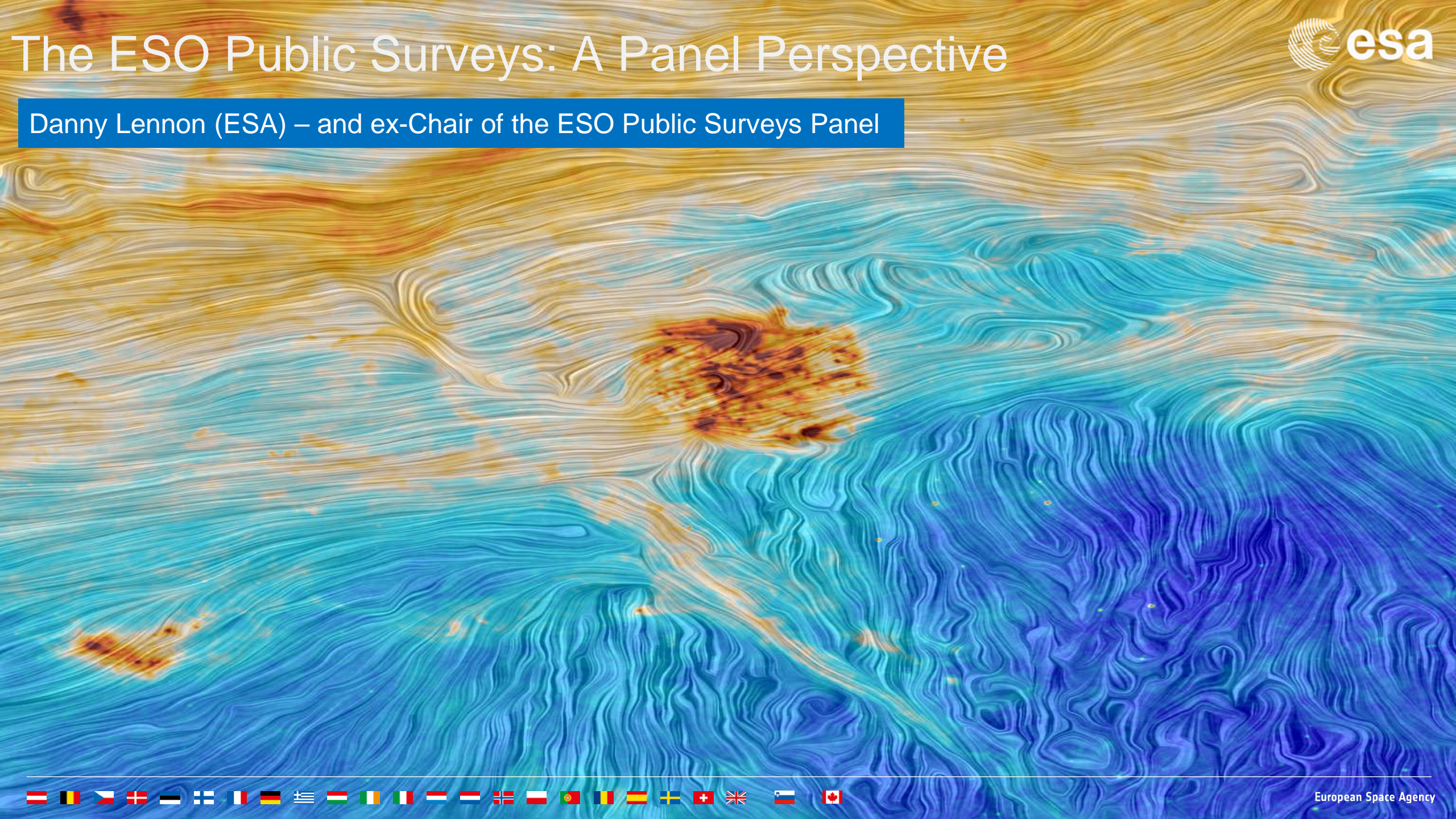


The ESO Public Surveys: A Panel Perspective



Danny Lennon (ESA) – and ex-Chair of the ESO Public Surveys Panel



- A 'handful' of surveys that are community (PI) led.
- Surveys must
 - address specific science goals of the PI team
 - have significant legacy value for the community
 - have viable management plan (obs. planning, data processing, quality control etc)
- PIs sign an agreement with ESO to return high-level data (science ready) products to ESO on specific schedule
- All raw data are immediately public

