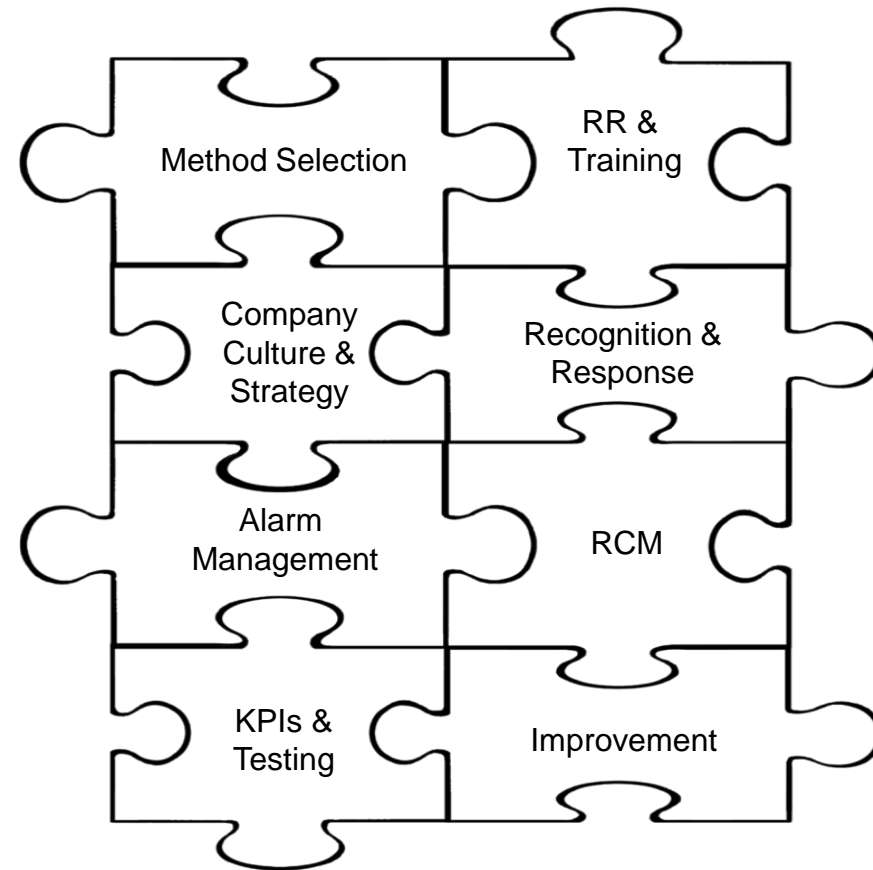


API RP 1175 Pipeline Leak Detection Leak Detection Program, Culture, & Strategy

Part 4: Leak Detection Program (LDP)

- Pipeline leak detection should be managed by structuring the elements of leak detection into an LDP
- An LDP outlines how all different aspects of leak detection interact and fit together
- Both technical and human factors should be considered

