ATTACHMENT 3: Reference Guide for Points of Contact (PoC) for Application Areas, and Coordinators for Earth System Application Categories, within the WMO Rolling Review of Requirements (RRR) Process.

TABLE OF CONTENTS:

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0.3	20 Apr 2022	Russell Stringer	Final draft responding to feedback and other updates in other related documents
0.4	24 May 2022	Secretariat	Editorial changes for submission to JET-EOSDE

This document is maintained by: WMO Secretariat, Observing Networks and Measurement Division of the Infrastructure Department.

1. INTRODUCTION

The World Meteorological Organization (WMO) Integrated GOS (WIGOS) consists of multiple components which observe many different geophysical variables across the many parts of the Earth System. By working together to collect and share their observations in the WIGOS framework, WMO Member countries gain access to the international observations needed in the activities undertaken to fulfil their mandates in monitoring the Earth System and delivering services. To maintain a consensus view on the design and implementation priorities for WIGOS, WMO conducts the ongoing RRR process.

PoC and Coordinators play vital roles in the RRR process. The roles are defined as part of the RRR, as described in Requirements for Observational Data in the Framework of the WMO Earth System Approach: The Rolling Review of Requirements. This Reference Guide is a supplement to that document and is intended to (a) further highlight the responsibilities and importance of the PoC and Coordinator roles, and (b) support PoCs and Coordinators at a more practical level by providing further role descriptions, suggestions and links for activities and reference material that may be helpful.

2. THE WMO RRR PROCESS AND THE POC AND COORDINATOR ROLES

In summary, the RRR process compiles information about requirements for observations, about observing system capabilities, and draws on experts and impact studies to provide guidance on the most important and achievable priorities for addressing the gaps between the identified requirements and capabilities. The main elements of the RRR process are illustrated in Figure 1 of Attachment 3. The prominent and pivotal role of a PoC in documenting requirements for observations and in contributing to the authorship of a SoG is evident, as is the role of a Coordinator in leading a team of PoCs in the authorship of a SoG.

The RRR process depends on input from each recognized Application Area regarding its requirements and priorities for observations. The PoC for each Application Area has the very important role of compiling input and feedback from the entire stakeholder community for that Application Area, developing a consensus view of their requirements for observations and documenting this in the OSCAR/Requirements database.

In the framework of the WMO Earth System approach, several Application Areas are grouped together in each of six Earth System Application Categories. The RRR process calls for the PoCs in each of these groupings to work together as a team of experts to prepare a SoG, under the leadership of a Coordinator. The SoG is essentially a gap analysis for that Earth System Application Category, with recommendations on how to address the gaps. The Coordinator is selected from amongst the group of PoCs and is the lead author of their SoG.

See Annex 1 to Attachment 3 for further details on the role of the PoCs and the Coordinators.

