

Discussion with ASME VVUQ Standards Committee

May 19, 2026
Vanderbilt School of Engineering
Nashville, Tennessee, USA

V1.2.1

Contents

- How the Standards Committee's guidance helped the VVUQ 50.1 team
- The Rosetta Stone Project was spawned during this process
- What happened besides VVUQ50.1 approval--the growing significance of consistency management
- Request: How we hope the Standards Committee will continue to provide guidance during further collaboration
- Questions, discussion

- References

How we got here . . .

VV50.1 Authoring Team

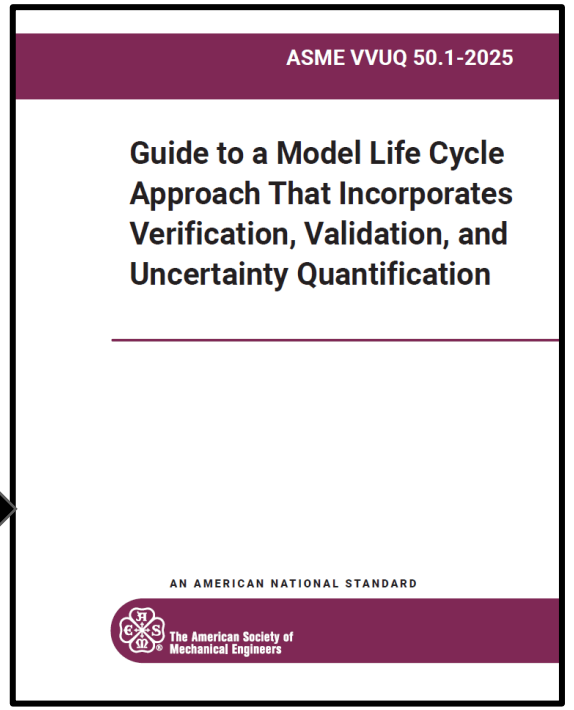


Schenectady, 2016;
Gaithersburg, 2017; etc. . . . .

Standards Committee Guidance

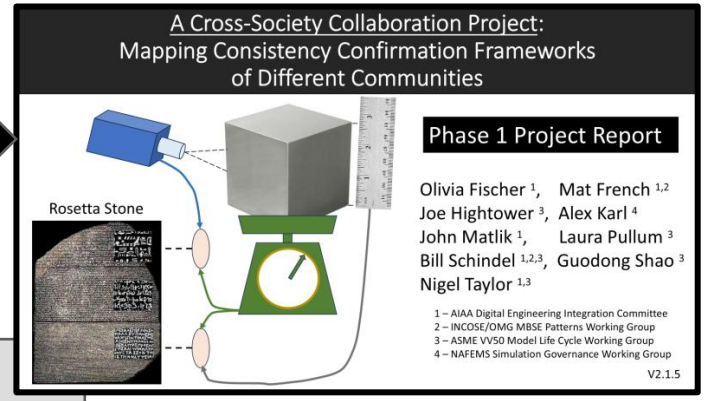
Thank you, Stds Cmtee!

ASME VVUQ 50.1 Authoring Process (2016 - 2025)



January, 2026 [3]

