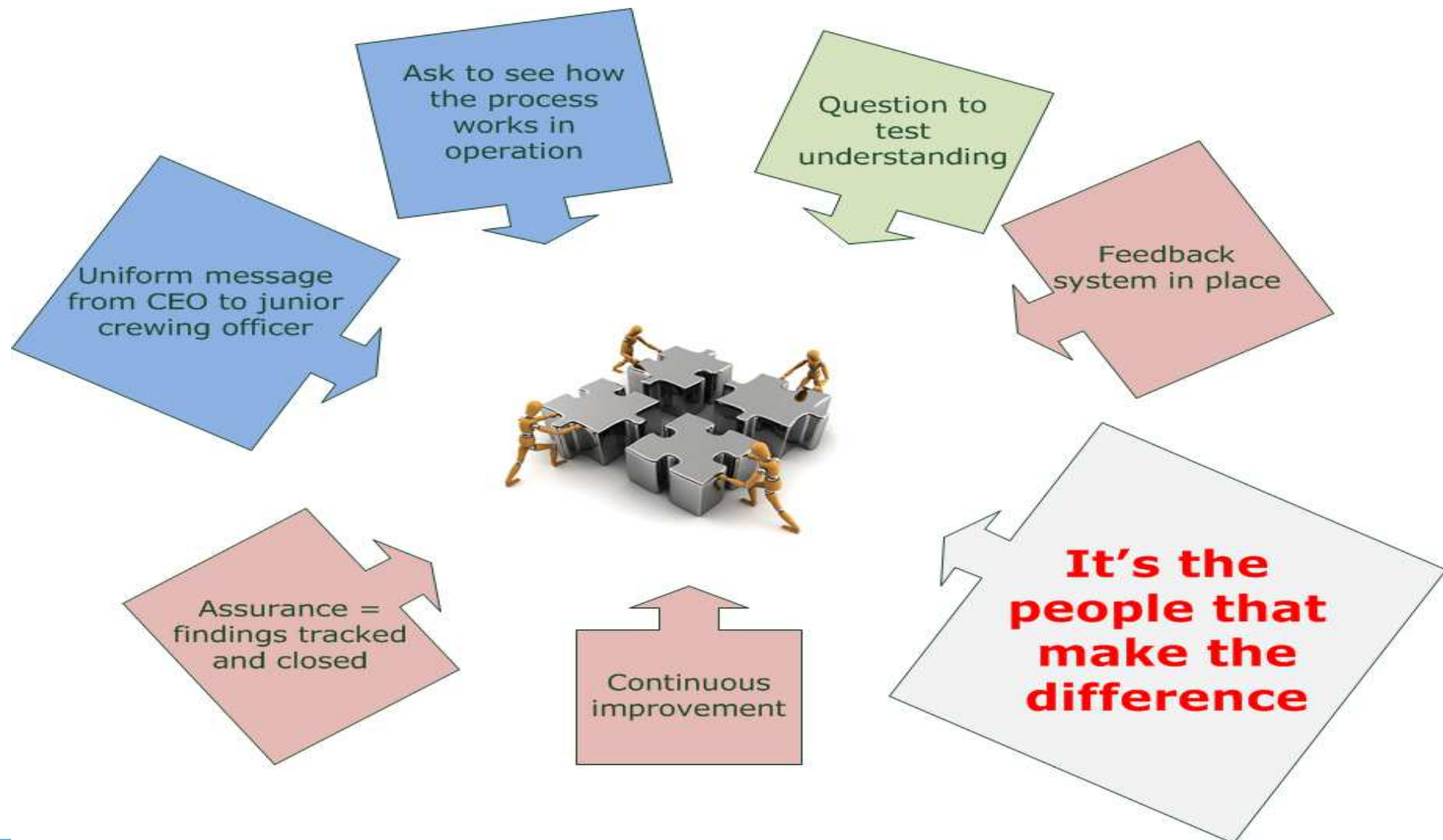
Eye candy
Flashy power points
Overly detailed reporting forms
"Familiar" Manual
"Perfect" paperwork
Waffle

