

ESO IT and SCS procurement and investment needs until 2027

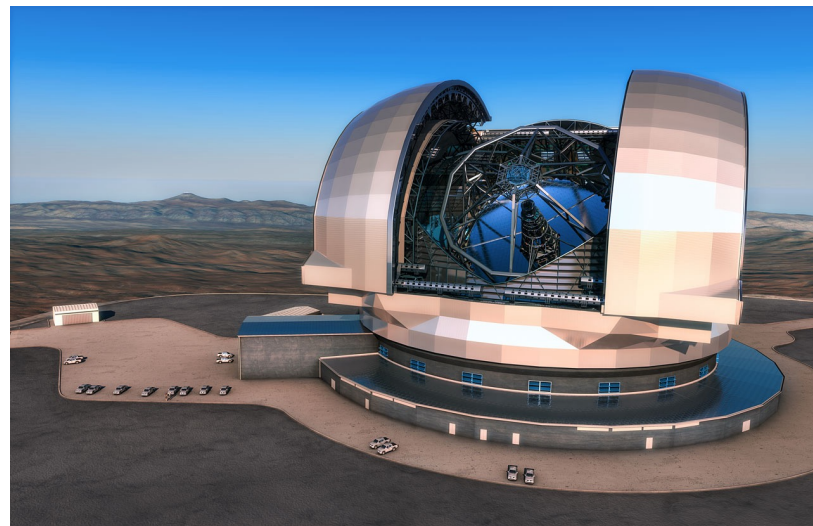
5 October 2022

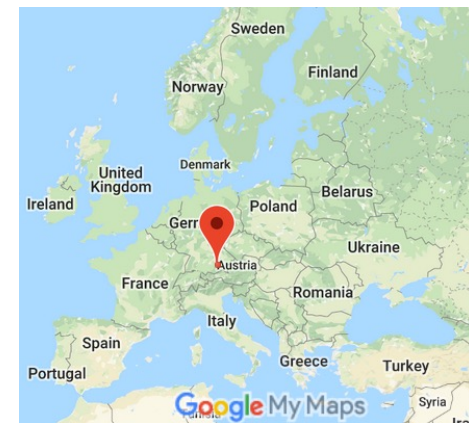
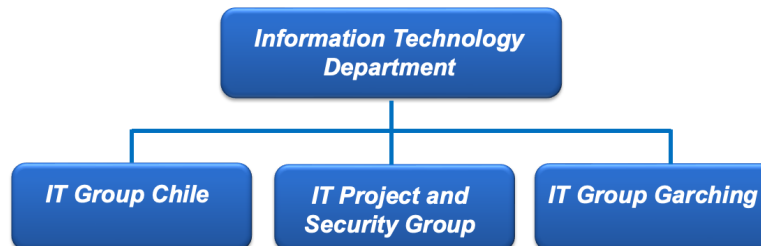
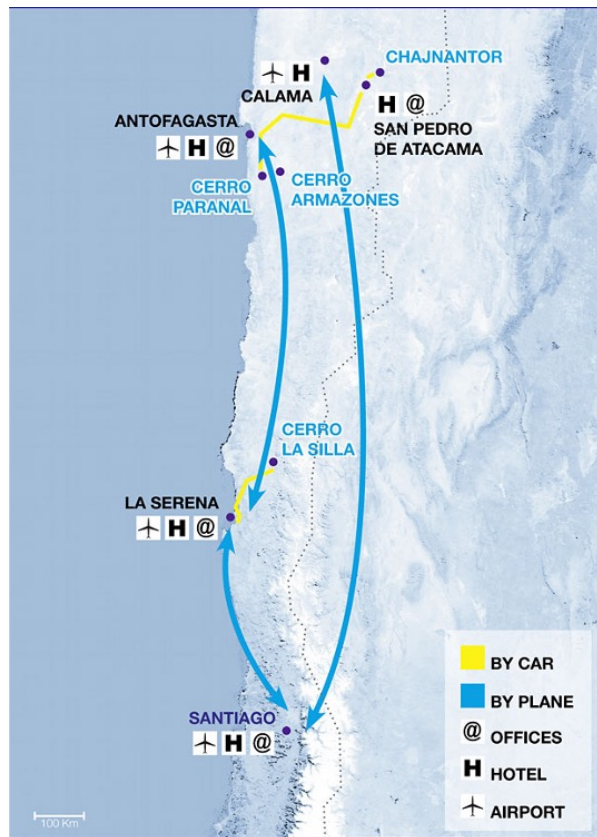
Pascal Ballester and Dieter Suchar

