

SOOS 2023 Performance Report

SOOS developed a Science and Implementation Plan for 2021-2025 which articulates the scientific priorities for SOOS through identification of key gaps in the observational network and by identifying the priorities in addressing these gaps. The plan has an emphasis on the capabilities required to support data collection and delivery, and the objectives and actions that SOOS will implement. The plan was developed by the SOOS community with extensive input from the broader Southern Ocean community. The [SOOS 2021-2025 Science and Implementation Plan](#) underwent an international, independent review coordinated by SOOS' governing bodies, the Scientific Committee for Antarctic Research (SCAR) and Scientific Committee for Oceanic Research (SCOR) and was approved in June 2022.

Incorporated in the SOOS 2021-2025 Science and Implementation Plan is a 5-Year Strategic Plan with five Objectives that combined will deliver the SOOS mission. Within each objective there are several Implementation Actions that indicate more specifically how these objectives will be achieved. The full and detailed SOOS 5-Year Strategic Plan is available [here](#).

The progress against SOOS' Objectives and Implementation Actions are outlined in the table below.

The table below shows the progress against the SOOS Objectives and Implementation Actions for the year 2023. The status of the Implementation Action is shown as: **Achieved**; **In progress**; **Not yet started**; **Ongoing activity**; **No longer a priority**. All acronyms can be found in Appendix I.

	Comments on 2023 actions	Implementers
Objective 1: Develop and coordinate inclusive and collaborative networks for shared knowledge, enhanced observational capability and data collection, management and delivery		
Coordination of regional networks	<p>In 2023 all RWGs were active, maintained active leadership teams and had growths in members between 10-20 members each. All RWGs also recruited new APECS Representatives which commenced in late 2023 or early 2024. All RWGs began planning the rotation and recruitment of leadership team members for 2024.</p> <p>All RWGs were active during the SOOS Symposium including convening sessions and holding open working group lunch meetings. Additionally, most RWGs are current drafting a paper to contribute to the SOOS Symposium Special Issue being released in Elementa in early 2025.</p> <p>The Ross Sea RWG were particularly active in 2023 convening the 4th International Ross Sea Symposium held in July in Naples. The Symposium was attended by 100 people and a special issue in Deep Sea Research II is now being coordinated as an output from the Symposium.</p> <p>The Ross Sea RWG also commenced a bi-monthly Ross Sea online presentation session in late 2023 which is continuing into 2024. SOIS begun planning the establishment of a webinar series which commenced in early 2024. Some RWGs continued to release regular newsletters including ABS and SOIS to their membership teams to provide updates on activities within their regions and upcoming opportunities of relevance. WSDML continue to coordinate a special issue in Copernicus to be released in 2024 and begun planning for a 2024 online WSDML workshop.</p> <p>RWG leadership team members actively represented SOOS at international meetings, conferences and workshops including a representation UNFCCC COP28, SCAR Biology Symposium, the New Zealand – Australia Antarctic Science Conference, the INSTANT Conference and a Ross Sea RWG</p>	<p>SOOS: RWGs</p> <p>Community: SCAR, APECS, IUGG, International Cryosphere Initiative (ICCI), Biogeochemical Exchange Processes at Sea-Ice Interfaces (BEPSII)</p>

