

Rolling Review of Requirements (RRR)

1st Introductory workshop

(RRR-Wrkshp-1, Virtual meeting, 17 May 2023)

Reference Guide for PoC and Coordinators

(Krunoslav Premec, SO/ONM)



Introduction

- *RRR process strongly depends and relies on a **dedicated engagement of PoC and Coordinators**.*
- *PoC and Coordinators **play vital roles** in the RRR process.*
- *Coordinator is a **lead author** and PoCs **co-authors** of SoG.*
- *PoC is **the conduit** to the RRR for input and feedback from the entire stakeholder community for AA, through AA owner.*
- *Information on input and feedback processes must **be provided to the stakeholder community, including Members, RAs, and TCs**.*
- ***Contribution of the relevant communities** to the compilation of the observational requirements is **the key to the effective implementation** of the RRR process.*

RRR AA PoC - Terms of Reference

The **PoC of an Application Area** is tasked to:

- (a) Collect, record and maintain observational user requirements of the Application Area in the OSCAR/Requirements database;
 - (b) Conduct a critical review and gap analysis for the Application Area by comparing observing capabilities with the observational user requirements of the Application Area, as well as by considering the results from impact studies and applying their own expert judgement;
 - (c) As a representative of the Application Area owner, promote and maintain active and effective communication mechanisms to obtain input and feedback from across the Application Area stakeholder community including in particular Member countries and Regional Associations;
 - (d) Liaise in her/his work with the body, which is the RRR owner of the Application Area, and seek concurrence of that community with the observational user requirements in OSCAR/Requirements and the result from the critical review and gap analysis;
 - (e) Provide input to the Coordinator of the Earth System Application Category to which the Application Area belongs, and contribute to the development of that Earth System Application Category SoG, including the critical review;
 - (f) Respond to requests for information from the JET-EOSDE as needed.
- The PoCs are designated by the bodies identified as the owners of the Application Areas.

RRR ESAC Coordinator - Terms of Reference

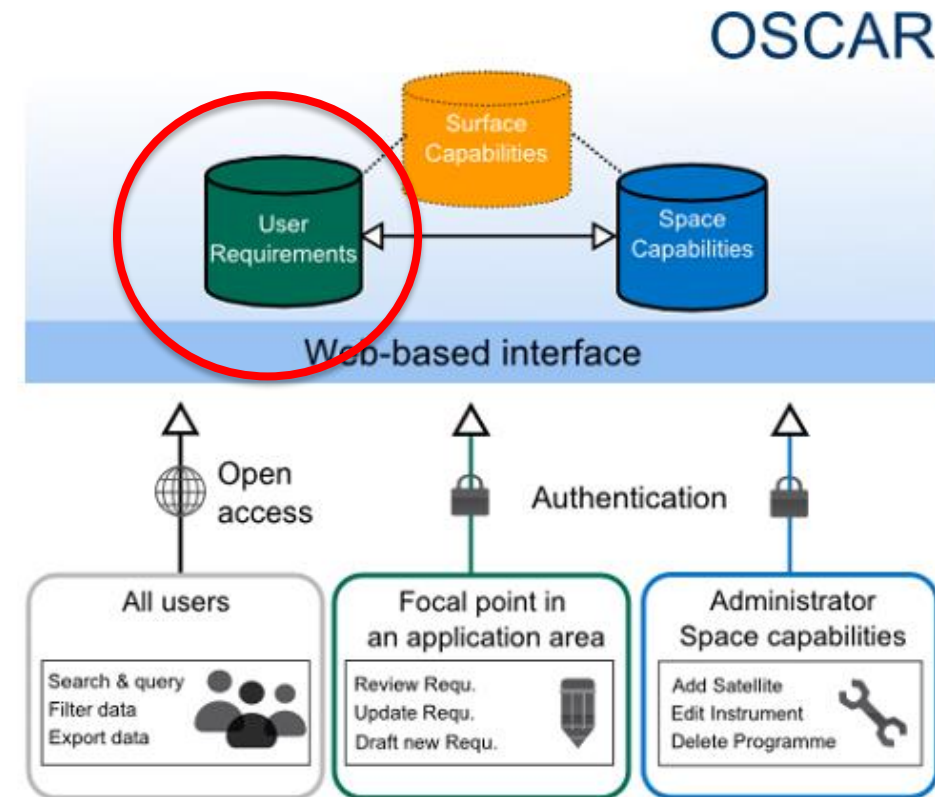
The **Coordinator for an Earth System Application Category** is tasked to:

