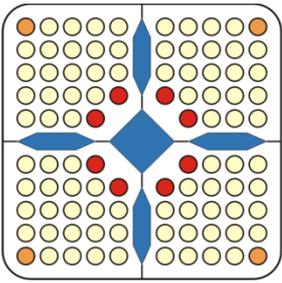


# *TRACE* NRC Prespective on NEKVaC

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- The NRC is a stakeholder of the NEKVaC; potential “customer” of some data, “reviewer” of industry submittals. High quality V&V reduces staff resources and can speed approvals.
  
- Legacy data continues to have high value. No one has a complete compilation of data and its necessary documentation – and both are at risk as people retire and storage media change.
  
- Legacy (thermal-hydraulic) data can be identified by PIRTs and prior submittals – and is broad and extensive:
  - IETs: LOFT, Semiscale, CCTF, SCTF, UPTF, ROSA, etc. (US Participant)
  - IETs: Bethsy, PKL, PANDA, ROSA, CCTF, UPTF etc. (US non-Participant)
  - SETs: FLECHT-SEASET, Achilles, THTF, FRIGG, etc.
  - Phenomena: MIT and UCLA subcooled boiling, Purdue IATE, Groeneveld CHF,
  - Industrial: Vendor prop CHF data, APEX, NIST, ...



# *TRACE* NRC Perspective on NEKVaC

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- Efficient use of data for model validation requires:
  - Data (raw + processed) in consistent electronic format
  - Instrumentation info (what, where, calibration)
  - Facility description (to allow modeling and characterization)
  - Data report (to document tests)
  - Scaling report (what data is applicable to?)
  
- Gaps in experimental database:
  - NRC interest is in data relevant to safety issues, establishing or changing regulations, and confirming staff decisions.
  - Gaps in validation data depend on specific applications and will likely evolve as industry needs evolve. The NRC will take a conservative approach if appropriate data is not available (i.e. ad hoc “bound” is acceptable).
  
- NEKVaC should focus on model uncertainty (i.e. that uncertainty determined from validation). Extrapolation of model, and other uncertainties is code uncertainty, and is scenario specific.