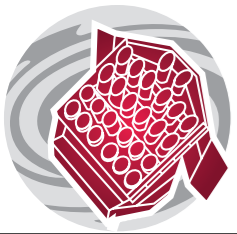
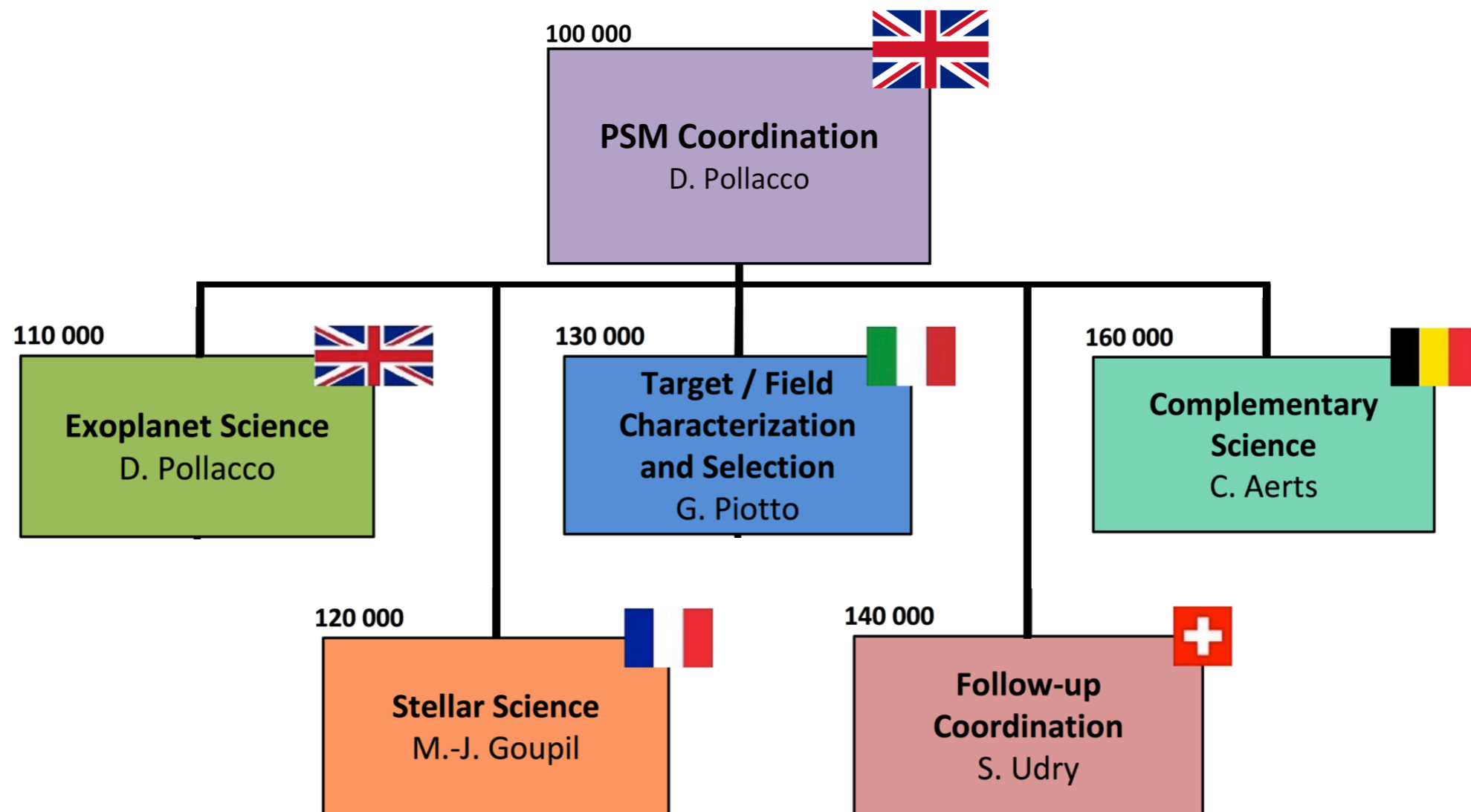


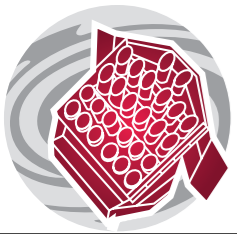
PSM Preparation & Deadlines

David Brown (PSM Office)