- (a) Coordinate with and guide the PoCs of the relevant Application Areas, to obtain their expert contributions to the development of the SoG (gap analysis with recommendations on how to address the gaps) of the Earth System Domain;
- (b) As lead author, complete the drafting and submission of the SoG of the Earth System Application Category;
- (c) Consult with relevant bodies and respond to requests for information from the JET-EOSDE as needed;
- (d) Submit the SoG and future updates to the Chair of the INFCOM Joint Expert Team on Earth Observing System Design and Evolution (JET-EOSDE) for his/her review and submission to the JET-EOSDE for discussion; SoGs are eventually recommended by the Chair of JET-EOSDE and/or the JET-EOSDE meetings to the president of INFCOM, who in consultation with the management group will approve it.
- The Coordinator is selected from amongst the PoCs of the Application Areas in the relevant Earth System Application Category, proposed by them through JET-EOSDE and SC-ON, and then appointed by the Infrastructure Commission President in consultation with the management group.


OSCAR

The [Observing System Capabilities Analysis and Review \(OSCAR\) tool](#) provides three separate databases:

- [OSCAR/Requirements](#),
- [OSCAR/Space](#), and
- [OSCAR/Surface](#).



OSCAR/Requirements



OSCAR
Observing Systems Capability Analysis and Review Tool

[Home](#) | [Observation Requirements](#) | [Space-based Capabilities](#) | [Surface-based Capabilities](#) | [Analysis](#)


[Overview](#) | [Variables](#) | [Requirements](#) | [Layers](#) | [Themes](#) | [Application Areas](#)

Application areas

The table below lists all application areas and the respective focal points maintaining requirements for these. For any enquiries or questions on particular requirements recorded in OSCAR, please contact the focal points directly, where an email-address is provided.

Name	Focal Point	Respons. Org.	Description	Earth System Application Category
1.1 Sun, Heliosphere and Solar Wind Forecasting and Monitoring	Nicole Vilmer nicole.vilmer@obspm.fr	WMO		1. Space Weather Applications
1.2 Energetic Particle and Magnetosphere Forecasting and Monitoring	Sergio Dasso sergio.dasso@gmail.com	WMO		1. Space Weather Applications
1.3 Ionosphere, Thermosphere and Geomagnetic Field Forecasting and Monitoring		WMO		1. Space Weather Applications
2.1 Global Numerical Weather Prediction and Real-time Monitoring	Kozo Okamoto kokamoto@mri-jma.go.jp	WMO	Global Numerical Weather Prediction	2. Atmospheric Applications
2.10 Atmospheric Disaster Risk Reduction	Taoyong Peng tpeng@wmo.int	WMO		2. Atmospheric Applications
2.2 High-Resolution Numerical Weather Prediction	Alexis Doerenbecher alex.doerenbecher@meteo.fr	WMO	High Resolution Numerical Weather Prediction	2. Atmospheric Applications

OSCAR/Requirements



OSCAR
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[Overview](#) | [Variables](#) | [Requirements](#) | [Layers](#) | [Themes](#) | [Application Areas](#)

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1.3 Ionosphere, Thermosphere and Geomagnetic Field Forecasting and Monitoring		WMO		1. Space Weather Applications
2.1 Global Numerical Weather Prediction and Real-time Monitoring	Kozo Okamoto kokamoto@mri-jma.go.jp	WMO	Global Numerical Weather Prediction	2. Atmospheric Applications
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OSCAR/Requirements/AA



OSCAR

Observing Systems Capability Analysis and Review Tool

Login

Home

Observation Requirements

Space-based Capabilities

Surface-based Capabilities

Analysis

Quick Search...



Overview

Variables

Requirements

Layers

Themes

Application Areas

Application: 2.1 Global Numerical Weather Prediction and Real-time Monitoring

Details

Name	2.1 Global Numerical Weather Prediction and Real-time Monitoring
Description	Global Numerical Weather Prediction
Corresponding Institution	World Meteorological Organization
Contact Person	Kozo Okamoto kokamoto@mri-jma.go.jp
Earth System Application Category	2. Atmospheric Applications