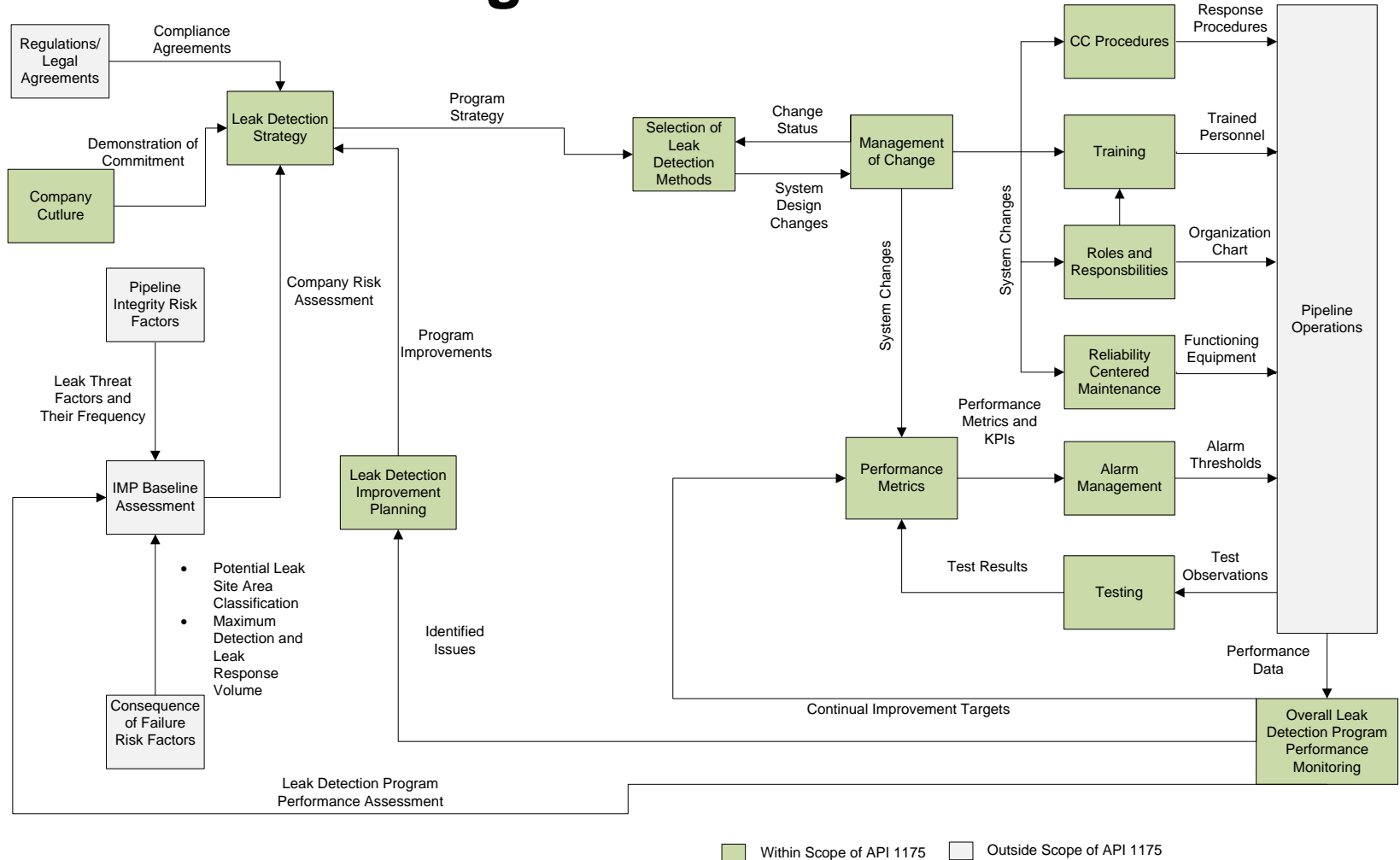


Part 4: Overview of Leak Detection Program

API RP 1175 divides an LDP into the following components:

- Leak detection culture and strategy
- Selection of leak detection methods
- Performance target, metrics, and KPIs
- Testing
- Control Center procedures for recognition and response
- Alarm management
- Roles and responsibilities and training
- Reliability centered maintenance for leak detection equipment
- Overall performance evaluation of the LDP
- Management of change
- Improvement process(es)

4 Leak Detection Program



Part 5: Leak Detection Culture and Strategy



- The Leak Detection Program has two major components: culture and strategy
- Culture influences how personnel behave and act
- Strategy outlines the technical aspects of the leak detection program

Part 5.1: Leak Detection Culture

- Culture:
 - Is a shared group attribute
 - Affects and is affected by the behavior and interactions of people
 - Includes a organization's vision, values, habits, norms, systems, symbols, language, assumptions, and beliefs
 - Is an evolving attribute

- Culture is defined and enhanced by ongoing management direction and support

- Doing every task, the right way, every time, is a cultural discipline institutionalized through tenets of operation

Part 5.1 Leak Detection Culture Continued

- Strong Leak Detection Culture Indicators:
 - Support from management
 - Exceeding minimum regulatory requirements
 - Ongoing improvement
 - Coordination of all leak detection methods
 - Coordination and teamwork between different entities involved
 - Clear policies, procedures, and processes
 - Comprehensive management of change
 - Ongoing training
 - A focus on the safe and reliable operations of the pipeline with no negative repercussions on the staff who take actions in response to leak indications



Part 5.1: Leak Detection Culture Continued

- Leak detection culture is visible by the level of commitment of all employees, particularly an organization's management
- Observations and recommendations on culture should be recorded
- Culture should be evaluated on an ongoing basis



Part 5.2: Leak Detection Strategy



- The strategy:
 - Outlines the requirements
 - Sets the goals
 - Outlines how the goals and requirements will be met
- Pipeline operators should develop and implement a leak detection strategy that covers all aspects of the LDP

Part 5.2: Leak Detection Strategy Continued

- Elements of strategy:
 - a) Management commitment and leadership
 - b) Pipeline operator's requirements and goals
 - c) How requirements and goals should be satisfied
 - d) Employing risk management
 - e) Selection of Leak Detection Systems (LDS)
 - f) Integration of all LDSs employed
 - g) Regulatory requirements and industry standards
 - h) Ongoing measurement of performance
 - i) Reporting
 - j) Training, testing, and operations / procedures
 - k) Review and approvals
 - l) Management of change
 - m) Ongoing improvement to the LDP



Part 5.2: Leak Detection Strategy Continued

- The strategy should be contained in a written document that is owned, retained, and supported by management
- May be divided into multiple documents
- Should be reviewed annually