PSM leadership



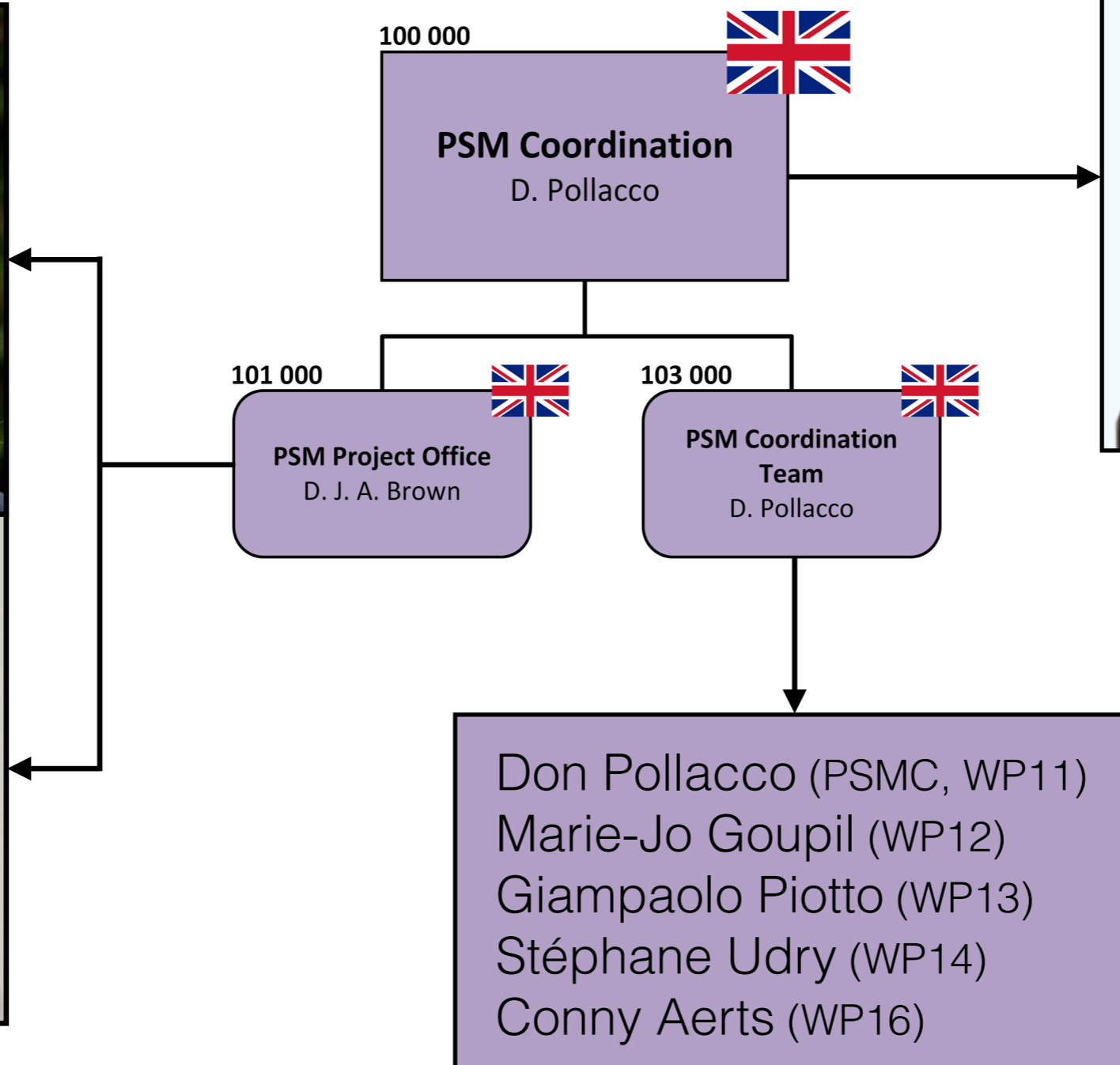


PSM management

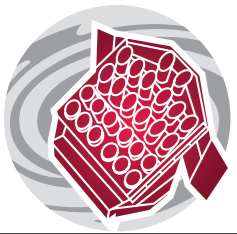
David Brown



Paul A. Strøm
(formerly Wilson)

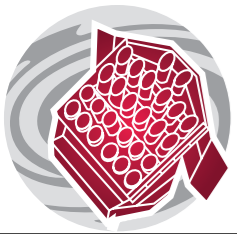


Don Pollacco



Part 1: Preparation

- Membership forms
- System design
- Exoplanet - Stellar Science Interfaces



Membership forms



PLATO Mission Consortium Membership and Non-Disclosure Agreement

Dear colleague,

Thank you for your interest in being/becoming a member of the PLATO Mission Consortium (PMC) (in the following called in short: "PLATO Team"). Please complete and sign this form and email it to your respective national PMC Board member (check out <https://platomission.com>) and the Office (plato-consortium@dlr.de) so that we can provide you with regular and relevant information.

When you sign this document, you agree with the following policy:

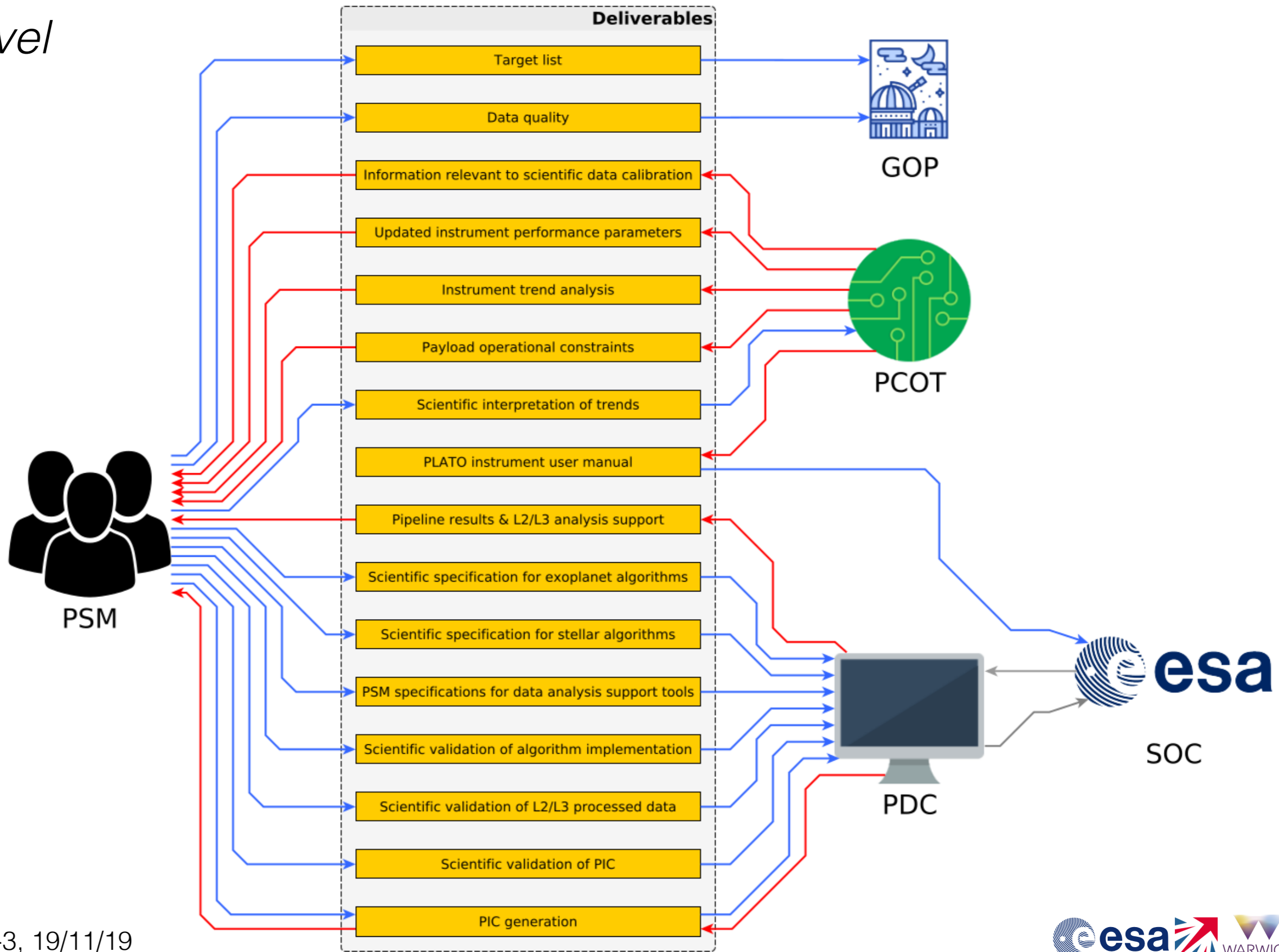
PLATO Team Membership

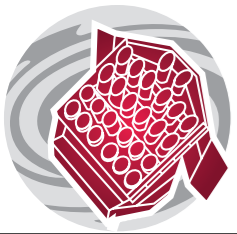
PLATO Team membership is offered to residents of countries with significant contributions to the development of the PLATO Mission Consortium (to PLATO Payload (PP), PLATO Data Center (PDC), or PLATO Science Management (PSM)). Possible exceptions for individuals who make significant contributions but are resident outside these countries are discussed on an individual basis with the PI and the PMC Board.