	<p>convened session at International Union of Geodesy and Geophysics (IUGG) General Assembly 2023.</p>	
<p>Coordination of networks to enhance observational capacity at any point in the value chain</p>	<p>In 2023 all CWGs and TTs were active, maintained active leadership teams and had growths in membership. SOFLUX recruited a new co-chair Iole Orselli, and OSD and SOFLUX recruited new APECS Representatives in late 2023/early 2024.</p> <p>All CWGs and TTs were active at the SOOS Symposium convening side-workshops, parallel sessions, plenary presentations and/or holding open lunch meetings.</p> <p>Other highlights of SOOS CWGs and Task Teams in 2023 include:</p> <ul style="list-style-type: none"> - CAPS Publication, Record low 2022 Antarctic sea ice led to catastrophic breeding failure of emperor penguins (Fretwell et al., 2023) - Continuation of SOFLUX monthly newsletters and regular webinars (4 in 2023) - Continuation of the OSD online mini workshops (5 in 2023) 	<p>SOOS: CWGs and Task Teams Community: OASIS, SCAR, AniBOS</p>
<p>Integrate and engage between and across relevant programmes, organisations, and institutes to leverage and enhance impact of the SOOS programme as a whole</p>	<p>In 2023, SOOS convened its first large international conference, the SOOS Symposium 2023 held from the 14th to 18th August 2023 in Hobart, Australia. The Symposium centred around the theme, “Southern Ocean in a Changing World”, and eight topics which incorporated a wide spectrum of Southern Ocean research. The Symposium was attended by 300 researchers from 25 nations for a week of plenary presentations, parallel sessions and workshops. In light of the escalating climate crisis, a community statement calling for an urgent expansion of Southern Ocean observations was released. This statement was translated into 12 languages and the full media release into 6. The statement and associated media release and media conference received wide attention including being the focus of over 40 media products (print, radio and TV) across Australia, New Zealand, Europe, North and South America. See the SOOS Symposium 2023 Report for further detail.</p> <p>SOOS was represented at international meetings, conferences and workshops including UNFCCC COP28, Australian Sustainable Ocean Plan workshops, Australian Centre of Excellence in Antarctic Science (ACEAS) 2023 Annual</p>	<p>Community: UN Ocean Decade, UN, SCAR, SCOR, CCAMLR, Tasmanian Polar Network, ACEAS, WCRP, FURG, IUGG, IPY, Geoscience Australia, WMO, WWRP, IOC, IODE</p>

	<p>Research Forum, World Climate Research Programme (WCRP) Open Science Conference, the Antarctic & Southern Ocean Mission Integrator (ASOMI) Workshop, SCOR Annual Meeting, Commission for the Conservation of Antarctic Marine Living Resources (CCAMLR), Universidad Federal do Rio Grande (FURG) Internationalisation Event, SCAR Executive Committee Meeting, SCAR INSTANT Conference, CCAMLR Climate Change Workshop, SCAR Biology Symposium, the New Zealand – Australia Antarctic Conference, IUGG 2023, Ocean Data Week, International Polar Year Planning (IPY) meetings, Third Special Meeting of CCAMLR on MPAs, Digital Earth Antarctica consultation meetings, World Meteorological Organisation (WMO) World Weather Research Programme (WWRP) Polar Research Project Stakeholder discussions, Business France delegation business meetings, 27th session of the International Oceanographic Commission (IOC) Committee on International Oceanographic Data and Information Exchange (IODE) meeting (IODC2-IODE27), Polar Data Forum V, Tasmanian Polar Network meetings and SCAR Standing Committee on Antarctic Data Management meetings.</p> <p>UN Ocean Decade: SOOS is a key partner in the Southern Ocean UN Ocean Decade Southern Ocean Task Force which has now formed the UN Ocean Decade Collaboration Centre for the Southern Ocean Region hosted by SCAR. The SOOS SOFLUX CWG is a UN Decade Action, and SOOS strongly engaged with the newly approved UN Ocean Decade, Antarctica InSync.</p>	
<p>Build an effective, networked community of data managers</p>	<p>The SOOS DMSC continued to be active through 2023. The DMSC has 23 members from 22 institutions across 13 nations. The DMSC have faced significant challenges in 2023 with the instability in the SOOS Data Officer position. Francesco Misurale was been appointed as a new DMSC Co-Chair in October 2023 and contributed significantly to redevelopment of the SOOSmap, V2. Unfortunately, Francesco has now moved to a new position outside of the Southern Ocean community. Antonio Novellino stepped forward and has been approved by both the DMSC and EXCOM as a Co-Chair and appointed in March 2024.</p> <p>In 2023, a number of DMSC-related activities took place:</p> <ol style="list-style-type: none"> 1. The SOOSmap, Version2, has been further developed and officially launched at the IODC2-IODE27 meeting (see under Objective 4). 	<p>SOOS: DMSC</p> <p>SOOS Partnerships and Collaborations: POLDER</p> <p>Community: BELSPO, Arctic Data Committee, SCADM, EMODnet, European Polar Board, AAD, WoRMS, GBIF, OBIS, IODE, IOC</p>