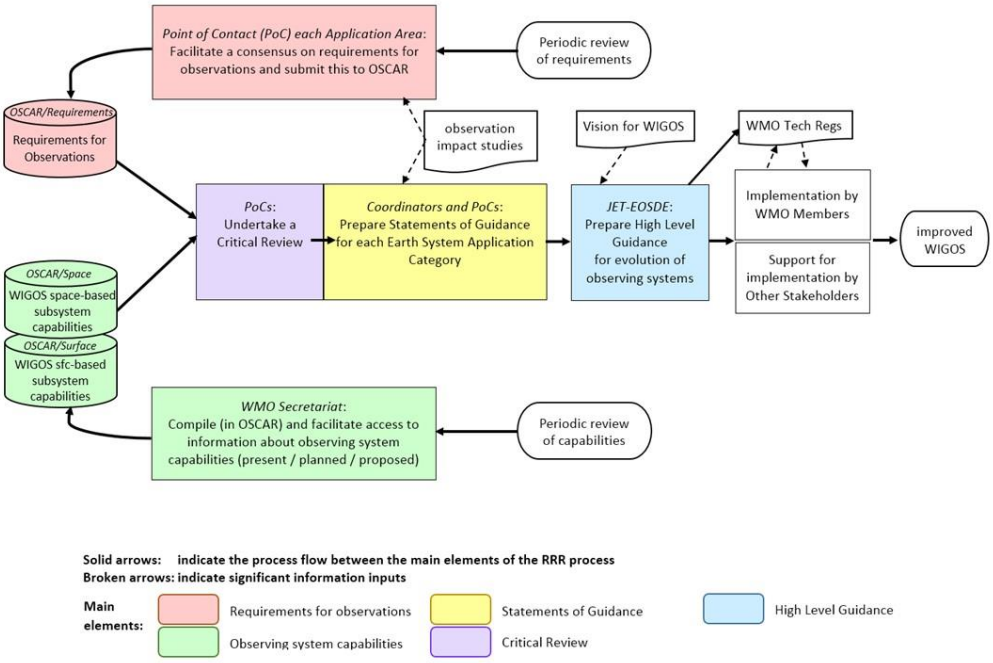

Figure 1 of Attachment 3. Main elements of the WMO RRR process (source: Requirements for observational data in the framework of the WMO Earth System Approach: the Rolling Review of Requirements).

3. COMMITMENT OF TIME

WMO relies on Member countries to nominate volunteer experts to carry out the work of constituent bodies such as Technical Commissions and their various expert teams and working groups. For such a nomination to be made depends on the expert's employer supporting them to commit the required amount of time to carry out the relevant role. The role of PoC requires a commitment of the equivalent of around 10 days each year. For those who take on the additional role of Coordinator the time commitment might roughly double.

It is also anticipated that the experts who are nominated are actively working in the relevant field, hence they will have the opportunity to gather information and develop their thoughts about the WMO tasks during the normal course of their regular work.

4. REPRESENTING AN APPLICATION AREA

For each Application Area there is a body which has ownership responsibility and authority. A list of Application Areas and their owners is shown in Annex I, however this list is undergoing changes and the online version should be consulted for up-to-date information, at: https://community.wmo.int/rolling-review-requirements-process

A PoC is a representative in the RRR process for the owner of their Application Area. After initially tasking you to perform the role of PoC for this Application Area they will also need to be satisfied with the consultation you have achieved across the relevant stakeholder community, to concur with all updates you propose for observations requirements in the OSCAR/Requirements database, and to concur with the material you include in the SoG for your Earth System domain. You should establish a clear mutual understanding with the owning body on how and when these interactions will occur.

5. FULFILLING THE POC AND COORDINATOR ROLES

This section expands on practical details of the PoC and Coordinator roles. Extended notes for the topics presented here are made in Annexes 2 to 9 to Attachment 3, including many spaces for each PoC and Coordinator to add your own notes about the specific contact details, information sources and activities relevant to you. In that way the Guide becomes specific to you, however there will also be value in sharing your notes with other PoCs/Coordinators and in particular your successor when in the future you eventually hand over the role. Similarly, a helpful source of practical advice for you is your predecessor in the role and other current and former PoCs/Coordinators across all Application Areas and Earth System Application Categories.

5.1 Work planning

The ongoing activities which constitute the RRR process are coordinated by the WMO Commission for Observation, Infrastructure and Information Systems (INFCOM) through its Joint Expert Team on Earth Observing System Design and Evolution (JET-EOSDE). Your activities will contribute as a component of the larger work plan of the JET-EOSDE.

The most important person to keep in touch with regarding your contribution to the RRR is the Chair of JET-EOSDE. Communication with the Chair, and understanding of the work of JET-EOSDE, can be facilitated by people in the WMO Secretariat who support the JET-EOSDE. A formal starting point is with the Head of the Observing Networks and Measurement Division of the Infrastructure Department.

It is useful to familiarize yourself with the work and meeting plans, as well as reports from previous meetings, of JET-EOSDE as they help to explain where your work fits in with other RRR activities and timelines.

Annex 2 to Attachment 3 provides further notes and spaces for you to add your own notes.

5.2 Communicating with your Application Area "owner"

As well as having good lines of communication with JET-EOSDE, it is important to maintain good communication with the body which has ownership responsibility for your Application Area. The details may differ between different bodies, but in general it is good to have contact with: the most senior expert heading the body, for example President or Chair of the relevant panel/ team/ committee; and the most relevant secretariat support person.

Annex 3 to Attachment 3 provides further notes and spaces for you to add your own notes.

