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1. Introduction

1.1 ESO, an intergovernmental organisation

ESO, the European Organisation for Astronomical Research in the Southern Hemisphere, or, with a shorter version of the name, the European Southern Observatory, is an intergovernmental science and technology organisation in astronomy, established under international public law in 1962. ESO currently has fifteen¹ Member States²: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Italy, Netherlands, Poland, Portugal, Spain, Sweden, Switzerland, and the United Kingdom. Australia is a Strategic Partner of ESO. Chile is the host state of the ESO Observatories, while the ESO Headquarters are hosted by Germany.

The Member States exercise their general oversight role via the ESO Council³, which is the governing body of ESO. The financial oversight is conducted via the Finance Committee³, which reports to Council. Additionally, the Member States via the Scientific Technical Committee³ advise Council and the Director General⁴ (DG) on technical and scientific aspects.

1.2 ESO's mission

ESO's overall mission is: i) to enable major scientific discoveries by constructing and operating powerful observational facilities that are beyond the capabilities of individual Member States and ii) to foster astronomical cooperation within its Member States.

For the implementation of the mission, ESO operates three unique world-class observing sites in the Atacama Desert region of Chile: the La Silla Paranal Observatory (LPO) includes the La Silla site telescopes⁵, the Paranal VLT/VLTI and VST/VISTA survey telescopes⁶, and the APEX⁷ at the Chajnantor site, while the ALMA Observatory⁸, which is an international partnership, is also located at the Chajnantor site. The construction of the ELT⁹ at Armazones, next to Paranal, will add the largest optical/near-infrared telescope in the world.

2. Management structure

2.1 Senior management

The DG, appointed by the ESO Council, leads the Organisation.

¹ Ireland is expected to join ESO as 16th Member State in 2018.

² <http://www.eso.org/public/about-eso/memberstates/>

³ <http://www.eso.org/public/about-eso/committees.html>

⁴ <http://www.eso.org/public/about-eso/dg-office/>

⁵ <http://www.eso.org/public/teles-instr/lasilla/>

⁶ <http://www.eso.org/public/teles-instr/paranal-observatory/>

⁷ <http://www.eso.org/public/teles-instr/apex/>

⁸ <http://www.eso.org/public/teles-instr/alma/>

⁹ <http://www.eso.org/public/teles-instr/elt/>



ESO's main organisational and operational units are the Directorates¹⁰, each led by a Director. Currently there are five Directorates at ESO: Directorate of Administration, Directorate of Engineering, Directorate of Operations, Directorate of Programmes, and the Directorate for Science.

The DG, together with the five Directors compose the Directors' Team (DT), ESO's highest level management structure. The DT is responsible for defining the horizontal priorities of the Organisation, both in the mid- and long-term. This includes establishing the high-level goals and strategy (for Council approval) for the organisation and approving organisational level horizontal policies and procedures. The DT manages the internal control environment and proposes potential new programmes (for Council approval) and structural changes that could affect the whole Organisation. The DT, when needed, ensures that the required documentation/approval processes are in place for Council and the auxiliary bodies (Finance Committee, Scientific Technical Committee, Observing Programmes Committee, Users Committee, etc) and, once approved, follows up on their implementation, as required.

2.2 Directorates

In summary, the areas of responsibilities of the Directorates are the following:

The Directorate of Administration (DoA) provides services in human resources, financial services, contracts and procurement, facility, logistics and transport, site safety responsibility in Garching and Santiago, and Enterprise Resources Planning services.

The Directorate of Engineering (DoE) provides engineering services and solutions for the design, manufacturing, installation, corrective maintenance, upgrade as well as support to the operation of telescopes, instruments and auxiliary equipment.

The Directorate of Operations (DoO) is responsible for all science operations-related activities including the preparation and execution of observing programmes, the operation of the ESO telescopes, the user support, and the delivery and curation of their data.

The Directorate of Programmes (DoP) is responsible for the management and delivery of the construction phase of ESO's projects and programmes, in close collaboration with DoE within ESO's matrix organization.

The Directorate for Science (DSC) is responsible for defining the scientific requirements and priorities for ESO's facilities, for providing a science environment suitable for staff astronomers, fellows and students and visitors from the Member States, and for science outreach and education.

