

MDEP Codes and Standards Working Group

**Is Harmonisation of Pressure-
Boundary Codes and Standards
Achievable?**

CSWG's Definition of “Harmonisation of Codes”

Harmonisation = Convergence + Reconciliation, where:

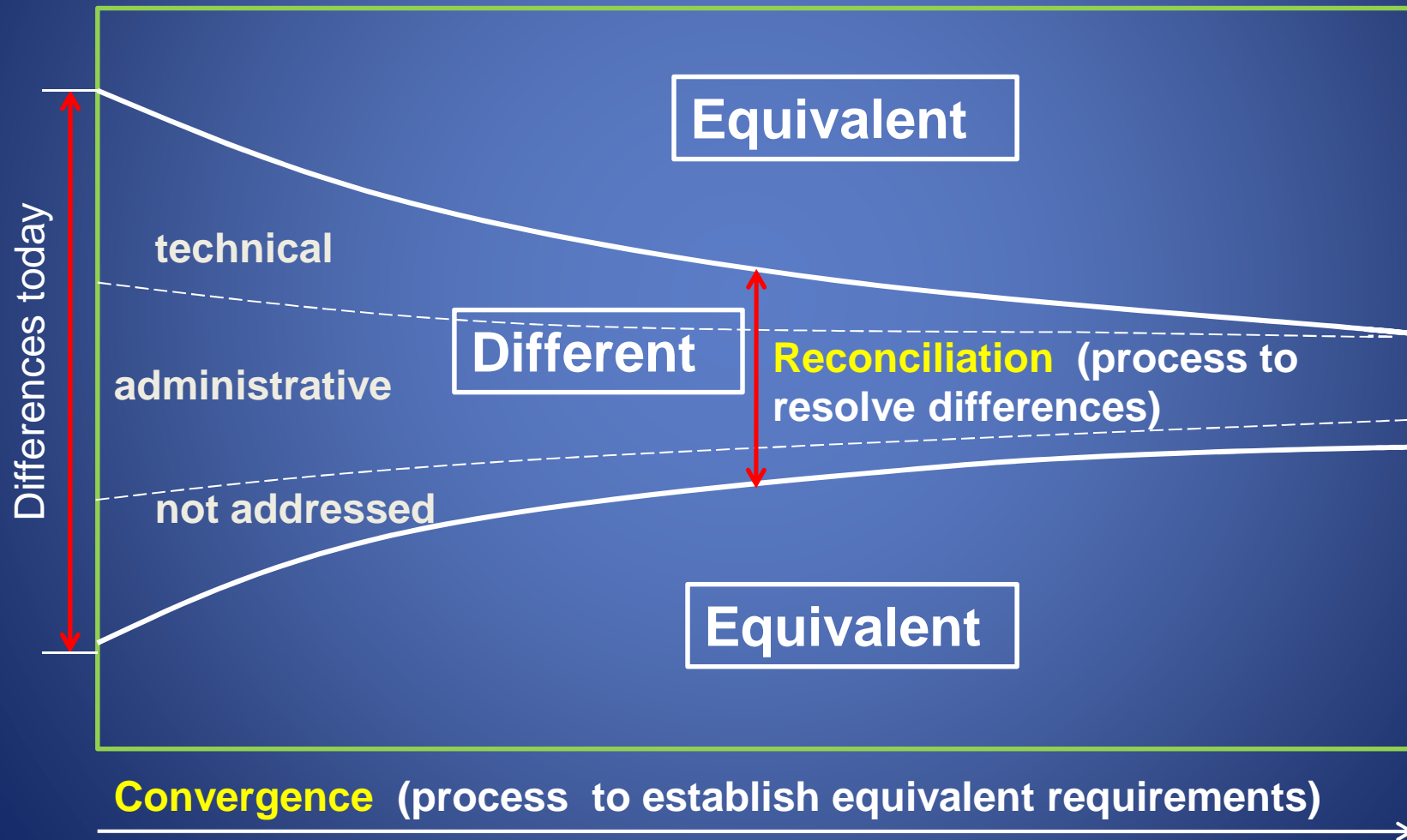
“Harmonisation of codes” means a process by which different countries can achieve convergence or reconciliation of differences in code requirements in order to ensure an acceptable level of quality and safety in nuclear power plants.