Rosetta Stone Project (Consistency Management) 2024-2026

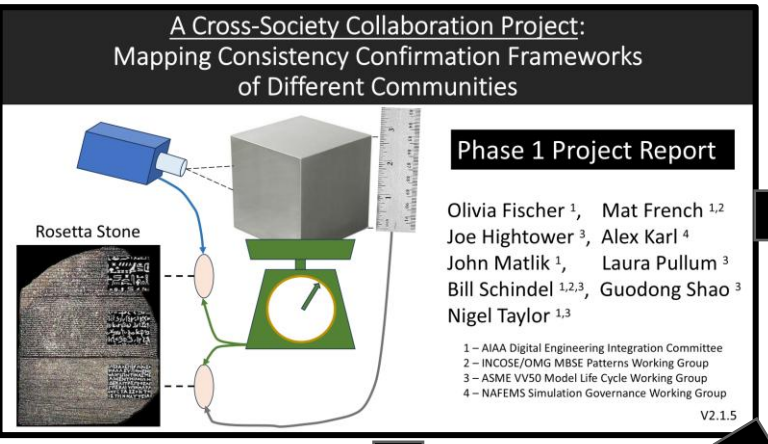


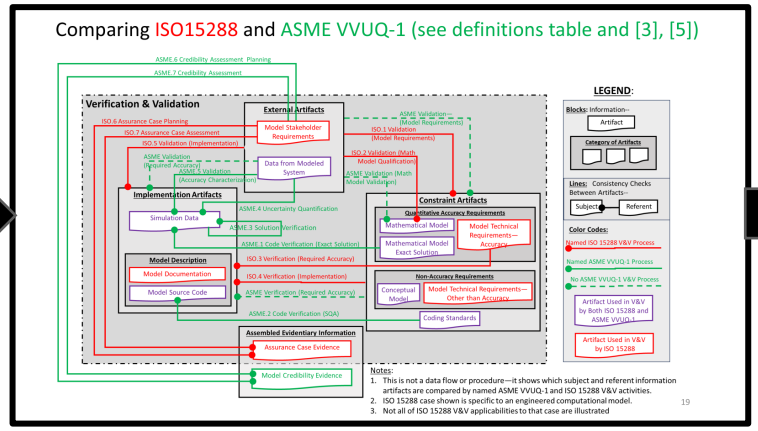
January, 2025 [1,2]

AIAA | **INCOSE** | **NAFEMS**

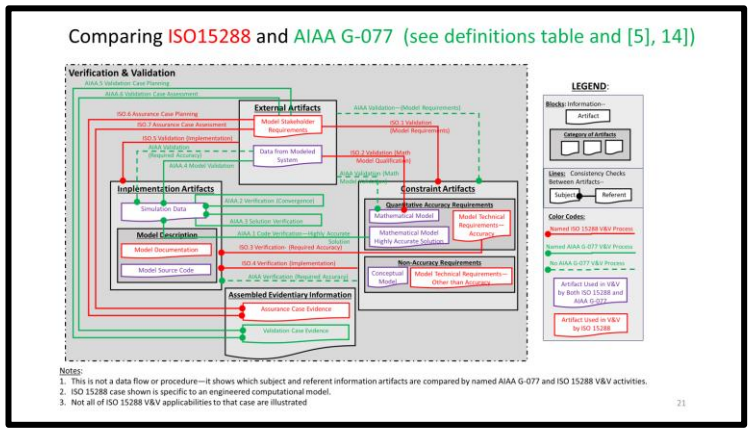
Mappings relate standards without changing them

