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Digital I&C ITAAC Inspection (a modified approach)

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Background

- Current approach developed to support DAC inspection (~2010)
- Life Cycle Phase-driven; essentially a verification of life cycle design outputs and documentation using IP65001.22
- Adopted for use with AP1000 ITAAC in 2011 (ITAAC 2.5.1.4 and 2.5.2.11 through 2.5.2.14)
- One inspection completed for ITAAC 2.5.2.11.b ("Requirements" phase for PMS) in April 2012

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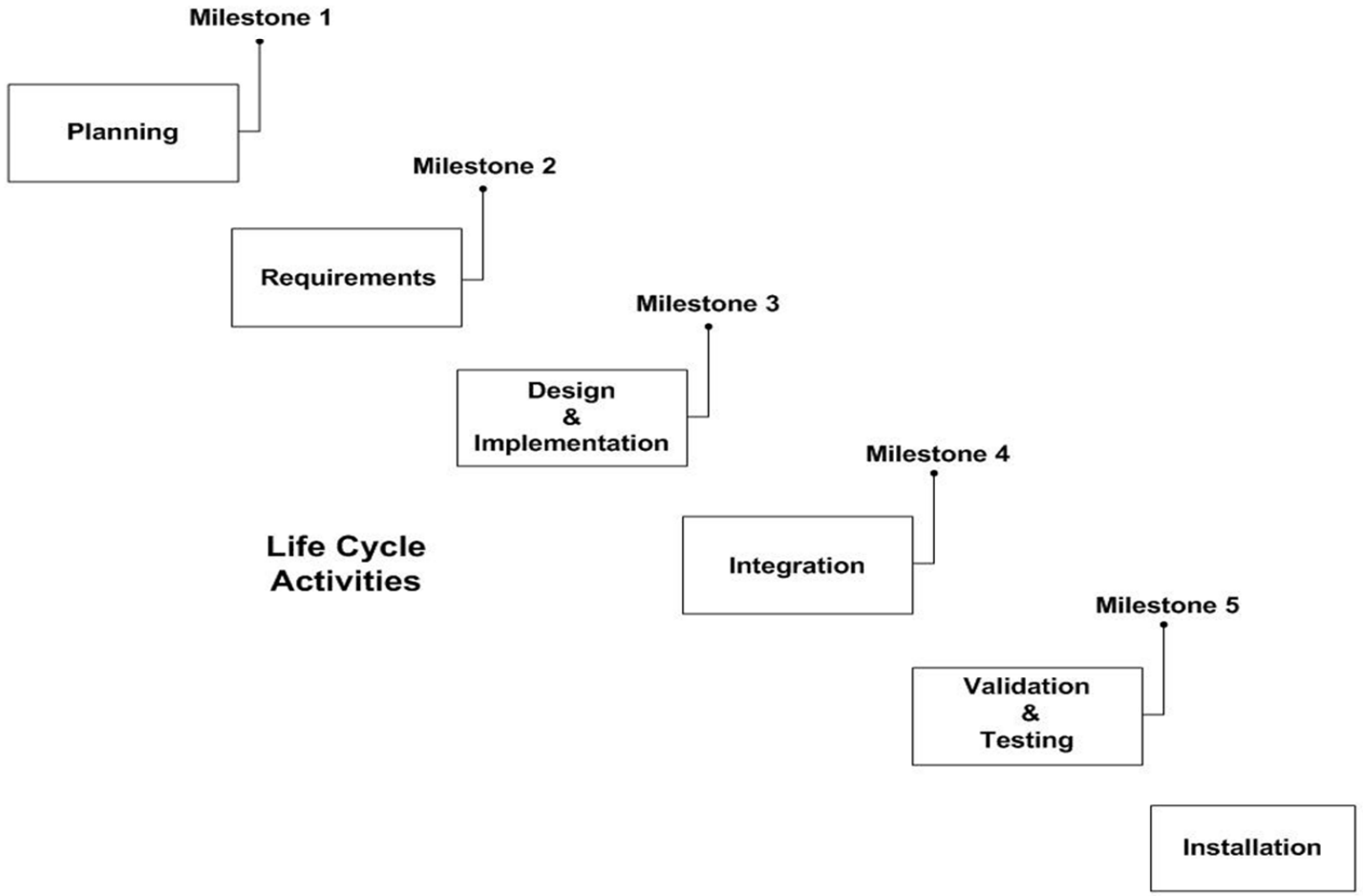
Original DI&C Inspection Approach (circa 2010)



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Lessons Learned since 2012

- **Actual DI&C development schedule is dynamic (and may be accelerated)**
- **Multiple parallel activities (development and testing) present a potential challenge to existing inspection resources**
- **Availability of expertise and continuity in key inspection areas is a concern**
- **Example- current development of AP1000 platforms (PMS (w/ CIM subsystem) and DAS)**

