# Integrity Data Management and Integration

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# Integrity Data Management and Integration

## 1 Scope

This bulletin provides a compendium of methodologies and considerations for integrating the underlying data used to support integrity management. Any one approach, let alone the entirety of the document, may not be appropriate or applicable in all circumstances. The document reviews possible approaches for consideration by operators in the context of their specific circumstances.

The primary focus of this bulletin is the methodologies and processes used to spatially integrate and normalize the data to support the application of comparative techniques used in interpreting integrity data, with particular emphasis on in-line inspection (ILI) data. The document begins with a discussion of general data quality processes, goals, and considerations such that data quality approaches can be considered in the context of the data integration processes.

An impediment to informed integrity decisions is the inability to efficiently review a broad spectrum of data in a format that has been normalized and spatially aligned. With the variations in organizational structures, integrity management programs, and technologies used across the pipeline sector, individual operators design data integration procedures that are customized to their organizational structure, processes, and pipeline systems.

Properly managed and integrated data support agile analytics to integrate new data as they become available and to recognize coincident events and patterns. The data source may be from within an organization or may be external to the company, as in the case of representative data based on industry experience or manufacturing processes. The intent is to empower operators to efficiently analyze and integrate threat- and integrity-related data to support their integrity management programs.

## 2 Normative References

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document applies (including any addenda/errata).

API Standard 1163, *In-Line Inspection Systems Qualification*

API Recommended Practice 1176, *Recommended Practice for Assessment and Management of Cracking in Pipelines*

API Recommended Practice 1183, *Recommended Practice for Assessment and Management of Pipeline Dents*

NACE SP0102-2017 [1], *In-Line Inspection of Pipelines*

## 3 Acronyms and Abbreviations

AC alternating current

ACVG alternating current voltage gradient

[1] NACE International (now Association for Materials Protection and Performance), 15835 Park Ten Place, Houston, Texas 77084, www.ampp.org.