Aesthetics



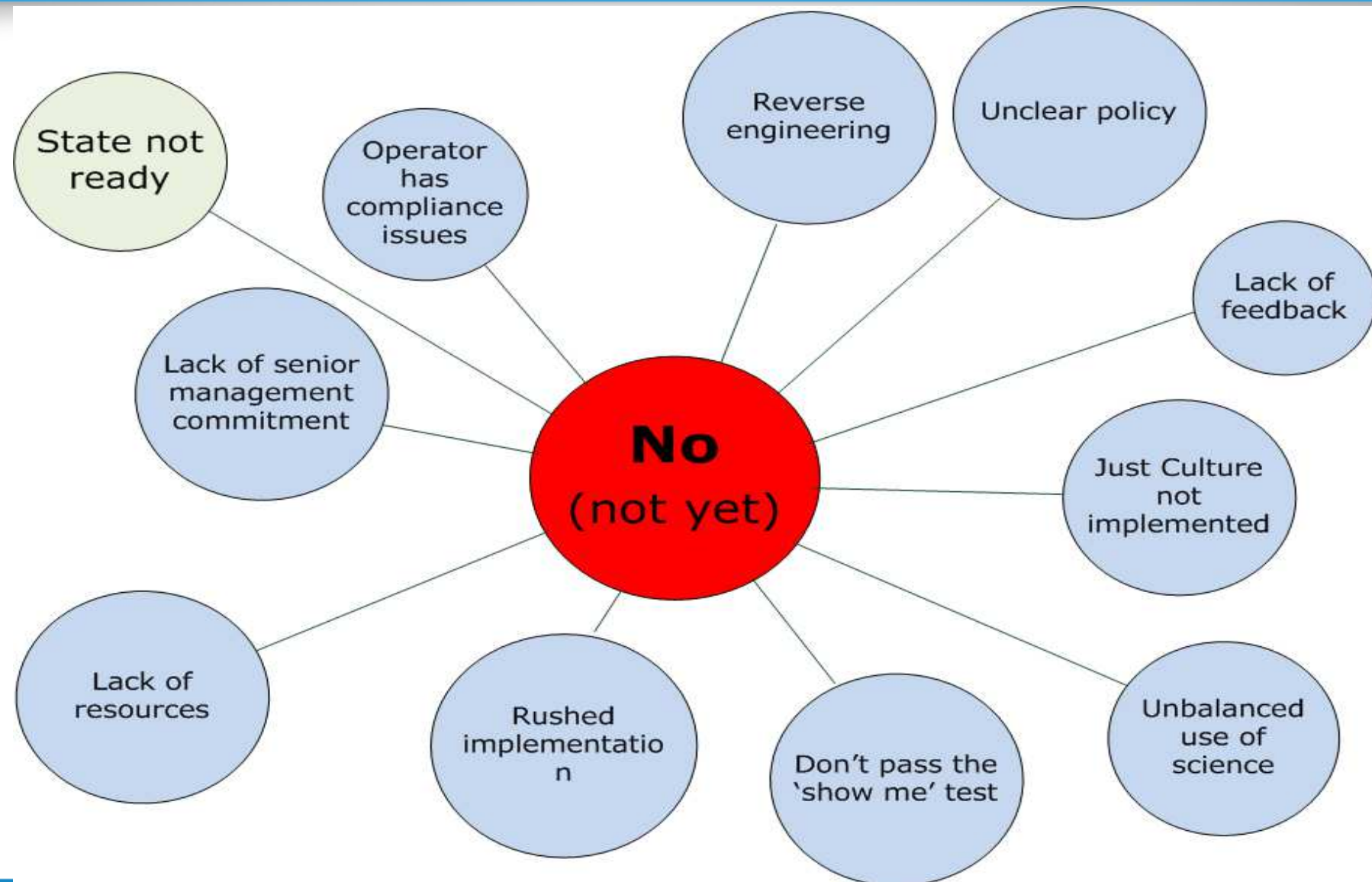
Approval & Oversight (2)

How to tell the difference?





Approval & Oversight (3)





State needs to be ready

Operator demonstrates compliance with FTL through fatigue management

- Relevant PIs, reporting system etc.

