

ESO and Industry

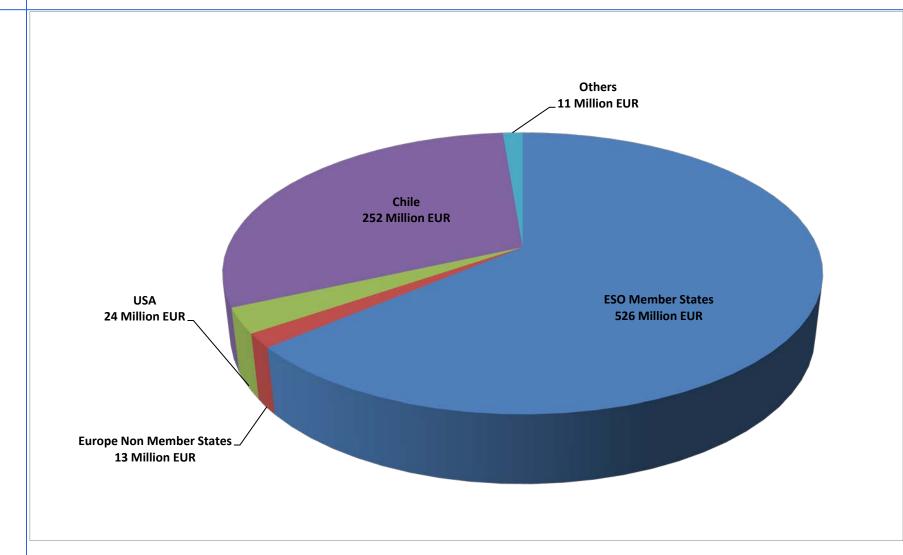
- Construction of world-class observatories
 - > Buildings, telescopes, instruments
 - Only possible with strong involvement of industry
- Procurement by competitive tendering
 - Preferably in the Member States
 - Aim for reasonable balance over Member States
 - ESO works pro-actively with 'under-returned' MS
- This approach
 - Keeps costs down
 - Helps develop high-tech industry in Member States

Technology Transfer

- ESO's Technology Transfer Policy
 - ➤ Approved by Council in Dec 2010
 - Defines rules for licensing of in-house developments
- First royalties now received
 - ➤ ESO Fiber RAMAN Amplifier
 - ALMA Calibration Loads Technology
 - ➤ Companies in Canada, Germany, UK

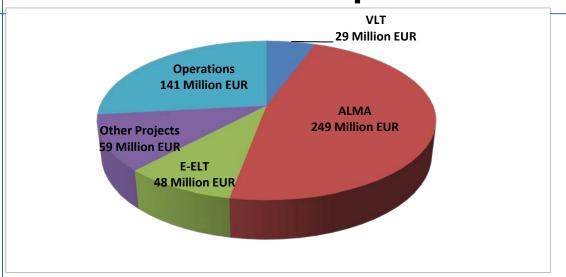


Contracts awarded worldwide over the period 2005 - 2012

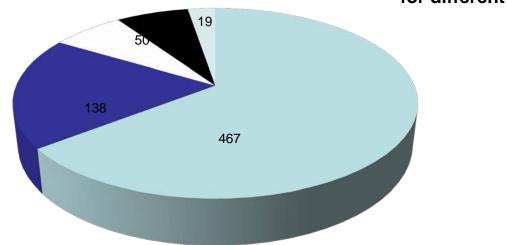


Total Contracts 8 years: 826 million EUR

Contracts awarded within ESO Member States over the period 2005 - 2012



Number of contracts, for different price ranges



In addition there were 25.900 Contracts with value below 50 kEUR



■50 - 150 kEUR ■150 - 500 kEUR

0.5 - 1 MEUR

■5 MEUR or more

■1 - 5 MEUR

Procurement Policy

- Overall objective: technical excellence at an affordable cost.
- Key principles:
 - Competitive Tendering;
 - Within ESO Member States (Chile for operations);
 - Contracts awarded to the lowest priced compliant tender;
 - Fair distribution of the contracts among the ESO Member States.

