

Architecture Review in Agile Development

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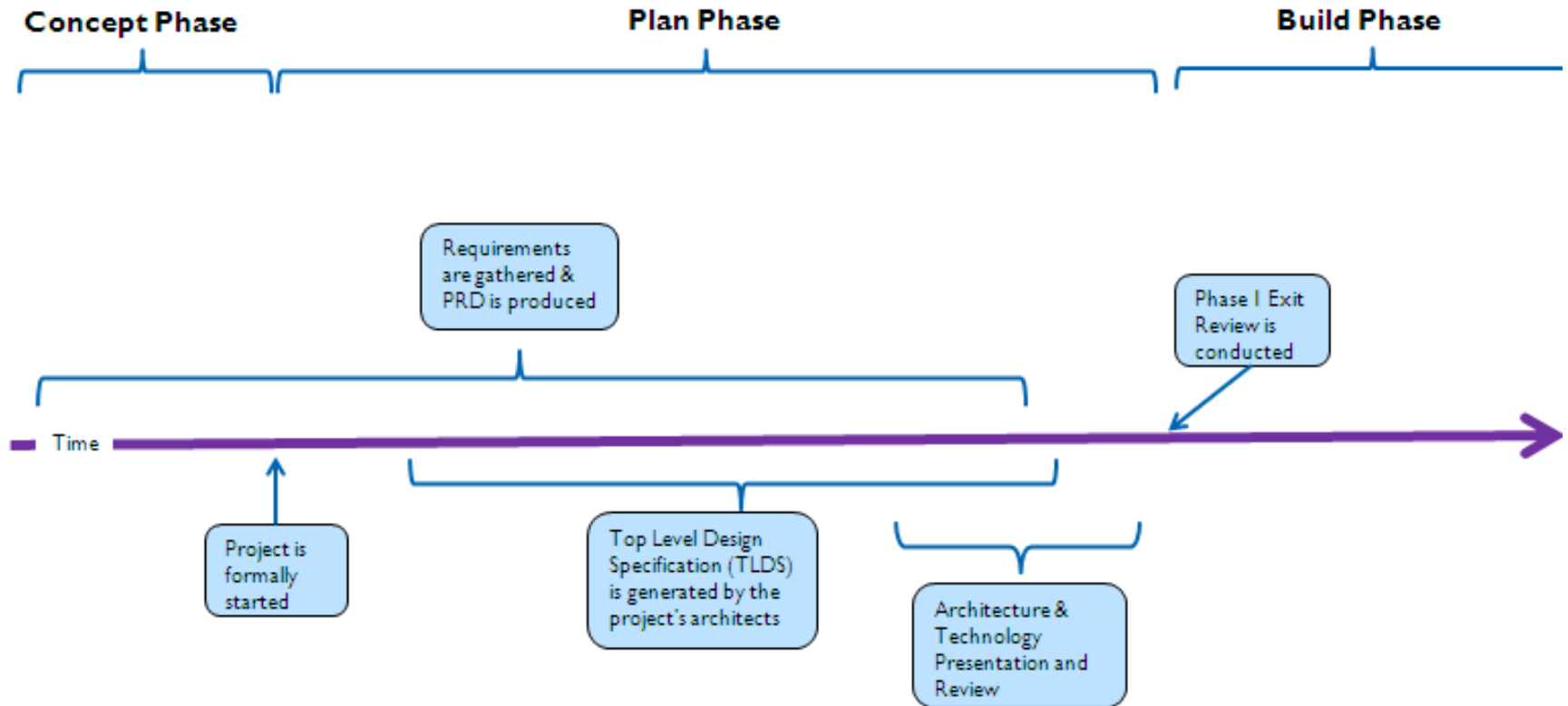