Demonstrable
commitment to FRM



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Benefits of FRM

Rather than complying with prescriptive limits, FRM relies on actually measuring and managing the fatigue-related risks.

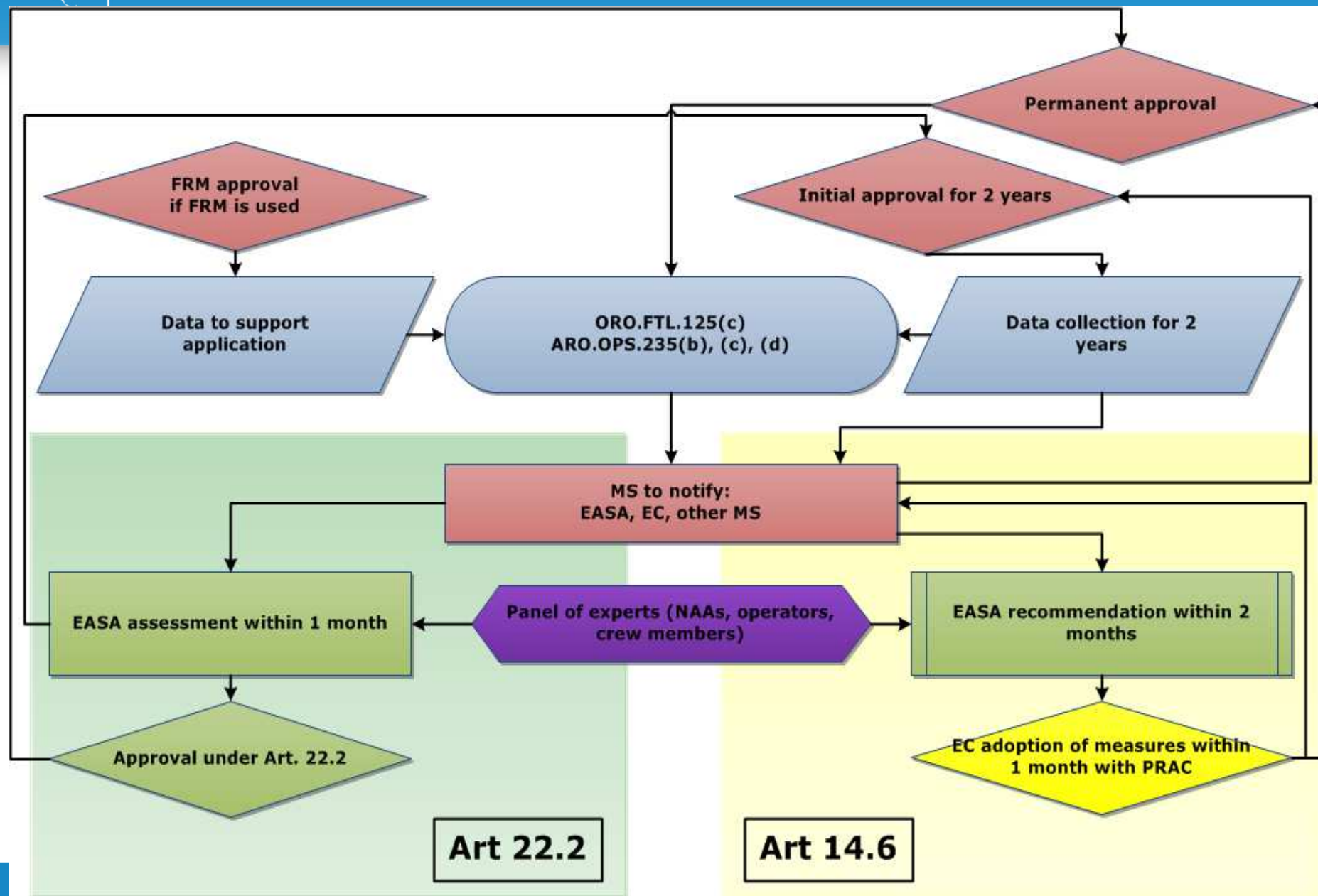
Increased risk knowledge enables enhanced management of safety.