Rosetta Stone Phase I Report

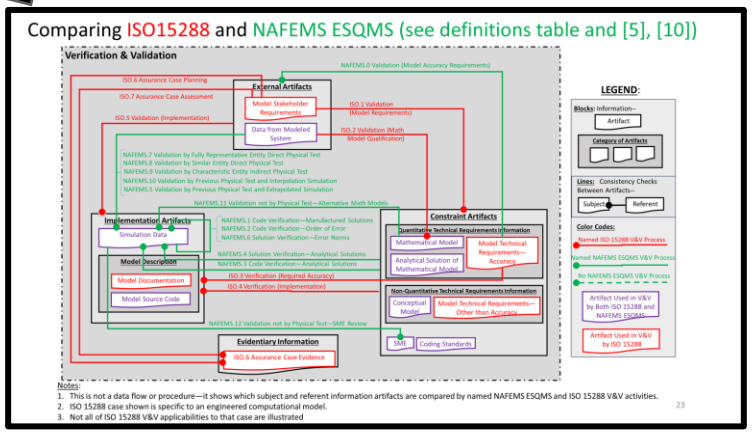




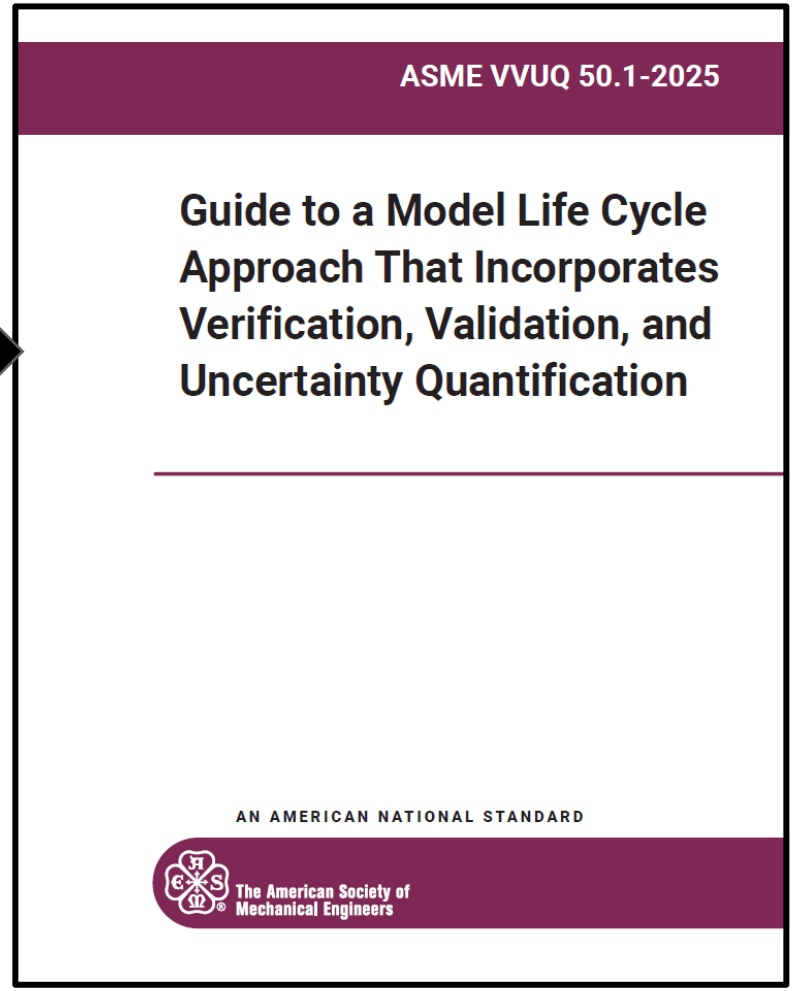
✓ ASME VVUQ 1 – ISO 15288 Mapping



✓ NAFEMS ESQMS – ISO 15288 Mapping

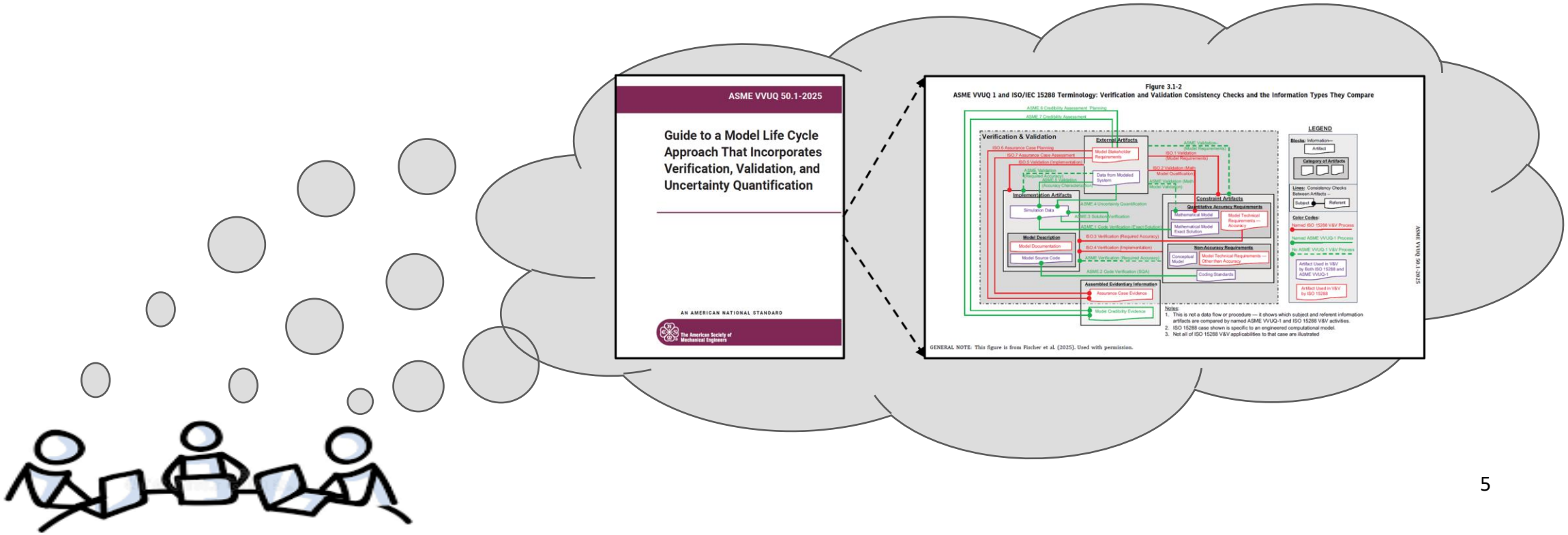


✓ AIAA G078 CFD – ISO 15288 Mapping

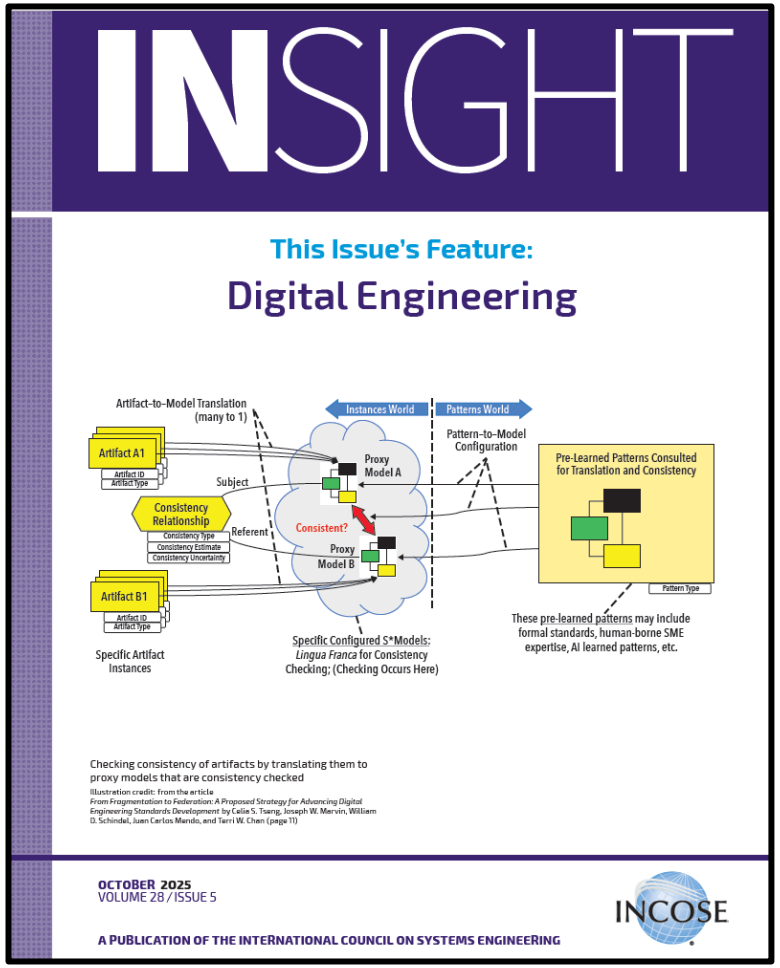


Rosetta Stone enables collaboration across discipline communities

- ASME VV50.1 shows that it is not necessary to change terminologies in order to understand and integrate practice of the whole set of discipline-specific VVUQ methods in a single project:
  - Understanding of different concepts as well as terminologies is both feasible and constructive.
- Collaboration (vs denigration) of communities and their practices contributes to better outcomes:
  - The ASME VVUQ Standards Committee has taken a leadership role in publishing VVUQ50.1 as a first step in the related cross-community collaborations to follow.



Consistency management includes extended cross-communities significance

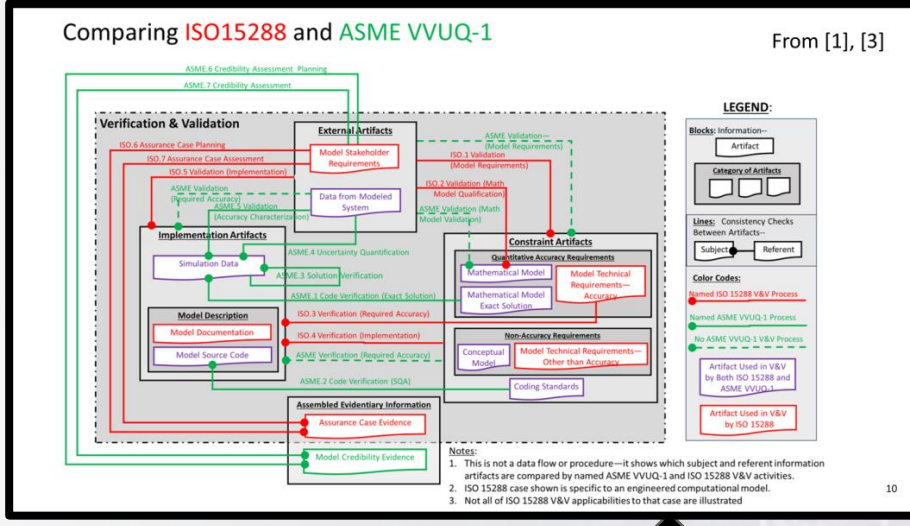


Oct 2025 Digital Engineering Special Issue [4]

<u>INCOSE INSIGHT Digital Engineering cover story</u>:

- Digital Engineering – MBSE Integration Forum: A collaboration across multiple societies, SDOs.
- Extending MBSE models in a vector metric space.
- Creates distance metrics for previously non-quantitative MBSE model elements.
- Extends the power of ASME computational model VVUQ standards, methods to MBSE VVUQ.
- Enables machine learning & inference with MBSE models.
- [5, 6]