		<ol style="list-style-type: none"> 2. DMSC members were represented at a number of international meetings and workshops including IODC2-IODE27, Polar Data Forum V, SCAR Standing Committee on Antarctic Data Management meetings and Polar Semantics Working Group. 3. DMSC members were actively engaged in the SOOS Symposium including co-convening side-workshops, plenary presentation, parallel sessions and a data helpdesk/data surgery that ran during the Symposium. 4. DMSC members annual meeting took place in August 2023, Hobart, run as a hybrid. This was followed by a joint SSC-DMSC session. Another DMSC meeting, run online, was organised in March 2024. 	
<p>Actively review and reflect on networking processes, activities, and structures to ensure that they are equitable, diverse and inclusive (EDI)</p>		<p>The SOOS Equity Diversity and Inclusion (EDI) Group continued to be active in 2023 developing a Terms of Reference for the group and being actively involved in the SOOS Symposium. The EDI Group coordinated an EDI plenary presentation, the development of a Symposium Code of Conduct and implementation and a pilot hybrid which ran through the Symposium. This pilot hybrid included live streaming of pre-defined parallel sessions and daily Symposium summaries. See the SOOS Symposium 2023 EDI Report for further detail.</p>	<p>SOOS: EDI Group</p>
<p>Build Southern Ocean community capacity, including early career development and support for new and emerging national programmes</p>		<p>All SOOS RWGs maintained active APECS Representatives as part of their leadership teams this included recruitment of new APECS Representatives in all RWGs and most CWGs in 2023 who commenced in late 2023 or early 2024. Additionally, SOOS has a further 382 early career members.</p> <p>SOOS had a number of early career activities at the SOOS Symposium including a mentoring program which ran during the Symposium as well as an ECR networking event and ice-breaker tags to be added to Symposium name badges which was instigated and organised by the local ECR organising committee.</p> <p>SOOS maintained the SOOS-Swedish Southern Ocean Network.</p> <p>SOOS endorsed 8 projects.</p>	<p>SOOS: RWGs, CWGs, SSC, DMSC, EDI Group, SOOS-Swedish Southern Ocean Network</p> <p>Community: SCAR, APECS, UN Ocean Decade.</p>

Objective 2: Address gaps and inefficiencies in our ability to collect, deliver, use sustained observations

<p>Support and lead efforts to better integrate modelling and observational efforts, including observing system design (OSD) elements such as Observing System Simulation Experiments (OSSEs) and Essential Ocean Variable (EOV) identification</p>	<p>SOOS collaborated on a BELSPO proposal for funding to further the development and facilitation of data products based on Essential Biodiversity Variables, Essential Ocean Variables, Essential Climate Variables and ecosystem Essential Ocean Variables. This proposal was successful and an expert, hybrid workshop (Biodiversity.aq/SOOS EG-ABI Essential Variables Workshop) was held prior to the SOOS Symposium with the aims to: create an inventory of essential variables, identify data requirements and gaps for calculating these essential variables, prioritise essential variables, identify existing workflows and tools, and develop a framework for developing the workflows required to turn public Southern Ocean biodiversity data into relevant essential variables.</p>	<p>SOOS: OSD CWG</p> <p>Community: BELSPO, AAD, EMODnet, WoRMS, GBIF, OBIS</p>
<p>Support and lead efforts to advance observing system and data sharing technologies (hardware, software) and methods</p>	<p>The CAPS CWG continued working on refining AI, other machine learning algorithms for automated counting and trialling the use of SAR imagery but these are not at a stage to be shared through an open repository (e.g., GitHub) yet. Results are being fed into the ATCM and CCAMLR via working papers.</p>	<p>SOOS: CAPS CWG</p> <p>Community: IWC, GOOS, European Space Agency, ATCM, CCAMLR</p>
<p>Support and lead efforts to agree, document, advocate for and implement best practice, in both science and data</p>	<p>The POLDER Group developed a Best Practice Guide to implementing schema.org for data discovery. This was published in May 2023 and accepted by Ocean Best Practices in June 2023.</p>	<p>SOOS Partnerships and Collaborations: POLDER</p> <p>Community: SCADM, ADC</p>
<p>Identify gaps and opportunities across the foundational capabilities and support efforts to address them</p>	<p>In 2023 the SOOS RWGs developed draft maps of observational coverage for SOOS’ Key Science Challenges (more below under Objective 3).</p> <p>SOOS also continued discussions with the Global Ocean Acidification Observing Network (GOA-ON) on developing a joint SOOS/GOA-ON ocean acidification collaborative hub for the Southern Ocean. The establishment of the hub is expected in 2023.</p> <p>As part of the SOOS Symposium, an entire half-day plenary with presentations and panel discussions focused on the “Gaps and next steps for the Southern Ocean observing system”.</p>	<p>Community: GOA-ON</p>

Objective 3: Identify the spatio-temporal and thematic requirements of observations needed to address the science themes; identify existing coverage and work to maintain it; and address identified gaps.