Variables measured in this Application Area

Subdomain	Variables		
Basic atmospheric	Air pressure (near surface)	Air specific humidity (near surface)	Air temperature (near surface)
	Atmospheric temperature	Specific humidity	Integrated Water Vapour (IWV)
	Wind (horizontal)	Wind (vertical)	Wind speed (near surface)
	Wind vector (near surface)		
Clouds and precipitations	Accumulated precipitation (over 24 h)	Cloud base height	Cloud cover
	Cloud drop effective radius	Cloud ice	Cloud ice Total Column
	Cloud liquid water (CLW)	Cloud liquid water (CLW) total column	Cloud top height
	Precipitation intensity at surface (liquid or solid)	Precipitation intensity at surface (solid)	Cloud type
Aerosols and radiation	Aerosol column burden	Aerosol mass mixing ratio	Downward short-wave irradiance at Earth surface
	Downward long-wave irradiance at Earth surface	Earth surface short-wave bidirectional reflectance	Fraction of Absorbed PAR (FAPAR)
	Short-wave cloud reflectance	Upward short-wave irradiance at TOA	Long-wave Earth surface emissivity
		Upward long-wave irradiance at TOA	Upward spectral radiance at TOA



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OSCAR/Requirements/Variable



OSCAR
Observing Systems Capability Analysis and Review Tool

Login

HomeObservation RequirementsSpace-based CapabilitiesSurface-based CapabilitiesAnalysis

OverviewVariablesRequirementsLayersThemesApplication Areas

Quick Search...

Variable: Air pressure (near surface)

Definition

Full name	Air pressure (near surface)		
Definition	Air pressure at a known height above the surface with the height specified in the metadata		
Measuring Units	hPa	Uncertainty Units	hPa
Horizontal Res Units	km	Vertical Res Units	
Stability Units	hPa (Stability /decade)		
Comment:			
Last modified:	2019-10-15		
Applied in OSCAR/Space Gap Analysis:	No		

Classification

Domain: Atmosphere

Sub-domain: Basic atmospheric

Variable: Air pressure (near surface)

Measured in Layers:

Near Surface

Cross-cutting themes:

Earth System Application Categories and its related Application Areas:

2. Atmospheric Applications

2.1 Global Numerical Weather Prediction and Real-time Monitoring

2. Atmospheric Applications

2.2 High-Resolution Numerical Weather Prediction

2. Atmospheric Applications

2.8 Aeronautical Meteorology

2. Atmospheric Applications

2.5 Atmospheric Climate Monitoring and Forecasting

Unknown:

Climate-AOPC (deprecated)

Ocean Applications

Requirements defined for Air pressure (near surface) (9)


This tables shows all related requirements. For more operations/filtering, please consult the full list of [Requirements](#)

Note: In reading the values, goal is marked **blue**, breakthrough **green**, threshold **orange**

Application-dependent Technical Priority (ATP) **Magenta**, and Relative priority of the attributes **Red**

Id	Variable	Layer	App Area	ATP	Uncertainty	Layer/s Quality	Coverage Quality	Stability / decade	Hor Res	Ver Res	Obs Cyc	Timeliness	Coverage	Conf Level	Val Date	Source	General Comment	Applicatio Area Comment
67	Air pressure (near surface)	Near Surface	Climate-AOPC (deprecated)		0.5 hPa 0.65 hPa 1 hPa				200 km 300 km 500 km		3 h 6 h 24 h	3 h 6 h 12 h	Global land	reasonable	2007-07-19	AOPC		
68	Air pressure (near surface)	Near Surface	Climate-AOPC (deprecated)		0.5 hPa 0.65 hPa 1 hPa				200 km 300 km 500 km		3 h 6 h 24 h	3 h 6 h 12 h	Global ocean	reasonable	2007-07-19	AOPC		
250	Air pressure (near surface)	Near Surface	2.1 Global Numerical Weather Prediction		0.5 hPa 1 hPa 1 hPa				15 km 100 km 500 km		60 min 6 h 12 h	6 min 30 min 6 h	Global land	firm	2009-02-10	John Eyre		

OSCAR/Requirements - Adding/Editing (1)





OSCAR
Observing Systems Capability Analysis and Review Tool

kpremec | [My Dashboard](#) | [Manage Users](#) | [Logout](#)

Home | **Observation Requirements** | Space-based Capabilities | Surface-based Capabilities | Analysis

My actions

This page (My Dashboard) presents an overview of the editing possibilities of this user account. You can always return here by clicking on **My Dashboard** in the top right corner while logged-in.