System Design

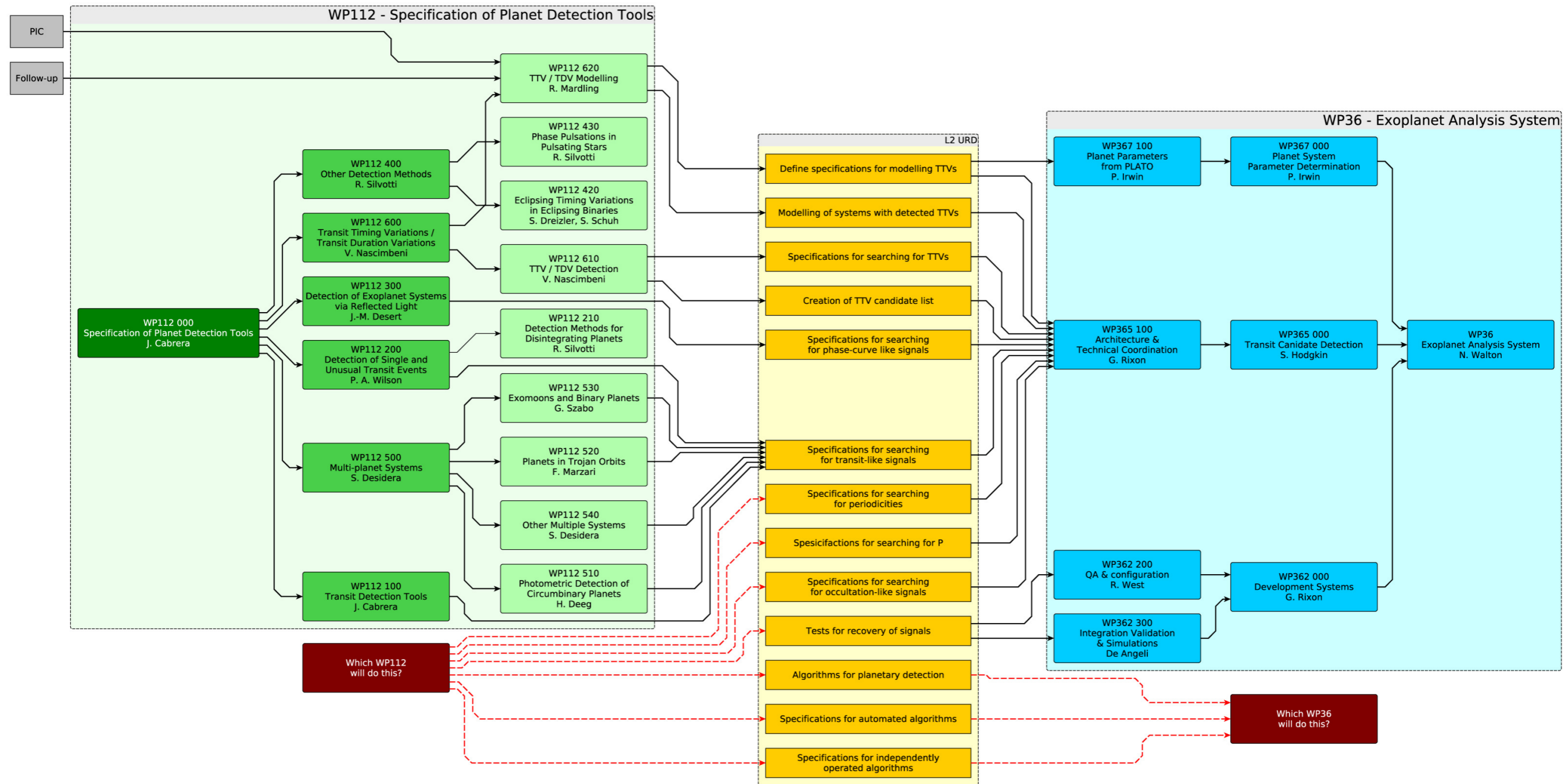
High-level

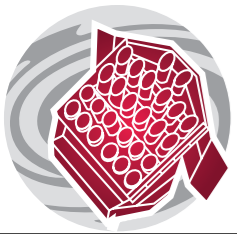




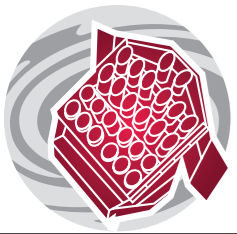
System Design

Level-2 data processing



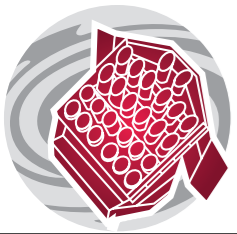


- Work package descriptions (WPDs)
 - ➔ Updates provided earlier this year
 - ➔ Consolidation phase
 - ➔ System drawings may suggest further updates
 - ➔ Delivery for Mission PDR Q2 next year
 - ➔ **Please keep WP12 Office informed of personnel changes**
- Science Implementation Plan (SIP)
 - ➔ Comments provided earlier this year
 - ➔ Next draft issued soon
 - ➔ Discussion and additional feedback phase before Christmas
 - ➔ Reviewed by Science team early 2020
 - ➔ Delivery for Mission PDR Q2 next year



Exoplanet - Stellar Science Interfaces

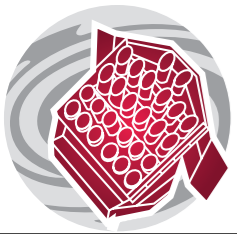
- Light curve stitching
 - ➔ Issue raised at PLATO Week 8
 - ➔ Working Group set up, lead by Suzanne Aigrain @Oxford
 - ➔ Technical note being prepared
 - ➔ Produced simple simulations to test proposed methods
- Other items of interest:
 - ➔ Limb darkening
 - ➔ Spot occultations
 - ➔ Rotation / activity modelling
 - ➔ Data exchanges between pipelines (EAS and SAS)
- Several meetings planned for Q1 next year.