5.3 Coordination amongst PoCs

Each Application Area is grouped with the other Application Areas in their Earth System Application Category, as explained in the RRR description in Section 2 above. The primary task that is undertaken by PoCs working as a team is preparation and submission of the SoG. One PoC in the team – identified as the Coordinator for that Earth System Application Category – is selected to coordinate this activity and to take responsibility as lead author, while others contribute as co-authors.

Whether you are the Coordinator or a co-author, you will need to collaborate actively with the other PoCs in your Earth System Application Category. Annex 4 to Attachment 3 provides further notes and spaces for you to add your own notes.

5.4 Consulting with Stakeholders

The RRR process depends on input from each Application Area regarding its requirements and priorities for observations. As the PoC for your Application Area, you have a very important role as the conduit to the RRR for input and feedback from your entire stakeholder community. Hence it is important to provide information to your stakeholder community on input and feedback processes, and to promote and maintain active and effective communication mechanisms.

The characteristics of each Application Area are different, however in broad terms you could consider mechanisms for consultation across your community of experts, with the body that owns this Application Area, and with relevant experts across WMO Technical Commissions and Regional Associations as well as the WMO Executive Council in relation to the Antarctic. Annex 5 to Attachment 3 provides further notes and spaces for you to add your own notes.

5.5 Assessing observation impact studies

JET-EOSDE encourages observation impact studies to be carried out and conducts a series of technical workshops on this topic. Each workshop provides an update on the latest understanding about the impact that various observing systems have on forecasts and other products generated by numerical prediction systems. Such information may contribute to your assessment of the optimum observations requirements for your Application Area, as well as the most important gaps to give priority to addressing.

Once you are familiar with the content and goals of these workshops, you might wish to propose scientific questions to be investigated that could assist your Application Area to enhance its understanding and description of its requirements for observations. Annex 6 to Attachment 3 provides further notes and spaces for you to add your own notes.

5.6 Compiling and Updating Requirements

A key result of your activities as PoC is the maintenance of an up-to-date record in the OSCAR/Requirements database of your Application Area's requirements for observations. Based on input from across the stakeholder community in your Application Area, any relevant guidance from Observations Impact Studies, and your own expert assessment, you will need to review the current requirements expressed in the OSCAR/Requirements database for your Application Area and enter your proposed updates to existing requirements and/or additions of new requirements.

This pre-supposes that you have a good familiarity with the details of existing requirements expressed by your Application Area and a good ability to navigate the Observing Systems Capability Analysis and Review Tool (OSCAR) database to investigate and update the contents of relevance to you. Further notes on this are provided in Annex 7 to Attachment 3. Also, some further explanation and general perspective on update procedures may be found in Annex IX (OSCAR UPDATING/MAINTENANCE PROCEDURE).

At a very practical level, instructions for entering proposed updates to Application Area requirements are provided for PoCs (referred to in the document as Focal Points) in a

Focal Point Manual: https://www.wmo-sat.info/oscar/files/OSCAR_Focal_Point_Manual.pdf

5.7 Completing the Statement of Guidance (SoG)

The other key result of your activities is the SoG for your Earth System Application Category, which is essentially a gap analysis (identifying requirements for observations which are not being met) with recommendations on priorities for addressing the gaps. A Statement of Guidance template provides informative guidance on what is required to be included in the document.

The SoG for your Earth System Application Category is drafted by a team consisting of the PoCs of each Application Area within that category, under the leadership of a Coordinator and is the lead author of the SoG. The Coordinator is either nominated by the Earth System Application Category Owner, or by default selected from, amongst the group of PoCs. In the past, each Application Area prepared its own SoG. The current approach is significantly different. There may be a settling-in period for all stakeholders to feel completely comfortable and confident with the new approach. Annex 8 to Attachment 3 provides further notes.

5.8 Further notes

As stated earlier, each PoC and Coordinator is encouraged to add your own notes about the specific contact details, information sources and activities that you have discovered that are useful to you in fulfilling this role. Annex 9 to Attachment 3 provides the space to encourage to record your notes for future reference.

ANNEX 1 TO ATTACHMENT 3. ROLE OF THE POINTS OF CONTACT (POC) FOR APPLICATION AREAS, AND COORDINATORS FOR EARTH SYSTEM APPLICATION CATEGORIES

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.

