



# Purpose and context of the Aperture Array CoDR

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19 April 2011

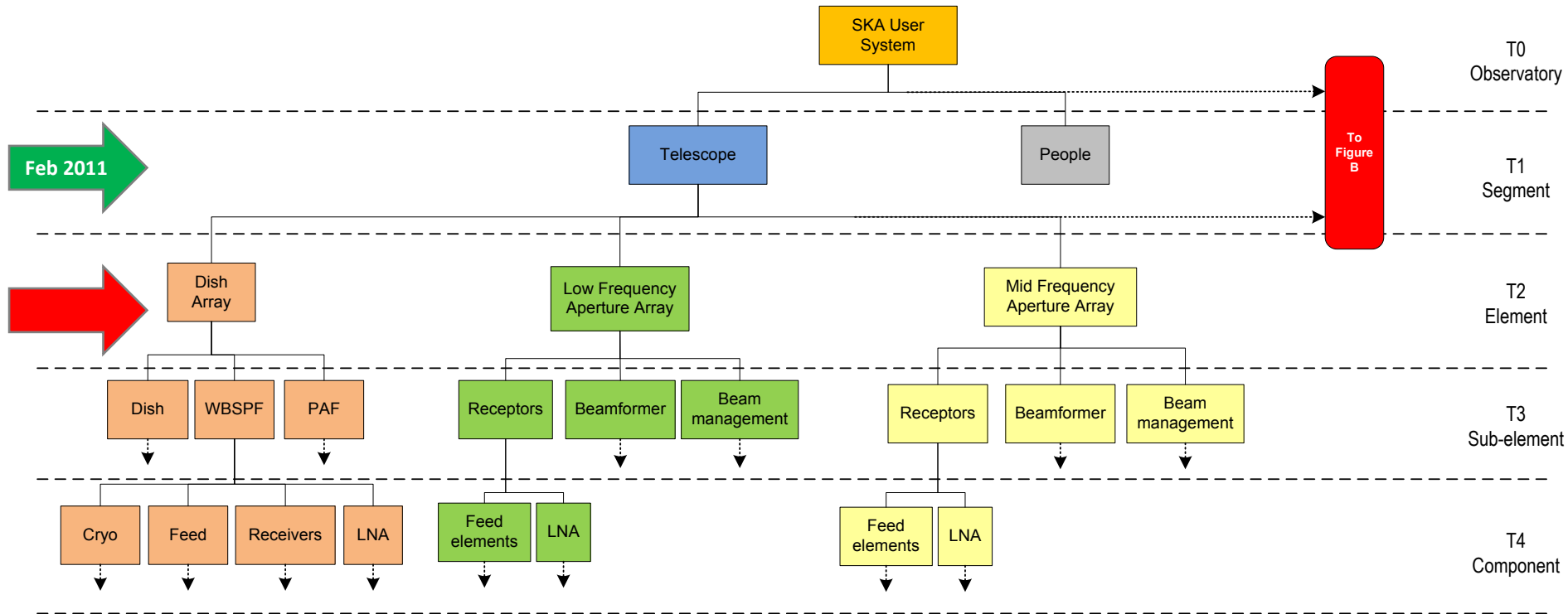


# Overview

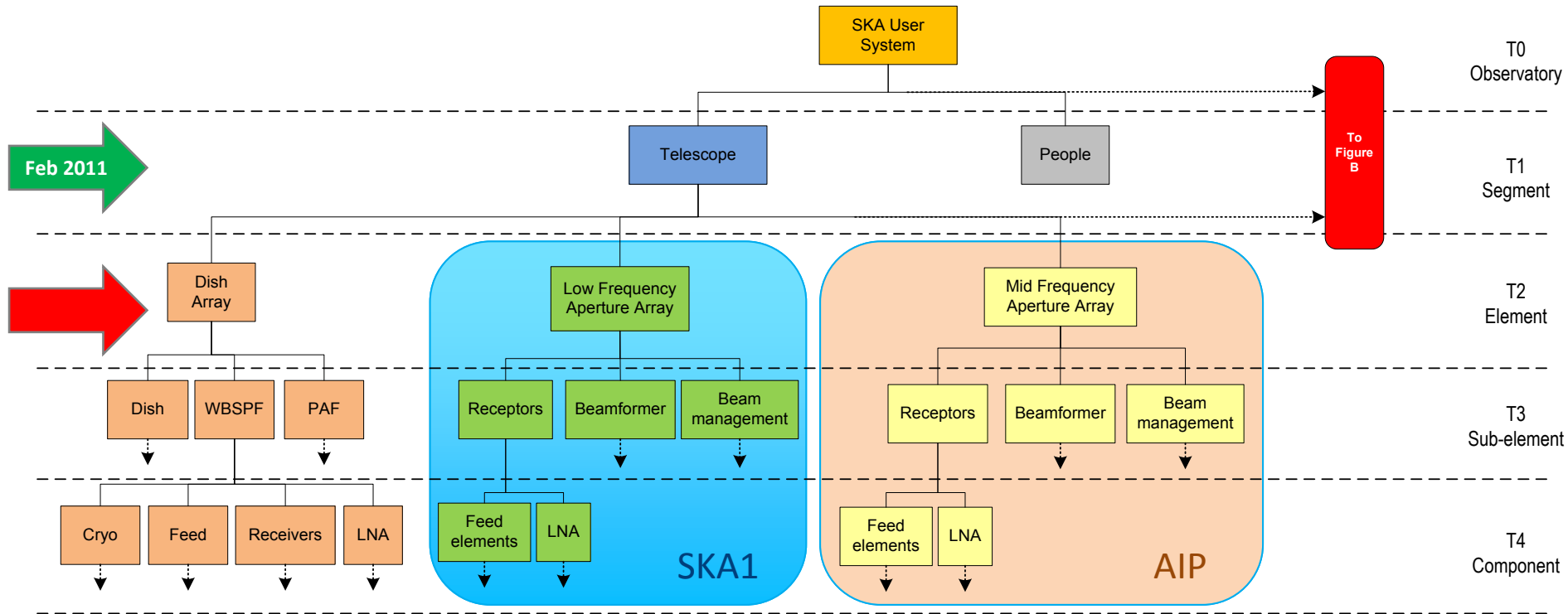