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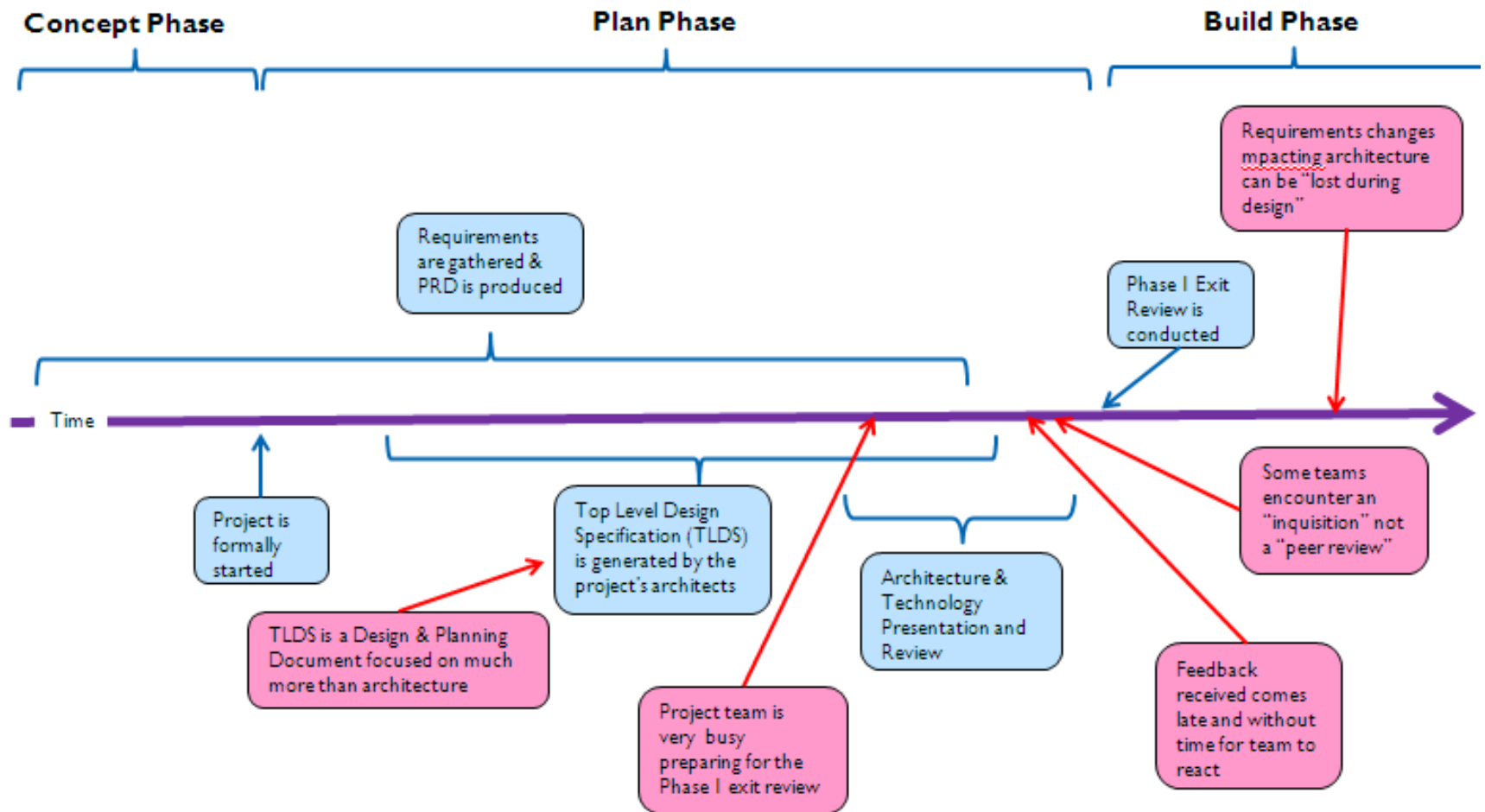
Agenda