Part 2: Deadlines

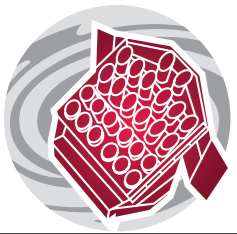
2018	Selection of spacecraft manufacturer Instrument PDR Software SRR Unit PDRs
2019	Q3/4: Software Preliminary Design Review (on-board data processing) Q3 onwards: PSM evaluation of on-ground L0/L1 algorithm justifications Q4: L2/L3 Requirements Review (L2/L3 RR)
2020	Q2: Mission PDR Q3 onwards: evaluation of on-ground L0/L1 ATBDS Q4: 2nd PMC-Internal Review
2021	Critical Milestone Review (CMR) Q4: Ground Segment Requirements Review (GSRQR)
2023	Q4: GS Design Review (GSDR)
2025	Q4: GS Implementation Review (GSIR)
2026	Q3: GS Readiness Review (GSRR)
2026	Q4: Launch Readiness Review (LRR) Q4: Launch
2030	End of nominal operations
2033	End of (possible) extended operations

Internal reviews
ESA reviews

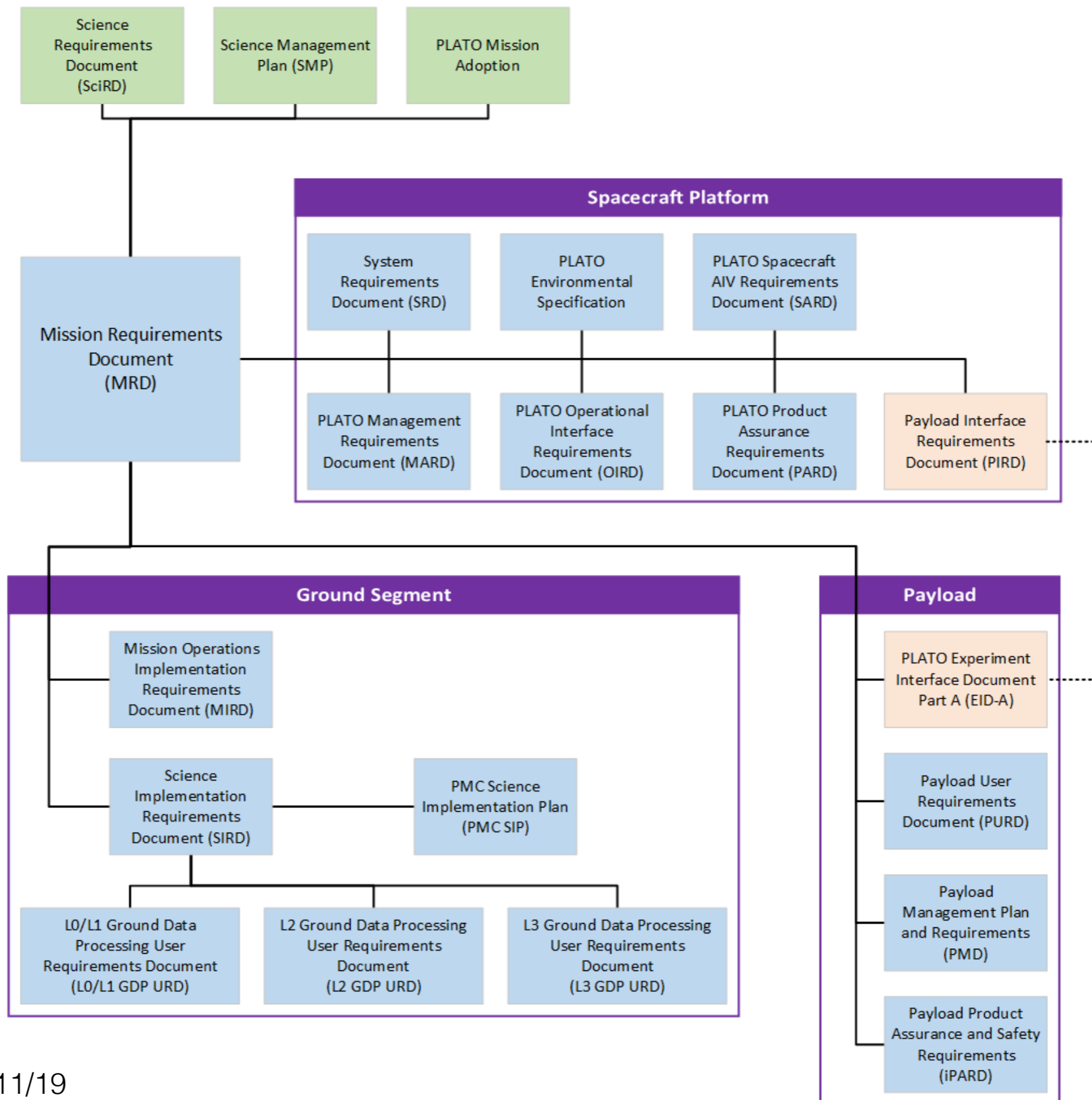


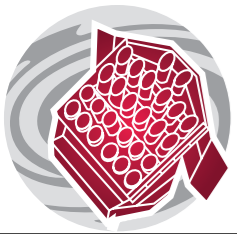
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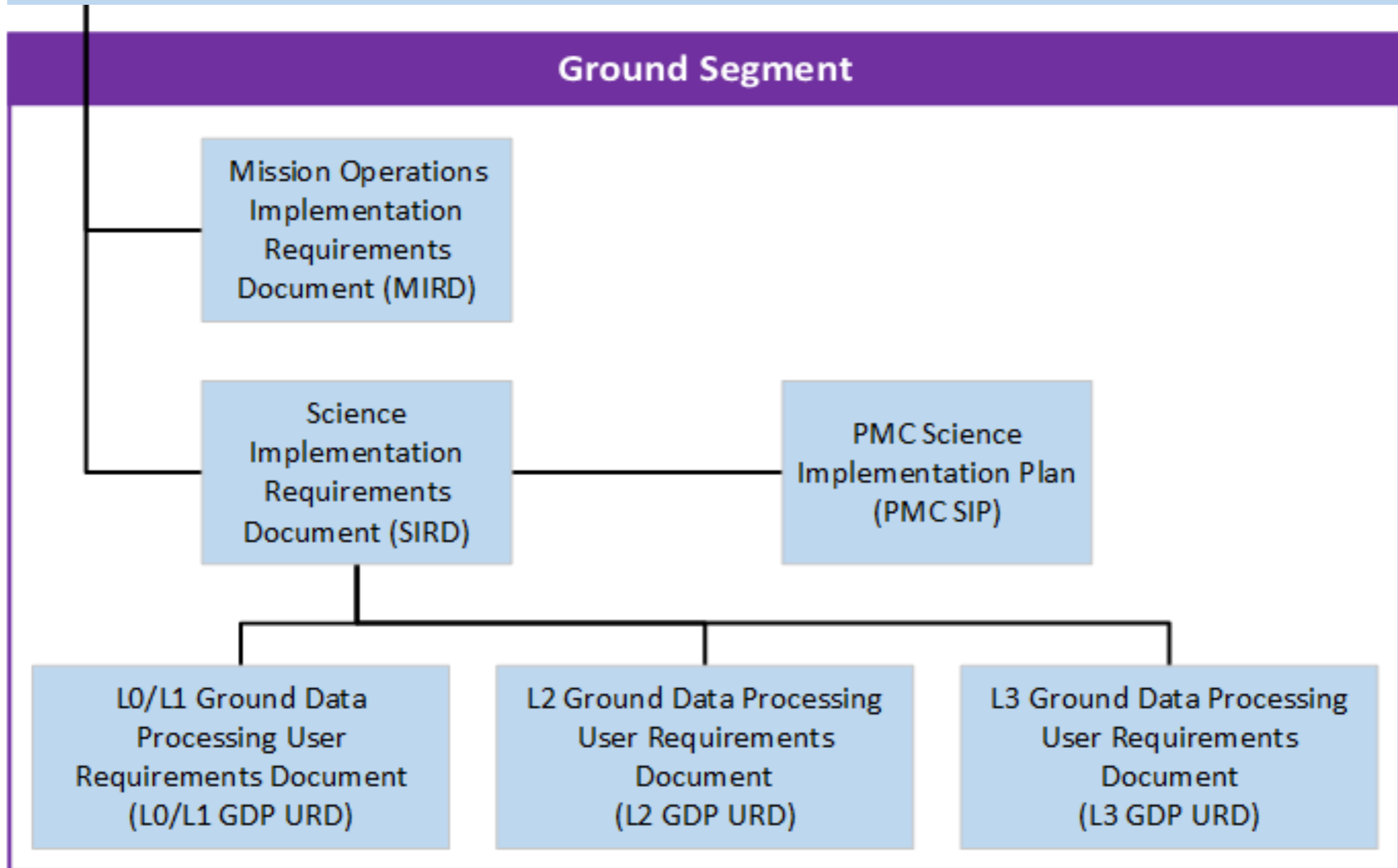
L2/L3 RR: Document Tree