- Concept Phase and CoDR
- Purpose and Expected Outcome of the CoDR
- Questions to Panel
- Documents
- Presentations
- Flow of Review

# Hierarchy (1)



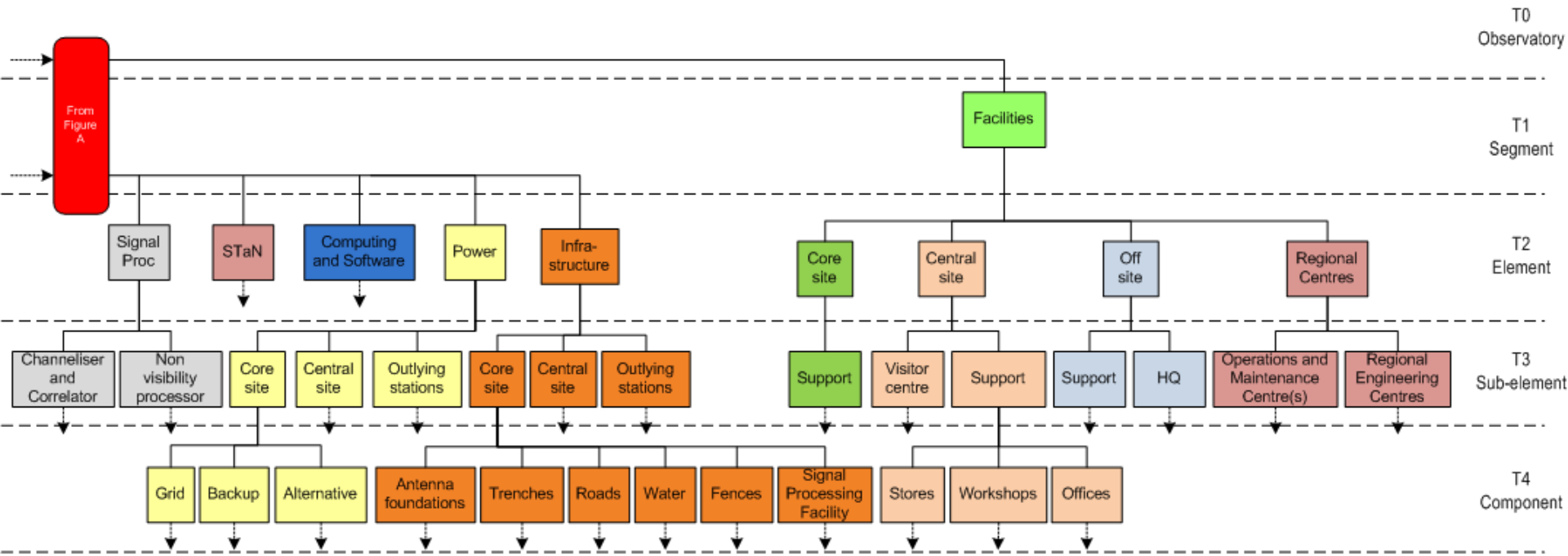
# Hierarchy (2)



