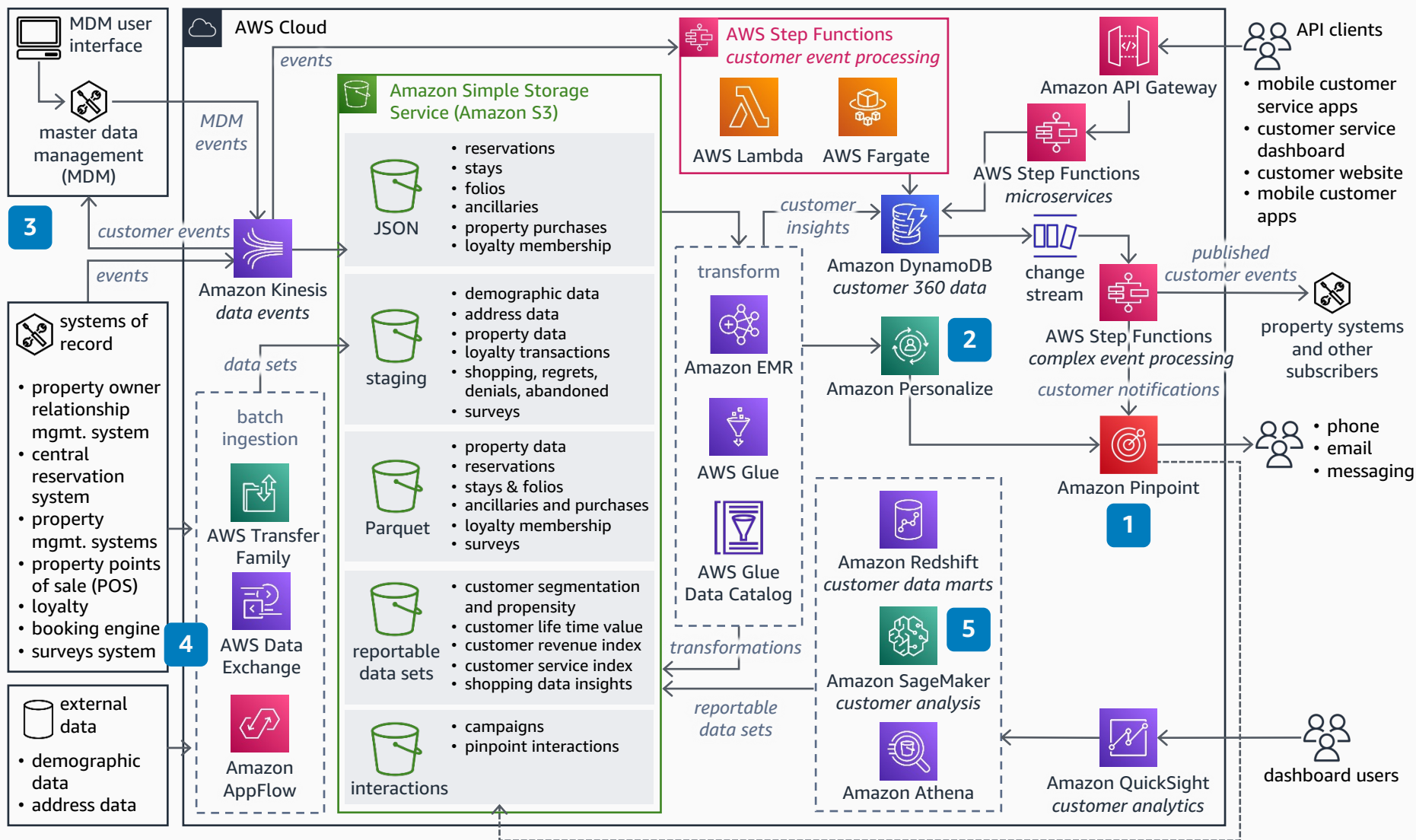# Personalization using AI/ML for Lodging

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.

Lodging companies often require multiple providers to build separate operational email systems, notification systems, and campaign and marketing systems to deliver 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 Lodging as its foundation, and offers personalization with artificial intelligence and machine learning (AI/ML) services.

1 Build on top of the operational data platform. Then, taking into account customer preferences, use **Amazon Pinpoint** to reliably deliver operational communications over channels like email, SMS, push, voice, or in-app messaging. **Amazon Pinpoint** also systematically stores 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 Lodging customers can extend the capability by adding additional domains such as POS and survey systems. This allows for creating personalized offers and on-property notifications and communication. Customers can also fine-tune the survey questions and interactions based on service disruptions.

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

AWS Reference Architecture