

# Industry Perspectives on Digital I&C

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# We Live in a Digital World

- We are surrounded by digital tools in our everyday lives
- Adoption in the nuclear power industry has been riddled with delays and cost overruns
- There is an urgent need to enable the adoption of digital technology



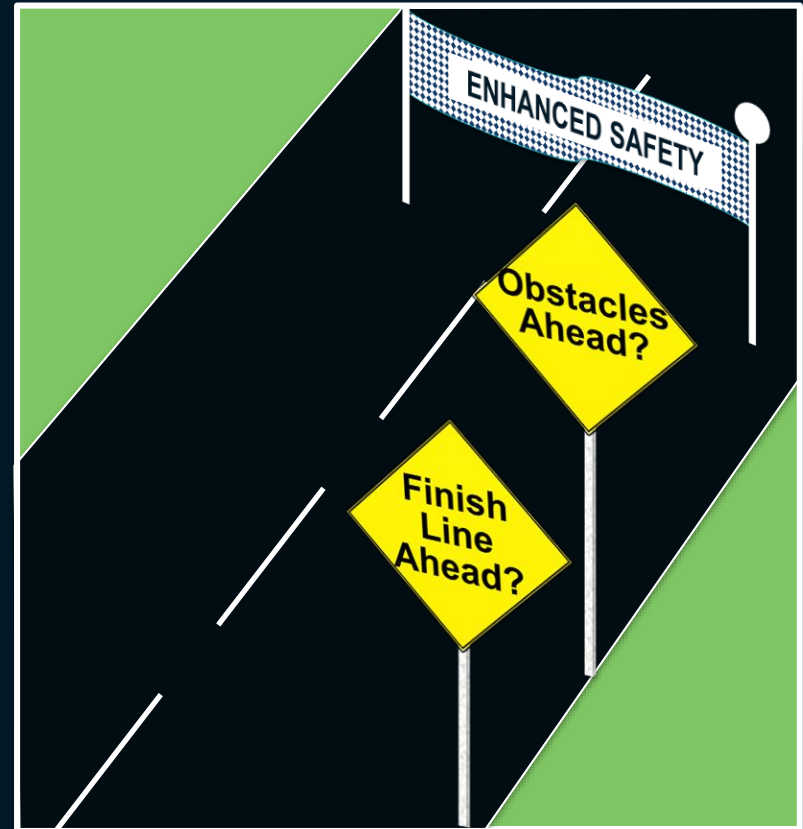
# Finish Line Seems Within Sight

## Successes

- RIS 2002-22 Supplement 1 has enabled some progress
- ISG-06, Revision 2 is helpful

## Remaining Challenges

- Endorsement of NEI 96-07 Appendix D still needed
- Path forward on CCF needed

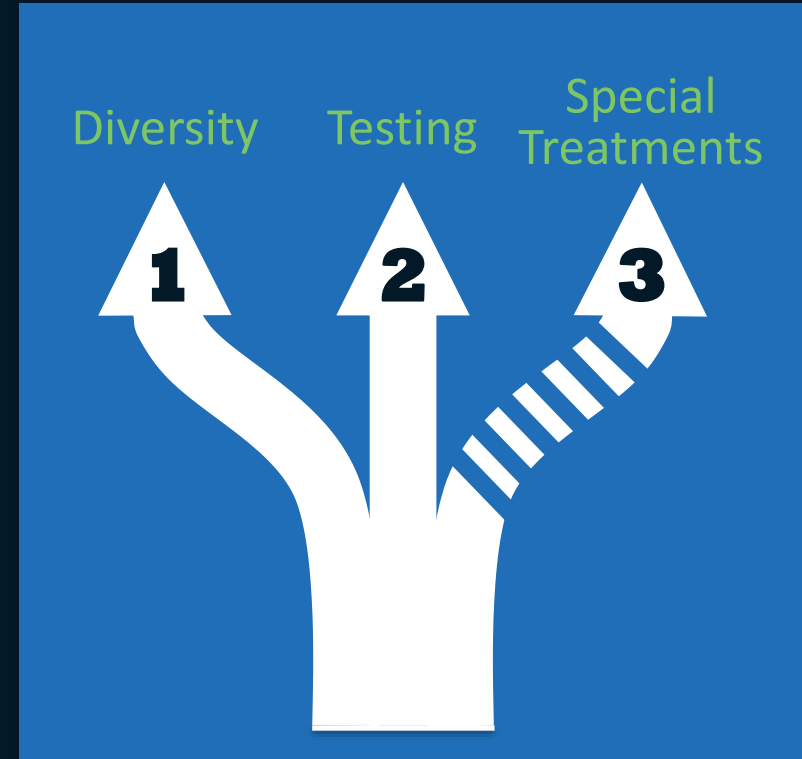


# CCF is Not Unique to Digital

- CCF should not be treated as design basis
- Analog systems are also subject to CCF
- Analog CCF is primarily addressed through Special Treatment Requirements
  - Same approach should be applied to digital

# Challenges

- A clear, predictable technical path forward on major digital upgrades is needed
- Currently two available paths to address CCF:
  - 100% testing (if feasible)
  - Diverse system
- A third path is needed



# Pursuit of a Third Path

- Two key issues to be resolved:
  - When can the likelihood of CCF be considered sufficiently low?
  - What defenses are sufficient when CCF is not considered to be low?
  
- Reliance on robust engineering practices:
  - Quality design process
  - Adoption of appropriate software design attributes
  - Incorporation of operating experience

# Paramount Considerations

1. Clarity of expectations
2. Demonstration of an efficient, predictable regulatory process
3. Re-establishment of confidence