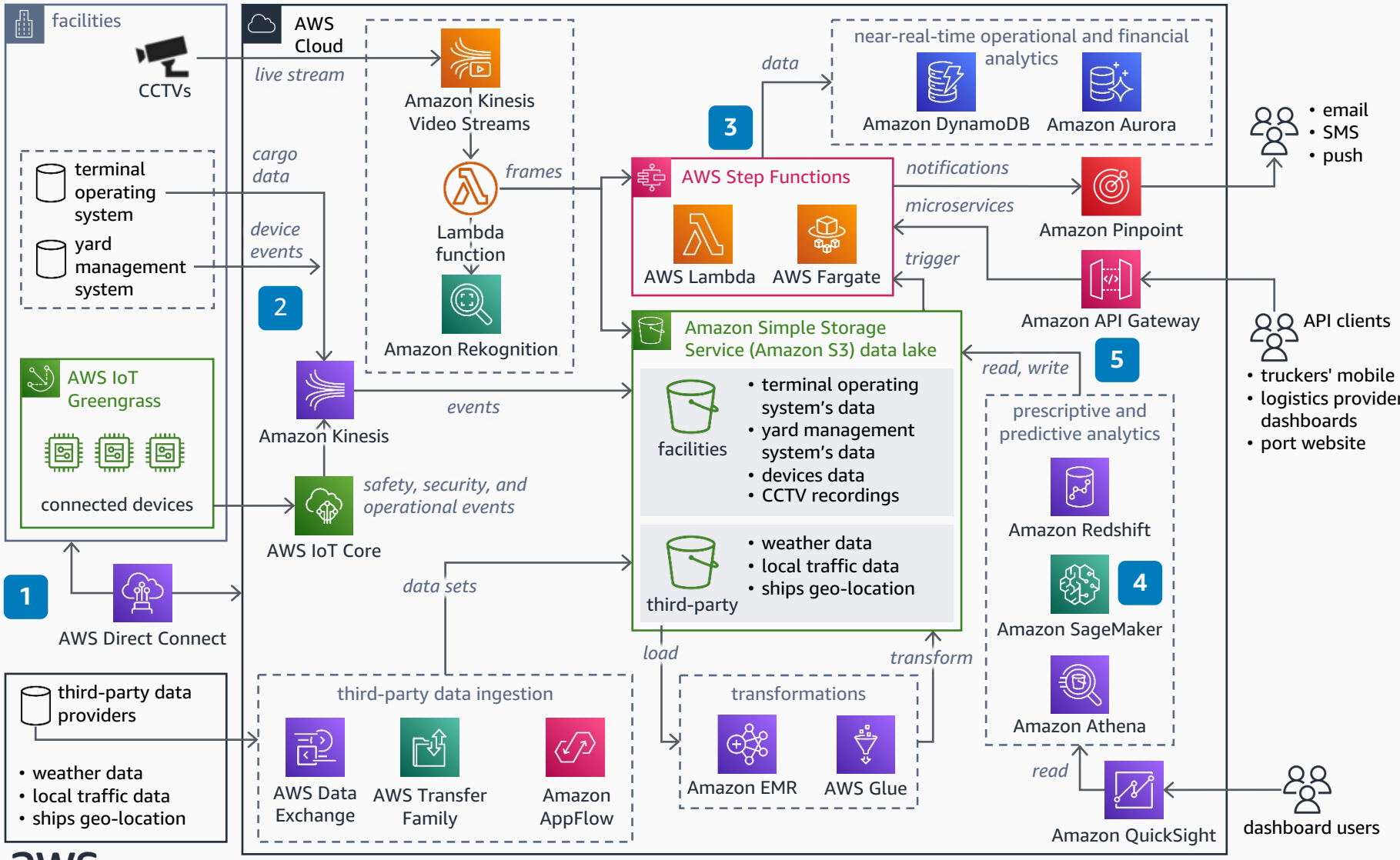
Data Platform for Ports and Inland Logistics Facilities

Support global port terminals and inland logistics facilities operators in eliminating data siloes and building a scalable, low-cost, low-maintenance data platform that provides near-real-time, in-depth visibility into operational and financial metrics. It is also designed to help improve profitability with machine learning (ML), analytics, and workflow automation services.



1. Build a data pipeline from customer's existing Enterprise Resource Planning (ERP) systems, IoT-enabled assets, and third-party data providers. Use the AWS global footprint to connect multiple ports and inland logistic facilities to create a unified data stream that includes geographically-dispersed intermodal operators.
2. To ensure increased resilience, security, availability, and fault tolerance, deploy an elastic and scalable data-ingestion-and-management solution. Enable customers to reduce or expand store and compute capacity to better respond to seasonal fluctuations of global trades without any upfront capital investments and low maintenance, adapting to the industry's cyclicality.
3. Use **AWS Step Functions** workflows to automate back office and operational processes workflows, reducing overheads and improving the management of safety and security issues, equipment in/out gating operations, and claims exceptions.
4. Provide advanced predictive and prescriptive analytical tools based on **Amazon SageMaker** and **Amazon Rekognition**, helping customers to reduce operational costs through equipment usage optimization, route and fuel optimization, maintenance optimization, safety, and security issues management.
5. Turn data into actionable knowledge with **Amazon Redshift** and **Amazon QuickSight**. Disseminate alerts and notifications across the entire supply chain with **Amazon Pinpoint**. Use **Amazon API Gateway** to share visibility on key metrics with shipping lines, port operators, trucking companies, railways, and railway customers.

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AWS Reference Architecture