Head of the Science Operation Software Department

Head of the Information Technology Department

- **Control Software & Engineering**
 - Presented by Jochen Haucke
 - C2 on Thursday, 11:00 – 13:30h
- **Information Technology**
 - Presented by Dieter Suchar
- **Science Operation Software**
 - Presented by Pascal Ballester





- Structured in three groups, in Chile and Germany
- Located on two continents, 4 different locations
- 2 time zones with 4, 5 or 6 hours difference
- Work schemas such as 5/2, 8/6 and mixed
- Provide a consistent set of services across multiple sites

- IT Service Desk
- Network and Communication
- Server: Linux, Microsoft
- Client: Linux, Apple, Microsoft
- Cloud services
- Database and Big Data
- IT / Cyber Security
- Web and Web content management
- Contract period: 3 + 2 years
- Estimated volume 8 – 12 M€ for tenders in 2024



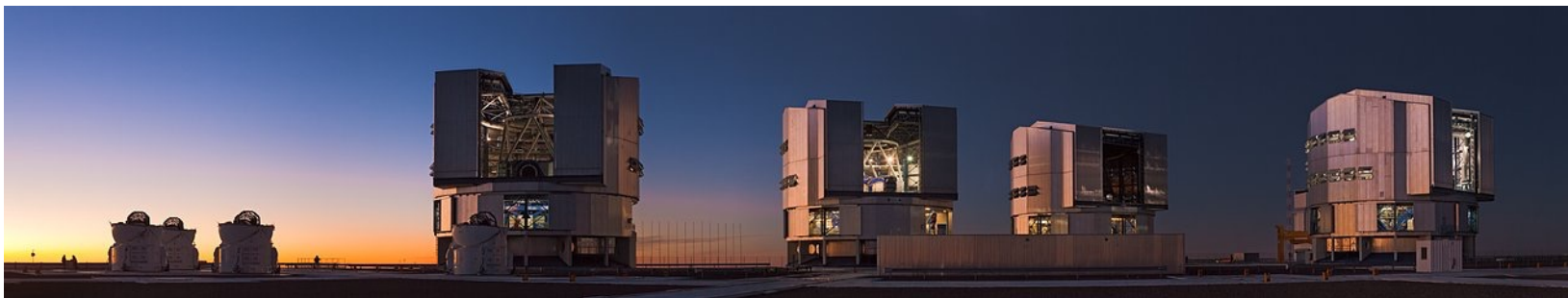
- Communications 2020+
 - Chile: Observatories to Antofagasta and Santiago
 - Contract period: ~10 years

- IT network infrastructure
 - Contract period: 3 + 2 years

- Estimated volume 10 M€
for tenders in 2026



- IT software licenses and subscriptions
- Software License Management
 - Microsoft, Oracle, Autodesk, IBM, VMWare, SAP, Adobe, etc.
 - Contract period: 3 – 5 years
- Estimated volume 3 M€ for tenders in 2024/2025



Tenders: Science Archive, Data Centre, etc.