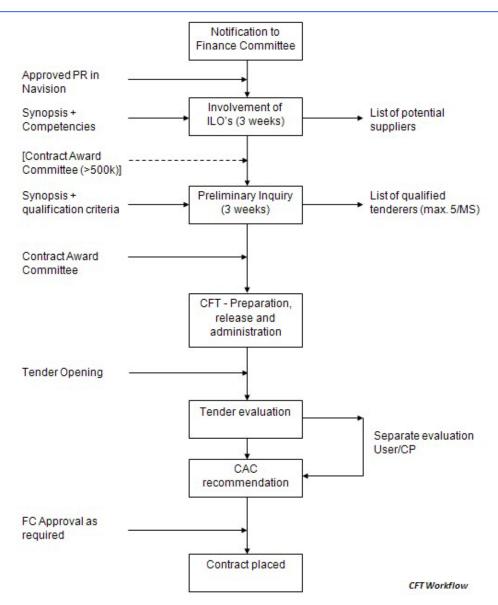
Procurement Process (1/2)

- ESO selects the recipients of its procurement actions from:
 - Its database, plus its staff's own knowledge;
 - Suggestions received from ESO Member States;
 - Interest expressed by companies:
 - In relation to forthcoming procurements announced on the ESO web page;
 - Generically.
- ESO gives great importance to the quality of its tenders, and expects the same from the bidders: "one shot only", no room for improving a tender after its submission.

Procurement Process (2/2)

- Evaluation of the managerial/technical evaluation of tenders performed without knowledge of the price(s);
- Lowest priced compliant tender is awarded the order/ contract;
- For each procurement above 150K EUR, an internal committee is constituted to follow through the evaluation and adjudication process.
- Contracts/ Purchase Orders are regulated by ESO's own set of contractual conditions (including recourse to private arbitration in case of disputes).

Calls for tender (CFT) (1/6)

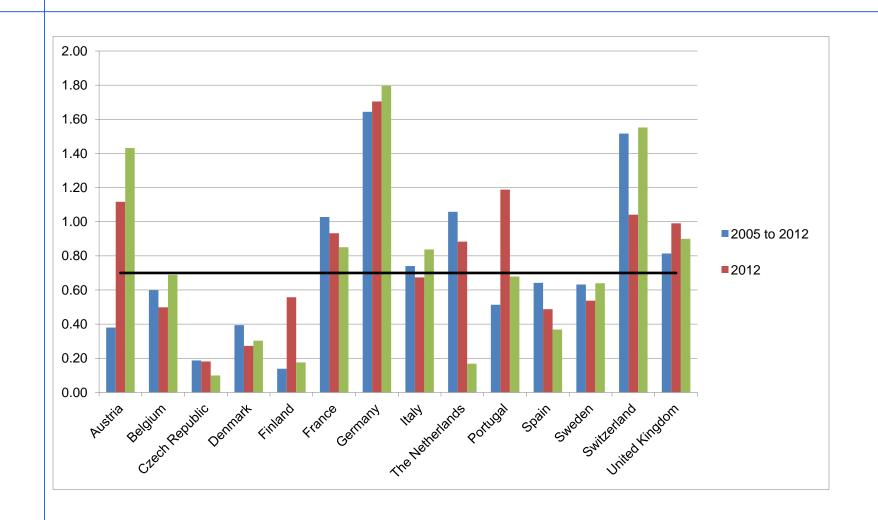


Typically used for Procurements > 150k EUR

Industrial Return (1/3)

- No requirement for juste retour...but a strong expectation from all ESO Member States of an equitable distribution;
- Measured through each country's return coefficient: ratio between the percentage of expenditures in an individual MS and the MS percentage contribution to the budget;
- Expenditures calculated on data collected from the Contractors re: the "origin of the supply".

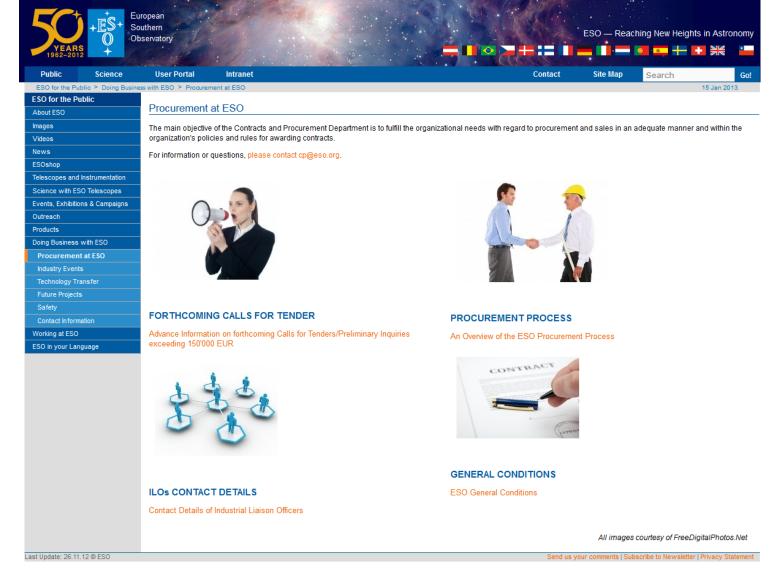
Industrial Return (2/3)



Industrial Return (3/3)

- Additional efforts invested by the Management to increase awareness in the Member States of the procurement opportunities offered by ESO:
 - Close monitoring + regular reporting to the ESO Finance Committee;
 - Stronger involvement of the Industrial Liaison Officers in identifying competent suppliers;
 - Increased programme of Industry days and networking events;
 - Update of the procurement rules.
- ...also, pro-activeness of the Member States encouraged.