3. Directorate of Administration (DoA)

The DoA has the task to enable the implementation of ESO's mission by providing and ensuring the best use of financial, human and infrastructural resources. The DoA is responsible for a broad portfolio of administrative services in Chile and in Garching, such as human resources, financial services, contracts and procurement services, facility

¹⁰ <http://www.eso.org/public/archives/static/about-eso/organisation/public-organigram.pdf>



management, logistics and transport, Enterprise Resource Planning (ERP) services, and the operation of the guesthouse in Santiago. Furthermore, the DoA provides strategic guidance within the Organisation on administrative matters. It is responsible for safety at the Garching and Santiago sites.

The Director of Administration leads the DoA and reports to the DG.

The DoA is divided into six organisational units:

- Administration Office
- Contracts and Procurement Department
- Facility, Logistics, Transport Department
- Finance Department
- Human Resources Department
- Infrastructure Chile

3.1 Administration Office

The Director of Administration is the Site Safety Responsible at Garching, at Vitacura and at the Santiago Guesthouse, and conducts this work supported by the Site Safety Engineer who is part of the Administration Office. This covers all aspects of occupational health and safety, environmental protection, safety of equipment and installations as well as operational safety.

The ERP team, also part of the Administration Office, is responsible for the maintenance and update of the ERP system; it implements new business processes as required and provides User support.

The Administration Office is in charge of the organisation of the Finance Committee meetings.

Additionally, the Director of Administration represents ESO at the ALMA's Head of Administration meetings as well as in CERN Pension Fund matters.

3.2 Contracts and Procurement Department (CP)

CP, which consists of an integrated unit in Garching and in Santiago, is responsible for all procurement actions, represents the Organisation in all dealings with suppliers and contractors in commercial matters, and ensures compliance with ESO's procurement rules¹¹. CP performs active contract management and maintains an up-to-date database of suppliers in the ESO Member States, in coordination with ESO's industrial liaison officers (nominated by each Member State).

¹¹ <http://www.eso.org/public/industry/cp.html>



3.3 Facility, Logistics, Transport Department (FLT)

FLT maintains the care and repair of the technical installations of the Garching buildings, including the ESO Supernova Planetarium and Visitor Centre and is responsible for office furniture and supplies, as well as dealing with waste management in Garching. FLT's broad portfolio also includes the management of: ESO flats, access cards/keys to all buildings/offices, ESO cars for duty trips, general catering support, removals, the warehouse in Garching-Hochbrück, and the transport of goods.

3.4 Finance Department (FIN)

FIN, similarly to CP, has an integrated unit in Garching and in Santiago. The broad activities of FIN cover all budget related activities, such as planning, preparation for approval, monitoring and coordination. FIN deals with financial planning for medium and long range, cash flow planning, as well as cash management and general accounting services. Payroll accounting is also undertaken by FIN, as is invoice control, with bank and treasury matters another major area of responsibility. Additionally, FIN provides periodical financial statements and analyses, and coordination with the external auditors.

3.5 Human Resources Department (HR)

HR supports the Organisation, with approximately 700 members of personnel by providing human resources services and policies both in Garching and in Chile. This includes recruitment and selection of diverse and talented staff, contract formation, remuneration and payroll, travel/mission refund, pension, health insurance coverage, welfare, learning and development and all necessary support required to deliver a robust HR service. Additionally, HR also deals with employer - employee relations.

3.6 Infrastructures Chile

Infrastructures Chile is led by the Deputy Director of Administration. The department provides ESO's Vitacura site with facilities management services, including maintenance, renovation and safety monitoring, as well as the management and operations of the Santiago Guesthouse. Additionally, the department provides support for staff removals and coordination with the travel agency for staff travels, oversees car insurance for Chile, and organises social events in Vitacura. Import/export and customs clearances are also part of the duties of Infrastructures Chile.

4. Directorate of Engineering (DoE)

4.1 Role and organisation

The DoE provides engineering services and solutions for the design, manufacturing, installation, corrective maintenance and upgrades of the ESO programmes and projects, as well as to the operations teams. DoE, within ESO's matrix organisation, is responsible for the management of people, while DoP and DoO are responsible for the management of projects. Additionally, the DoE provides general IT services to the whole Organisation.