For other operations, please go directly to the specific item. You can edit /delete data when browsing through the Database, indicated with a EDIT  or DELETE  icon. (These will only appear while logged-in and where appropriate user-rights are set)

OSCAR/Requirements **2** | OSCAR/Space | Backup&Restore


[+ Add Variable](#) [+ Add Requirement](#) [Manage Requirements in Draft Status](#) (currently 54)
[Manage Application Areas and assign Points of Contact](#)

Management of different option lists

[Domains and Subdomains](#) [Layers and horizontal coverage levels](#)
[Sources \(for Requirements\)](#) [Confidence Levels \(for Requirements\)](#)
[Earth System Application Category](#)

My personal details

Username	kpremec	Email	kpremec@wmo.int
Name	Krunoslav Premec	Phone	+41 22 730 8436
Organization		Address	WMO Geneva
Point of Contact for			

 [Update my personal Data / Change Password](#)

Statistics

Total number of (validated) Requirements in DB	836
Requirements in Draft Status Requirements in DB:	54
Registered Users	48

History

OSCAR/Requirements – Adding/Editing (2)

The screenshot displays the OSCAR web application interface. The top navigation bar includes the OSCAR logo and the text 'Observing Systems Capability Analysis and Review Tool'. The user 'kpremec' is logged in, with links to 'My Dashboard', 'Manage Users', and 'Logout'. The main navigation menu shows 'Home', 'Observation Requirements', 'Space-based Capabilities', 'Surface-based Capabilities', and 'Analysis'. The 'Observation Requirements' section is active, with sub-links for 'Overview', 'Variables', 'Requirements', 'Layers', 'Themes', and 'Application Areas'. A search bar is located on the right.

The 'Add a new Requirement (Step 1/2)' form is shown. It includes a 'Create Requirement' button and a 'Cancel' button. The form has two dropdown menus: 'Variable' and 'Applicationarea'. Red arrows and numbers indicate the following steps:

1. Click on the 'Variable' dropdown menu.
2. Click on the 'Applicationarea' dropdown menu.
3. Click on the 'Create Requirement' button.

OSCAR/Requirements – Adding/Editing (3)

Home | Observation Requirements | Space-based Capabilities | Surface-based Capabilities | Analysis | Search Search...
Overview | Variables | Requirements | Layers | Themes | Application Areas

Requirement saved Proceed to next step.

Update Requirement # 1019

Update Requirement

Cancel

For: [Air pressure \(near surface\)](#)

In Application: [6.1 Earth System Forecasting and Monitoring](#)

Layers

☐ Near Surface

Confidence Level *

--Select Confidence-Level--

Horizontal Coverage of Requirement (default=global) *

Global

☐ Historic requirement (Inactive)

Application-dependent Technical Priority (ATP)

0.5

Date of validation *

- - -

Select an existing Source *

If the source is not listed, create a new source first before continuing

--Select Source--

General Comment

Anything noteworthy about this particular requirement should be stated here, in particular detailed information about horizontal coverage, if applicable

Application Area Comment ^

Horizontal Coverage Comment ^

Observation Comment ^

Performance Comment ^

Note: * Relative priority of the attributes

Please note that the units are fixed by variable for the following fields. Please enter only numeric values, these can be natural or float numbers (use '.' (point) as delimiter). Goal values should always be lower than breakthrough or threshold numbers

Please click on the help icon for an explanation of the values required.

