Technical Committee Name
Research Roadmap

A synchronized, gap-driven portfolio for 2026–2030

Objective → Goal → Gap → Outcome → Project → Timing → Cost → Dependency



SOM Roadmap Overview

SHARING

Best Practices

Effectively communicate SRP findings, best practices

INTEGRITY

Understanding root causes

Identifying factors affecting leak detection and environmental force damage

EFFICIENCY

Leak Detection Management

Identification and management of leaks in gas and liquid pipelines

TECHNOLOGY

Monitoring + analytics

Identify & Benchmark technology to detection of leaks and threats. Identifying new cross functional satellite monitoring opportunities.

WORKFORCE

Human Factors

Assessing SCADA management under pressure

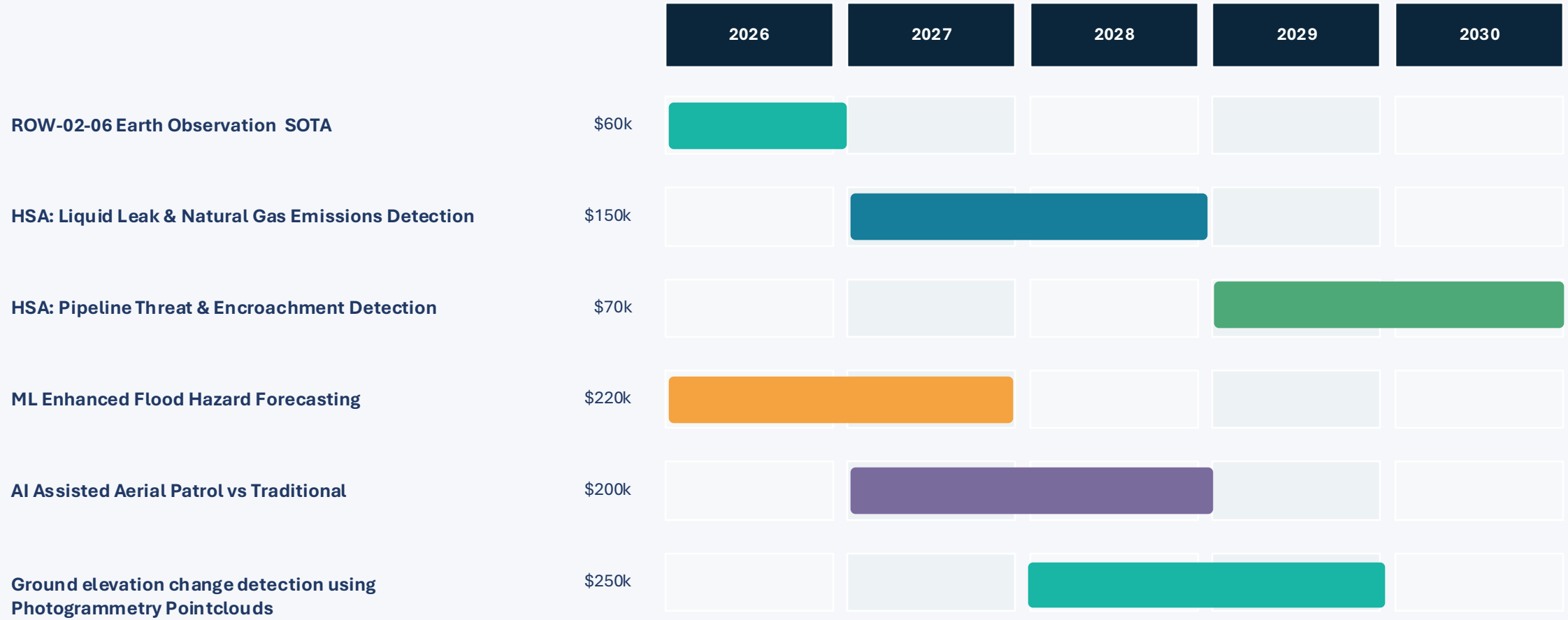
Our Research Roadmap Detailed Plan

PRCI OBJECTIVE	**Technology**
TC GOAL	Develop opportunity gaps for future monitoring via satellites
TECHNICAL GAP	Accuracy and detection limits of leak detection by satellite analysis
DESIRED OUTCOME	Define detection limits, accuracy of leak detection, encroachments by satellite analysis
KEY LIST ONGOING AND NEW RESEARCH PROJECTS TO ACHIEVE THE GOAL	• ROW-02-06 Earth Observation and Pipeline Threat Management State of Art Update • Idea 3538 Hyperspectral Satellite Analysis: Liquid Leak & Natural Gas Detection • Idea 3527 Hyperspectral Satellite Analysis: Pipeline Threat & Encroachment Detection

Our Research Roadmap Detailed Plan

PRCI OBJECTIVE	**Technology**
TC GOAL	Develop AI technology to improve monitoring techniques
TECHNICAL GAP	Manual data interpretation of change from large datasets is time consuming, no accuracy benchmarks
DESIRED OUTCOME	Applicable benchmarks for manual processes and AI assisted processes for prioritizing use cases
KEY LIST ONGOING AND NEW RESEARCH PROJECTS TO ACHIEVE THE GOAL	• Idea 4944: Machine Learning-Enhanced Flood Hazard Forecasting at Pipeline Water Crossings • Idea 3877: Analysis of AI Assisted Aerial Patrol ROW Inspection vs Traditional Aerial Patrol • Idea 3879: Ground elevation change detection using Photogrammetry Pointclouds

2026–2030 Research Sequencing View – by PRCI Objective: Technology



Our Research Roadmap Detailed Plan

PRCI OBJECTIVE	**Efficiency**
TC GOAL	Develop AI technology to improve monitoring techniques
TECHNICAL GAP	Management of leak detection, alarms in liquid and gas pipelines
DESIRED OUTCOME	AI & ML applications to improve leak management
KEY LIST ONGOING AND NEW RESEARCH PROJECTS TO ACHIEVE THE GOAL	• Idea 3525: Non-intrusive alarm validation from ELD systems for small leaks • Idea 3353: Liquid Pipeline CPM System Machine Learning Threshold Improvement

2026–2030 Research Sequencing View – by PRCI Objective: Technology



Thank You!

Open to Feedback