The Director of Engineering leads the DoE and reports to the DG.

DoE is divided into eight organisational units:

- DoE Management Office
- Information Technology Department
- Control Software and Engineering Department
- Electronic Engineering Department
- Mechanical Engineering Department
- Optical Engineering Department
- Science Operation Software Department
- System Engineering Department

4.2 Organisation

4.2.1 DoE Management Office

The DoE Management Office comprises the Director for Engineering, the Deputy Director, and the Executive Officer, who share a variety of management tasks, including line management, allocation of the manpower of the Directorate, and of the engineering standards.

4.2.2 IT Department (IT)

IT is structured around three groups:

- IT Chile
- IT Garching
- IT Project Office

The IT Chile and IT Garching groups are responsible for the day-to-day IT operations and the delivery of the agreed services to the site customers. The IT Project Office is responsible for project management of IT projects, service quality, service catalogue, software asset management and life cycle management and the security programme.

4.2.3 Control Software and Engineering Department (CSE)

The responsibility of CSE is to specify, analyse, design, implement, verify and maintain control systems, and develop control software for the telescopes and astronomical instruments over the full software lifecycle. The CSE is divided into four groups:

- Control Engineering
- Infrastructure software and integration
- Instrument control software
- Observatory control software



4.2.4 Electronic Engineering Department (EE)

EE is responsible for the definition, design and manufacturing of control electronic and detector systems/subsystems for telescopes and instruments as well for electrical compliance verification for all ESO projects. The EE consists of four groups:

- Detector Systems
- Electrical and Compliancy Engineering
- Electronic Developments, Lab facilities & Workshop
- Telescope and Instrument Electronic Engineering

4.2.5 Mechanical Engineering Department (MEC)

MEC is responsible for the definition, design, analysis, procurement and initial assembly of mechanical, opto-mechanical, cryogenic and vacuum systems for advanced astronomical telescope and instrumentation systems for all ESO projects in support of all ESO observatories. MEC is divided into three groups:

- Instruments and Cryogenic Systems
- Structural Analysis
- Telescopes and Large Structures

4.2.6 Optical Engineering Department

The Optical Engineering Department provides optical design, integration and testing of optical systems as well as photonics technologies and laser guide stars expertise to all ESO projects. The Department has two groups:

- Laser & Photonics
- Telescope and Instrument Optics

4.2.7 Science Operation Software Department (SCS)

SCS is responsible for all science operation software for the end-to-end operations of the ESO observatories. Science operation software includes all components required for proposal submission, scheduling, execution, archiving, processing, visualization, and quality control of the observations. SCS is structured in three groups:

- Dataflow Infrastructure
- Pipeline Systems
- Software Engineering and Quality

4.2.8 System Engineering Department

The System Engineering Department provides system engineering services to all ESO projects. All essential functions are covered, including requirement engineering, verification,



disciplinary integration & technical coordination, system architectural design and system analysis.

The System Engineering Department is structured in four groups:

- Processes and Standards
- Adaptive Optics Systems
- Instrument Systems
- System Analysis

5. Directorate of Operations (DoO)

5.1 Role and organisation

The DoO is responsible for all science operations-related activities including the preparation and execution of observing programmes, the operation of the observatories and support centres, and the delivery and curation of their data.

The Director of Operations leads the DoO and reports to the DG.

DoO is divided into three Divisions:

- La Silla Paranal Observatory
- Data Management and Operations
- ESO ALMA Support Centre

Within the three divisions, twelve departments support the activities of DoO.

5.1.1 La Silla Paranal Observatory (LPO)

The Director of Operations acts as the Director of the LPO.

LPO is responsible for the on-site operational activities of ESO's telescopes: the VLT¹² and the VLTI¹³, the VST¹⁴ Optical Survey Telescope and the VISTA¹⁵ Infrared Survey Telescope at the Paranal site, the 3.6-m¹⁶, and the NTT¹⁷ at the La Silla site and the APEX¹⁸ 12-m sub-mm radio antenna at the Chajnantor site. LPO also supports the operation of hosted telescope projects at Paranal¹⁹ and La Silla²⁰.