ESO CP Web Page















Forthcoming Call for Tenders

71 22.10.2013 ALMA Procurement of DC Vacuum Feed-Through Connectors

The scope of this Call for tender is the supply of 186 custom designed DC vacuum feed-through, blind mate connector assemblies based on MDM series interface. Each connector assembly will incorporate two 51 pins MDM connectors. The mechanical design for the connector assembly will be provided by ESO.

The Call for tender is scheduled for issue in Q4 2013 to potential manufacturers.

7018.10.2013 PAO Ground Transportation Service for Personnel to and from the Paranal Observatory

Call for tender covering surface transport services of personnel from Antofagasta to Paranal and vice versa, for a period of three years with a possible extension of two years. The Call for tender is foreseen to be issued to potential suppliers in Chile only. 1st Qtr. 2014

Collaboration with industry is key



r	Procurement	Short Description	Expected time frame
1	.D&MS	Contract for the final design and construction of the Dome and main Structure. Preliminary Inquiry has been done. 5 potential primes/consortia are qualified for CFT.	release of CFT end 2013/early 2014
2	Telescope control	Middleware DDS development licenses.	2014/202
3	Telescope control	Verification and Validation services for E-ELT software	20
4	M4 Unit	Machining, grinding, polishing of the 1.2-m optical thin shells of the M4 Mirror	20
5	Detectors	Delivery of wave front sensors	2014/20
6	Power gen set and Dist	Design of powerstation to connect to grid and cable to transport power up to mountain	20
7	Power gen set and Dist	Construction of of powerstation to connect to grid and cable to transport power up to mountain	20

8 Cryo, Air and Chillers	Procurement of Chillers	2015/2016
9 Telescope Control	HW and SW needed for the core infrastructure for the Telescope Control	2014/2015
10 M1 Unit	Polishing of the 931 M1 segments	2014/2015
11 M1 Unit	Position actuators for the M1 segments	2014/2015
12 M2 Unit	M2 Mirror Blank	2014/2015
13 INST	Near Infrared Detectors	2015
14 Permanent Infrastructure	Reception, first aid and offices	2015
15 M1 Unit	Production of M1 segments supports based on production drawing	2016
16 M1 Unit	Production of Edge sensors	2015/2016
17 Telescope Control	infrastructure for remote Telescope control (cables etc)	2015/2016
18 Washing and coating	M1 and 4 M washing units	2015/2016
19 Washing and coating	Mirror Coating units (M1)	2015/2016
20 Permanent Infrastructure	ARM network Room	2015/2016
21 Science Data Operations	Data Flow Dev Se and Mgmt Services	2015/2016
22 M1 Unit	M1 segment Blanks	2016/2017
23 Permanent Infrastructure	Mirror maintenance building	2016/2017
24 Cryo, Air and Chillers	Air Compressor	2016/2017
25 M3 Unit	M3 Cell and Mirror	2016/2017
26 Prefocal stations	Prefocal stations	2016/2017
27 Metrology	WFS, Camera head and Controller	2016/2017
28 Permanent Infrastructure	Storage Hall	2016/2017

29 Washing and coating	Mirror Coating units (4m)	2016/
30 Power gen set and Dist	Back up power generators	2016/
31 M2 Unit	M2 Integration Stand and transporter	2017/
32 M2 Unit	M2 In-situ cleaning device	2017/
33 Telescope Control	SW development Contract #1	2017/
34 Permanent Infrastructure	Technical Building and offices	2017/
35 Permanent Infrastructure	Control building	2017/
36 M3 Unit	M3 Mirror Blank	2017/
37 M5 Unit	M5 Mirror	2017/
38 M5 Unit	M5 Electromachnetic unit	2017/
39 Laser Guide Star Unit	Laser beam Projection SubUnits	2017/
40 Laser Guide Star Unit	laser Sources	2017/
41 Metrology	Calibration unit	2017/
42 Permanent Infrastructure	Instrumentation lab and Clean room buildings	2017/
43 Cryo, Air and Chillers	Cryo plant	2018/
44 Telescope control	M1LCS- Control Infrastructure	2019/
45 Telescope control	SW debvelopment Contract #2	2019/

Suppliers in Israel

- Ricor: cryo parts
- Duma Optronics Ltd: positioning equipment
- Babylon.com Ltd: software
- Acktar Ltd

Why not you ?