Benefits include reduced safety events, informed strategic decisions, increased operational flexibility, reduced insurance premiums, more effective regulatory oversight and improved relations with the unions.

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Approval of IFTSS





Time frame for assessment

**Panel of experts (NAAs, operators,
crew members)**



Art. 22(2)

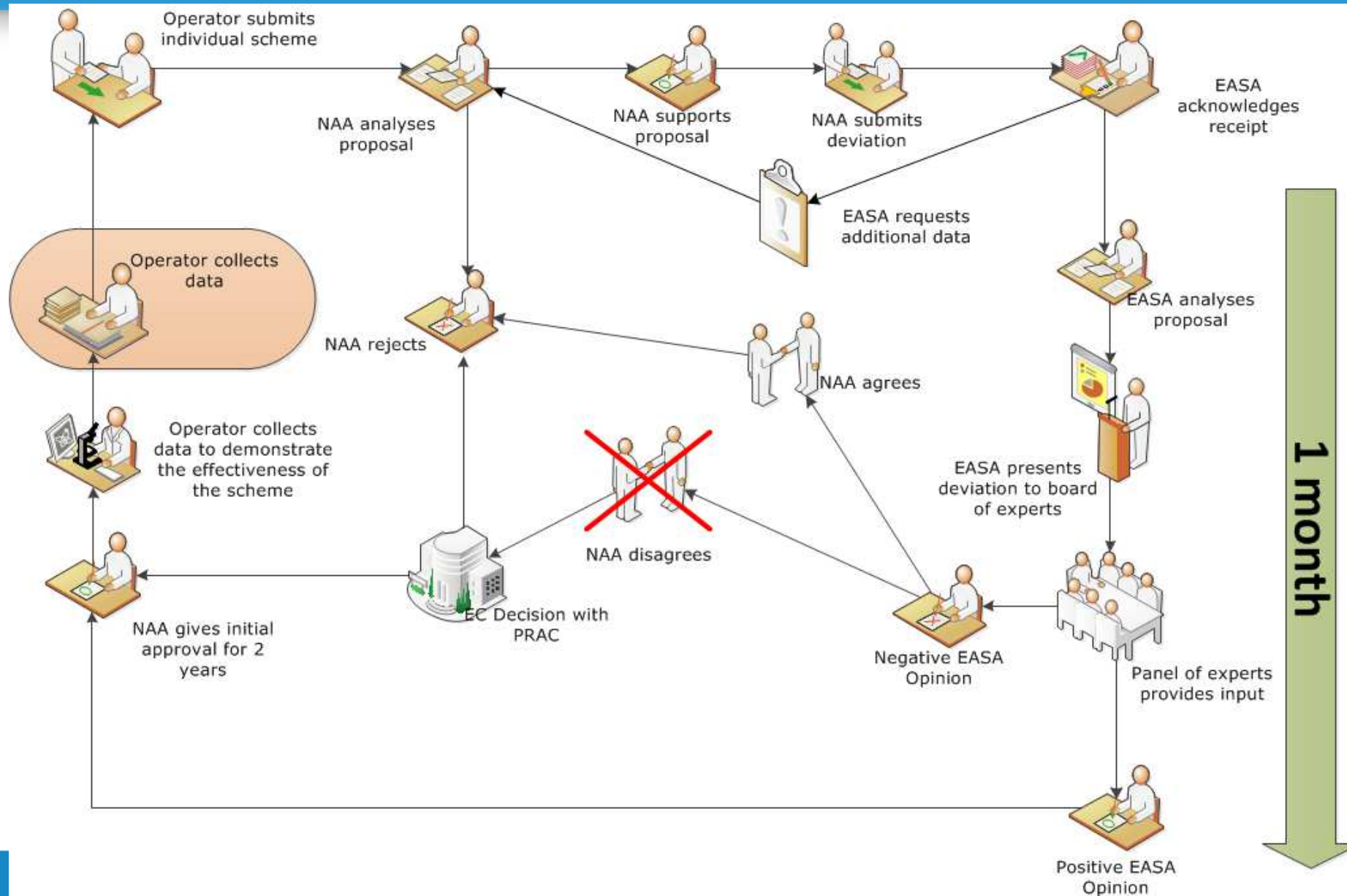
- **1 month**

Art. 14(6)