LPO is structured into six departments and three supporting offices.

¹² <http://www.eso.org/public/teles-instr/paranal-observatory/vlt/>

¹³ <http://www.eso.org/sci/facilities/paranal/telescopes/vlti.html>

¹⁴ <http://www.eso.org/public/teles-instr/paranal-observatory/surveytelescopes/vst/>

¹⁵ <http://www.eso.org/public/teles-instr/paranal-observatory/surveytelescopes/vista/>

¹⁶ <http://www.eso.org/public/teles-instr/lasilla/36/>

¹⁷ <http://www.eso.org/public/teles-instr/lasilla/ntt/>

¹⁸ <http://www.eso.org/public/teles-instr/apex/>

¹⁹ <http://www.eso.org/public/teles-instr/paranal-observatory/speculoos/>

²⁰ See list on <http://www.eso.org/sci/facilities/lasilla/telescopes/national.html>



5.1.1.1 LPO Director's Office (LPM)

The LPO Director is responsible for setting the overall goals, priorities, and strategies within LPO for all operational aspects.

The LPO Director acts as the Programme Manager for LPO Projects and interface to all external projects, supported by the Project Coordination Office (PCO). The Head of PCO runs the Paranal System Engineering (PSE) group composed of the System Engineers and System Scientists of Paranal.

The Director acts as the site safety responsible of LPO, relying on the support of the LPO Safety Office (SAF) in this task.

The Quality Office provides support to the Director with quality management at LPO and runs the Change Control Board.

The LPO management team is composed of the Director, the department heads, and the head of the Project Coordination Office.

5.1.1.2 Paranal Science Operations Department (PSO)

PSO is responsible for the execution of all scheduled observations and the production of astronomical data of highest quality. The department is further charged to maintain, and whenever possible, to improve the scientific and operational performances of the Paranal telescopes and instruments. The PSO instrument scientists lead the Instrument Operations Teams (IOTs) of all VLT and VLTI instruments.

5.1.1.3 Paranal Logistics Department (PLF)

PLF is in charge of all logistics aspects of the Paranal site. This includes transport, accommodation, catering, cleaning, building and road maintenance, security and other services.

5.1.1.4 Paranal Maintenance, Support & Engineering Department (MSE)

MSE provides all technical maintenance services and engineering support to the operational systems of the Paranal site and guarantees their highest availability and performance. The operational systems include the telescopes and their systems and sub-systems including the scientific instruments. In addition, MSE supports the assembly, integration, verification and commissioning of new facilities and systems delivered to Paranal by other ESO Directorates. MSE further provides all warehouse services to Paranal and operates the power station.

5.1.1.5 La Silla Department (LSD)

LSD provides the technical operations, the maintenance and the day- and night-operations of the La Silla site including the ESO-operated telescopes and the hosted telescopes. LSD further deals with all logistics tasks related to the La Silla site.

The Head of the LSD is the La Silla site manager.

5.1.1.6 APEX Department (LSA)

ESO is a 32% partner in the APEX partnership. ESO is responsible on behalf of the partnership for the operation and maintenance of its base station site at Sequitor near San



Pedro de Atacama, the 12-m antenna site on Chajnantor at 5100 m altitude, and the science operation of the complete facility, as well as for all related logistics tasks.

The Head of the LSA is the APEX station manager who reports to the APEX Board on all operational matters and to the LPO Director on all staff-related and safety matters.

5.1.2 Data Management and Operations (DMO)

The DMO division is responsible for the off-site operations and user support of the LPO based on an integrated data-flow system. DMO maintains the ESO Science Archive Facility²¹ as a powerful resource, both scientific and operational. It fosters involvement of the ESO scientific community and offers interfaces and support schemes to enable efficient operations of new instruments and science cases. DMO implements and operates systematic processes to generate and proliferate scientifically certified content through the ESO Science Archive Facility. DMO drives the evolution of the VLT data-flow system and maintains a coherent development programme to accommodate new requirements.

