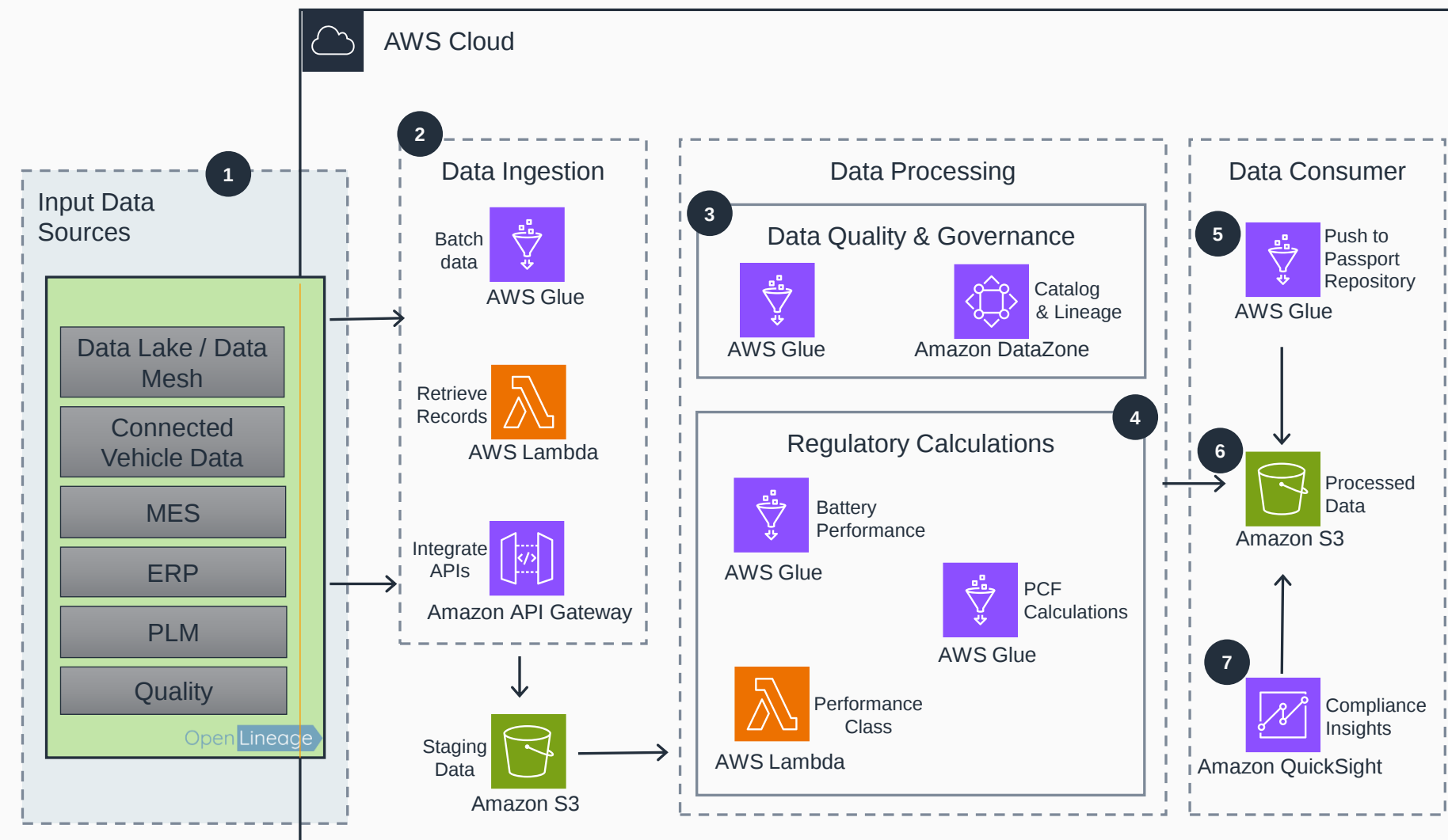


Guidance for Battery Passport on AWS

Data Pipeline

This architecture diagram illustrates how to construct a data pipeline that captures all the necessary data required to create a Battery Passport. It demonstrates the key components and their interactions, offering a comprehensive overview of the architecture's structure and functionality.



- 1 Battery Passport input data is stored in various systems across the enterprise, both within and outside of AWS. These systems contain raw data that needs to be first captured and transformed into the values required to showcase in a passport.
- 2 **AWS Glue** is used to fetch batch data, **AWS Lambda** is used to retrieve records from data on AWS Cloud, and **API Gateway** access on-prem APIs and ingest data into **Amazon Simple Storage Service (Amazon S3)** buckets for staging.
- 3 **AWS Glue** jobs validates the staging data and correlate the data coming from multiple sources. **Amazon DataZone** will contain the data lineage from source to processed data, while OpenLineage is used for data sourced from systems outside of AWS or not supported by default DataZone
- 4 The [Regulation \(EU\) 2023/1542](#) has very specific requirements about the data unit (e.g., PCF should be per Kwh for four different lifecycle stages). **AWS Glue** jobs is used to batch calculations, **AWS Lambda** is used for complex and single-record calculations (e.g., Performance class), and **Amazon S3** will store all the processed data.
- 5 Passport data needs to be accessed through a QR code and has different access requirements. **AWS Glue** job will push the data into the passport data repository and maintain the transparency and authenticity of the data.
- 6 **Amazon Simple Storage Service (Amazon S3)**. will store all the processed data. This data accessed for other regulatory requirements (e.g.; CSRD)
- 7 Regulation has certain milestones. **Amazon QuickSight** is used to analyze how the economic operator is performing against the milestones, e.g., Target material Rate of recoverability



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