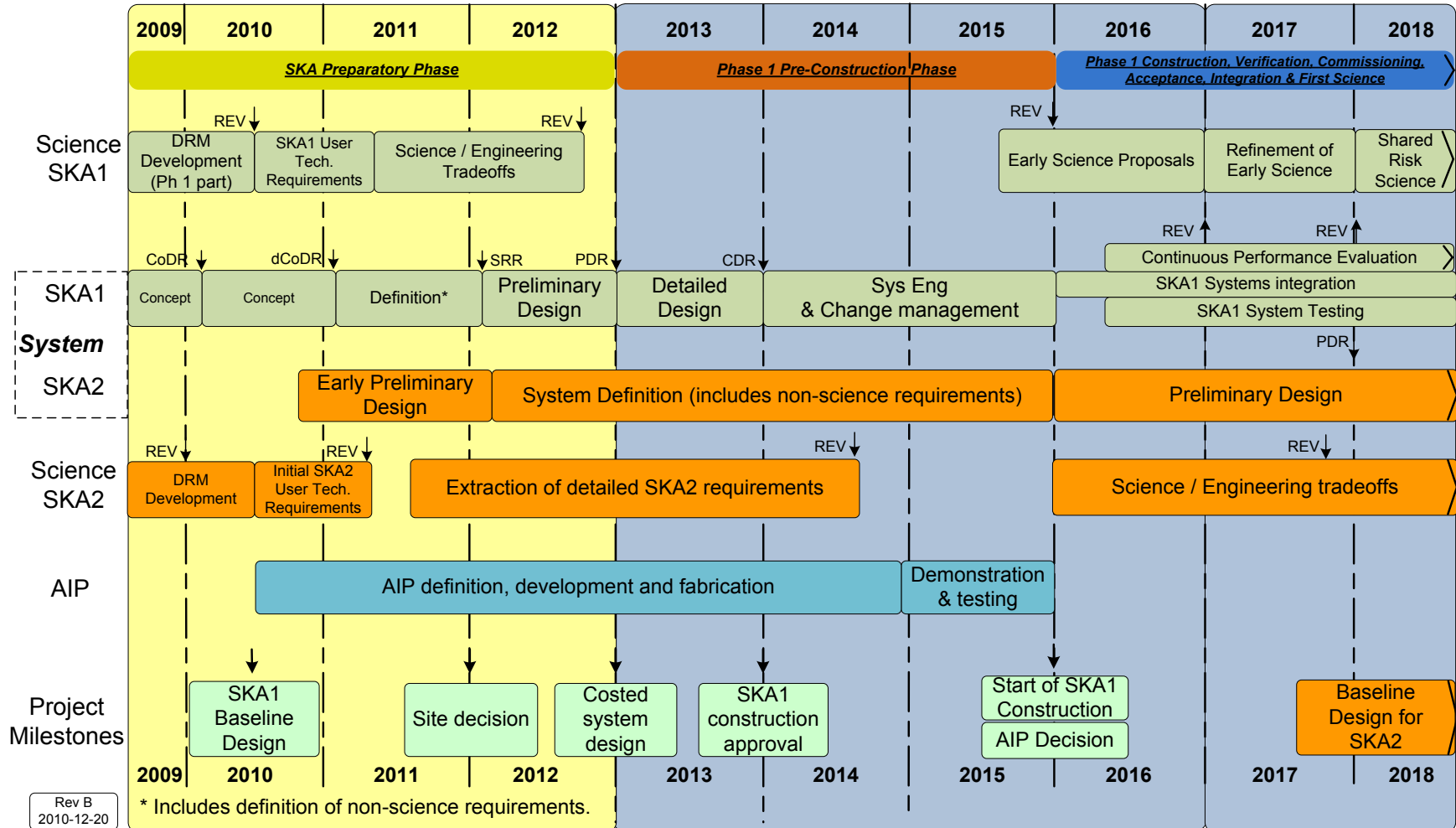
# Hierarchy (3)



