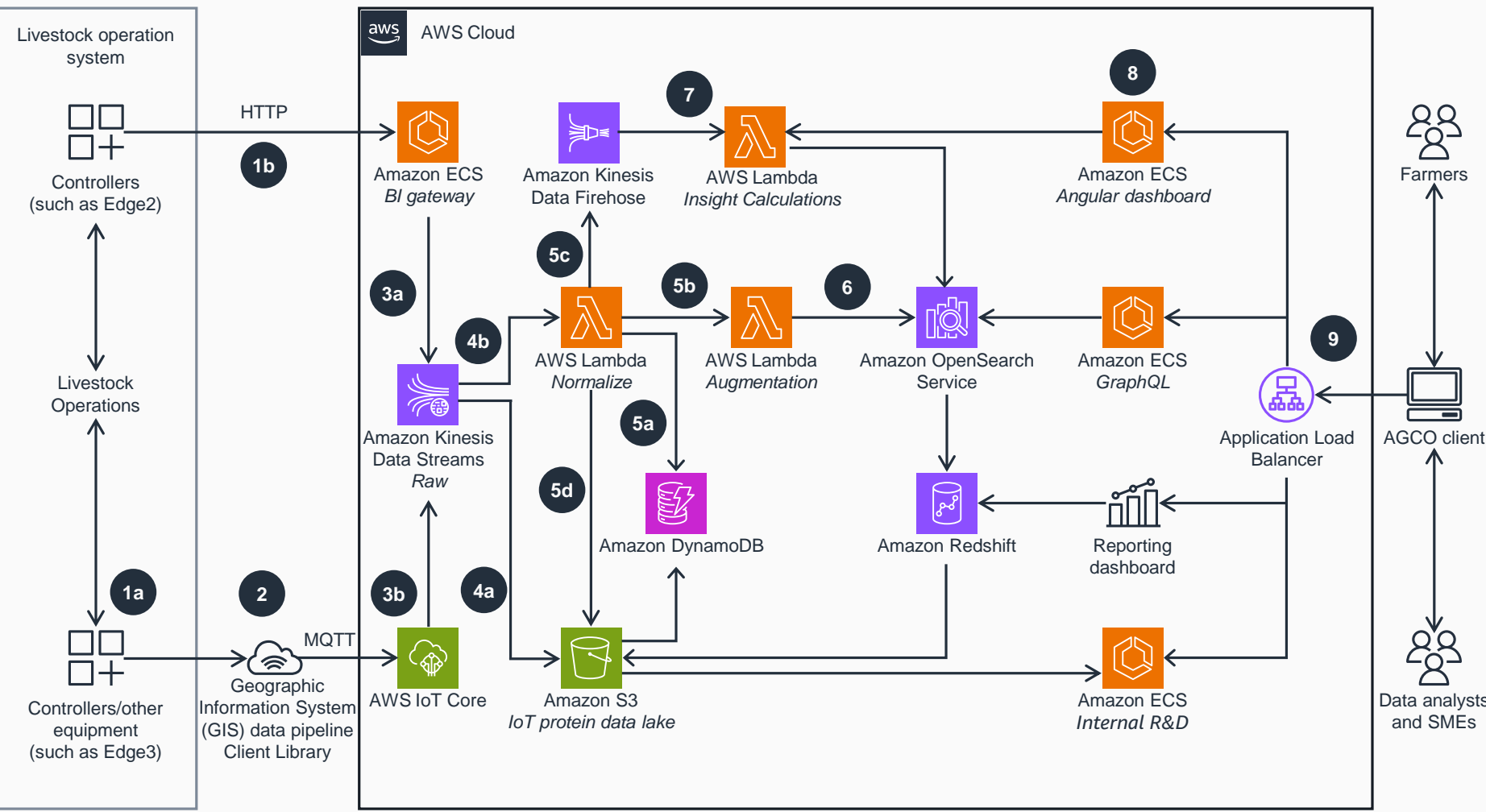


Guidance for Monitoring Livestock Health and Quality of Life on AWS

This architecture diagram shows how to use AGCO's solutions on AWS to predict healthy livestock feed requirements. AGCO is an international agriculture company focused on professional farm machinery that you can use through every phase of the farming process.

Steps 1-5 are explained here, with more on Steps 6-9 on the next slide.