Uncertainty Goal

hPa

Uncertainty Breakthrough

hPa

Uncertainty Threshold

hPa

Uncertainty Priority *

0.5

Stability Goal

hPa

Stability Breakthrough

hPa

Stability Threshold

hPa

Stability Priority *

0.5

Hr Goal

km

Hr Breakthrough

km

Hr Threshold

km

Hr Priority *

0.5

Vr Goal

Vr Breakthrough

Vr Threshold

Vr Priority *

0.5

Layer/s Quality Goal

Layer/s Quality Breakthrough

Layer/s Quality Threshold

Layer/s Quality Priority *

0.5

Oc Goal

seconds

Oc Breakthrough

seconds

Oc Threshold

seconds

Oc Priority *

0.5

Timeliness Goal

seconds

Timeliness Breakthrough

seconds

Timeliness Threshold

seconds

Timeliness Priority *

0.5

Coverage Quality Goal

Coverage Quality Breakthrough

Coverage Quality Threshold

Coverage Quality Priority *

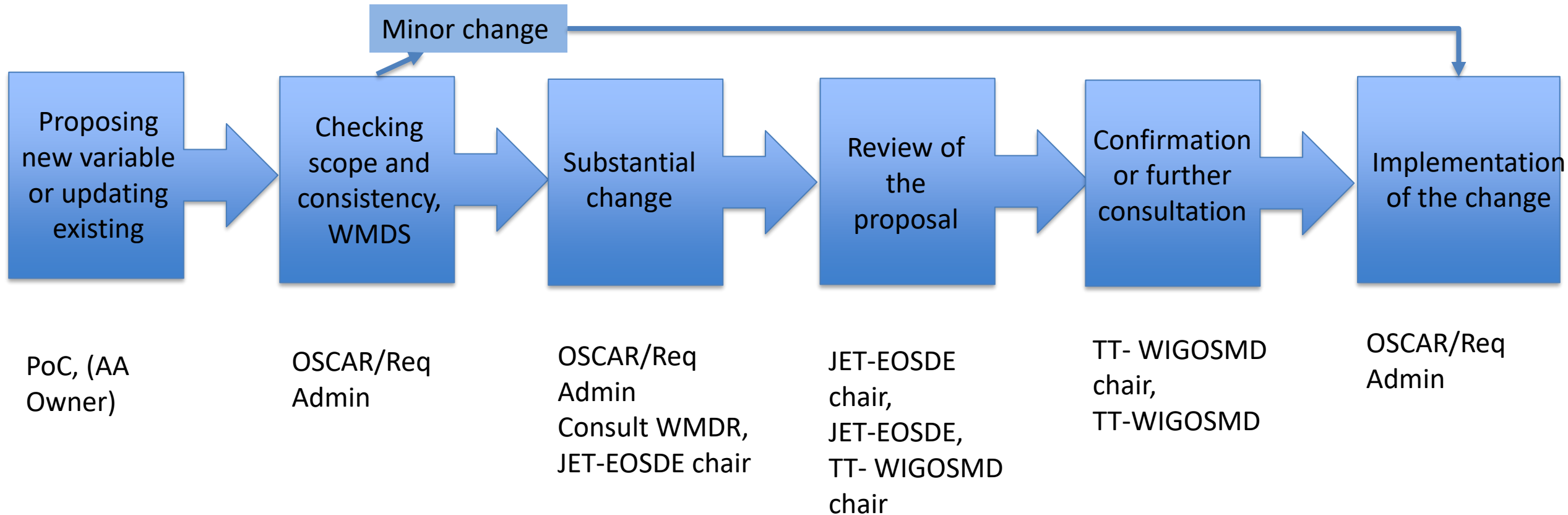
0.5

Do not forget!