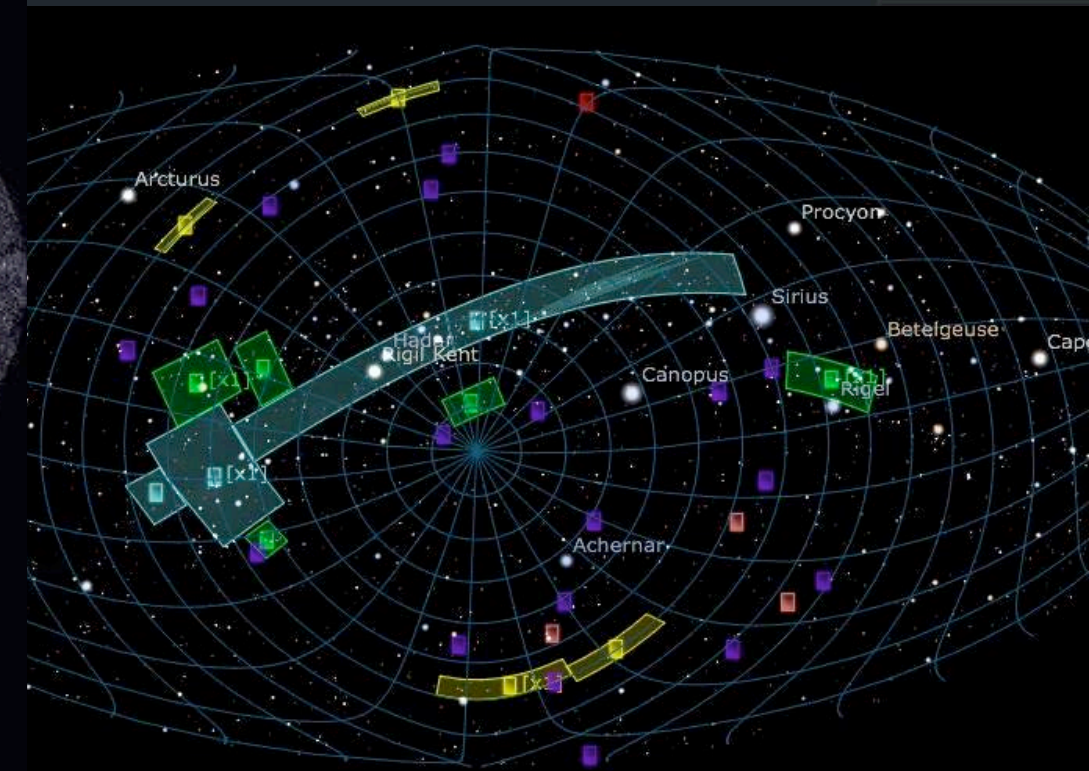
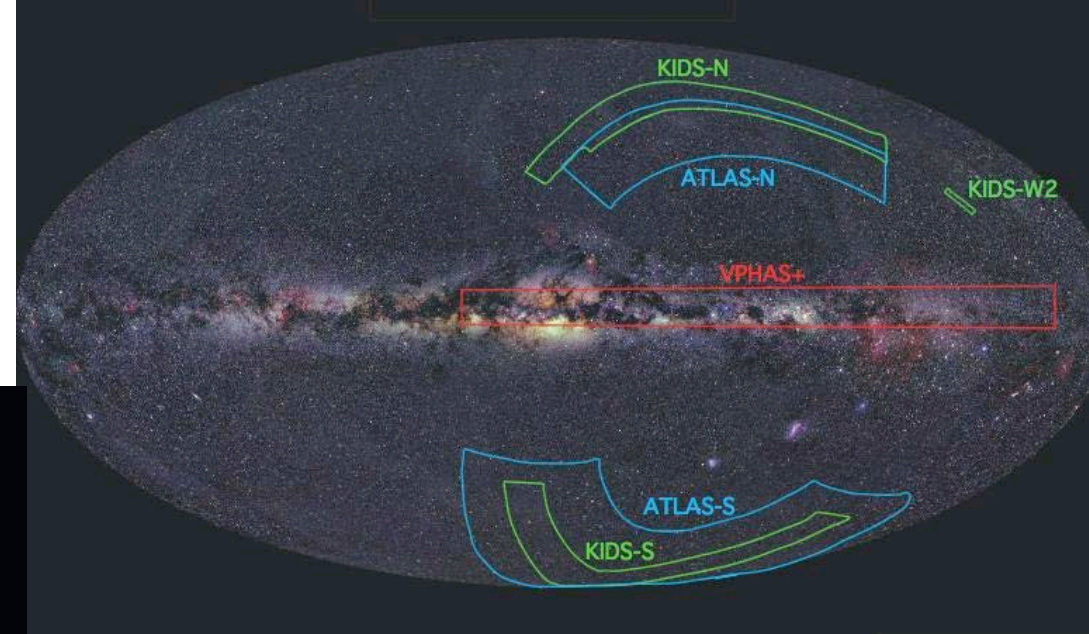