- Problem statement
- Proposed solution
- Evidence from the field

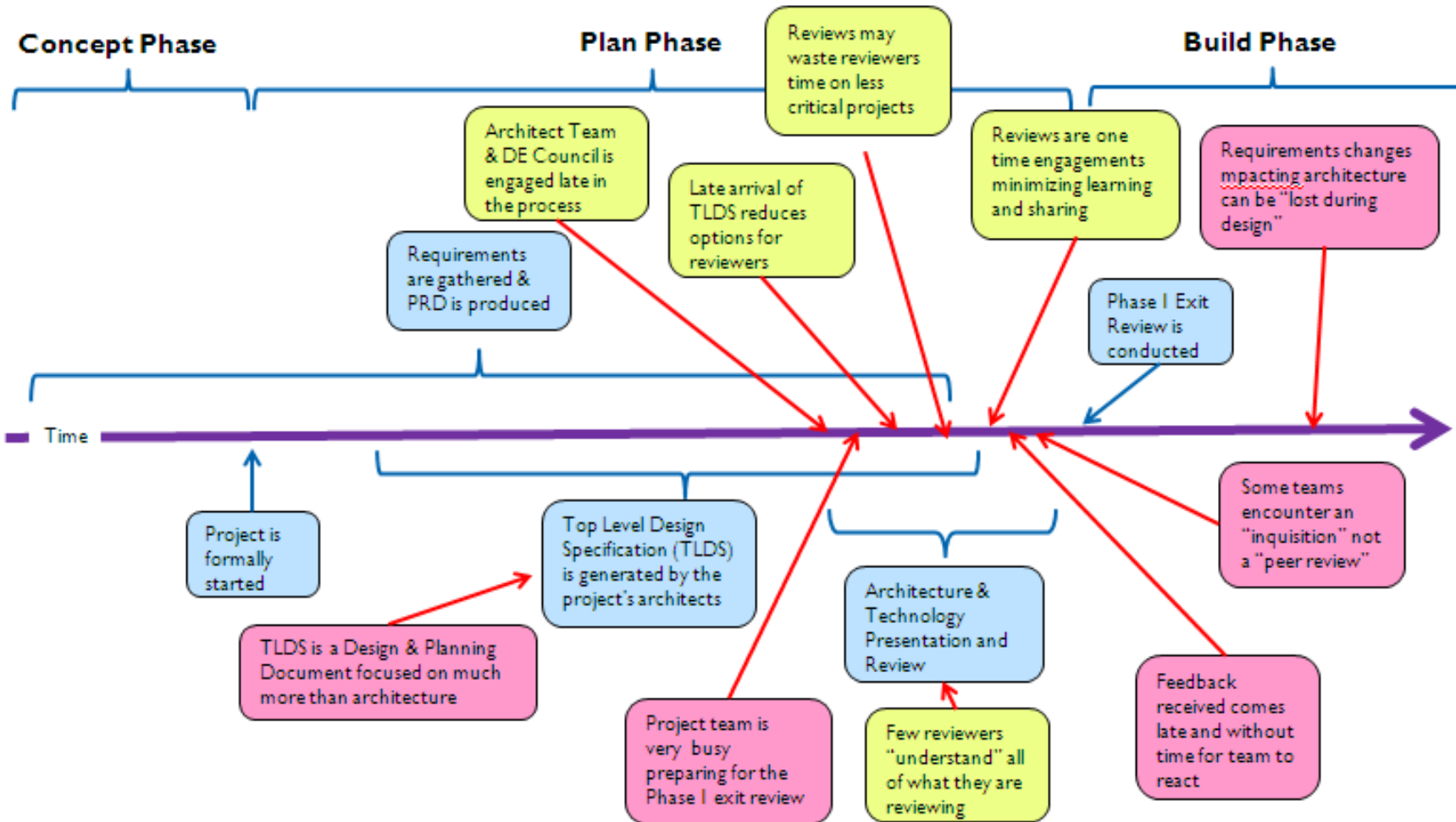
Historic One Phase Architecture Review Process



Historic One Phase Architecture Review Process Development Team Perspective



Historic One Phase Architecture Review Process Review Team Perspective



Agile Software Development Model

- The main characteristics of agile development:
 - Flexibility
 - Minimalism
 - Collaboration
- Emphasizes rapid and flexible development
- Transforms the development process from being process-centric to human-centric
- Favors operating software over documentation

