ESO IT and SCS procurement and investment needs until 2027
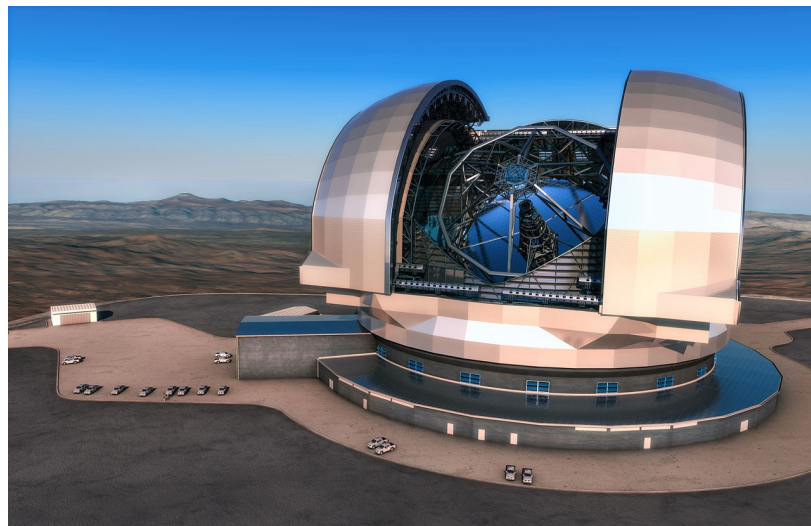
5 October 2022

Pascal Ballester and Dieter Suchar
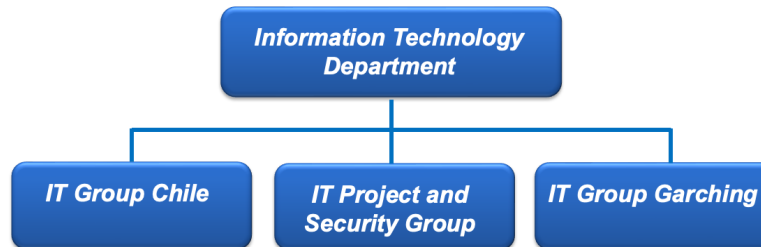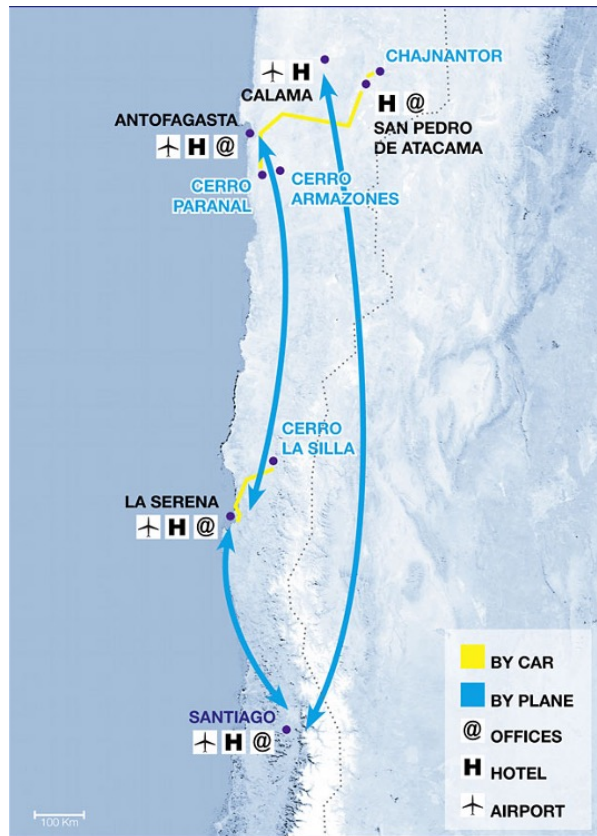
Head of the Science Operation Software Department