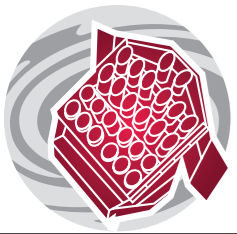




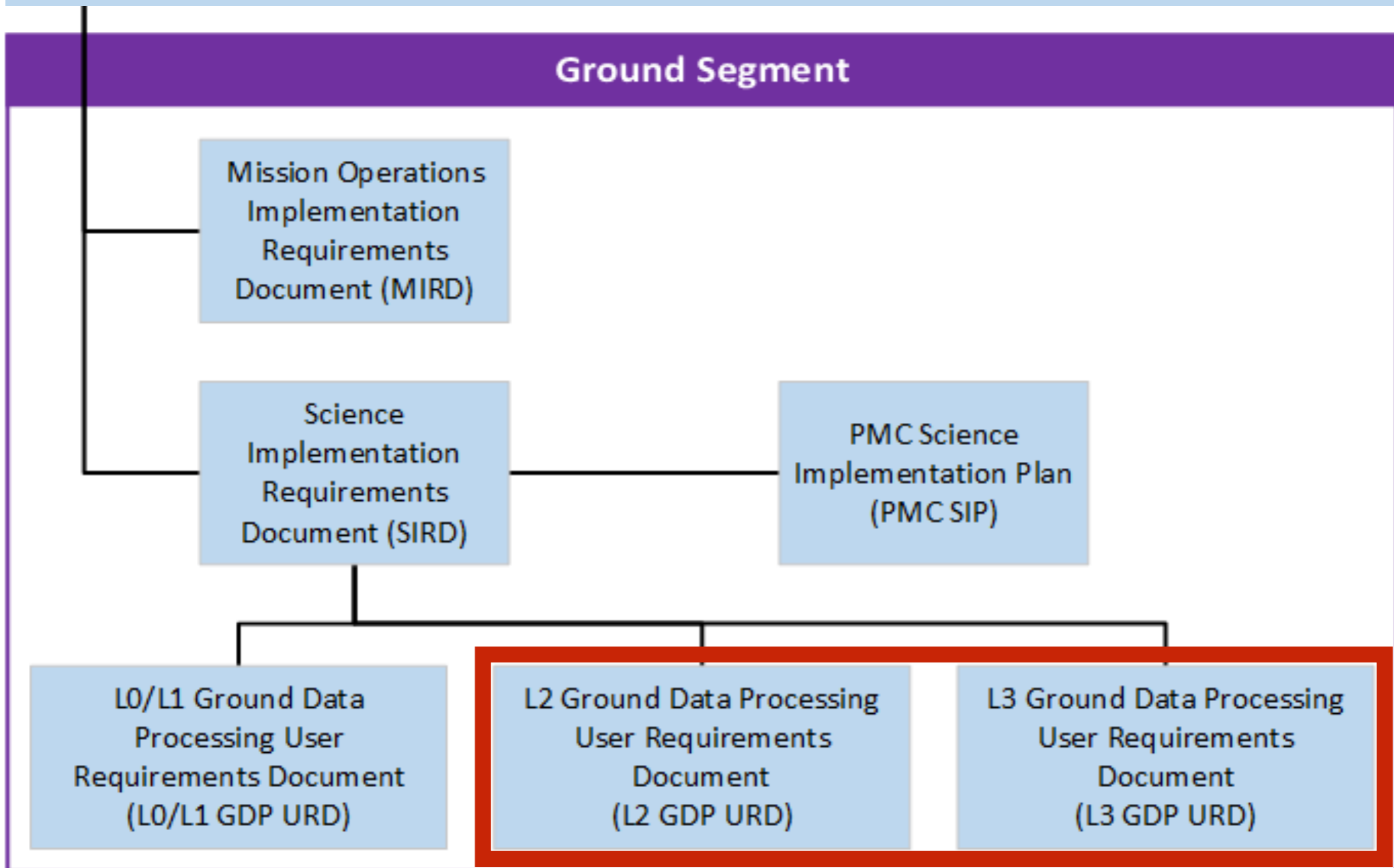
L2/L3 RR: Document Tree

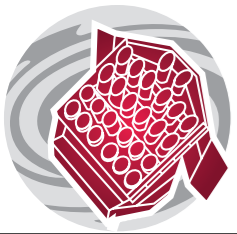
Mission Requirements Document (MRD)





Mission Requirements Document (MRD)

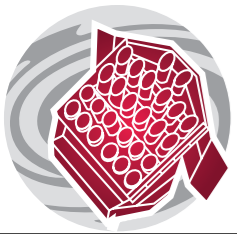




- Objectives
 - ➔ Verify the completeness, flow-down, and traceability of the requirements.
 - ➔ Check the consistency, comprehensibility, and validity of the requirements
 - ➔ Verify the sufficiency of justifications
 - ➔ Check the feasibility and validity of the verification & validation metrics and methods
 - ➔ Identify problem areas and provide recommendations for future development