DMO is structured as follows:

5.1.2.1 DMO Office

The Head of the DMO is responsible for setting the overall goals, priorities, and strategies for DMO within DoO, and acts as the programme manager for the VLT/VLTI and ELT data-flow and pipeline development programmes. The Office is supported by a data-flow systems project engineer and an end-to-end operations scientist who coordinate the development and implementation of all VLT/ELT data-flow system components with resources drawn from the engineering matrix.

5.1.2.2 User Support (USD)

The main role of USD is to be the interface between the users of ESO facilities (in particular those who take advantage of Service Mode observations) and the Observatories. USD currently provides support for all the instruments available at the VLT and VLTI, as well as the Survey telescopes (Paranal). Its main activities are:

User oriented services:

- Support for Phase 1 proposal preparation²², and the preparation of Phase 2 material²³;
- Operation of a helpdesk system (usd-help@eso.org) where users can address questions and request assistance on all aspects of ESO telescope Service Mode operations.

Science Operations oriented services:

- Link between the Observatory and the users;
- Participation in the Instrument Operations Teams (IOTs);

²¹ <http://archive.eso.org/>

²² <http://www.eso.org/sci/observing/phase1.html>

²³ <http://www.eso.org/sci/observing/phase2.html>



- Maintenance of the User Portal database;

5.1.2.3 Back end Operations (BOD)

The main activities of BOD are:

- Operating ESO's Science Archive Facility as the access point for the scientific community to ESO's data, both raw and processed, and ensuring data and metadata integrity;
- Developing the Science Archive Facility as a science tool for archival exploitation of its holdings;
- Processing the raw science and calibration data collected at LPO's Paranal site with the dual goal of monitoring instrument performance and delivering processed data to the community;
- Providing scientific guidance to define and develop data reduction tools;
- Collecting highly processed data from Principal Investigators and making them available to the community at large through the Science Archive Facility.

5.1.3 ESO ALMA Support Centre (EASC)

EASC is responsible for the ESO off-site segment of ALMA operations, including user support and contribution to on-site science operations, hardware and software maintenance, upgrades, and development, as well as long term R&D for future science capabilities. At the same time, it is the "face" of ALMA towards the scientific and technological community and institutes in ESO Member States as well as towards the international ALMA partners for the operations of ALMA.

EASC is currently divided into four departments.

5.1.3.1 ALMA Regional Centre (ARC, ISOPT-EU)

ARC coordinates the European ARC Network, which also includes seven nodes and one centre of expertise, spread across Europe. The European ARC Network provides the interface between the ALMA project and the European science community. It supports its users mainly in the areas of proposal preparation, observation preparation, data reduction and analysis. Support of on-site operations is provided by Astronomer on Duty shifts, participation to the Quality Assessment of the ALMA data, as well as contribution to the overall development of ALMA science policies and procedures. The ARC also operates the European ALMA Science Archive and leads the scientific requirements coordination for several ALMA software subsystems.

5.1.3.2 ALMA Science Team (AST, IST-EU)

AST is part of the quadrilateral Integrated Science Team of ALMA. AST has the responsibility of supporting the development of the science priorities for ALMA development, coordinating the ALMA Upgrade Study programme in Europe, and engaging the scientific and technological community in the ESO Member States. The AST supports the definition of the scientific requirements of the ESO ALMA upgrade projects and monitors the compliance during execution. The AST is responsible for the definition and execution of



the commissioning and science verification activities of the ESO development projects for ALMA.

5.1.3.3 ALMA Computing (ACT, ICT-EU)

ACT is responsible for the development and maintenance of the ALMA software subsystems. In collaboration with similar sized groups at the other ALMA Executives and the JAO, ACT is part of the Integrated Computing Team (ICT). ACT maintains responsibility for the Computing subsystems that were developed in Europe during ALMA construction. The key areas of responsibility are Archive Services, Observing Preparation, Observatory Interfaces (supporting the full observing project workflow), Telescope Calibration and Automation & Testing. The ACT is in addition a major contributor to Data Processing software, namely CASA and Pipeline Heuristics. Apart from regular maintenance, all ALMA subsystems are still in active development to support growing and changing demands from the observatory. The ACT also contributes to ALMA Development projects.