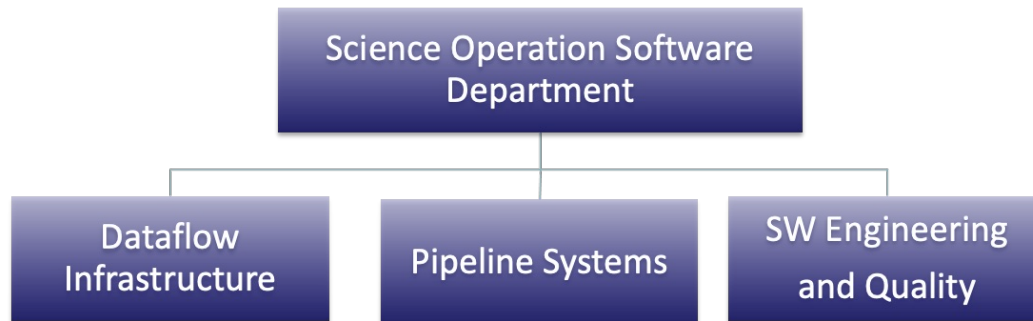
- Science Archive Infrastructure
 - Germany: Linux servers including storage
- Multi-functional units (rented)
 - Chile (3 sites) and Germany
- Data Centre infrastructure and maintenance
 - Vitacura Office/Santiago de Chile

- Contract period: 3 + 2 years
- Total estimated volume 1 M€ for tenders in 2024

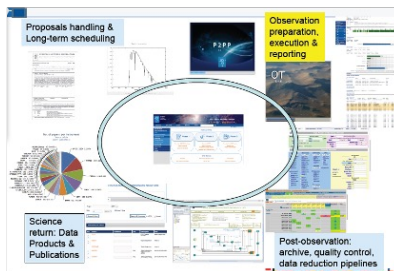
- Global Support is a must
 - Vendors have to deal with global support at remote sites
 - Standardisation of infrastructure and processes
 - Logistic restrictions
- Long lifecycles
 - Solutions are in operation typically for over 10 years
 - Select Hardware and Software vendors carefully
- Requirements are diverse due to scientific needs

- Good experience with companies that have an established presence in Chile and Germany:
 - Single company providing Network Support in both countries
 - Single supplier for Servers / IT workplace equipment
 - Single company on all sites for IT Service Provision
 - Academic Network between South America and Europe

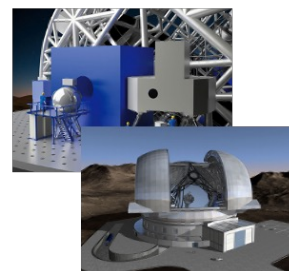




ALMA Dataflow



VLT Dataflow



Paranal / E-ELT Instrumentation

- **Software Maintenance and Support**
 - Mostly maintain an existing code base
 - Sometimes development of new features in the existing base
 - Can include software support, ticket based
- **Software Development**
 - Identifies a sequence of deliverables, and provides in due time the specifications
 - Design review, implementation, integration, acceptance, payment for each deliverable
- **Agile Development and Maintenance Service Contracts**
 - Addresses an industry-wide issue of using Agile methodology in the framework of Service contracts.
 - Agile process is defined, and the overall scope, but not the sequence of deliverables

- Sprint, review, implementation, integration, acceptance, payment for each sprint, or according to a payment model
- Defined Statements of Work with the support of consultants
- Project roles and Sprint process are described in the Statement of Work, as well as technical skills.
- Agile outsourcing contracts are planned for dataflow development and maintenance, and software testing, both for VLT/ELT and ALMA dataflows
- Estimated volume 7 M€ in the period 2023 – 2027

- Contact ESO Contracts & Procurement
 - www.eso.org/public/industry/cp.html
- Subscribe to the Contracts & Procurement database
 - Europe: www.eso.org/public/industry/cp/forms/newvendordetailsform.html
 - Chile: www.eso.org/public/industry/cp/forms/newvendordetailsform_es.html
- Contact Details of ESO Industrial Liaison Officers
 - www.eso.org/public/industry/cp/docs/ILO_Contact_details.html
- Forthcoming Calls for Tenders and Preliminary Inquiries
 - www.eso.org/public/industry/cp/docs/CFT-advance.html