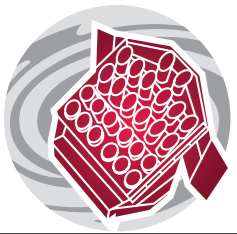
Date

end November	Review kick-off
20th December	RIDs released
23rd December - 5th January	Christmas break!
17th January	All RIDs answered
21st February	Review close-out



Part 2: Deadlines

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On-ground L0/L1 processing

PACK 0

Architecture and data flow of the on-ground science processing pipeline (document)

PACK A

Jitter and long-term drift correction
Microscanning and PSF modelling
Photometry of imagerettes
Outlier correction
Photometry of saturated stars

PACK B

Attitude estimation
Calibration of image geometry
PSF interpolation across the field of view

PACK C

Sky-background modelling
Long-term detrending
Focus calibration
LC matching & flux calibration

2019/07/16

2020/01/31

2020/05/31

2020/09/15

2021/01/31

2021/06/30

Pack A

Pack B

Pack C

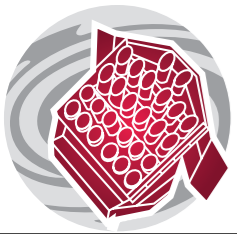
Justification documents

Pack A

Pack B

Pack C

ATBDs



On-ground L0/L1 processing

PACK 0

Architecture and data flow of the on-ground science processing pipeline (document)

PACK A

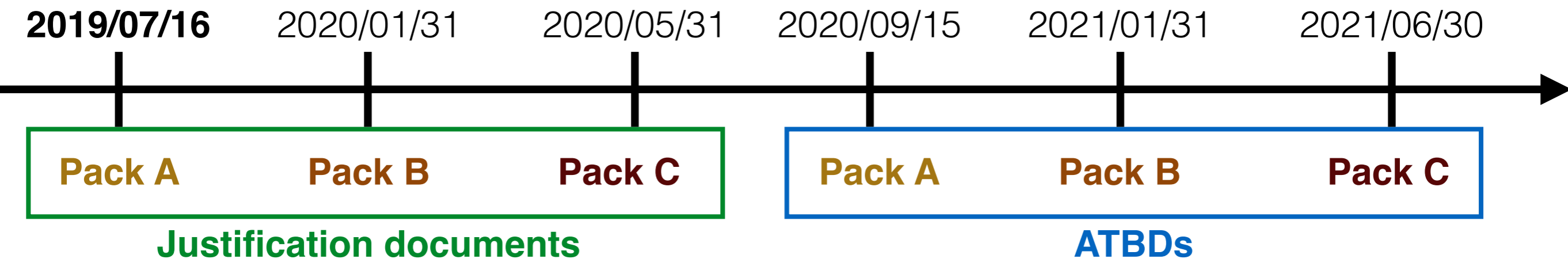
Jitter and long-term drift correction
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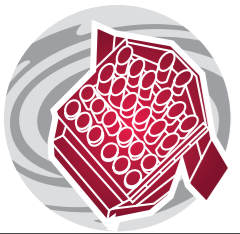
PACK B

Attitude estimation
Calibration of image geometry
PSF interpolation across the field of view

PACK C

Sky-background modelling
Long-term detrending
Focus calibration
LC matching & flux calibration





