



REVENUE STREAM 04

Aerial & Satellite Surveillance

Orbital radar and autonomous-drone eyes over 60,000 km of pipeline, see the dig before the breach.

60,000 km

network under ASEA

80%

inspection-efficiency gain

Pre-breach

SAR detects digging early

THE OPPORTUNITY

Mexico's regulator (ASEA) oversees **60,000 km of pipeline and 111 terminals**. Patrolling remote rights-of-way manually is hazardous and inefficient, and some ground stations have been abandoned due to field-security risk. The result: 10,591 taps in 2025 and MX\$23.5B drained.

THE SOLUTION

- **Satellite SAR:** all-weather, day-and-night radar measures millimetre-scale ground shift, spotting unauthorised excavation and machinery before the pipe is breached.
- **Drone-in-the-box + computer vision:** autonomous drones in remote docks run scheduled and alert-triggered patrols; CV flags vehicles, intruders and thermal anomalies.
- **TDLAS gas detection:** drones sense trace methane/hydrocarbon leaks from the air without interrupting operations.
- **GIS integration:** geo-referenced alerts flow straight into existing maintenance and security workflows.

PROOF IN THE FIELD

Saudi Aramco

AI predictive maintenance across 15,000+ km of pipeline; 30% of operations automated with drones and robotics; mapping 10× faster than manual.

ImageVision

Drone + computer-vision pipeline monitoring raises inspection efficiency up to 80% and catches early-stage defects.

SkyWatch / Siemens Aerosophia

SAR detects ground disturbance days-to-weeks early; Aerosophia delivers 24/7 autonomous drone-in-the-box review.

MEXICO APPLICATION

Target the highest-risk corridors, the Tuxpan-Tula pipeline and the heavily tapped Hidalgo and Guanajuato networks. Orbital SAR and autonomous drones monitor vast territory remotely, so response resources are dispatched **only on an AI-confirmed intrusion**, improving both safety and efficiency.

REVENUE MODEL

- Monitoring-as-a-Service: per-asset / per-kilometre subscription.
- Provider runs satellite tasking and drone operations plus cloud AI analytics.
- Delivered as actionable, geo-referenced alerts into the client's GIS, asset-light for the client.

PROJECTED ROI

The 80% inspection-efficiency gain slashes patrol and helicopter cost, and SAR pre-breach detection avoids fuel loss, spill remediation and infrastructure shutdown. Capturing even a **5% reduction in annual theft losses** covers the operating cost within the first quarter.