<p>Map the geographic distribution of theme challenges to understand their regional importance, existing data coverage and the national/international effort to address them</p>	<p>All RWGs have defined sub-regions for their sector and worked through 2022 and 2023 to understand the regional importance of theme challenges, their existing data coverage and the national/international effort to address them. The development of heatmaps to present this work was developed in 2022 and 2023 for publication in 2024.</p>	<p>SOOS: RWGs</p>
<p>Develop a regional understanding of stakeholder requirements and data priorities for data pertaining to the theme challenges</p>	<p>This work will be completed through the stakeholder engagement surveys completed through 2024.</p>	<p>SOOS: RWGs</p>
<p>Develop and utilise a system for identification of observational coverage and requirements</p>	<p>The SOOS International Project Office (IPO) has developed a system to produce heatmaps of RWG sub-regions with the regional importance of SOOS' Science Themes and Challenges as well as observational coverage. Draft maps were developed in 2023 which are currently being finalised and will be sent out via a community survey for feedback before being finalised in late 2024.</p>	<p>SOOS: RWGs</p>
<p>Enhance logistical collaborations to ensure sustained data coverage</p>	<p>Support and population of SOOS' Database of Upcoming Expeditions, DueSouth continued through 2023 supported by the European Polar Board who hosts and maintains the polar infrastructural database, Polardex which includes DueSouth. The upcoming planned routes to the Southern Ocean component of Polardex is SOOS' DueSouth database. Additionally, SOOS has been working to update information on field facilitates, vessels and aircraft for the Southern Ocean within Polardex.</p> <p>An automated connection between DueSouth and IAATO's database of planned tourist cruises was launched 2022 and continued in 2023. Information on over 500 planned routes is now available through DueSouth with Southern Ocean/Antarctic planned route information provided by the SOOS community, CCAMLR, OceanOps, COMNAP and IAATO as well as some planned route information discovered and entered by the SOOS IPO.</p>	<p>SOOS: DMSC, RWGs, CWGs, TTs</p> <p>Community: AADC, COMNAP, CCAMLR, OceanOps, European Polar Board, IAATO</p>
<p>Support and advocate for efforts to collect, deliver and use observational data</p>	<p>See above for SOOS representation at international meetings, workshops and conferences, and the number of projects SOOS endorsed in 2023.</p>	<p>SOOS: Ross Sea RWG, SOIS RWG, SOFLUX CWG, DMSC</p>

	<p>SOOS contributed to a BELSPO funded project and workshop in 2023, see above for further detail.</p> <p>SOOS held its inaugural SOOS Symposium was held in August 2023, see below for further detail.</p>	<p>Community: BELSPO, AAD, EMODnet, WoRMS, GBIF, OBIS, OC, IODE, IUGG, ICCI, BEPSII</p>
Objective 4: Deliver high-quality scientific data, synthesis activities/products and knowledge that are needed to deliver our mission		
<p>Delivery of publications (scientific, strategic, data) that provide scientific knowledge towards addressing the science themes, enhancing observational capabilities, or delivering directly to policy and management</p>	<p>Pezzi, L., Beadling, R., du Plessis, M., Gille, S., Josey, S.A., Shi, J.-R., Santini, M., Souza, E., MacGilchrist, G., and Schultz, C. (2023). Southern Ocean [in "State of the Climate in 2022"]. <i>Bull. Amer. Meteor. Soc.</i>, 104 (9), S322-S365. DOI: https://doi.org/10.1175/BAMS-D-23-0077.1</p> <p>Janseen, A.R, Bricher, P., Payne, K., Badhe, R., Biebow, N., et al., 2023. Polar Data Forium IV – An Ocean of Opportunities. <i>Data Science Journal</i> 22:18, pp 1-13. DOI: https://doi.org/10.5334/dsj-2023-018</p> <p>Fretwell, P., Boutet, A., and Ratcliff, N. 2023. Record low 2022 Antarctic sea ice led to catastrophic breeding failure of emperor penguins. <i>Communications Earth & Environment</i> 4, pp 273. DOI: https://doi.org/10.1038/s43247-023-00927-x</p> <p>Bricher, P., Verhey, C., Duerr, R., Ingram, R., Pulsifer, P., Collins, J., et al., 2023. POLDER best practice guide to implementing schema.org for data discovery, Version 1.0. Zenodo. DOI: https://doi.org/10.5281/zenodo.7787161</p>	<p>SOOS: DMSC, CAPS CWG</p> <p>SOOS Partnerships and Collaborations: Southern Ocean Task Force</p> <p>Community: SCAR, UN Ocean Decade, SCADM and broad community input.</p>
<p>Populate SOOSmap with high-priority standardised datasets that are required to address the science themes and encourage broader use of SOOSmap by Southern Ocean researchers</p>	<p>In 2023, EMODnet Physics and DMSC members provided feedback on the portal functionality and content as part of a development sprint before the official SOOSmap, Version 2, launch at the IODC2-IODE27 meeting. Another brief review of the portal metadata has been done by the SOOS IPO in November 2023, this feedback and a deep review is currently underway.</p> <p>Briefly, the latest SOOSmap development included:</p> <ol style="list-style-type: none"> 1. new interface and new filtering features 2. improved data federation and metadata presentation 3. improved data download features 4. management of in situ, remote sensing and model output on the same interface 	<p>SOOS: DMSC</p> <p>Community: EMODnet Physics, SO-CHIC and the broad Southern Ocean data community and providers</p>