For completeness.....



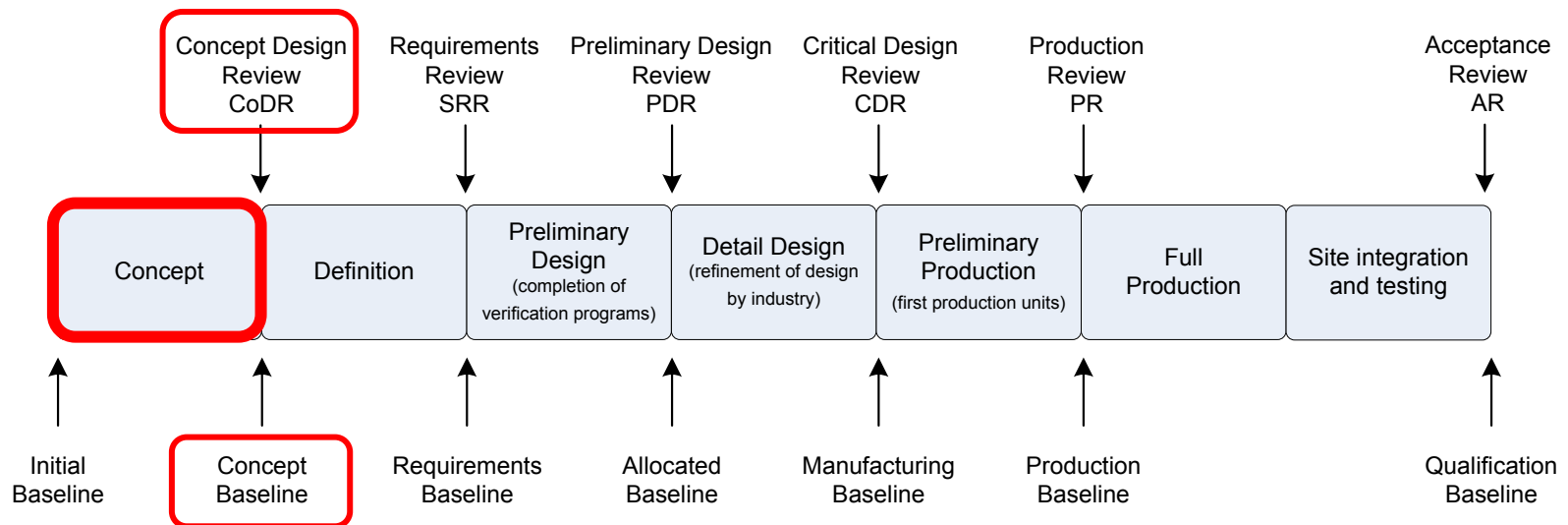
# SE Phases within Project Phases



# Concept Phase and CoDR (1)

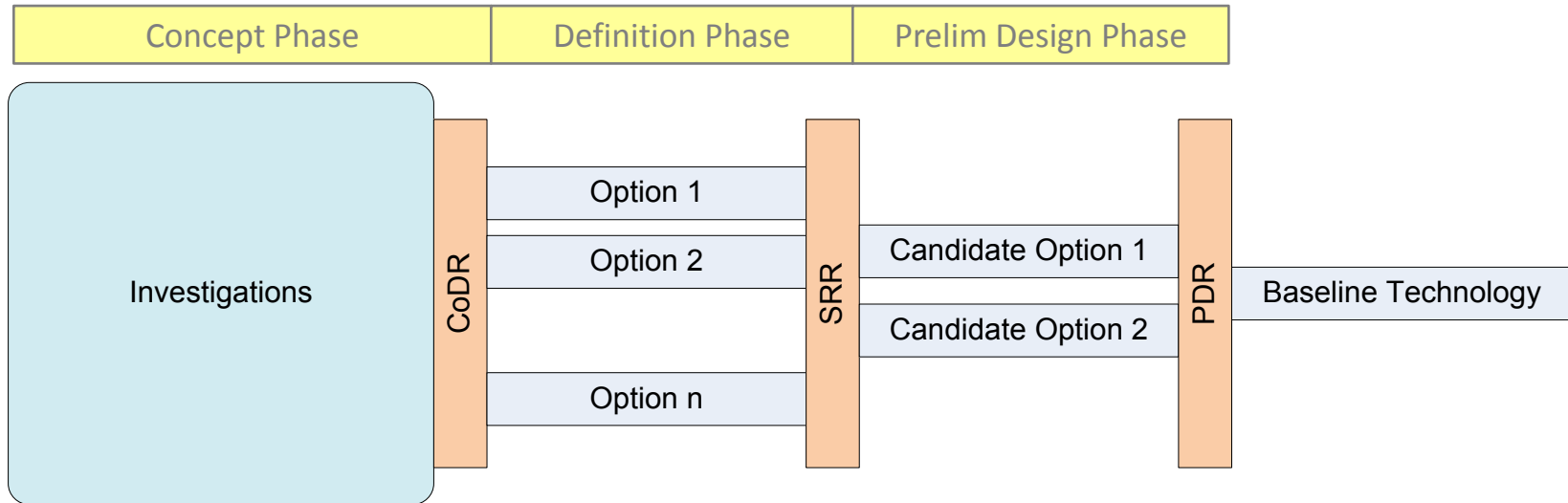


- CoDR is performed at the end of the Concept Phase



- Compared to the 'usual definition' and scope of a CoDR, the SKA CoDRs are taking place earlier in the project lifecycle
- Imply concepts have not yet been narrowed down to any single solution and that a range of options may still exist.