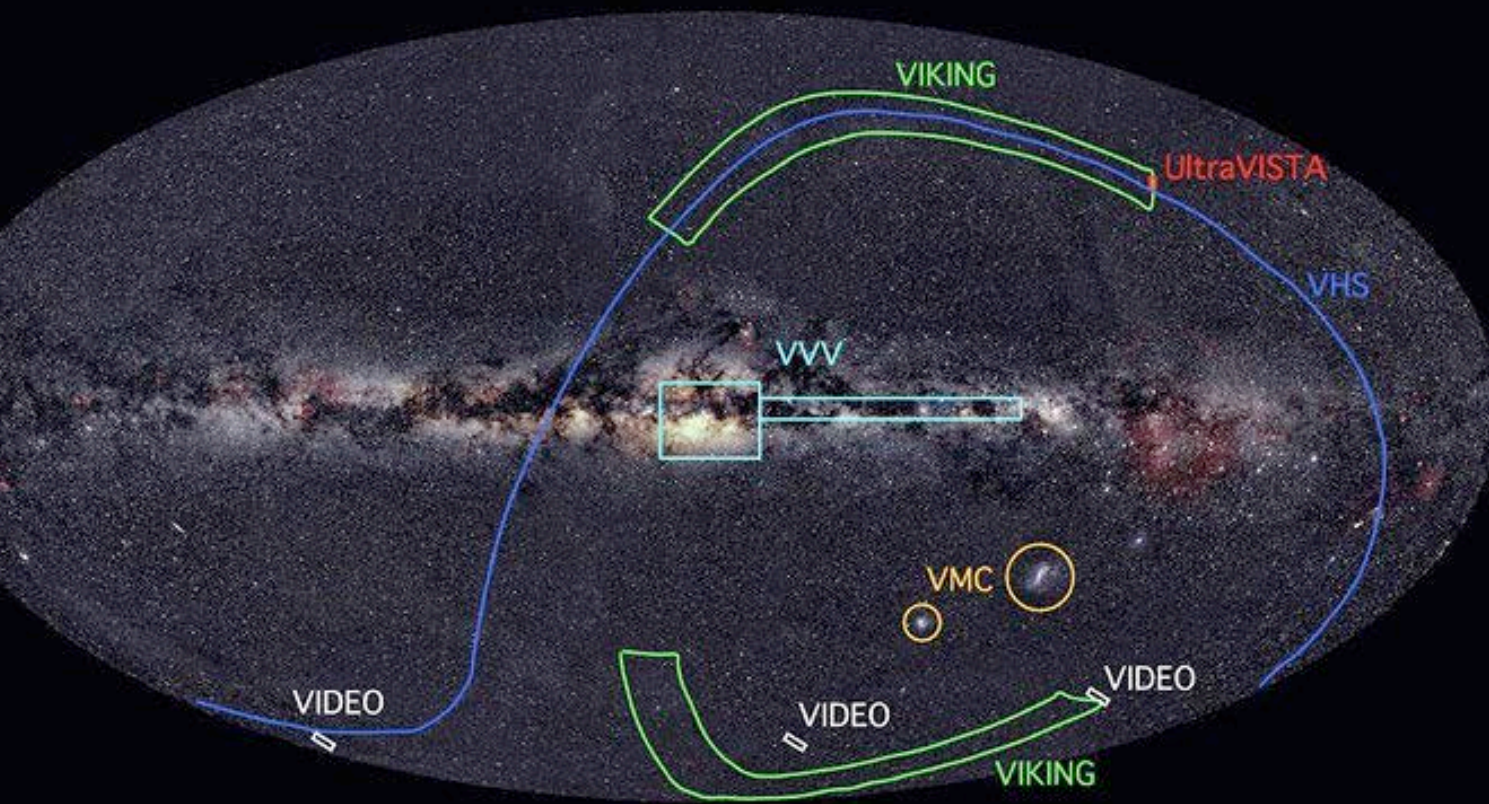
ESO Public Survey Facilities