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.

The timelines and deadlines for the activities of PoCs and Coordinators will be determined to support the work plans of the INFCOM JET-EOSDE. However, as a general rule, once in each 4-yearly planning cycle of the WMO:

(a) the complete set of observational requirements of the Application Area is to be reviewed and, where relevant, updated; and

(b) a complete review and re-submission of the SoG is to be undertaken.

ANNEX 2 TO ATTACHMENT 3.
POC AND COORDINATOR ROLES: WORK PLANNING

As outlined in Section 5.1, the most important person to keep in touch with regarding your contribution to the RRR is the Chair of JET-EOSDE.

Contact details (each PoC may enter and maintain these details for their own reference):

Name: …….

Email: …….

Phone: …….

Communication with the Chair, and understanding of the work of JET-EOSDE, can be facilitated by people in the WMO Secretariat who support the JET-EOSDE. A formal starting point is with the Head of the Observing Networks and Measurement Division of the Infrastructure Department:

Contact details (each PoC may enter and maintain these details for their own reference):

Name: …….

Email: …….

Phone: …….

It is useful to familiarize with the work and meeting plans, as well as reports from previous meetings, of JET-EOSDE as they help to explain where your work fits in with other RRR activities and timelines.

A general entry point to relevant information is the GOS page at:
https://community.wmo.int/activity-areas/global-observing-system-gos

Note however that the WMO web pages have been going through a transition from the old site:
https://old.wmo.int/extranet/pages/index_en.html

to the new site:
https://public.wmo.int/en

As a result, some relevant material might not currently be easy to find or access.

New entry points to relevant information include the Commission for Observation, Infrastructure and Information Systems (INFCOM) page at:
https://community.wmo.int/governance/commission-membership/commission-observation-infrastructure-and-information-systems-infcom

Specific pages of relevance under that page include the Standing Committee on Earth Observing Systems and Monitoring Networks (SC-ON) page:
https://community.wmo.int/governance/commission-membership/commission-observation-infrastructure-and-information-systems-infcom/commission-infrastructure-officers/infcom-

management-group/standing-committee-earth-observing-systems-and-monitoring-networks-sc

And the JET-EOSDE page at:
https://community.wmo.int/governance/commission-membership/commission-observation-infrastructure-and-information-systems-infcom/commission-infrastructure-officers/infcom-management-group/standing-committee-earth-observing-systems-and-monitoring-networks-sc/joint-expert-team-earth

Past meeting reports can be found online at:

[to be clarified ……..]

Or they can be otherwise obtained from:

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The work plans of JET-EOSDE can be found online at:

[to be clarified ……..]

Or they can be otherwise obtained from:

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Future meeting plans can be found online at:

[to be clarified ……..]

Or they can be otherwise obtained from:

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ANNEX 3 TO ATTACHMENT 3. POC AND COORDINATOR ROLES: COMMUNICATING WITH YOUR APPLICATION AREA "OWNER"

As outlined in Section 5.2, as well as having good lines of communication with JET-EOSDE, it is important to maintain good communication with the body which has ownership responsibility for your Application Area. The details may differ between different bodies, but in general it is good to have contact with:

(a) The most senior expert heading the body, for example President or Chair of the relevant panel/ team/ committee:

Contact details (each PoC may enter and maintain these details for their own reference):

Name: …….

Email: …….

Phone: …….

Other experts with delegated authority to liaise with you on behalf of the owning body:

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Meeting and/or reporting arrangements requiring your input:

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The most relevant secretariat support person:

Contact details (each PoC may enter and maintain these details for their own reference):

Name: …….

Email: …….

Phone: …….

ANNEX 4 TO ATTACHMENT 3.
POC AND COORDINATOR ROLES: COORDINATION AMONGST POCS

As outlined in Section 5.3, each Application Area is grouped with the other Application Areas that are active in the same Earth System Application Category. The primary task that is undertaken as a team with the other PoCs is preparation and submission of the SoG. One PoC in the team – identified as the Coordinator for that Earth System Application Category – is selected to coordinate this activity and to take responsibility as lead author, while others contribute as co-authors.