The Proposed Solution

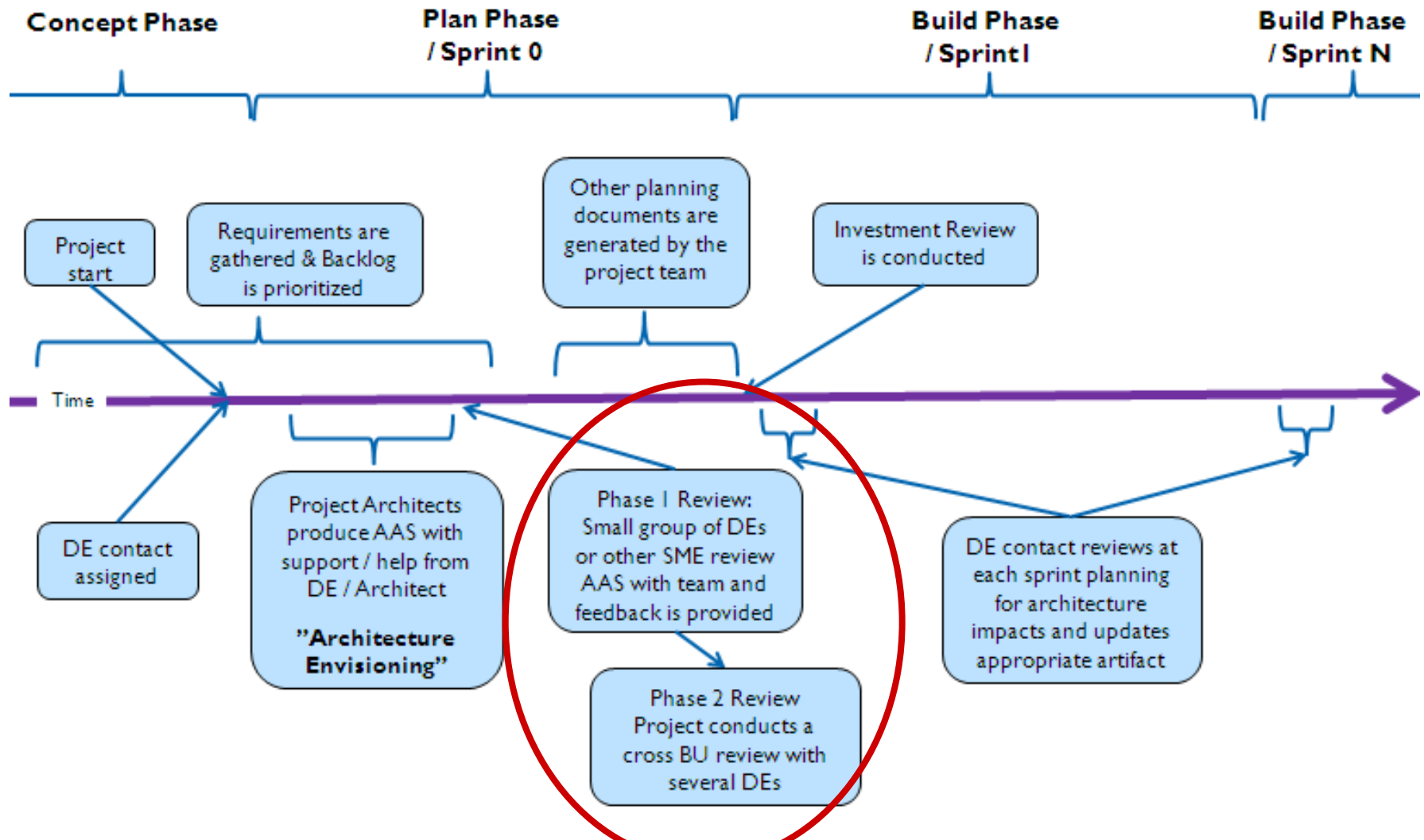
1. Architecture Abstract Specification (AAS) Document
2. Two phase review process

AAS: Brief Reminder

Abstract Architecture Specification (AAS)