- Wide-field imaging surveys with VISTA (4m Visible and Infrared Survey Telescope for Astronomy)
- Wide-field imaging surveys with VST (2.6m VLT Survey Telescope)
- Spectroscopic surveys with VLT and NTT

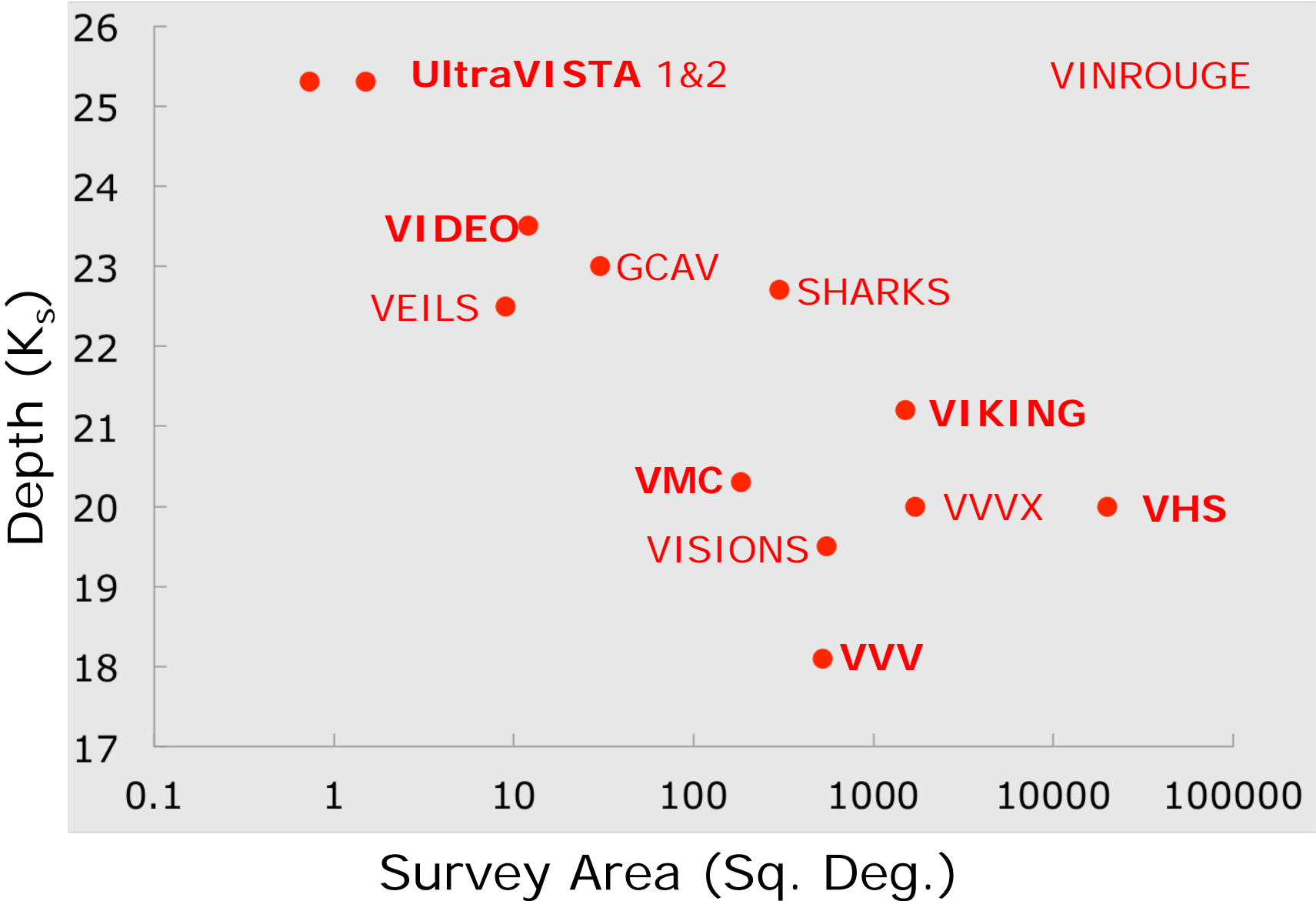
<https://www.eso.org/sci/observing/PublicSurveys/sciencePublicSurveys.html>