Whether you are the Coordinator or a co-author, you will need to collaborate actively with the other PoCs in your Earth System Application Category as listed in this table (each PoC may enter and maintain these details for their own reference):

Application Area: ………………………… *PoC Contact details:* Name: ………………………… Email: ………………………… Phone: …………………………	Application Area: ………………………… *PoC Contact details:* Name: ………………………… Email: ………………………… Phone: …………………………
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Application Area: ………………………… *PoC Contact details:* Name: ………………………… Email: ………………………… Phone: …………………………	Application Area: ………………………… *PoC Contact details:* Name: ………………………… Email: ………………………… Phone: …………………………

The most critical collaboration is with the Coordinator for your Earth System Application Category grouping:

Contact details (each PoC may enter and maintain these details for their own reference):

Name: …….

Email: …….

Phone: …….

Each grouping is different in size and characteristics so is likely to have different working arrangements:

Working arrangements for my Earth System Application Category:

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ANNEX 5 TO ATTACHMENT 3.
POC AND COORDINATOR ROLES: CONSULTING WITH STAKEHOLDERS

As outlined in Section 5.4, the RRR process depends on input from each Application Area regarding its requirements and priorities for observations. As the PoC for your Application Area, you have a very important role as the conduit to the RRR for input and feedback from your entire stakeholder community. The characteristics of each Application Area are different, however in broad terms you could consider:

Mechanisms for consultation across your application community of expertise, such as meetings, conferences and personal contacts:

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Mechanisms for consultation within the body that owns this Application Area, such as working groups / expert teams, meetings, conferences and personal contacts associated with that body:

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Mechanisms for consultation within the WMO, further to the above, with relevant experts across Technical Commissions and Regional Associations as well as the WMO Executive Council in relation to the Antarctic, through working groups / expert teams, meetings, conferences and personal contacts:

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Working structures and other information such as meeting reports, work plans, and future meeting plans can be found online for:

WMO Technical Commissions and their subsidiary bodies:
https://community.wmo.int/governance/commission-membership

WMO Regional Associations, online here:
https://community.wmo.int/governance/regional-association

That page provides links to each of the six Regional Associations:

(a) WMO

Regional Association III (South America);

(b) WMO Regional Association I (Africa);

WMO Regional Association II (Asia);

WMO Regional Association IV (North America, Central America and the Caribbean);

WMO Regional Association V (South-West Pacific); and

WMO Regional Association VI (Europe).

You should also consider the WMO Executive Council in relation to the Antarctic.

ANNEX 6 TO ATTACHMENT 3.
POC AND COORDINATOR ROLES: ASSESSING OBSERVATION IMPACT STUDIES

As outlined in Section 5.5, JET-EOSDE encourages observation impact studies to be carried out and conducts a series of technical workshops on this topic. Each workshop provides an update on the latest understanding about the impact that various observing systems have on numerical models. Such information may contribute to your assessment of the optimum observations requirements for your Application Area, as well as the most important gaps to give priority to addressing.

You will see plans for future conferences within meeting reports and plans of the JET-EOSDE. The most recent workshop was:

> *Scoping Workshop on Future Activities to Assess Impact of Various Observing Systems on Earth System Prediction, Geneva, 9-11 December 2019*

The series of WMO Workshop on the Impact of Various Observing Systems on Numerical Weather Prediction is also of interest:

(a) Seventh Workshop, Geneva, 30 November – 3 December 2020;

Sixth Workshop, Shanghai, China, 10 – 13 May 2016;

Fifth Workshop, Sedona, Arizona (USA), 22-25 May 2012;

Fourth Workshop, Geneva, 19-21 May 2008;

Third Workshop, Alpbach, Austria, 9-12 March 2004.

Once you are familiar with the content and goals of these workshops, you might wish to propose scientific questions that could assist your Application Area to enhance its understanding and description of its requirements for observations.

Further notes about these workshops in general or specific studies of relevance to the use of observations in your Application Area:

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ANNEX 7 TO ATTACHMENT 3. POC AND COORDINATOR ROLES: COMPILING AND UPDATING REQUIREMENTS

As outlined in Section 5.6, a key result of your activities as PoC is the maintenance of an up-to-date record in the OSCAR/Requirements database of your Application Area's requirements for observations. In addition to building on your consultation, analysis and expertise to develop your proposed updates to the requirements, you will also need a good ability to navigate the Observing Systems Capability Analysis and Review Tool (OSCAR) database to investigate and update the contents of relevance to you.

