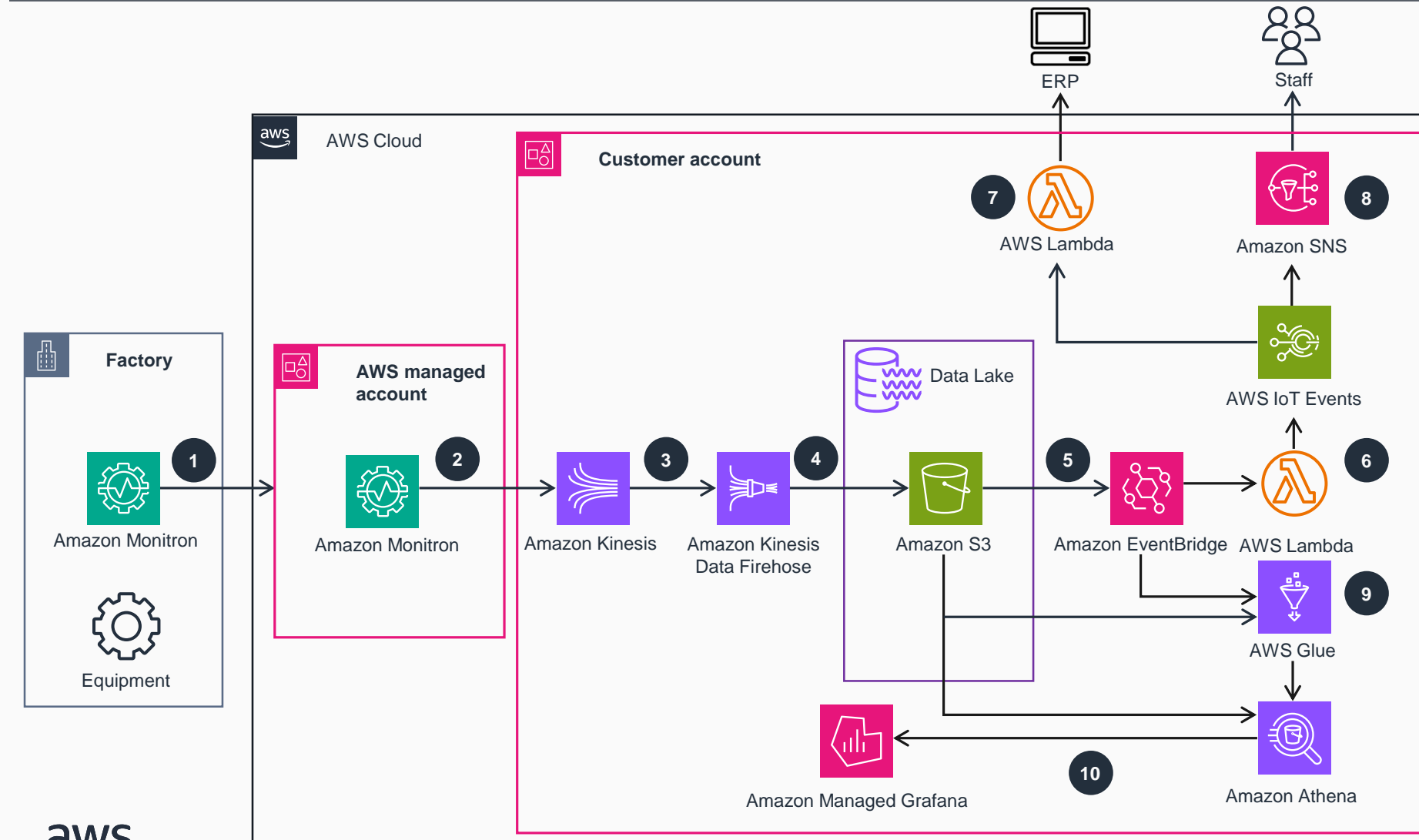# Guidance for Predictive Maintenance with Amazon Monitron

This architecture diagram shows you how to create a data reservoir employing Internet of Things (IoT) sensors, live data feeds, notifications, visuals, and linked processes with enterprise resource planning (ERP) to assess plant data for predictive upkeep and to enhance machine availability.

1. Install **Amazon Monitron** sensors on equipment and **Amazon Monitron** gateway in the factory.

2. Create **Amazon Kinesis Data Streams** using **Amazon Monitron** as the data source.

3. Configure **Kinesis Data Streams** from the **Amazon Monitron** managed account to the customer account.

4. Configure an **Amazon Simple Storage Service (Amazon S3)** bucket as the delivery destination of **Amazon Kinesis Data Firehose**. **Amazon S3** serves as the storage foundation for an industrial data lake.

5. Configure **Amazon S3** notifications to send events to the **Amazon EventBridge** destination.

6. Configure an **AWS Lambda** function as the target of **EventBridge** destination rules. The **Lambda** function processes the **Amazon S3** event and sends it to an **AWS IoT Events** state machine.

7. **AWS IoT Events** responds to the sensor warning state and creates an enterprise resource planning (ERP) work order using **Lambda**.

8. **AWS IoT Events** responds to the sensor warning state and notifies personnel using an **Amazon Simple Notification Service (Amazon SNS)** topic through SMS, mobile push, and email.

9. Connect **AWS Glue Data Catalog** to an **S3** bucket. Schedule an **AWS Glue** job through **EventBridge** to update **Data Catalog**. **Amazon Athena** queries **Amazon S3** data as defined by **Data Catalog**.

10. Visualize Internet of Things (IoT) metrics and state from **Athena** queries using **Amazon Managed Grafana**.

AWS Reference Architecture