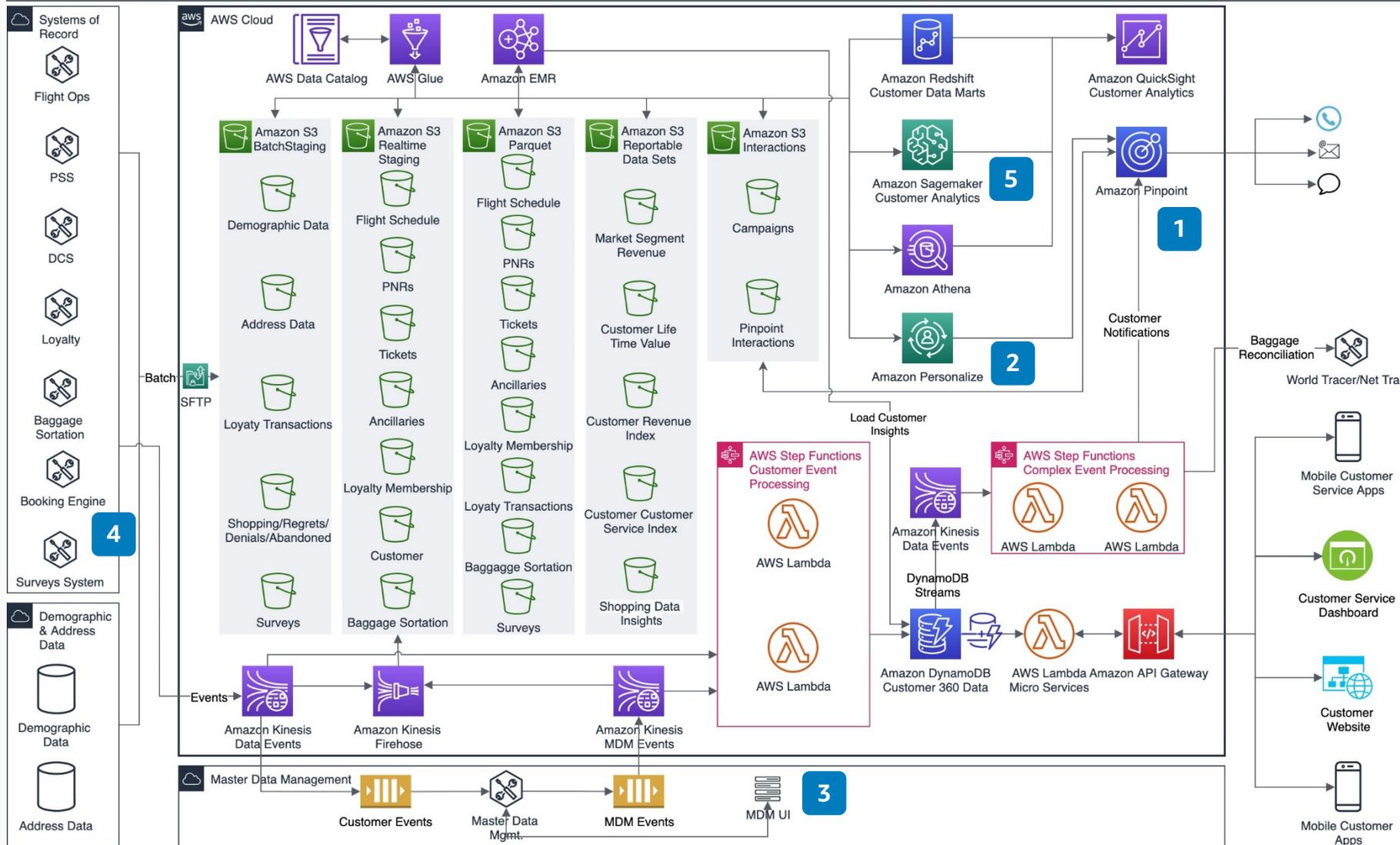# Personalization Using AI/ML for Airlines

Personalize and improve the customer experience by proactively recognizing service changes and failures, recovering from failures, and interacting with the customer on their preferred communication channel.

Airlines often require multiple providers to build separate operational email systems, notification systems, and campaign and marketing systems to deliver a personalized customer experience. These systems typically do not work well together and do not scale to meet new data feeds and new channels of communication. This personalization workflow addresses challenges by integrating multiple AWS services to personalize the customer communication experience. This reference architecture uses Data Platform for Airlines as the foundation and offers personalization with artificial intelligence and machine learning services.

1 Build on top of the operational data platform and use **Amazon Pinpoint** to reliably deliver operational and notification communications across email, SMS, voice, and push to apps by taking into account customer preferences. **Amazon Pinpoint** will also systematically store all interactions along with delivery status for tracking.

2 Use **Amazon Personalize** to create segmentations, target lists, and personalized offers by using the data in the data lake. Use **Amazon Pinpoint** to deliver these offers to the customers based on customers' preferences. These systems also record all the offers and the customer interactions so they can be used for refining the offers.

3 Improve the effectiveness of the personalization by using master data management (MDM) integration.

4 Airline customers can extend the capability by adding additional domains like shopping data, baggage sortation, and baggage reconciliation. This allows for creating message workflows that reduce customer pain points like automatic baggage lost notifications, baggage tracking, and baggage reconciliation. Airline customers can also fine-tune the survey questions and interactions based on service disruptions.

5 Airline customers can create new AI/ML models for customer life time value, segmentation and specialized offers by using **Amazon SageMaker** and the raw and curated data readily available in the data lakes.

AWS Reference Architecture