The OSCAR database home page is at: https://space.oscar.wmo.int/

The home page provides the summary Figure shown below, an overview description of OSCAR and a link to further explanation in the OSCAR User Manual at: OSCAR User Manual

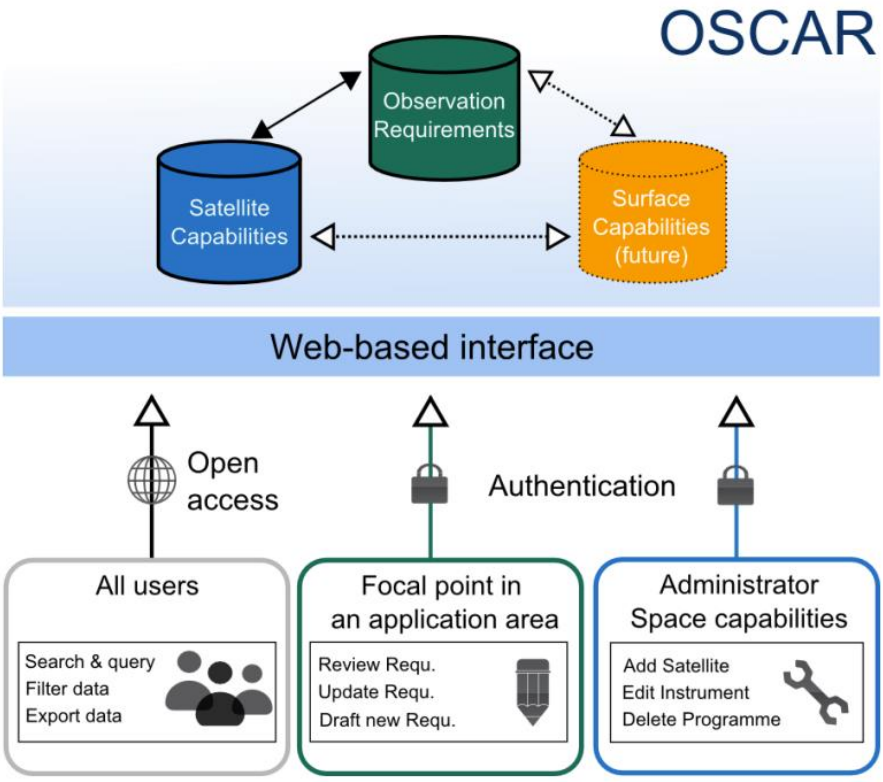

Figure 2 of Attachment 3. Basic Structure of OSCAR and examples of access

The User Manual concentrates on the open access aspects of OSCAR, however it also provides a link to a further document containing information specifically relevant to you as PoC (referred to in the document as Focal Point): https://www.wmo-sat.info/oscar/files/OSCAR_Focal_Point_Manual.pdf

The Focal Point Manual explains how to edit existing requirements and how the enter new requirements. It is also possible to request the addition of new variables to the database – you will need to define various attributes of the variable as part of your request.

ANNEX 8 TO ATTACHMENT 3. POC AND COORDINATOR ROLES: COMPLETING THE STATEMENT OF GUIDANCE (SOG)

As outlined in Section 5.7, the other key result of your activities is the SoG for your Earth System Application Category, which is essentially a gap analysis (identifying requirements for observations which are not being met) with recommendations on priorities for addressing the gaps.

A Statement of Guidance template provides informative guidance on what is required to be included in the document. The template is available online at: [hyperlink to be provided once approved and available online; for the time being, it is available in Attachment 1 of this document]

Existing versions of SoGs are available online on the RRR web page; scroll down to find the SoG table:
https://community.wmo.int/rolling-review-requirements-process

When reviewing the existing versions, keep in mind that the new Earth System Application Category approach is significantly different from the previous approach.

ANNEX 9 TO ATTACHMENT 3. POC AND COORDINATOR ROLES: FURTHER NOTES

In your role as PoC and, if applicable, Coordinator, you are encouraged to document for future reference your own additional notes about the specific contact details, information sources and activities that you have discovered that are useful to you in fulfilling this role.

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