<p>Enhance FAIR data management and delivery through the use and linkage of existing tools and networks, and assist in connecting resource needs</p>	<p>Continued support of the NASA EarthData Search (formerly the GCMD). The SOOS metadata portal contains 9,258 records, largely from National Antarctic Data Centres and NASA’s satellite programmes (an increase of 1,629 from 2022). The portal was visited by 356 users viewing 3.839 pages. In 2023, the portal developments included a new International Directory Network (IDN) home page, NASA’s Common Metadata Repository (CMR) which makes an HTML view of each metadata record available for indexing by Google Dataset Search and improvements to the keyword status. Participants are encouraged to visit the GCMD Keyword Forum for the latest news and discussion on keywords.</p> <p>POLDER (a joint project between SOOS, SCADM and ADC) in 2023 published the Best Practice Guide to implementing schema.org for data discovery, four online data hacks in the “Polar to Global Online Interoperability and Data Sharing Workshop Series” and 2 workshops to help repositories complete the POLDER recommended schema.org. The “Polar Federated Search” was rebranded to the “Polar Data Search” to be more intuitive for non-data management users (URL has remained the same: https://search.polder.info). The portal now includes 25 repositories (6 new added in 2023) and a new and improved “About” page.</p>	<p>SOOS: DMSC</p> <p>SOOS Contributions and Collaborations: POLDER</p> <p>Community: NASA, SCADM, ADC</p>
<p>Ensure SOOS data activities align with a clear data policy that is itself, aligned with the FAIR data principles of the Findable, Accessible, Interoperable and Reusable and with data policy of other polar communities</p>	<p>SOOS Data Policy (https://doi.org/10.5281/zenodo.6041433) released in 2022 continues to be implemented.</p>	<p>SOOS: DMSC</p>
<p>Objective 5: Maintain SOOS as the world-leading hub to support the collection and delivery of Southern Ocean observations</p>		
<p>Reporting metrics and information are collected, compiled and delivered to stakeholders as required</p>	<p>In 2023 SOOS reported to SCAR, SCOR, CCAMLR, the SOOS Hobart Partners (IMAS/UTAS, CSIRO, Tasmanian Government), Scientific and Technological Research Council of Turkey Marmara Research Centre Polar Research Institute, Antarctica New Zealand, the Swedish Polar Research Secretariat, University of Cape Town’s Biogeochemistry Lab and the UK National Committee on Antarctic Research.</p>	<p>SOOS: IPO, EXCOM</p> <p>Community: SCAR, SCOR, CCAMLR, IMAS/UTAS, CSIRO, Tasmanian Government, Scientific and Technological Research Council of Turkey Marmara Research Centre Polar Research Institute, Antarctica New Zealand and the Swedish Polar Research Secretariat, UK National</p>