- **2 months EASA**
- **1 month PRAC**

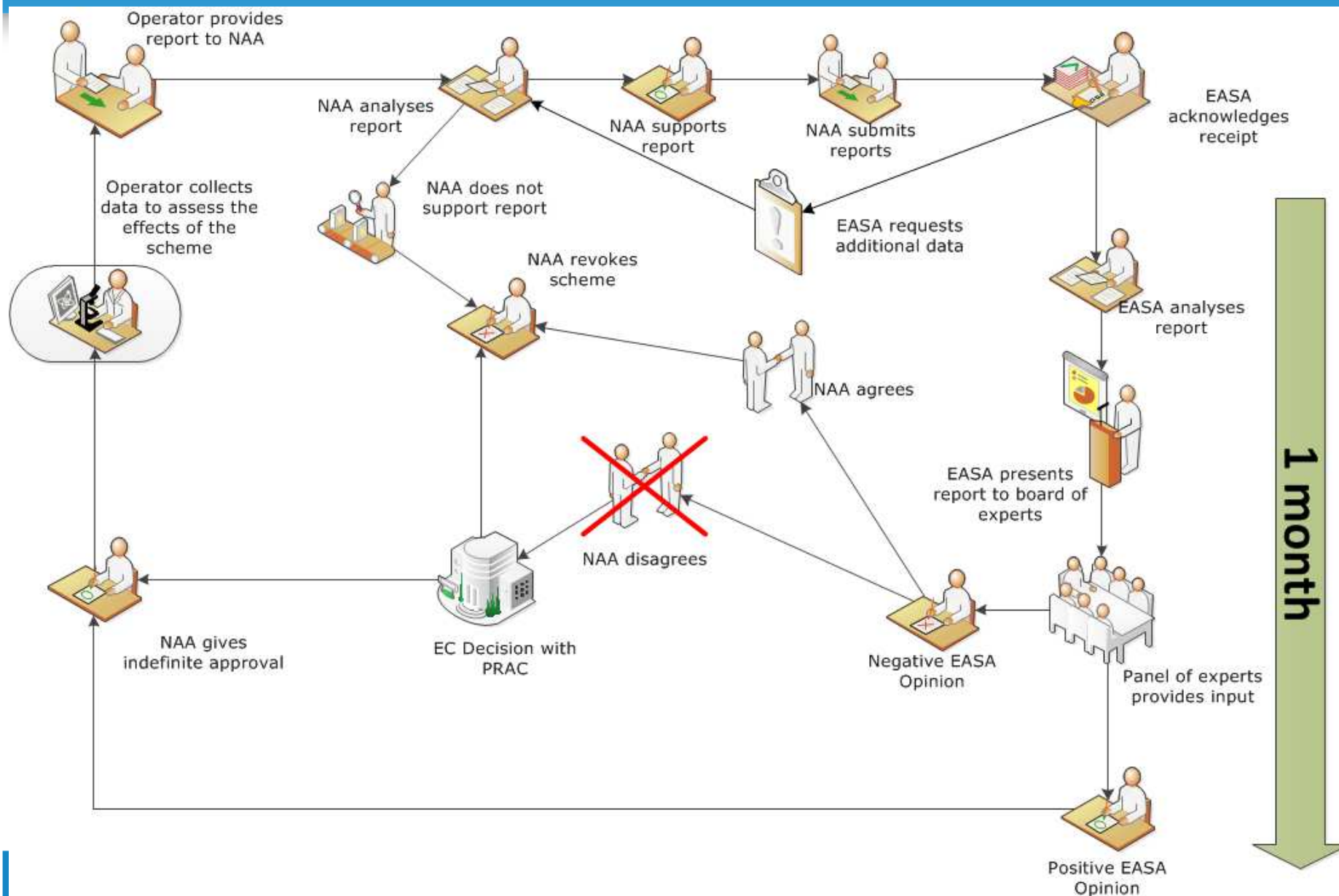


Workflow Art. 22.2 Initial approval



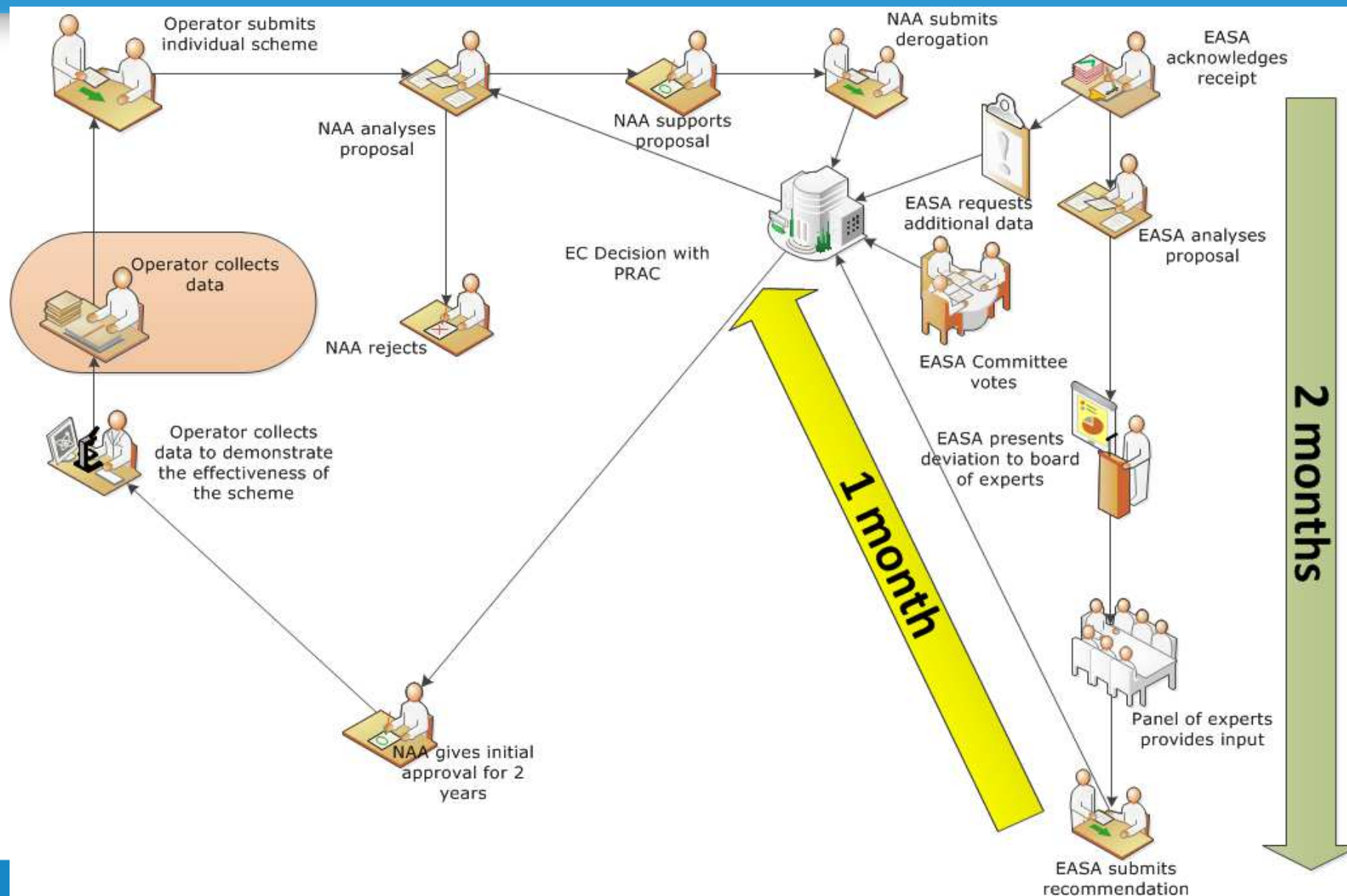


Workflow Art. 22.2 Indefinite approval



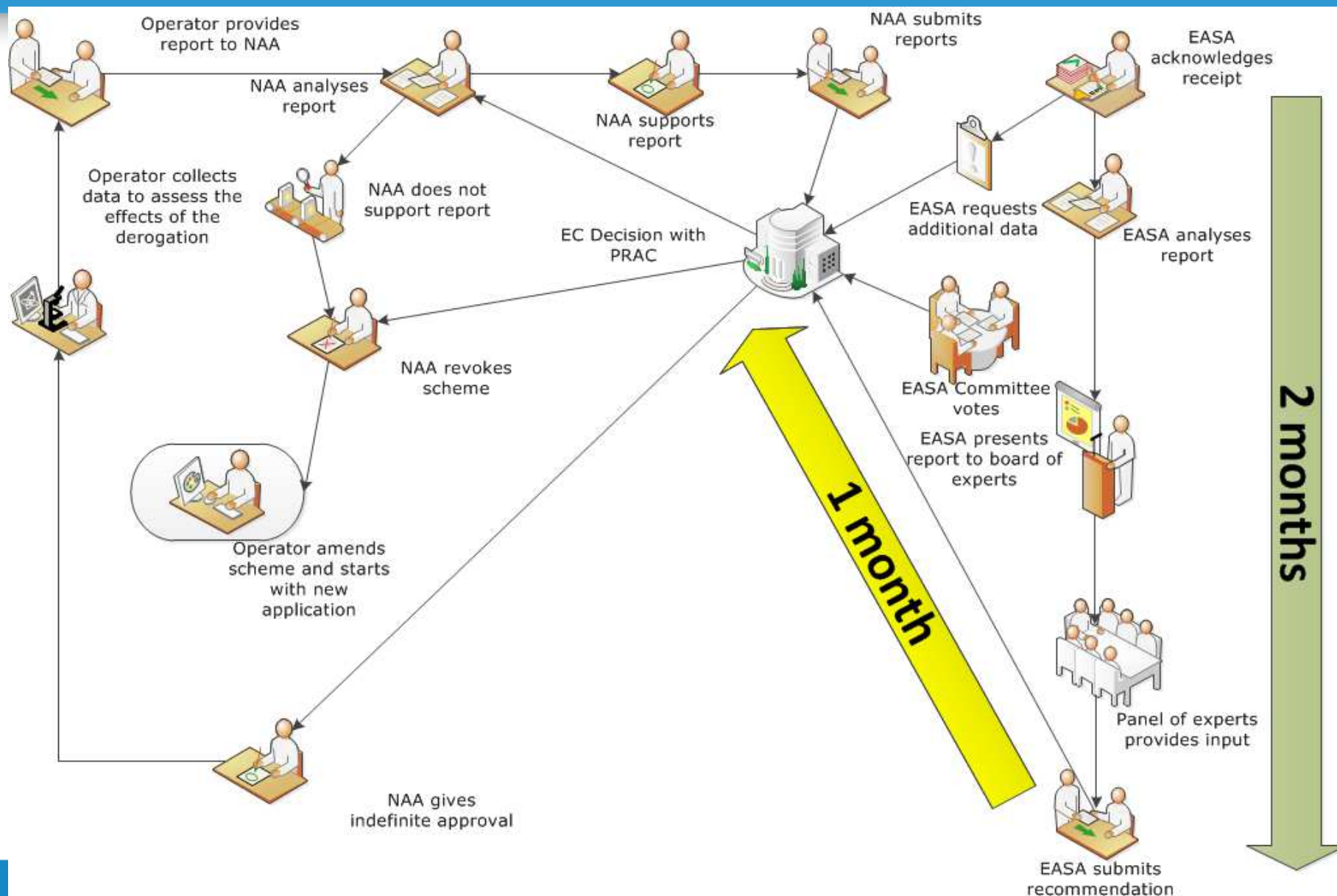


Workflow Art. 14.6 Initial approval





Workflow Art. 14.6 Indefinite approval





To be decided

Composition of panel of experts?

- Conflict of interest issues?

At what stage of the process shall the panel be involved?

- Tight planning due to time constraints



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Summary

Upstream pre-assessment by NAAs paramount

Pool of nominated experts

Expert input to EASA assessment

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