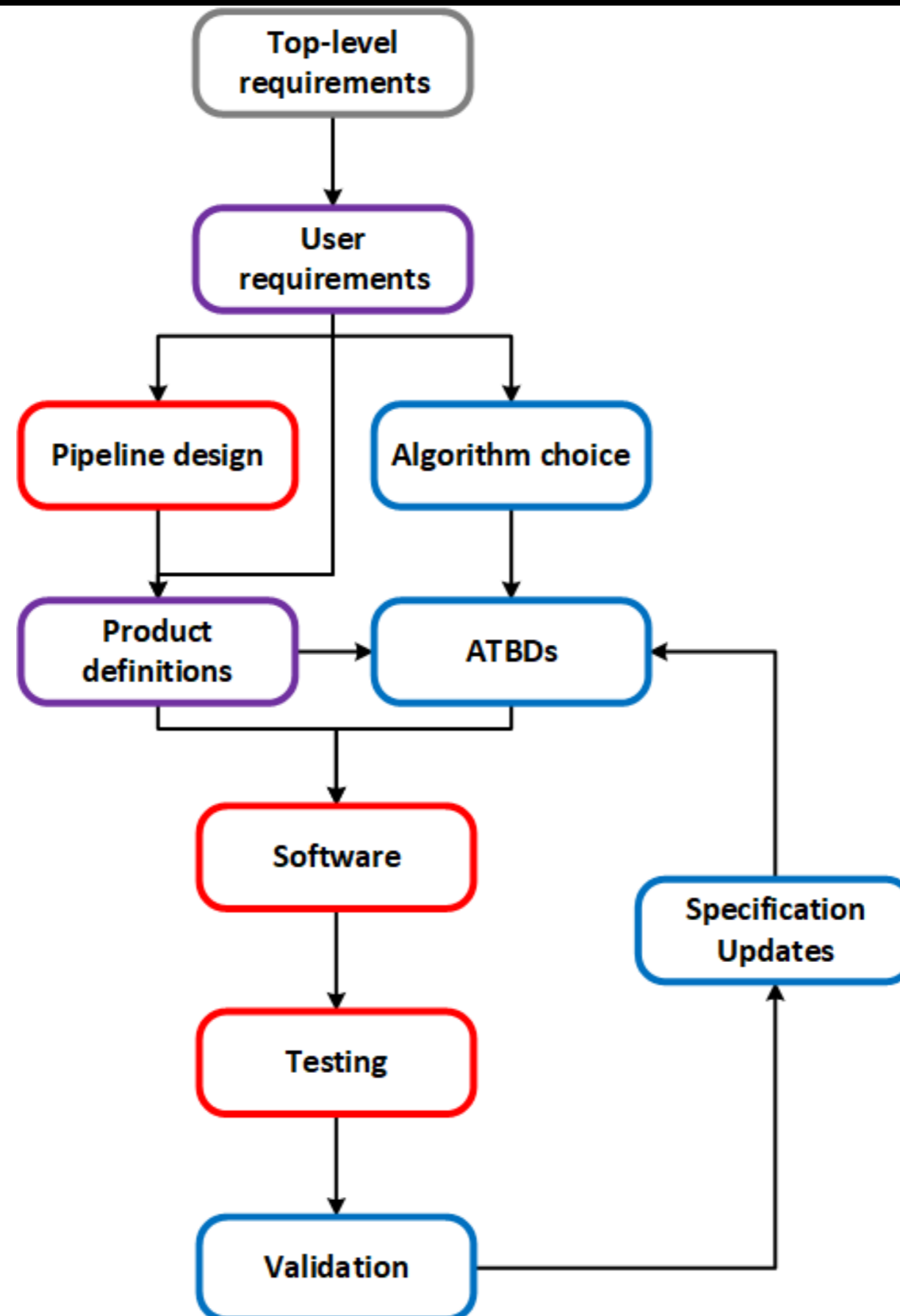
Looking Ahead

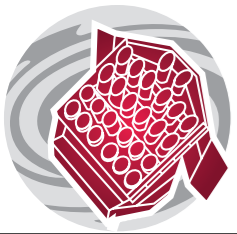
ESA

PDC

PSM

Joint





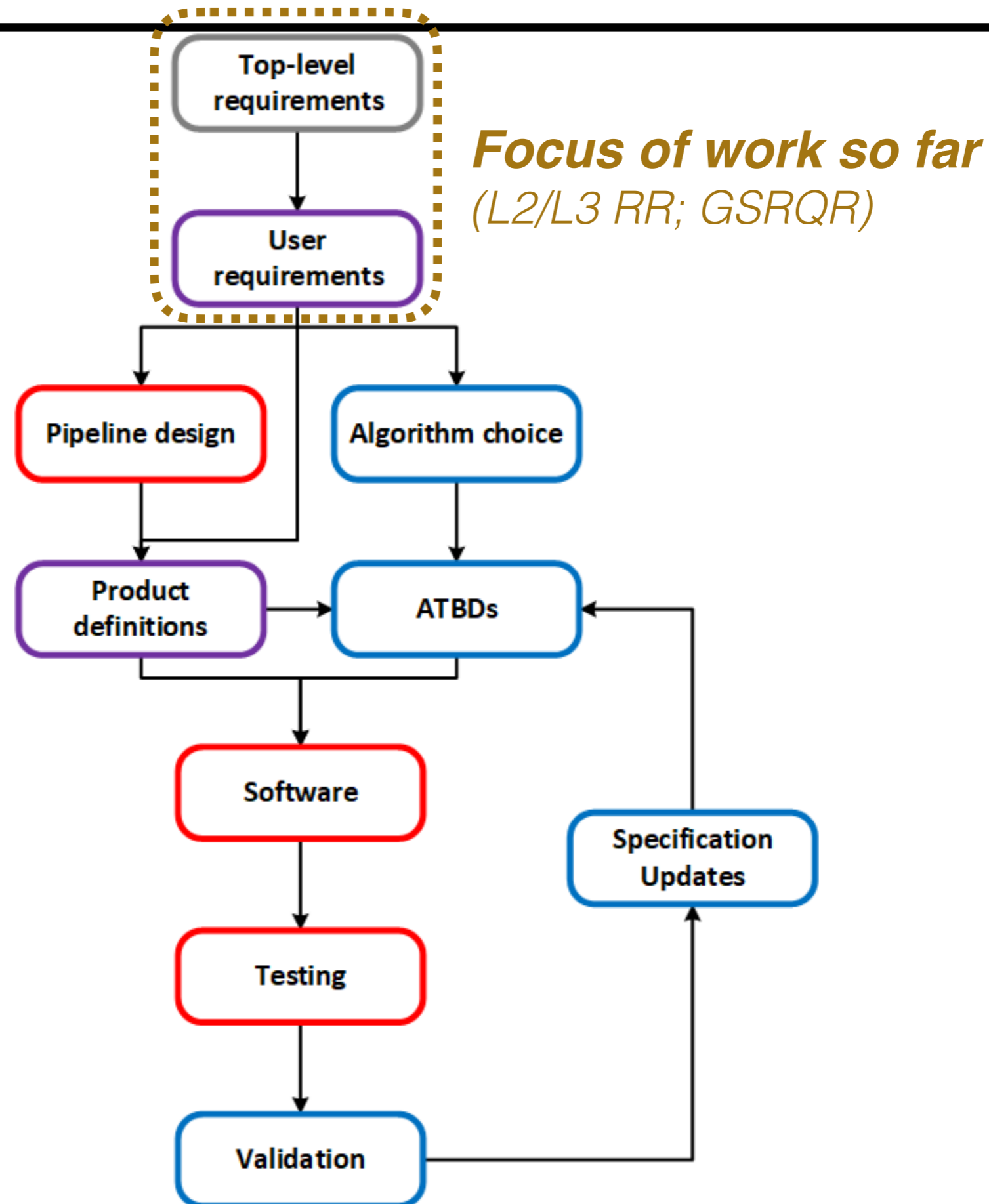
Looking Ahead

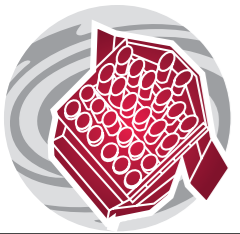
ESA

PDC

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Joint





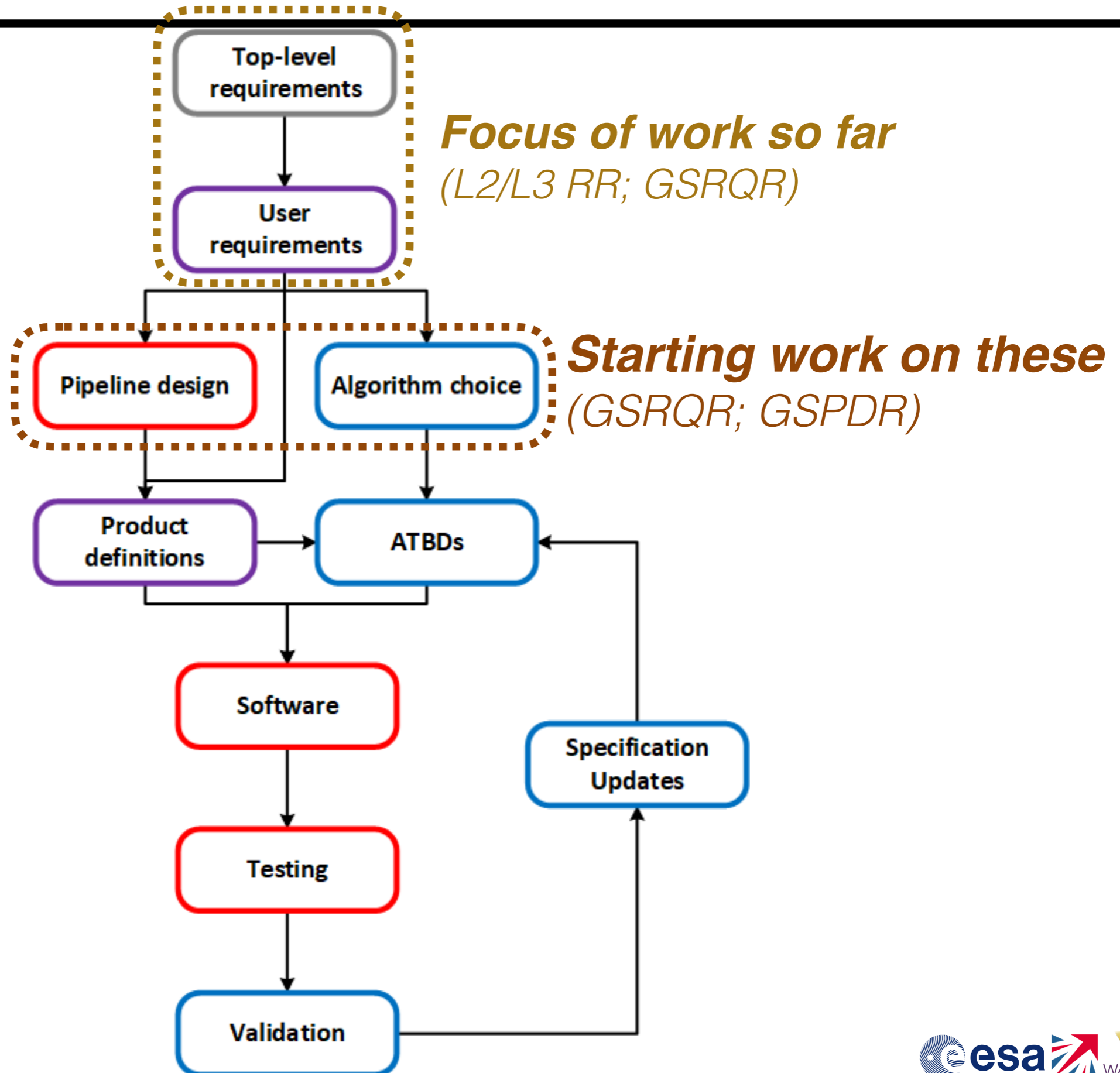
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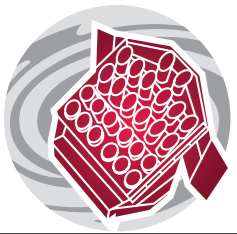
ESA

PDC

PSM

Joint