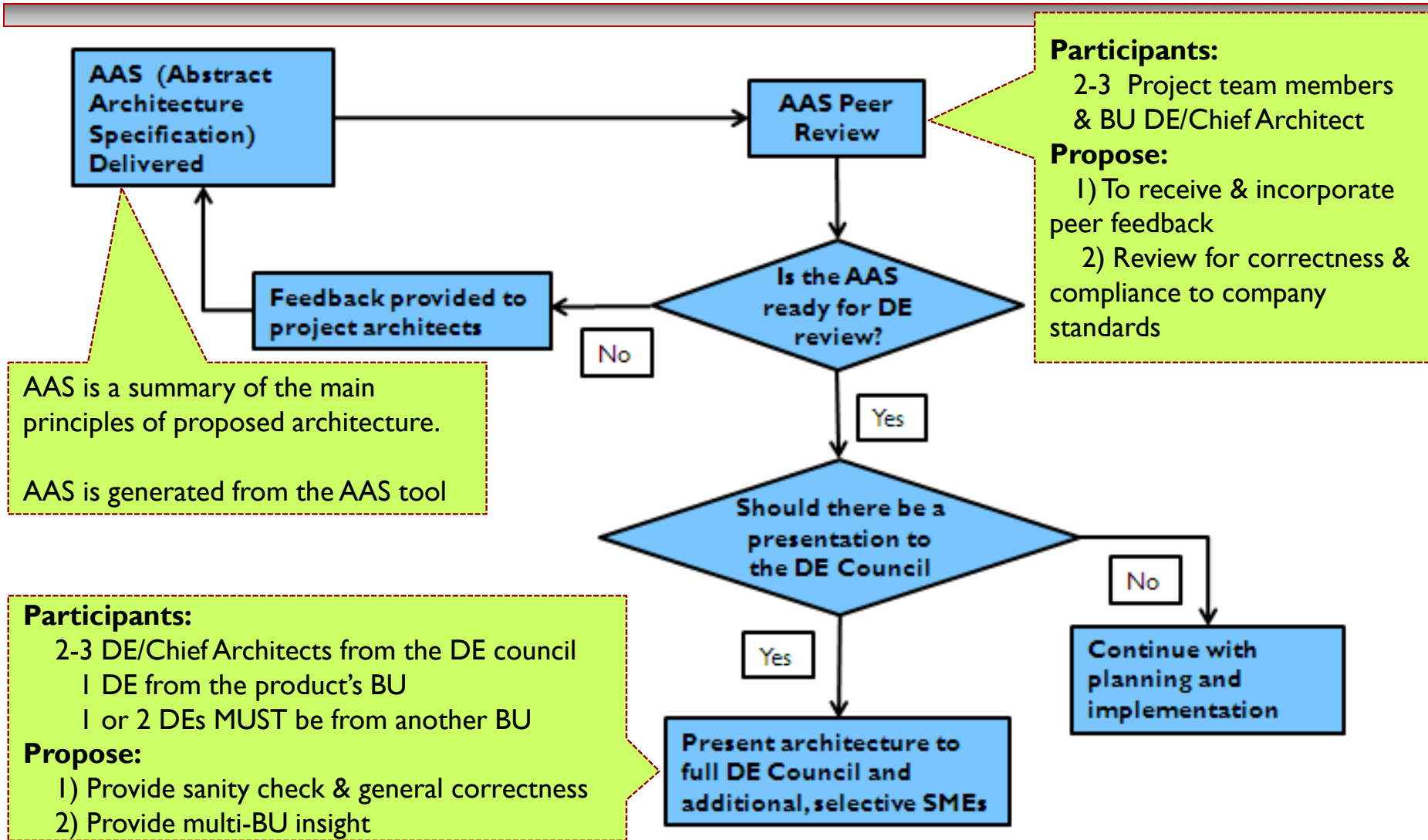
- **An automatically generated short (4-6 pages) architecture document** aligned with Agile's expectation for minimalism, flexibility and collaboration.
- Includes the most relevant and updated information regarding the proposed architecture
- Kept short by employing elevator speech concepts

