

ESO/L. Calçada



European Extremely Large Telescope

The next major project for ESO is the European Extremely Large Telescope (E-ELT). It will be a 39-metre optical/infrared telescope that will gather 15 times more light than the largest optical telescopes operating today. The telescope has an innovative five-mirror design that includes advanced adaptive optics to correct for the turbulent atmosphere, giving exceptional image quality. The main mirror will be made up from 798 hexagonal segments. Following completion of a detailed design phase, the green light for construction was given in late 2014, with first light targeted for 2024.

The list of requirements for the E-ELT includes the manufacture and polishing of glass blanks, civil works, dome construction, the telescope main structure, power supplies, position actuators, control equipment, IT infrastructure, CMOS detectors, temporary storage and accommodation, catering and domestic services.



Y. Baletsky (LCO)/ESO



ESO/B. Tafreshi (twanight.org)



ESO Procurement

In the period 2005–2014, ESO has awarded contracts worldwide totalling 996 M€ in value, the bulk of which, 943 M€, has been placed with companies in the ESO Member States and Chile. The overall objective in ESO procurements is to secure technical excellence at an affordable cost. Further details can be found on the ESO Contracts and Procurement (CP) web page at <http://www.eso.org/public/industry/cp.html>.

The ESO procurement process is different from, for example, the EC practice, but it is not complicated: ESO attaches great importance to the quality of its tenders, and expects the same from the bidders. Accordingly, it operates on a “one shot only” basis and offers no room for improving a tender after submission. Contracts are placed with the company that submits the lowest priced compliant tender.

Register Interest

For its tendering actions, ESO invites companies selectively and relies for that purpose on its knowledge and database, together with input provided by its Member States. New suppliers interested in working with ESO are strongly encouraged to make themselves known to ESO by contacting the Contracts and Procurement Department (CP), either in relation to a specific procurement (the ESO CP web page, <http://www.eso.org/public/industry/cp.html>, lists forthcoming procurement actions) or generically.

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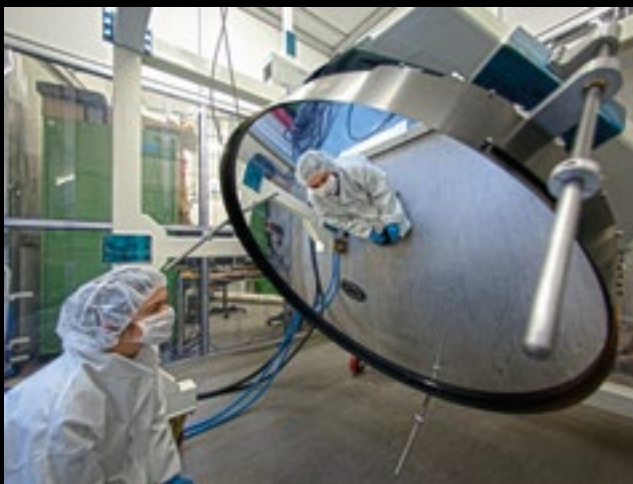


A. Duro/ESO



ESO and Industry

ESO, the European Southern Observatory, is an intergovernmental organisation supported by 16 countries, along with the host state of Chile. It is dedicated to building and operating world-class observing facilities for astronomical research and to organising collaborations in astronomy. For more than 50 years, ESO has been contracting with industry in its Member States and in Chile for the goods and services necessary to fulfil its mission. Our requirements span the whole range from one-off construction work to framework agreements for recurrent items necessary for day-to-day operations; and from domestic support services for the establishments, to joint development of new technologies with industrial and academic partners. ESO works at the cutting edge of technology in some of the most remote places on Earth: we actively encourage new contacts and new companies to work with us.



ALMA

The Atacama Large Millimeter/submillimeter Array (ALMA) is a single telescope of revolutionary design, composed of 66 high-precision antennas, and operating at wavelengths of 0.32 to 3.6 millimetres. Its main array has 50 antennas, each 12 metres in diameter that act together as an interferometer. An additional compact array of four 12-metre and twelve 7-metre antennas complements this. The 66 ALMA antennas can be arranged in different configurations, where the maximum distance between antennas can vary from 150 metres to 16 kilometres.

Construction of ALMA began in 2002 with the development and initial production of critical elements of the detectors and the telescope was inaugurated 2013. The challenges of delivering high-precision equipment to work in the extreme conditions found at an altitude of 5000 metres were shared by scientists and industry in the three partner regions. Among the elements delivered by ESO on behalf of the Member States were 25 European ALMA antennas, provided through a contract with the AEM Consortium (Thales Alenia Space, European Industrial Engineering, and MT-Aerospace) and the ALMA antenna transporters, manufactured by the company Scheuerle Fahrzeugfabrik GmbH.



VLT

The world's most advanced optical/infrared telescope, consisting of four Unit Telescopes (UT), each with a main mirror 8.2 metres in diameter. Four movable 1.8-metre diameter Auxiliary Telescopes can work with the VLT as a giant interferometer (VLTI). The VLT has stimulated a new age of discoveries, with several notable scientific firsts, including the first image of an exoplanet, tracking individual stars moving around the supermassive black hole at the centre of the Milky Way, and observing the afterglow of the furthest known gamma-ray burst.

In excess of 330 M€ were spent in ESO Member States for the construction of the VLT, which started operations in 1999 (UT1). Hundreds of suppliers were involved, and in particular more than 70 contracts each exceeding 500 k€ in value were awarded, covering a wide range of industrial skills, from civil works to precision electronics, and from large-scale glass manufacture to the handling plant for coating the mirrors.