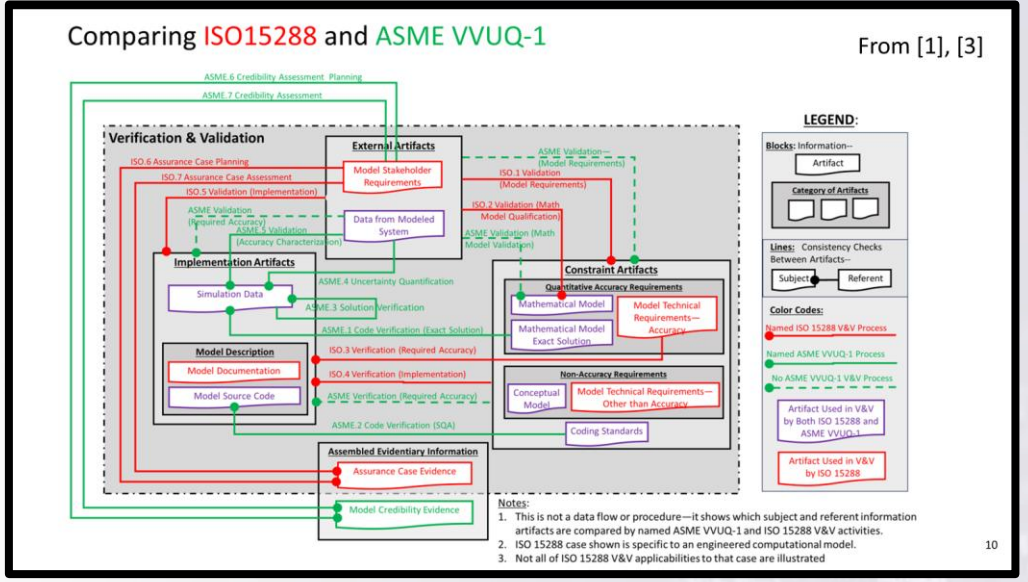
A request, and thank-you



- As we continue to collaborate across these communities . . .
- Our near-term goal is not out of reach:
  - Build awareness of <u>how</u> the VVUQ standards are related, although different.
  - Not a change to these standards, but increased awareness of their relations.
- As the ASME VVUQ community members participate in this collaboration, we request that the VVUQ Standards Committee continue to serve as an authoritative ASME point of focus / sounding board for their engagement.
- Example: VV20 subcommittee presentation at VVUQ 2026 Symposium. [7]
- Thank you for your historical guidance of the ASME VVUQ 50.1 effort!

Questions, discussion

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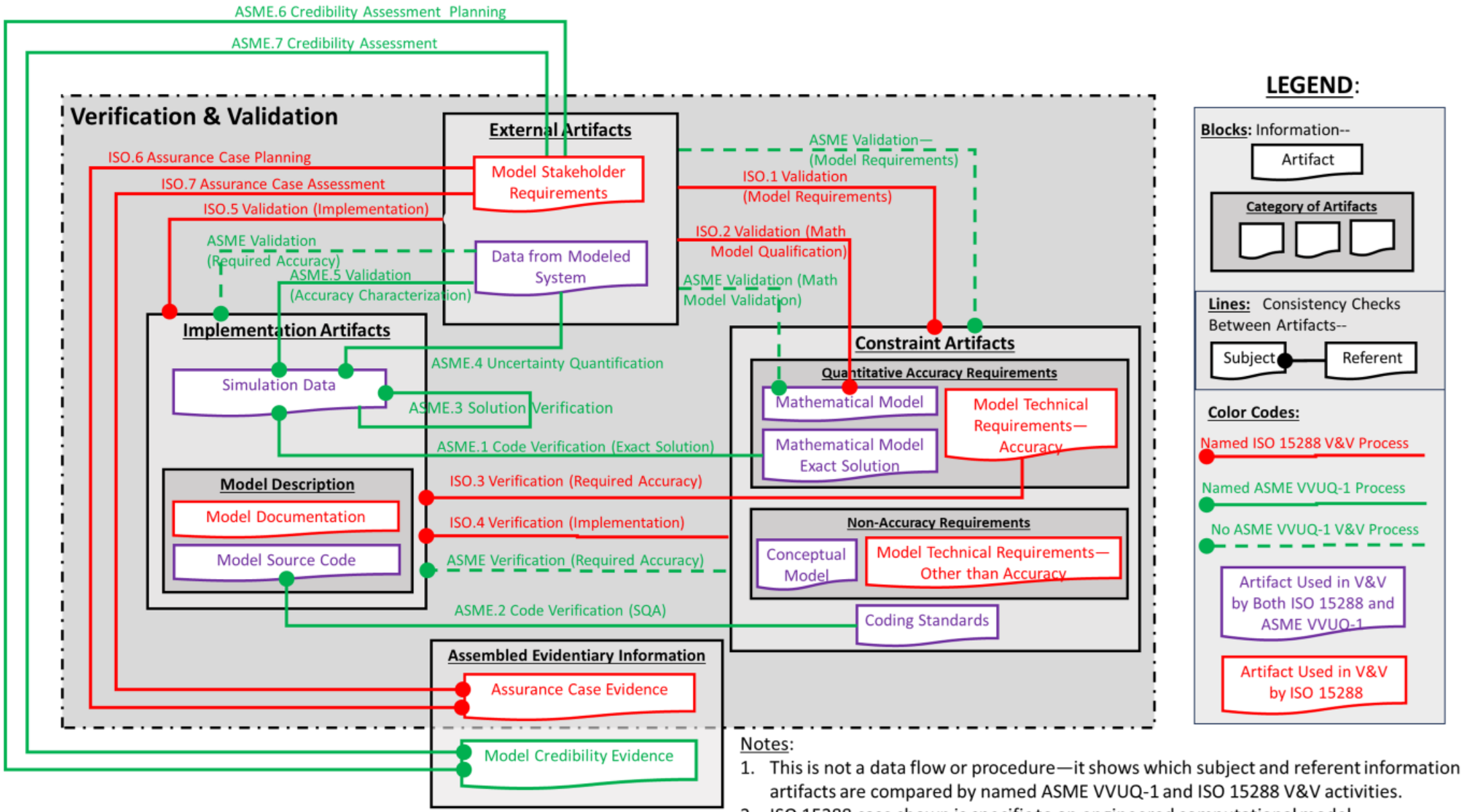