		Committee on Antarctic Research, University of Cape Town's Biogeochemistry Lab
The SOOS communication and engagement strategy is kept up-to-date and implemented	<p>The SOOS IPO developed a SOOS Engagement and Communications Strategy in 2023, to be finalised in early 2024.</p> <p>SOOS produced four issues of the SOOS Newsletter (April, July, September, December), maintained the SOOS website and SOOS' social media accounts (Facebook and Twitter) as well as establishing a SOOS LinkedIn account. The reach of the SOOS Update Newsletter grew to 790 recipients in December (an increase of over 100 since 2022). Engagement in the SOOS Twitter and Facebook accounts also grew with 2,981 (a growth of 147 in 2023) and 1,993 (growth of 301 in 2023) followers, respectively.</p> <p>See above for SOOS representation at international meetings, workshops and conferences in 2023.</p>	SOOS: IPO, all SOOS community
Funding for the SOOS IPO is maintained and enhanced	<p>The core SOOS IPO sponsoring partnership continued in 2023 with continued sponsorship from IMAS/UTAS, CSIRO and Tasmanian Government, and hosting provided by IMAS/UTAS. During 2023 there was much discussion on the ongoing sponsorship beyond 2023 with this partnership and potential new partners. Another single year agreement for the core SOOS IPO sponsorship and hosting was agreed in late 2023 with contributions from IMAS/UTAS, CSIRO and the Tasmanian State Government as well as new partners, the Australian Antarctic Program Partnership (AAPP) and the Australian Antarctic Division. Discussions continue for a longer-term agreement for 2025 and beyond.</p> <p>SOOS' international sponsorship agreements continued with the Swedish Polar Research Secretariat, Antarctica New Zealand, the University of Cape Town's Marine Biogeochemistry Lab, the Scientific and Technological Research Council of Turkey Marmara Research Centre Polar Research Institute and OCEAN:ICE, Horizon Europe project.</p>	<p>SOOS: IPO, EXCOM</p> <p>Community: IMAS/UTAS, CSIRO, Tasmanian Government, AAPP, Australian Antarctic Division, Swedish Polar Research Secretariat, Antarctica New Zealand, State Oceanic Administration, University of Cape Town, Scientific and Technological Research Council of Turkey Marmara Research Centre Polar Research Institute, OCEAN:ICE</p>
SOOS governance is managed and maintained	<p>SOOS' governance structure was maintained during 2023 although there were some challenges in recruitment and retention of SOOS EXCOM members. SOOS Vice Chair, Sebastien Moreau, stood down from his EXCOM position in late 2023 and no new EXCOM nominations were received in the September nomination round. Eileen Hofmann remained on EXCOM till the end of 2023</p>	<p>SOOS: IPO, EXCOM</p> <p>Community: SCAR and SCOR</p>

		and Irene Schloss rotated to co-chair at the start of 2024 (9 months early). A new Vice Chair was appointed in early 2024, Wolfgang Rack, and the recruitment of a second Vice Chair is ongoing. Three new SSC members were appointed, Nicole Hill, Alexander Haumann and Mohammed Adjou. All SOOS working groups also maintained their leadership structures.	
Implementation Plan objectives are coordinated and support		SOOS developed a Science and Implementation Plan for 2021-2025 which was submitted to SCAR and SCOR in 2021. The plan underwent an international, independent review coordinated by SCAR and SCOR, and was approved and published in June 2022. All 25 Implementation Actions were commenced by the end of 2022 and work continued on these Actions in 2023.	SOOS: IPO, broad SOOS community Community: SCAR and SCOR, broad Southern Ocean community
SOOS International Project Office administration and management is carried out efficiently and effectively		The SOOS IPO staff had significant staff challenges in 2023 with instability in the SOOS Data Officer. The Data Officer role remains vacant whilst a longer-term core SOOS IPO sponsorship and hosting agreement is finalised to allow for the recruitment of a suitable SOOS Data Officer with a multi-year contract. The SOOS Executive Officer, Alyce Hancock, was on maternity leave from October 2022 to May 2023 with the position filled by Lavenia Ratnarajah during Alyce's maternity leave. The SOOS Science and Communications Officer position continued to be filled by Julia Bach throughout 2023. All SOOS IPO activities continued through 2023, with some delays due to the staff challenges. SOOS' finances continued to be administered.	SOOS: IPO Community: IMAS/UTAS