Two Phase Agile Architecture Review



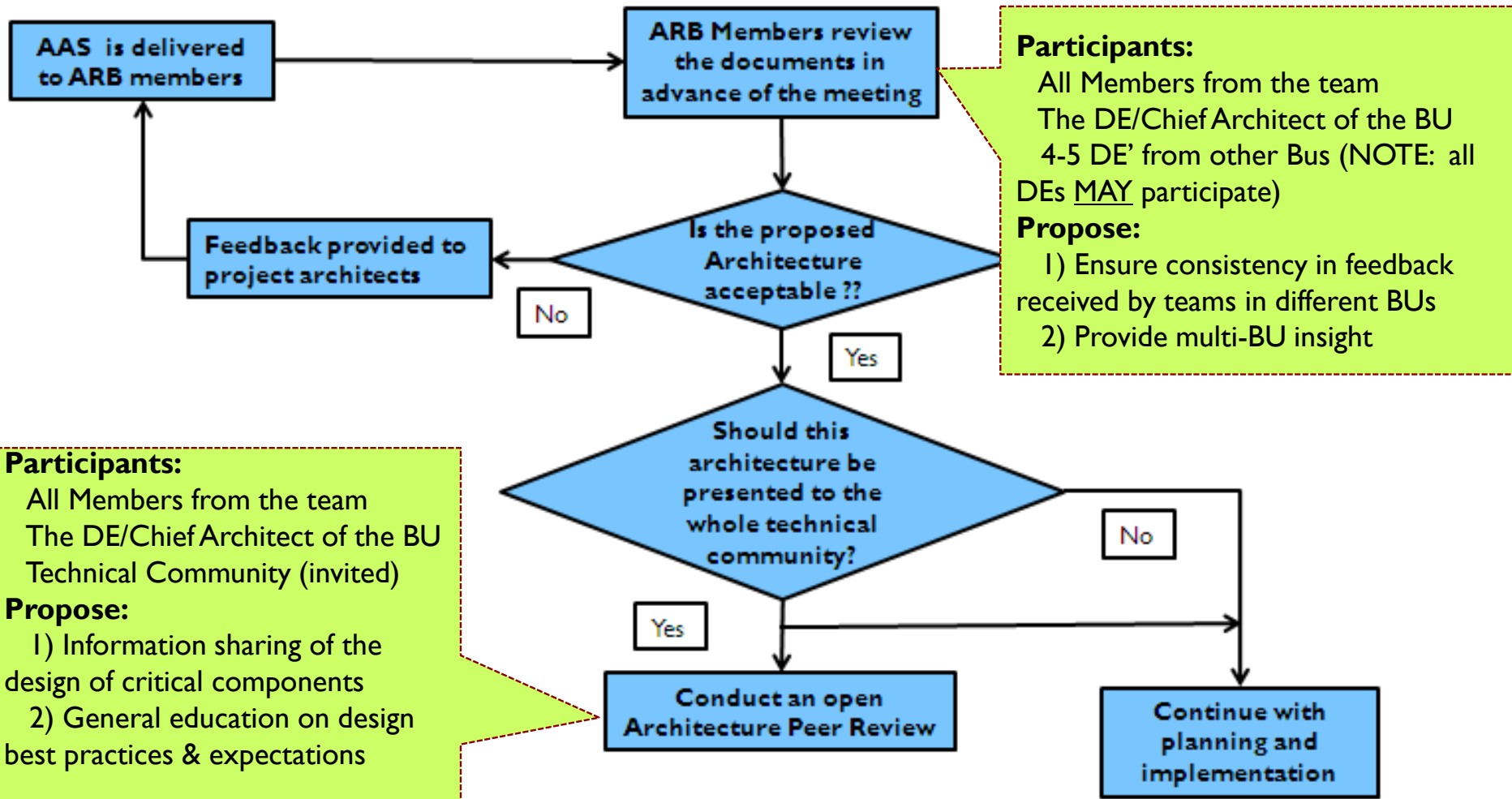
Two Phase Review Process– Phase I

Initial Peer Review (during planning sprint)



Two Phase Review Process– Phase 2

Cross Business Unit Review (prior to end of Planning Sprint)



Two-Phase Review Process in Practice

We observed and analyzed review processes for 90 projects:

- 48 based on previous review process & documents,
- 42 based on two-phase review process & documents

Two-Phase Review Process in Practice

Experience and Result

- Shortened “start of project to architecture approved”
 - “Versions” averaged 4.4 months versus 6.5,
 - “Releases” 6 months versus 7.7
- Reduced significant final review comments from an average of 7 to 3
 - The phase I review identified 15 projects where no phase 2 review was required
 - ✦ Saving hundreds of staff hours of senior level participants over the course of a year
- Reduced the time required to conduct multi-BU reviews
 - From 120 minute typical to less than 90 typical action than the TLDS
- Teams reported that the process was less stressful
 - Even “enjoyable” because of ongoing interaction with senior members of the technical community

Two-Phase Review Process in Practice

Experience and Result, cont

- Some extended team members felt they now lacked some information that they received in the previous format
 - Technical Publications, Field Support
 - AAS contains less “tutorial and background” information than the TLDS.

Two Phase Review Process: The benefits

- Ongoing “mentoring” as part of architecture review process
- Collaborative and constructive review
- Project team (internal) review as a formal part of architecture review process
- Ongoing DE engagement simplifies and facilitates the communication among architects and reviewers

Questions?

Thank You