5.1.3.4 ALMA Technical Support (ATT, IET-EU)

ATT is responsible for specific hardware maintenance support and providing technical expertise to ALMA, including development and maintenance of technical documentation and manuals. ATT also manages hardware development projects and supports development studies, which are carried out with institutes in ESO Member States. ATT, as IET-EU, is part of the quadrilateral ALMA Integrated Engineering Team, and in agreement with the ALMA partners, ATT may execute “in kind” contributions to the on-site hardware maintenance activities, as part of the overall optimization of the execution of the ALMA programme.

6. Directorate of Programmes (DoP)

6.1 Role and organisation

The DoP is responsible for the management and delivery of ESO’s construction programmes and projects within ESO’s matrix organization. The overall work is broken down into four programmes:

- ELT Construction Programme
- Armazones Instrumentation Programme
- Paranal Instrumentation Programme
- Technology Development Programme

Within the programmes there are many projects. The matrix organization at ESO separates the management of the people from the management of the projects. The DoP is responsible for the management of the projects, including the responsibility for the budget of the projects, while DoE is responsible for the management of the people.

The Director of Programmes leads the DoP and reports to the DG.

DoP is divided into six organisational units:



- Office of the DoP
- ELT Programme Office
- Armazones Instrumentation Programme Office
- Paranal Instrumentation Programme Office
- Technology Development Programme Office
- Project Management Department

6.1.1 Office of the DoP

The Director of Programmes has the overall responsibility for the successful delivery of the programmes within the agreed specifications, budget and schedule, and is responsible for setting the overall priorities within and between the programmes, and the approval of projects.

6.1.2 ELT Programme Office

The ELT Programme Office is led by the ELT Programme Manager, who is responsible for the planning and delivery of the ELT Construction Programme, including its first instruments. Dedicated personnel for programme engineering, telescope science, financial and budget control, quality and product assurance and archiving support the Office in order to ensure the central management of the activities of the ELT Work Packages. The overall ELT Programme additionally includes project managers from the PMD and DoE, the Programme Scientist from DSC, an AIV manager and ELT System Engineer from DoE, and is also supported by the Garching and LPO Safety Engineers.

6.1.3 Armazones Instrumentation Programme (AIP) Office

The AIP Office runs the AIP Programme, which is responsible for the construction and delivery of those ELT instruments that are not funded as part of the ELT construction programme. The AIP Office is led by the AIP Programme Manager, who coordinates the work with external institutes, as well as the project managers and project scientists from DoP, DoE and DSC.

6.1.4 Paranal Instrumentation Programme (PIP) Office

The PIP Office runs the Paranal Instrumentation Programme that delivers new instruments and upgrades to the existing instruments of La Silla and Paranal, including the required modifications to the observatory infrastructure. The Office is led by a Programme Manager and is supported by a Programme Engineer who coordinates the technical work with the project managers and other personnel from DoP, DoE and DSC.

6.1.5 Technology Development Programme (TecDev) Office

The TecDev Programme aims to develop and secure key technologies which will maintain ESO's facilities at the cutting edge of astronomy and which will contribute to achieving ESO's mission. In practice, this means taking technologies which are at low levels of technology readiness and developing them to a level sufficient to be incorporated within



new projects with manageable risk. The TecDev Programme also supports technology development for new ESO standards.

The Office is led by a Programme Manager, who is supported by a Technology Development Advisory Team to choose the projects to be supported.

6.1.6 Project Management Department (PMD)

Within the programmes of DoP, multiple projects are defined and implemented. These projects are led by project managers, who form the PMD²⁴. The PMD aims to ensure that projects are implemented within the framework, plans and standards defined by the DoP programmes, and according to common standards and quality within all of the projects.

The Head of the PMD is the key project manager within the organisation who drives the culture, and set standards for project management, and works closely with the Programme Managers to ensure that their requirements are met and that the allocated staff are suited to the tasks ahead.