References

1. Fischer, O., French, M., Hightower, J., Karl, A., Matlik, M., Pullum, L., Schindel, W., Shao, G., Taylor, N., "A Cross-Society Collaboration Project: Mapping Consistency Confirmation Frameworks of Different Communities". Download from -- https://www.omgwiki.org/MBSE/lib/exe/fetch.php?media=mbse:patterns:rosetta_stone_project_report_01.08.2025_v2.1.5.pdf
2. Fischer, O., French, M., Hightower, J., Karl, A., Matlik, M., Pullum, L., Schindel, W., Shao, G., Taylor, N., "Results of the 2024 Rosetta Stone Project— A Cross-Societies Collaboration", in *Proc. of ASME VV2025 Symposium*, 2025. Download from -- https://www.omgwiki.org/MBSE/lib/exe/fetch.php?media=mbse:patterns:rosetta_stone_project_historical_context_discussion_for_asme_vvuq2025_v1.8.5.pdf
3. ASME VVUQ 50.1: "Guide to a Model Life Cycle Approach That Incorporates Verification, Validation, and Uncertainty Quantification", ASME, January 2026. Download from -- ASME Store
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6. Schindel, W., Taylor, N., "Consistency Management—The Expanding Rosetta Stone", ASME VVUQ2026 Symposium, May, 2026. Download from -- https://www.omgwiki.org/MBSE/doku.php?id=mbse:patterns:mbse_patterns_wg_participation_in_asme_vvuq2026_symposium
7. Dowding, K., Taylor, N., "Expanding the V&V-20 Standard: A Structured Approach to Validating CFD in Engineering Applications", ASME VVUQ2026 Symposium, May, 2026.

Comparing ISO15288 and ASME VVUQ-1

From [1], [3]



Notes:

1. This is not a data flow or procedure—it shows which subject and referent information artifacts are compared by named ASME VVUQ-1 and ISO 15288 V&V activities.
2. ISO 15288 case shown is specific to an engineered computational model.
3. Not all of ISO 15288 V&V applicabilities to that case are illustrated