Looking Ahead

ESA

PDC

PSM

Joint

Top-level requirements

User requirements

*Focus of work so far
(L2/L3 RR; GSRQR)*

Pipeline design

Algorithm choice

*Starting work on these
(GSRQR; GSPDR)*

*Will be starting
on these soon
(GSRQR; GSPDR)*

Product definitions

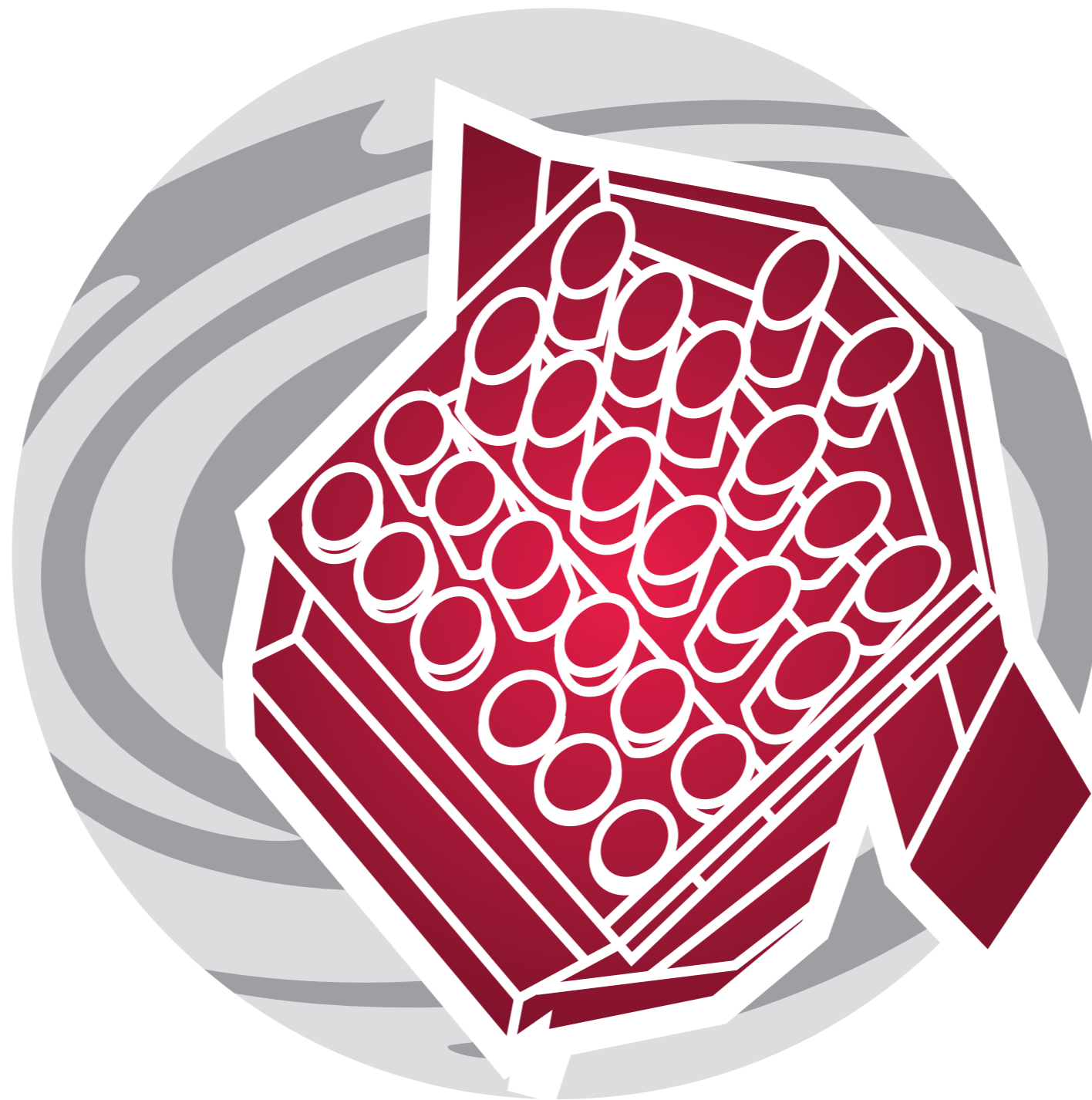
ATBDs

Software

Specification Updates

Testing

Validation



Thanks

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www.warwick.ac.uk/plato-science