7. Directorate for Science (DSC)

7.1 Role and organisation

DSC is responsible for developing ESO's science strategy and providing science leadership, including defining science priorities, for ESO's programmes and projects via interactions with the science community, ESO staff and governing bodies. DSC ensures the selection of the most compelling scientific observing programmes. DSC is responsible for maintaining a stimulating scientific atmosphere at ESO such that staff astronomers can flourish in their research, making them better able to assist the wider community and to train the next generation of astronomers in the ESO fellowship and studentship programmes. DSC is also entrusted with the task of communicating the excitement of astronomy and the success of ESO, of its facilities and staff, to the community, to the stakeholders and the wider public.

The Director for Science leads the DSC, supported by four Programme Scientists, and reports to the DG.

The DSC is divided into four departments:

- Observing Programmes Office
- Education and Public Outreach Department
- Offices for Science Garching and Chile
- Project Scientists Department

7.1.1 Observing Programmes Office (OPO)

OPO interacts with scientists in its community to select the best observing programmes for implementation on ESO's telescopes, and then schedules the observations requested in

²⁴ Those who do project management in less than 2/3 of their time are not part of the PMD.



those successful proposals. OPO is charged with all activities related to proposal handling: the Call for Proposals; Observing Programmes Committee meetings; contractual obligations of ESO towards guaranteed observing time holders; Director's Discretionary Time proposals; public surveys; telescope time statistics.

7.1.2 Education and Public Outreach Department (ePOD)

The ePOD is responsible for making ESO a household science brand in the eyes of the scientific community, the Member States, the general public, media, educators and industrial partners. For that purpose, it publicises worldwide the excitement of astronomy and the success of ESO, of its facilities and of its staff, using all possible and constantly evolving communication technologies, channels and formats. Running the ESO Supernova Planetarium and Visitor Centre further expanded the responsibilities of ePOD and opened new channels to reach out to the general public and educators.

7.1.3 Offices for Science

The Offices for Science in Garching and Chile provide support, training and mentoring to ESO staff astronomers, fellows and students, organising colloquia, seminars and workshops; managing the resources for science-related travel; managing and administering the ESO fellowship and studentship programmes and establishing collaborations with the community on the Garching campus and beyond. The Head of the Office for Science is also the elected Chair of the ESO Faculty (see section 8.1). The ESO libraries are part of the respective Offices for Science and act as a science information, document management and archiving centre at ESO and for its community.

7.1.4 Project Scientists Department (PSD)

The PSD contains the Project Scientists who interact closely with the Programme Scientists, and the Programme and Project Managers in the DoP, and with the Project Engineers at the DoE. The Project Scientists are responsible for developing and maintaining the science requirements for ESO projects, ensuring compatibility with the scientific high-level requirements of the respective programme.

7.1.5 Programme Scientists

There are four Programme Scientists at ESO, corresponding to the VLT²⁵, VLTI²⁶, ALMA²⁷, and ELT²⁸ Programmes. The Programme Scientists are responsible for developing and maintaining a strategic science vision (scientific Top-Level Requirements) for their respective programme and providing scientific leadership. The Programme Scientists report to the Director for Science and work closely with DoP and DoO.

²⁵ <http://www.eso.org/public/teles-instr/paranal-observatory/vlt/>

²⁶ <http://www.eso.org/sci/facilities/paranal/telescopes/vlti.html>

²⁷ <http://www.eso.org/public/teles-instr/alma/>

²⁸ <http://www.eso.org/public/teles-instr/elt/>



8. Office of the Director General (ODG)

The ODG deals with various activities that are under the direct authority of the DG (i.e. not delegated to the Directors), including corporate and horizontal activities across all Directorates. The ODG includes two departments:

- Executive Office
- Internal Audit Office

8.1 Executive Office (ODG-X)

ODG-X provides support to the DG with their internal and external duties. ODG-X includes the following groups:

- Legal and Institutional Affairs
- Representation Office in Chile
- Internal Communication Office
- Corporate Policies & Risks Management
- Scientific Editor

ODG-X also supports Council with the development and implementation of ESO's strategy when required and provides executive and secretarial support to the DG, Council, the DT, and other auxiliary bodies. It is also responsible for editing the ESO Annual Report, The Messenger and the ESO Science Newsletter.

8.1.1 Legal and Institutional Affairs (LIA)

The LIA advises and assists the DG with matters concerning the Organisation's institutional relations, protocol and diplomacy, defends ESO's legal interests, and provides legal advice.