“Convergence” means establishing the same or equivalent code requirements in order to reduce the areas identified as “different,” and

“Reconciliation” means to accept differences in code requirements by justifying their acceptability.

[Ref. MDEP Technical Report, “Lessons Learnt on Achieving Harmonisation of Codes and Standards for Pressure Boundary Components in Nuclear Power Plants,” TR-CSWG-02]

Model for Harmonisation of Code Requirements

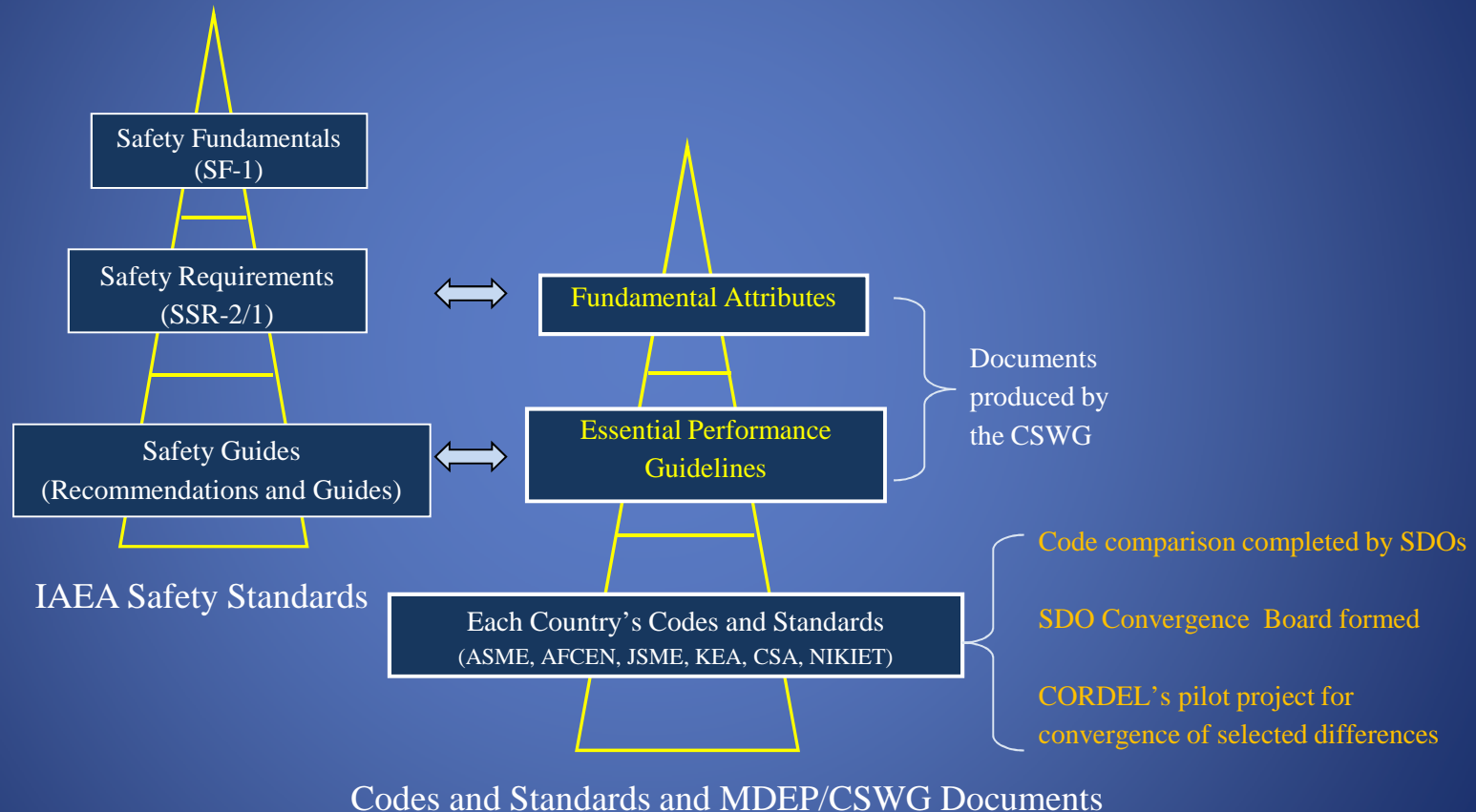


CSWG's Initiatives

- MDEP/CSWG documents:
 - MDEP Technical Report, TR-CSWG-01, “Regulatory Frameworks for the Use of Nuclear Pressure Boundary Codes and Standards in MDEP Countries”
 - MDEP Common Position, CP-CSWG-01, “Findings from Code Comparisons and Establishment of a Global Framework towards Pressure-Boundary Code Harmonisation” *