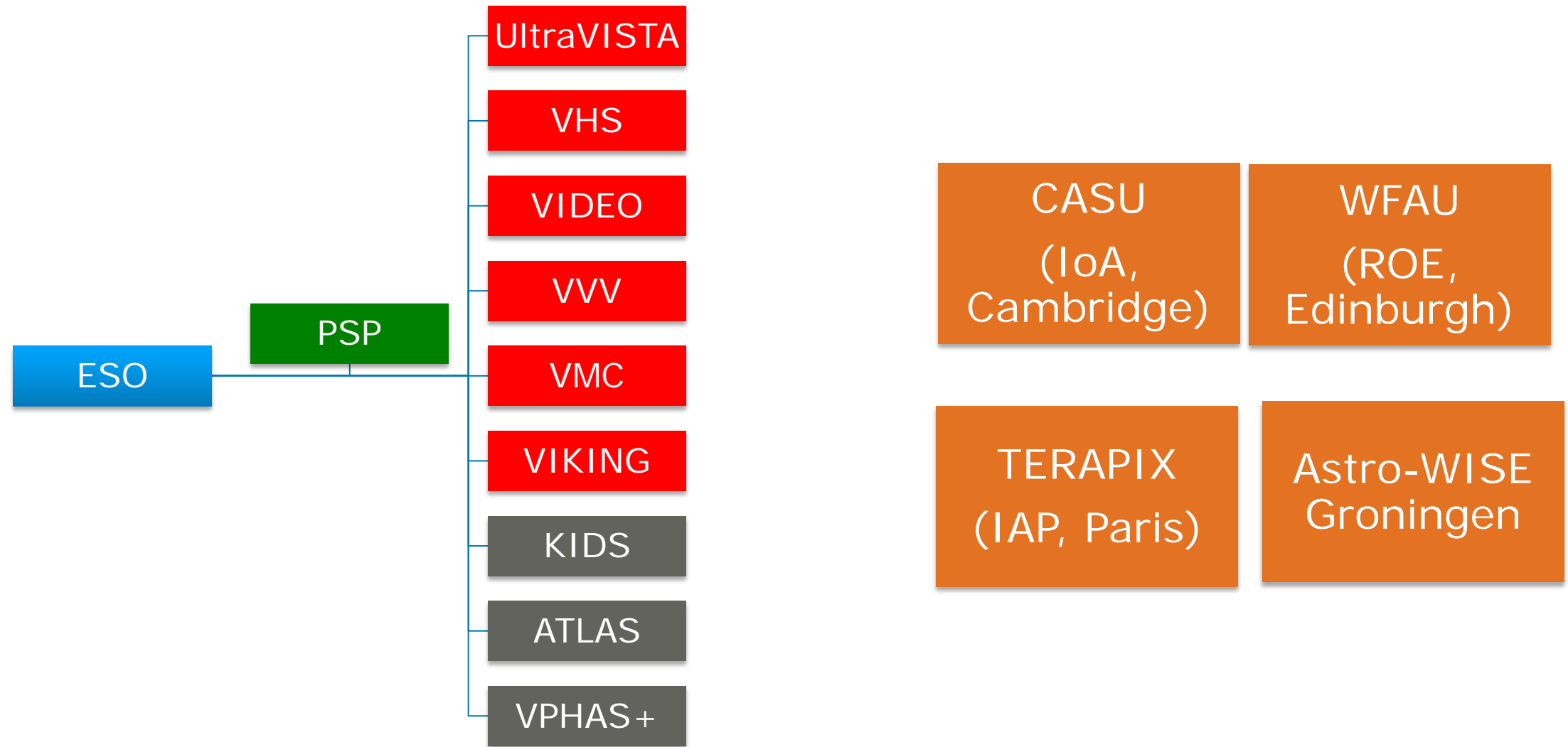
- May 2006: First PSP meeting for VISTA This was originally a joint UK/ESO panel since the UK donated VISTA as part of its buy-in to join ESO.
- April 2010: VISTA Phase 1 Surveys begin
- October 2011: VST Surveys begin Nominal duration is 5 years.
- January 2014: VISTA and VST Panels merged
- April 2017: VISTA Phase 2 Surveys begin Some Phase 1 surveys are extended.
- ~2020: Nominal end of VISTA Phase 2
Depending on 4MOST schedule

