

# Secure Transmission Lines & Ensure Grid Reliability with Our **Vegetation Encroachment Detection**



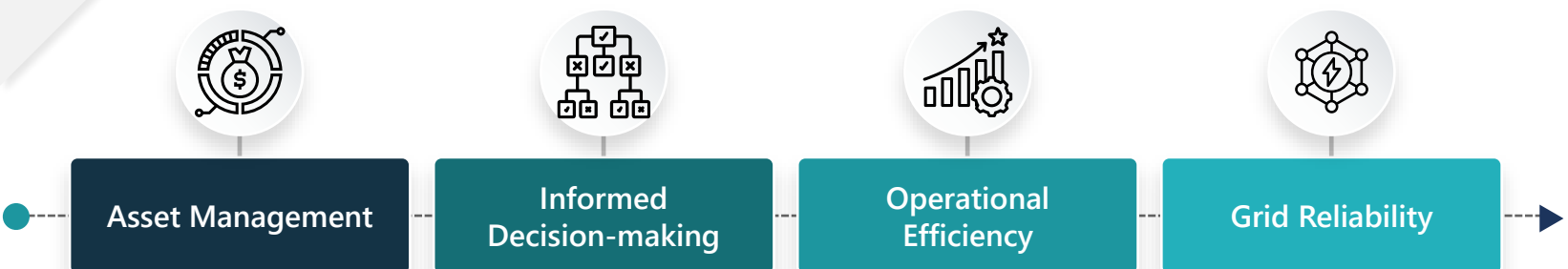
Our Vegetation Encroachment Detection solution safeguards energy infrastructure by precisely **identifying overgrown vegetation near power lines**, enabling timely and preventive action. It delivers **real-time monitoring, actionable alerts**, and **geospatial insights** to reduce outage risks and support efficient maintenance. Built on **Azure Machine Learning, Azure Container Registry, Azure Kubernetes Service, Azure Cosmos DB, and Azure Blob Storage**, the system ensures scalability, performance, and secure data handling. It uses **Azure Custom Vision** for fast model training, **Segment Anything Model (SAM)** for pixel-level segmentation, and **OpenAI CLIP (Contrastive Language-Image Pre-training)** for advanced contextual image interpretation. With **few-shot learning**, it rapidly adapts to new or evolving patterns using minimal annotated data, empowering utility enterprises to **manage grid reliability** with confidence and precision.

***Gartner projects global IT spending in the power and utilities sector to reach \$249.1 billion in 2025, a 10% increase from \$231.2 billion in 2024. This growth is expected to continue with a 10.3% CAGR, reaching \$385.6 billion by 2029.***

## Key Features



## Core Benefits



## Impacts