 - MDEP Technical Report, TR-CSWG-02, “Lessons Learnt on Achieving Harmonisation of Codes and Standards for Pressure Boundary Components in Nuclear Power Plants”
 - MDEP Technical Report, TR-CSWG-03, “Fundamental Attributes for the Design and Construction of Pressure Boundary Components”
 - MDEP Technical Report, TR-CSWG-04, “Essential Performance Guidelines for the Design and Construction of Pressure Boundary Components”

* “...the CSWG proposes to establish a global framework of a hierarchy structure for the common areas of the different codes as a basis for harmonisation.” [Ref. CP-CSWG-01]

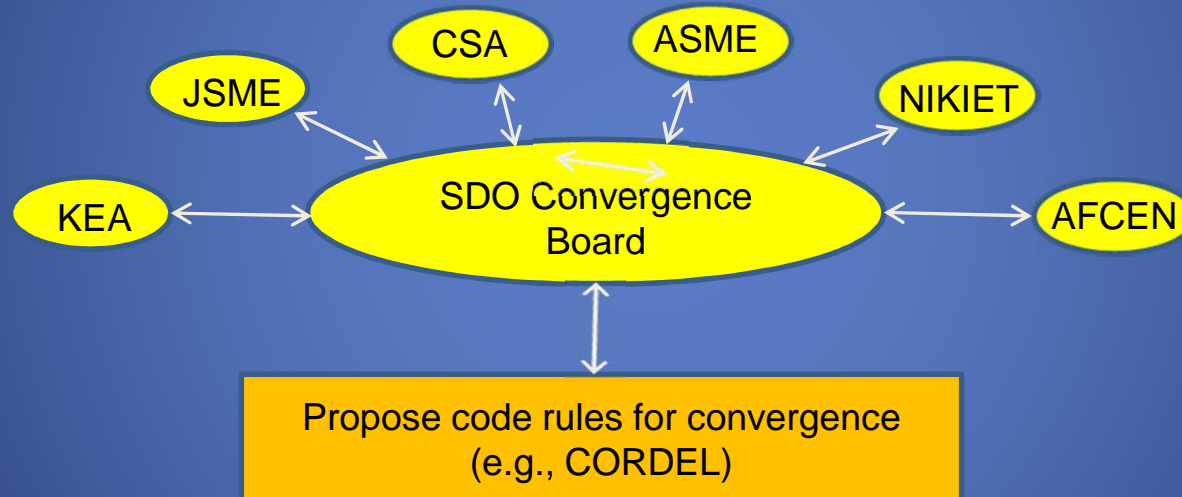
Relationship Between IAEA and MDEP/CSWG Documents



Relationship between the hierarchy structures of the IAEA Safety Standards series and MDEP/CSWG documents