8.1.2 Representation Office in Chile (REP)

The REP represents ESO and the DG in interactions with the Chilean governmental, regional and local authorities, as well as with diplomatic missions in Chile. It coordinates the representation of ESO's political and legal interests in Chile and promotes ESO's positive relationship with Chile at all levels — government, research organisations, universities, and society at large.

8.1.3 Internal Communication Office (ICO)

The ICO is responsible for strengthening and coordinating internal communication, ensuring that ESO staff have access to accurate and timely organisational information and encouraging communication and information sharing across the entire Organisation.



8.1.4 Corporate Policies & Risks Management (CPRM)

The CPRM deals with corporate risk management, personal data protection, data classification, various corporate policies, and intellectual property matters, including technology and knowledge protection and licensing.

8.1.5 Scientific Editor

ESO's Scientific Editor is responsible for the editing of the ESO Annual Report²⁹ and The Messenger³⁰, and coordinates the ESO Science Newsletter³¹.

8.2 Internal Audit Office (ODG-A)

ODG-A reviews the reliability and integrity of financial information, the efficiency and economy of resource management, and compliance with ESO's rules and regulations. It carries out an independent, objective assurance and consulting activity designed to add value and improve the Organisation's operations and was established to assist all levels of management in the Organisation, as well as to support the external auditors. Although reporting to the DG, the Head of ODG-A also has a direct line to the Council President, in particular when dealing with audits affecting the DG or the ODG.

9. Inter-directorate structures

9.1 ESO Astronomers Faculty and Scientific Personnel Committee

Astronomers across the Organisation and from all Directorates make up the ESO Astronomers Faculty, which is tasked with discussing and advising on scientific, technical and operational issues, from the point of view of active astronomers representative of those in ESO's Member States. The Astronomers Faculty elects a Faculty Chair in both Vitacura and Garching, for a period of 3-4 years, during which they take on the responsibility for leading the Offices for Science in Garching and Vitacura respectively. Additionally, the two Faculty Chairs become members of the SPC, together with four Faculty astronomers and the Director for Science. Ordinarily, the role of SPC Chair rotates between the two Faculty Chairs, at the discretion of the DG. The SPC evaluates the scientific credentials of astronomers, ensuring a minimum standard is achieved before an appointment is made into a position that requires research expertise, and before an indefinite appointment can be made.

9.2 ESO Safety Commission

The DG has overall responsibility for safety at ESO, and the ESO Safety Commission is the high-level group that supports the oversight of the area. The Safety Commission is a standing team set up by the DG. The Commission monitors the evolution of the safety policy and standards and advises when a change in the ESO regulations or policies may be

²⁹ <http://www.eso.org/public/products/annualreports/>

³⁰ <http://www.eso.org/sci/publications/messenger/>

³¹ <http://www.eso.org/sci/publications/newsletter.html>



necessary, and coordinates between the sites to ensure a coherent set of standards and norms for all activities.

9.3 International Relations Team

The International Relations Team is a standing team established by the DG. Its role is to formulate ESO's policy in international relations, in line with the guidance set out by ESO Council. The International Relations Team organises and coordinates relations with Member States and their national science communities, as well as with prospective Member States or partners and international scientific organisations and represents ESO in various external bodies and boards.

9.4 Diversity and Inclusion Committee

The Diversity and Inclusion Committee provides advice to the ESO DG on how to advance diversity and inclusion at all levels within ESO. It develops and maintains a Diversity and Inclusion Plan for ESO, and reports on its implementation, recommending guidelines, policies, procedures or other actions to the DG, or to a Director or Head of Department when these fall within their direct responsibility. The Committee represents ESO in a variety of networks and international working groups that promote diversity and inclusivity.

9.5 Ombuds

The ESO Ombuds³² offers guidance, advice, coaching and mediation as a way to informally solve conflicts between persons working at or on behalf of ESO. The duty station of the Ombuds is Vitacura, with regular visits to the Garching Headquarters and to the observatories. The Ombuds is independent in structure, function and appearance to the highest degree possible within the Organization, and acts neutrally and impartially.

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³² Status July 2018: ESO is in the process of recruiting the Ombuds.