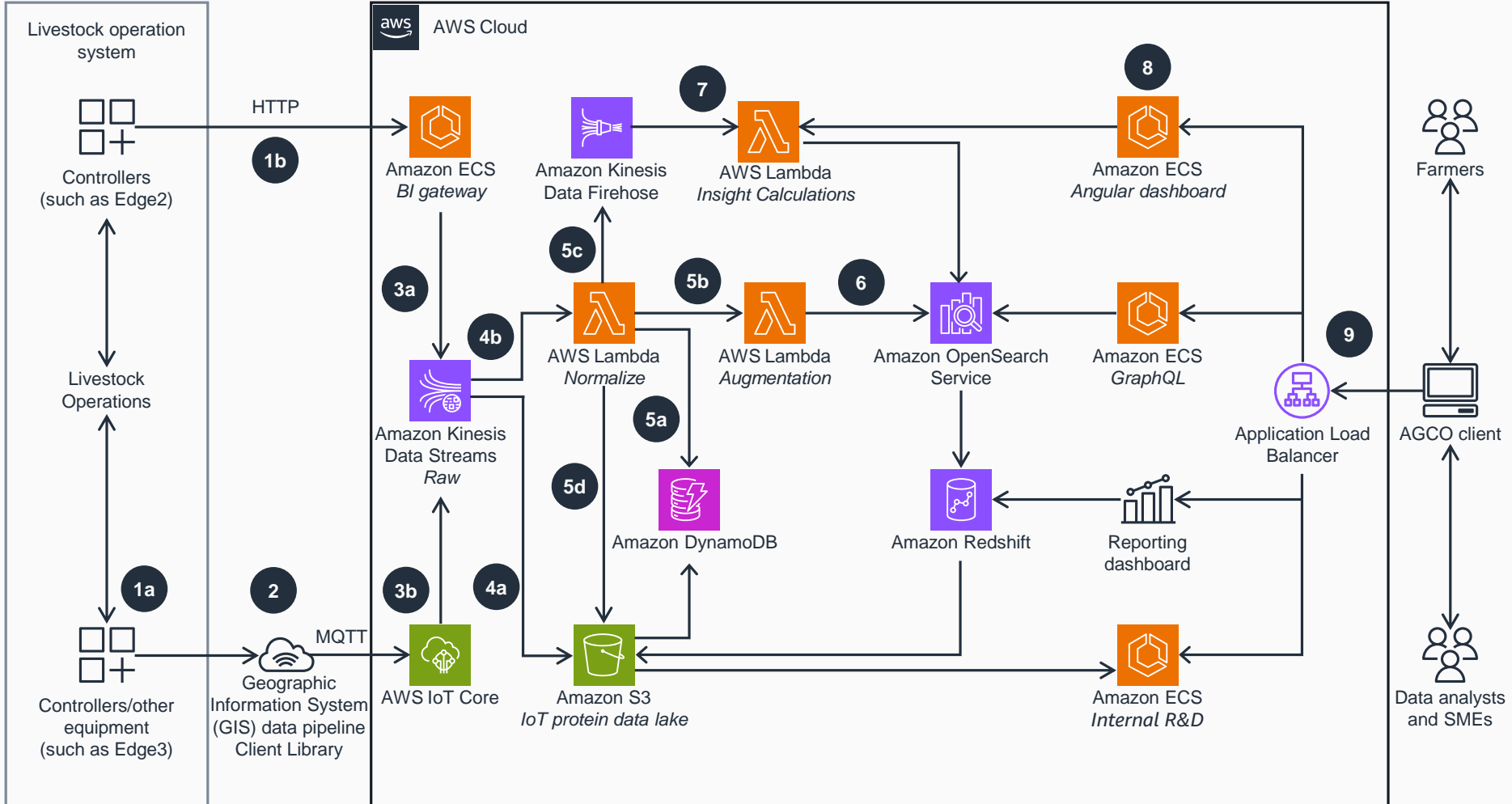


- 1a Bird weight and feed bin data from load cell sensors are transmitted to a central gateway controller with embedded Client Library.
- 1b Bird weight and feed bin data from other load cell sensors are transmitted directly to a business intelligence (BI) application running on **Amazon Elastic Container Service (Amazon ECS)** through HTTP.
- 2 The central gateway controller sends the Internet of Things (IoT) sensor data to **AWS IoT Core** through MQTT.
- 3a The BI application running on **Amazon ECS** transmits sensor data to **Amazon Kinesis Data Streams** for consumption smoothing, queue management, and further processing.
- 3b **AWS IoT Core** receives, decrypts, and transmits sensor data to **Kinesis Data Streams** for consumption smoothing, queue management, and further processing.
- 4a **Kinesis Data Streams** sends sensor data to a data lake on **Amazon Simple Storage Service (Amazon S3)** for long-term storage and archival.
- 4b **Kinesis Data Streams** sends data to an **AWS Lambda** function that performs the following four functions, outlined in Steps 5a-5d:
- 5a The **Lambda** function queries **Amazon DynamoDB** for operational data associated with the device and enriches the data.
- 5b The **Lambda** function passes enriched data and invokes another **Lambda** function that further augments and formats the data.
- 5c Enriched data is sent to **Amazon Kinesis Data Firehose** for storage and consumption.
- 5d Enriched data is sent to **Amazon S3** for research and development (R&D) or BI teams, made accessible through **Amazon Redshift**.

See next slide for Steps 6-9.

Guidance for Monitoring Livestock Health and Quality of Life on AWS

Steps 6-9 are outlined on this slide.



- 6 The **Lambda** augmentation function inserts data into **Amazon OpenSearch Service** for consumption by business application dashboards.
- 7 **Kinesis Data Firehose** stores enriched data and transmits to a **Lambda** function. Calculated insights are inserted into **OpenSearch Service** that performs miscellaneous calculations for consumption by business application dashboards running on **Amazon ECS**.
- 8 Team-specific business intelligence application dashboards running on **Amazon ECS** query data stored on **Amazon S3**, **Amazon Redshift**, and **OpenSearch Service**.
- 9 Insights and BI applications are made highly available and scalable through an **Elastic Load Balancer** serving data to AGCO clients.