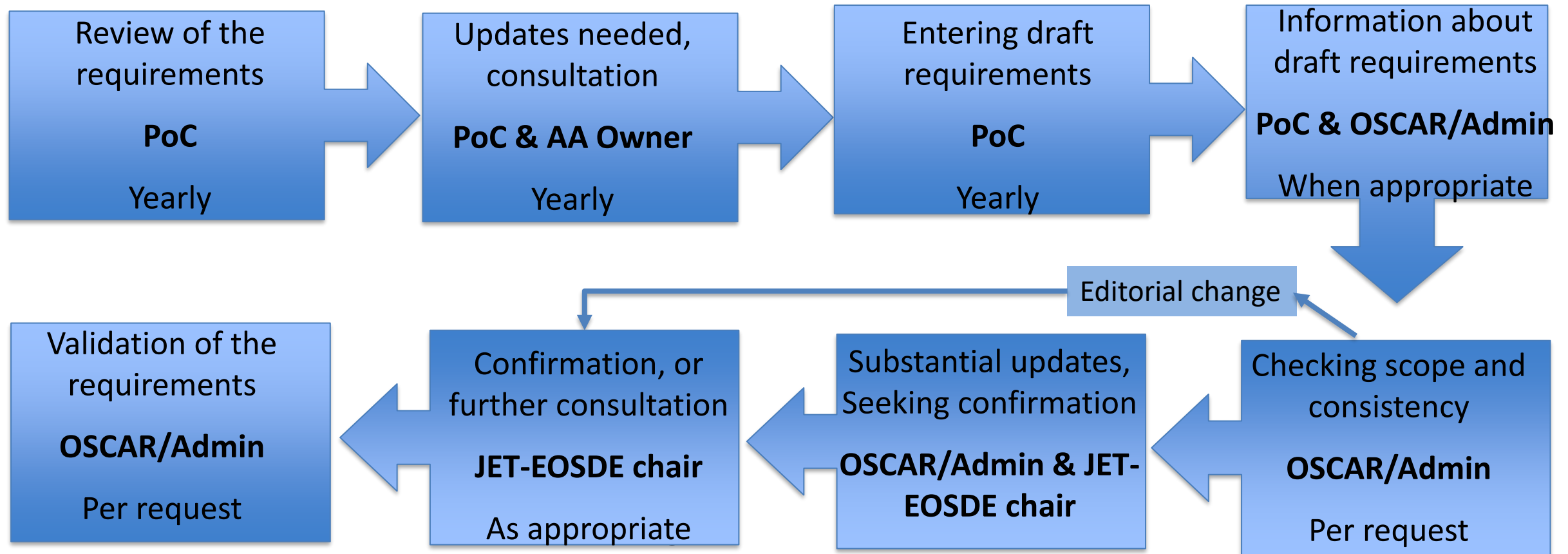
OSCAR/Requirements updating Process

(New variables or changes to the attributes of a variable)



OSCAR/Requirements updating Process

(Requirements of existing variables)



Procedure for update, validation and approval SoG within RRR

- 1) ESAC Coordinator, in consultation with PoCs, reviews existing or drafts new SoG;
- 2) ESAC Coordinator refers draft SoG to JET-EOSDE Chair, with copy to the WMO Secretariat;
- 3) JET-EOSDE chair decides on the review process (at JET-EOSDE meeting or by correspondence);
- 4) JET-EOSDE chair refers the comments to ESAC Coordinator;
- 5) ESAC Coordinator, in consultation with the PoCs, updates the draft accordingly;
- 6) ESAC Coordinator refers draft SoG to JET-EOSDE Chair, with copy to the WMO Secretariat;
- 7) JET-EOSDE chair concurs with the revised draft, or requests further revision from ESAC Coordinator;
- 8) JET-EOSDE chair requests SC-ON Chair submission of SoG to P-INFCOM for review/approval on behalf of INFCOM-MG;
- 9) P-INFCOM approves SoG or requests further revisions via JET-EOSDE;
- 10) WMO Secretariat updates the WMO documentation (website, etc.) with the new SoGs; and
- 11) At each JET-EOSDE meeting, the WMO Secretariat reports on changes since the last meeting.

ESAC SoG - Template

(Contributors: name of Coordinator and PoCs who contributed to the SoG)

(Version number, approval status, and date)

1. Introduction [1/2 to 1 page]

2. AAs

2.1 The considered AAs and their prioritization [1/2 page]

2.2 Summary of key variables and identified key gaps [1/2 page]

3. Recommendations on how to address the gaps [1 page]

Annex 1: Gap analysis for ESAC AAs

Annex 2: References

GAP Analysis for AA

- Template

Type of Application Area (tick one or more boxes)	Forecasting	<input type="checkbox"/>		
	Monitoring	<input type="checkbox"/>		
	Integrated product	<input type="checkbox"/>		
	Direct use of observations for services	<input type="checkbox"/>		
Point of Contact (Name, Country)				
Application owned by (group/body)				
Status of observational user requirements in OSCAR/Requirements				
Date of gap analysis				
This box shall briefly describe the application area and its observational user requirements.				
N o.	Required Variable (and vert./horiz. domain/s)	Type of gap	Gap description, impact and how it could be addressed	Comments, clarifications, phenomenon observed
1				
2				
3				
4				
5				



Useful Templates

(Available in the Reference Guide for PoC and Coordinators, but also directly from RRR website)

Annex 2. PoC and Coordinator roles: Work planning

Annex 3. PoC and Coordinator roles: Communicating with your Application Area “owner”

Annex 4. PoC and Coordinator roles: Coordination amongst PoCs

Annex 5. PoC and Coordinator roles: Consulting with Stakeholders

Annex 6. PoC and Coordinator roles: Assessing observation impact studies

Annex 9. PoC and Coordinator roles: Further notes

Useful Links

- [The Rolling Review of Requirements process \(2023 update\)](#)
- [OSCAR / Requirements database](#)
- [Terms of Reference for Points of Contact \(PoCs\) and Coordinators](#)
- [Statement of Guidance \(SOG\) template](#)
- [Gap Analysis for ESAC Application Area template](#)
- [Example for Analysis \(Global NWP\)](#)
- [Reference Guide for PoCs and ESAC Coordinators](#)
- [RRR process \(legacy version; until May 2023\)](#)

Contact us

Email:

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kpremec@wmo.int



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Thank you



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