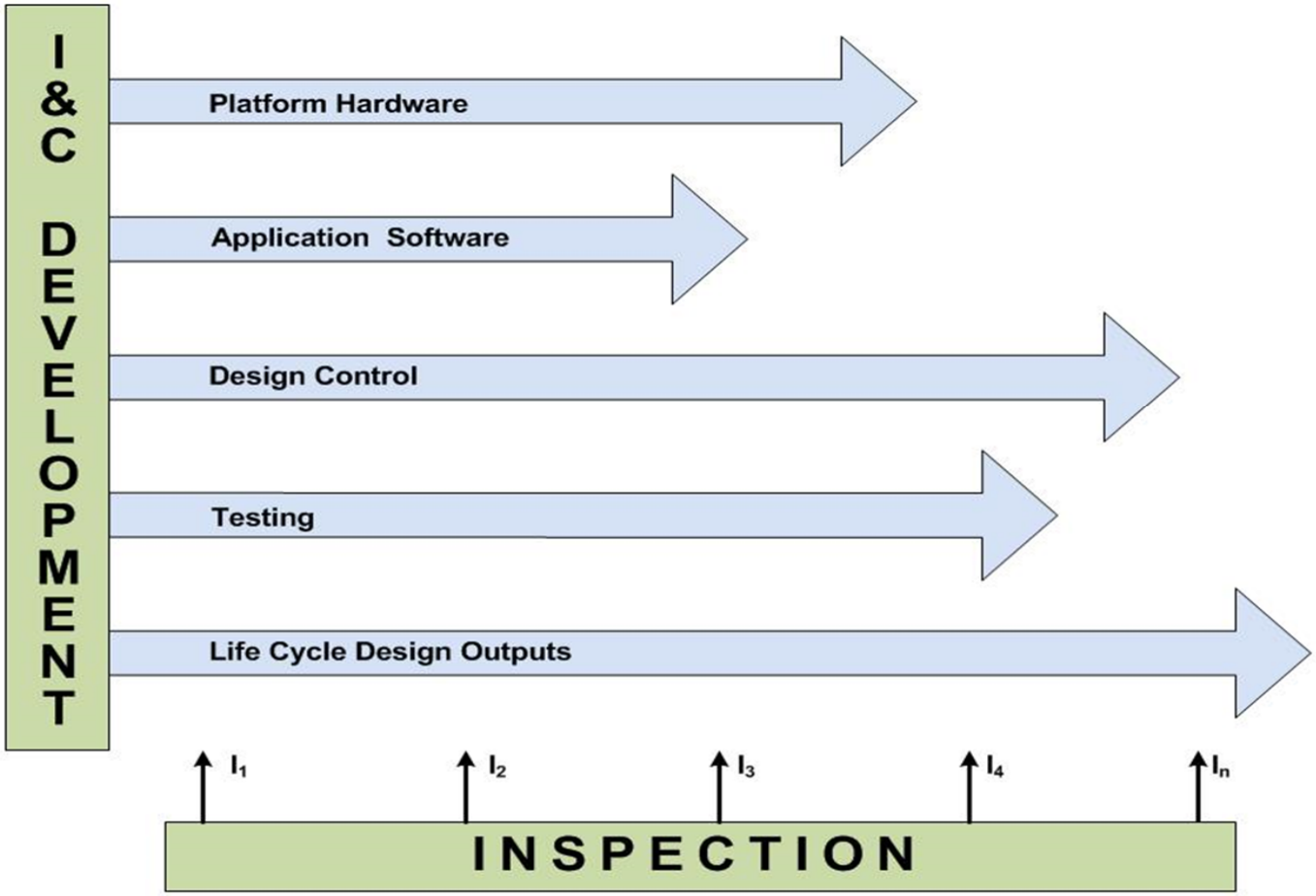
Lessons Learned (cont.)

- In 2013, NRO shifted to vendor inspection process for activities conducted at vendor facilities (e.g. DI&C)
- Through dialogue w/ WEC, magnitude of DI&C development/testing activities became apparent;
- Modified approach was needed that would enable inspection of in-progress activities and Appendix B processes, as well as design outputs
- inspection resources
- Built-in efficiencies; more than one ITAAC could be touched with an inspection, and ITAAC could be touched more than once

Modified Approach

- Series of planned vendor inspections (augmented by RII and NRO expertise)
- Not milestone-driven; scope includes the activities currently being performed (based on informational meetings with WEC)
- All targeted ITAAC-related activities will be "touched" by an inspection
- Bi-weekly dialogue w/ WEC and use of virtual reading room are mechanisms for planning and scoping inspections

Modified Approach (cont.)



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Advantages

- **Flexibility- inspection scope can be adjusted based on the development schedule and latest "intel"**
- **NRO controls the inspection schedule (not subject to milestones or vendor schedule dynamics)**
- **DI&C expertise can be merged with vendor inspection expertise (enhanced inspection quality)**
- **Efficiency- a typical inspection may include several ITAAC-related activities**
- **Multiple inspection opportunities for long-duration ITAAC-related activities**

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Status

- **Planning for first DI&C vendor inspection is on-going; expect to complete January 2014**
- **Scope to include attributes associated with:**

  - PMS design/implementation phase activities and design outputs (ITAAC 2.5.2.11.c)

  - Selected PMS testing activities (ITAAC 2.5.2.11.d)

  - PMS/CIM commercial grade dedication follow-up (ITAAC 2.5.2.13)

  - Selected DAS testing activities (ITAAC 2.5.1.4.b)

  - PMS/CIM planning phase activities and outputs (ITAAC 2.5.2.14.a)*

  **** design acceptance criteria***

Inspection Results

- Inspections conducted with IP43002 (vendor IP) informed by IP65001.22 (DI&C) or other procedure(s) as necessary
- Results documented in vendor inspection report
- Issues that may impact licensee's capability to complete and subsequently close affected ITAAC are communicated to licensees via separate letter
- Vendor(s) should execute their development process; for DI&C SSCs, inspection will proceed as development progresses and ends following final inspection/verification of the ITAAC "Report."

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Questions/Discussion