FOOTPRINTS of VISTA (PHASE 1 and 2) and VST Public Surveys



Phase 1
Phase 2





The PSP as a management body

- Primary role of PSP is/was scientific oversight: Review and ranking of proposals, decisions on science priority, review of science (both of the PI team and legacy value) etc
- Arbitrate between PIs and ESO Survey Team (EST), and advocate to Observing Programmes Committee (OPC)
- Typical issues:
 - When is a survey complete?
 - Why is ESO so bureaucratic?
 - Why is a PI unresponsive?
 - Can we have more time?
 - Help!

The role of the processing centres

- Formally ESO has an agreement with each PI.
- VISTA (and the VST) has a single instrument.
- Expectation that each PI team is responsible returning high-level data doesn't really work.
- VISTA/VST have relied on community contributed data processing centres, e.g. CASU/WFAU.
- These are important elements of infrastructure that enable the surveys.

- Typical surveys run for 4-5 years, a few run ~twice this duration. Certainly longer than originally envisioned before the surveys kicked off.
- This is longer than most funding agency planning cycles.
- Potential issue as most/all PI teams are dependent on grant support.
- How can we improve coordination?

- Having distributed teams helps fully exploit diverse science goals – they have the expertise! But beware complexity!
- Having Distributed PI teams also limits vulnerability to funding problems – due to diversity of survey elements
- Underlying infrastructure (data centres) is ‘taken for granted’ a little but is essential to the public survey approach
- The ESO PSP’s (independent) role was at times managerial. Perhaps this role needs to be formalized/expanded?
- From an operations perspective – ensuring PI teams produce high level data products is often difficult. Sometimes they need help. This requires allocation of resources.