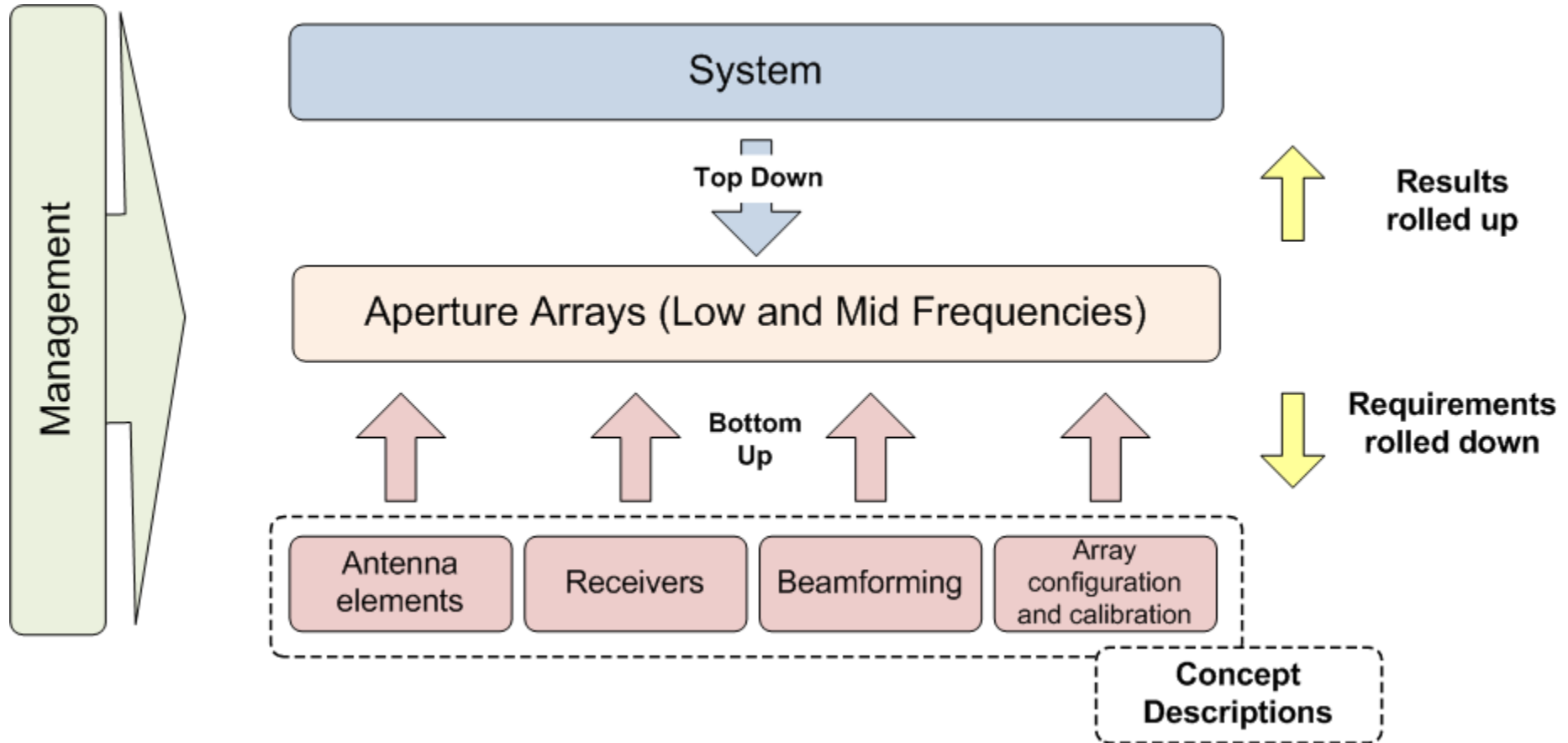
# Concept Phase and CoDR (2)



- Concept phase will be followed by the definition phase and then the preliminary design phase.
- As phases progress the SKA system design will evolve via a set of trade-off studies to arrive at a single solution by the time of the Preliminary Design Review.



# Approach and Documents



# Purpose and Expected Outcome



(Extracted from document WP2-010.020.010-PLA-002, Rev E, Aperture Array Concept Design Review Plan)

- **Purpose**
  - Review the results of the work conducted at element level during the Concept Phase.
- **The CoDR will be conducted to evaluate:**
  - The overall technical progress,
  - Whether the technical adequacy obtained during the concept phase, as defined in the relevant documentation, is at a sufficient level of maturity to allow the Aperture Array element to move into the next phase,
  - Whether all aspects of the Aperture Array element have been covered and where gaps exist, whether adequate measures have been identified to address the shortcomings.
- **Expected outcome**
  - The establishment of the Aperture Array concept baseline by conclusion of the Aperture Array concept phase.

# Questions to the Panel



1. Are the requirements complete, and sufficiently defined for this stage of the project?
2. At the concept level, is the element/subsystem presented capable of meeting the requirements?
3. Has interfaces to other aspects of the system have adequately identified and defined at this stage of the program?
4. Are the options proposed to be carried forward credible and are the presented data and information in support of each option credible?
5. Have all the necessary aspects of the specific element/subsystem been considered and addressed during the review or are there gaps and/or shortcomings?
6. Does the risk profile appear reasonably detailed and assessed for this stage of the program?
7. Do the stated risk controls and proposed mitigations appear reasonable and executable?
8. Is the overall plan (including the identification of the tasks, effort, resources, costs, schedule and risk mitigation needed) to complete the subsequent project phases credible?

# Flow of the Review



Tuesday

- **Top down**
  - Science
  - Technical Requirements
  - High Level Description
- **Bottom Up**
  - Technical AA Concepts
- **Management**
  - AA Risks and Risk Management
  - Deployment and Operations
  - Strategy to proceed to next phase

Wednesday

Thank You



The Square Kilometre Array