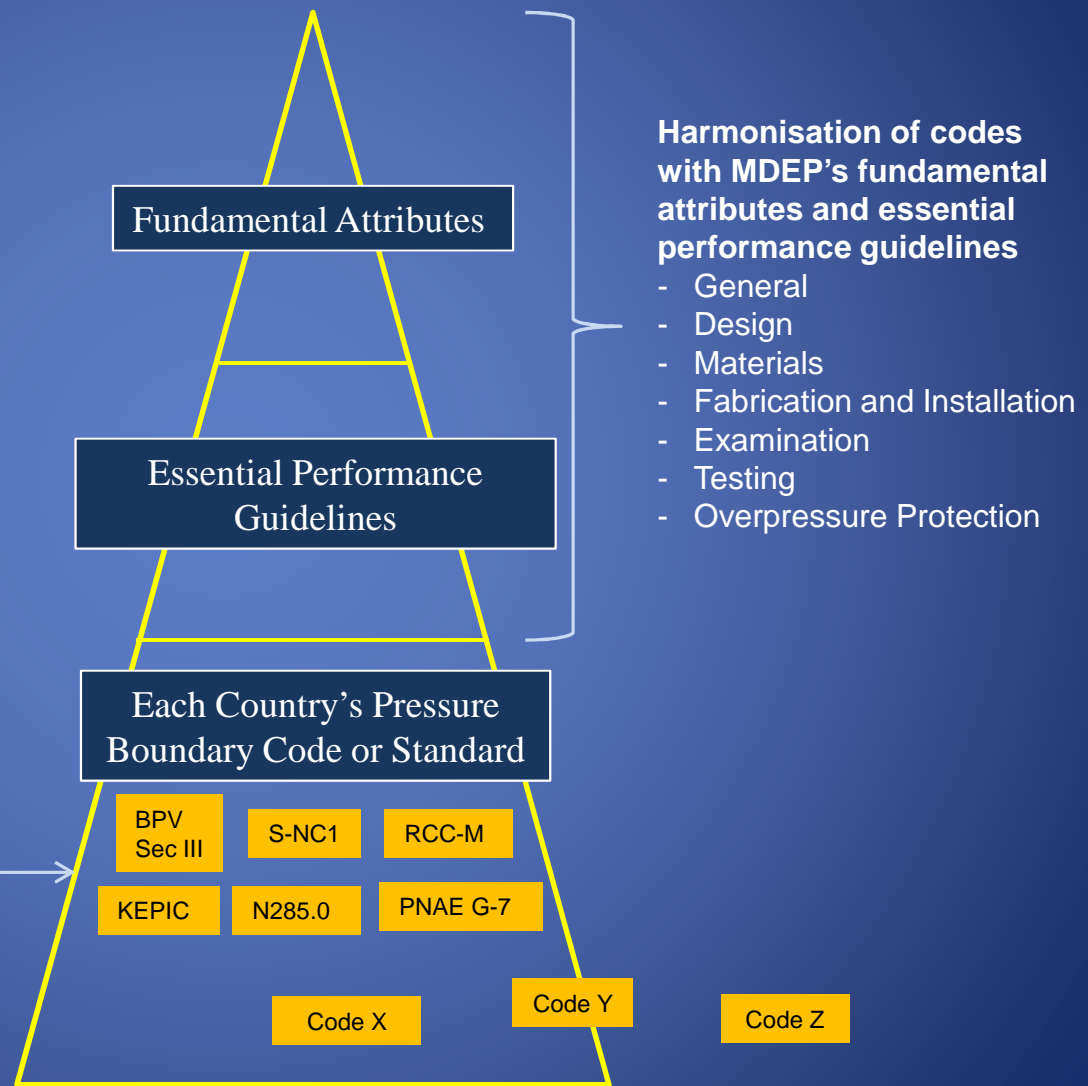
Industry Initiatives

- Standards Development Organisation's (SDO's) Code Comparison completed
- SDO Convergence Board established:

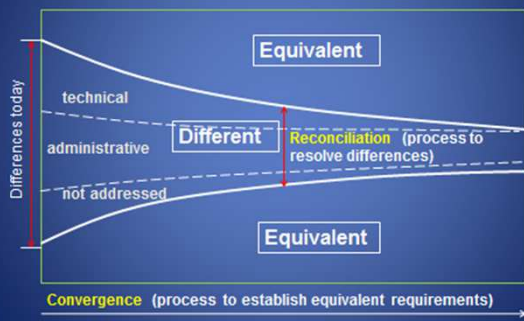


- CORDEL Codes and Standards Task Force pilot project for convergence of selected code differences
 - non-destructive-examination personnel certification
 - non-linear analysis methods (AFCEN)

Harmonisation of Codes at Top-Tier Levels



Harmonisation of Code Requirements



Conclusions

- Harmonisation or convergence of pressure-boundary codes and standards at the specific-requirements level is extremely difficult and impracticable.
- Harmonisation or convergence of specific code requirements is possible, but is a costly venture and involves a lengthy process.
- Harmonisation of pressure-boundary codes and standards at the top-tier levels is achievable and has been accomplished.