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

One IT Department

Information Technology Department

- IT Group Chile
- IT Project and Security Group
- IT Group Garching

- ➤ 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

Tenders: IT Service Provision

- 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
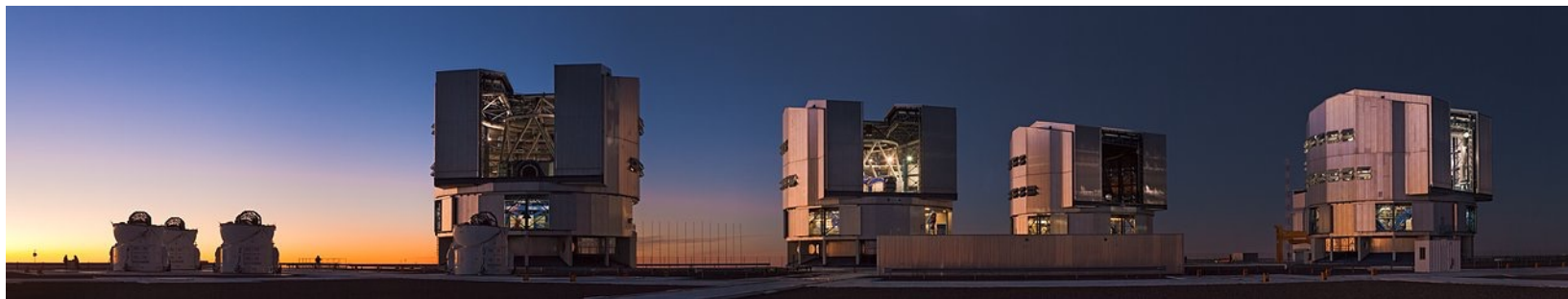
  ➤ Contract period: ~10 years

- IT network infrastructure

  ➤ Contract period: 3 + 2 years

- Estimated volume 10 M€

  for tenders in 2026

Tenders: Software licenses

- **IT software licenses and subscriptions**

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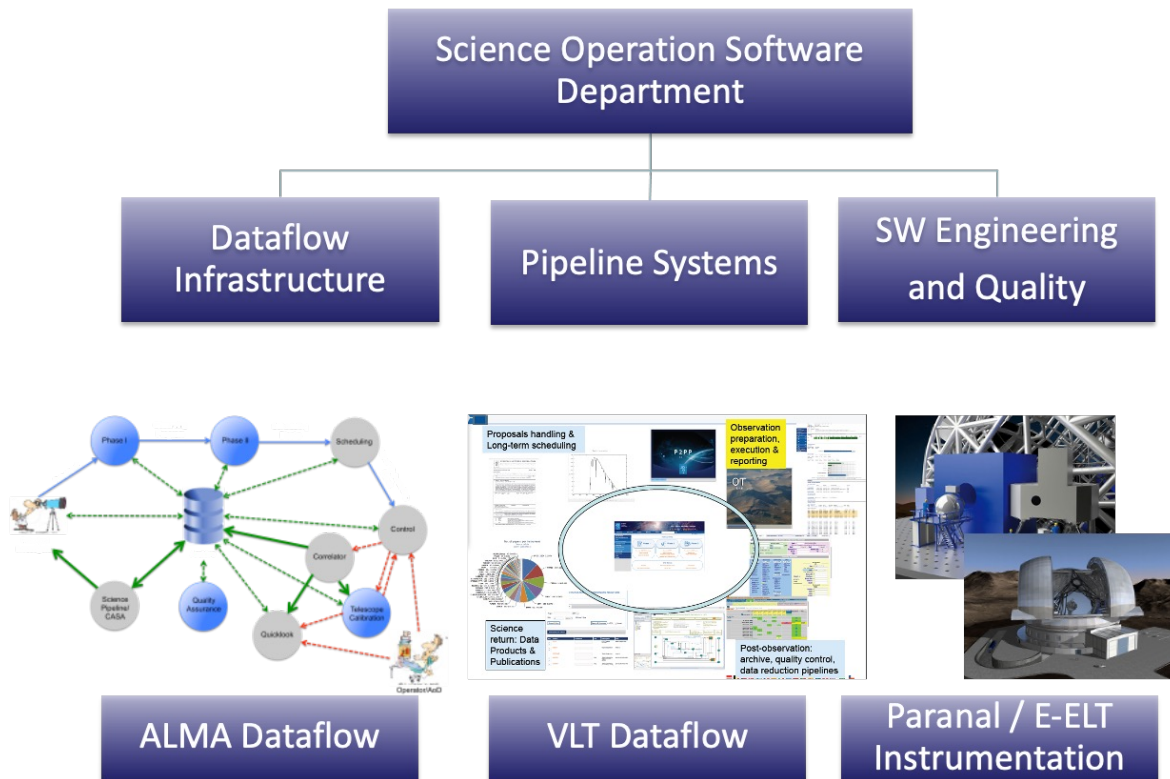
- **Estimated volume 3 M€ for tenders in 2024/2025**

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

Some Challenges

- **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**

Successful Collaboration

- 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

Science Operation Software

SW Dev & Maintenance Contracts

- **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

Agile Service Contracts

- 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

How to engage with ESO

- 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