Business Case - POS <> AV Integration: Self Service Testing

JIRA: https://jira.uberinternal.com/browse/DEPENDREQ-11815

Why: AV Delivery unlocks strategic value for Uber

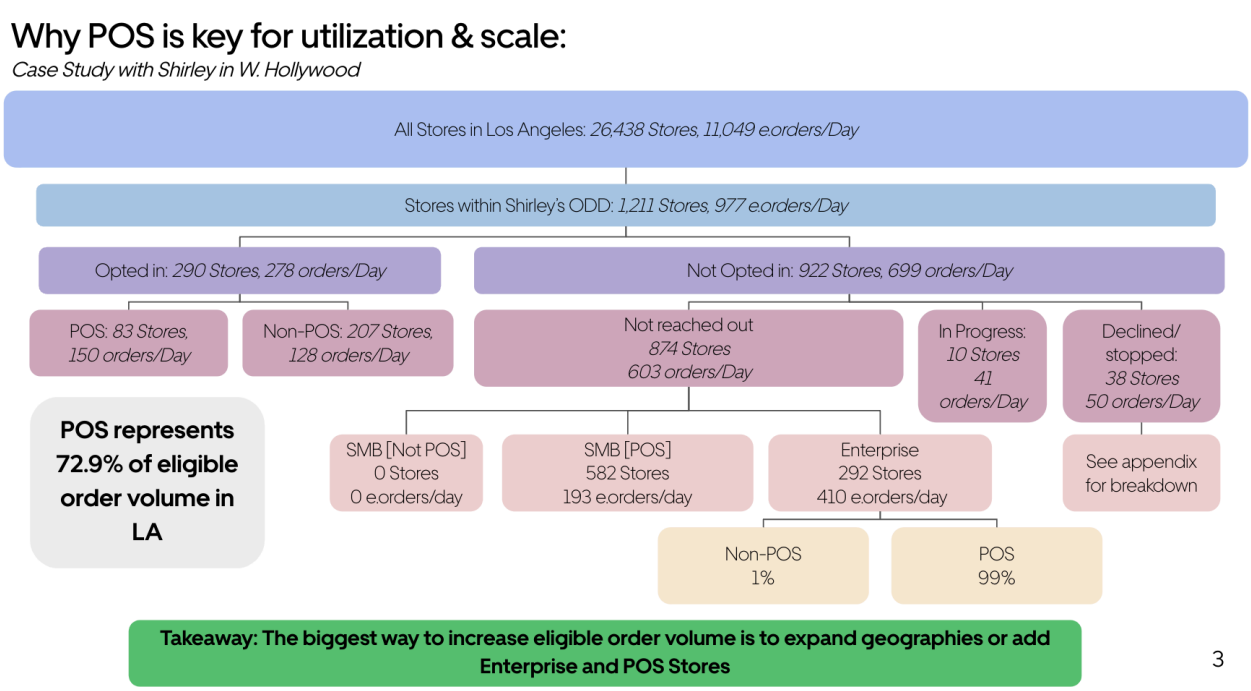
Autonomous Vehicle (AV) delivery is a cornerstone of Uber's platform strategy.

- AV Delivery reinforces platform narrative; as the best global marketplace for AV tech across multiple LOBs. We've already been able to showcase our aggregation strategy on AV delivery - multiple cities with multiple AV operators. Aggregation enables us to take a standardized platform approach across providers, drive competitive pricing, deepen our expertise, and cement Uber as the leading platform for AV tech.
- AV delivery is unlocking cost efficiencies today for Uber. As a principle, terminal pricing is below human equivalent, and we are realizing additional savings from insurance. We can strategically deploy bots in high CPT and/or supply constrained markets.
- Key competitors are scaling AV investments rapidly. Early mover advantage strengthens Uber's leadership narrative in autonomy.
- By reinforcing Uber as the best global AV marketplace across LOBs, we deepen expertise, drive competitive pricing, and cement market leadership.

Current Gap: POS Integration with AV is a Key Blocker to Growth

For AV delivery to scale with merchants, seamless integration into Point of Sale (POS) systems is critical.

- If a merchant uses a POS system and wants to have autonomous delivery enabled, they currently need to carry a separate uber eats tablet to get key notifications (e.g., order matched to robot, robot arrival). That's because AV delivery isn't yet integrated directly into their POS.
- This means that Front of House staff need to manage their existing POS and a new process, by carrying an additional tablet and creating duplicative workflows
- However, there is integration complexity. Tech work is required for the POS provider to enable, or Tech work could be required from the merchant, if they have a custom integration, which many large Enterprise brands do.
- Integrated merchants (POS and/or aggregator platforms) **represent 45% GBs within Uber Eats**. These platforms are critical in driving Autonomous Vehicle (AV) adoption by enabling technical integration with Uber's AV functionality and supporting go-to-market efforts to accelerate merchant uptake.
- Without POS integration, operational friction at the merchant level slows AV growth and adoption.



Problem Statement:

- Today POS Partners rely on us to trigger the AV robot for every order, they are unable to test independently. Additionally,
    - Test AV couriers can "go stale", blocking the test flow. The "freshness" of a test AV is not exposed, causing confusion when the test flow suddenly stops working. Currently, the only fix is for the AMD team to create an entirely new AV courier.
    - Only a few of the existing AV courier models can be tested; setting up the other models is high-lift for the AMD team
- This means we need a 1:1 mapping and PEng resourcing to complete testing and implementation of AV delivery, as providers are unable to self test. This creates a bottleneck to AV delivery being rolled out at a more accelerated pace, and is a blocker for unmanaged POS providers, which comprise 30% of GBs (POS providers without a 1:1 PEng mapping).

Proposed Solution:

Studio Simulator for POS <> AV Integration

- Introduce a Studio Simulator tool to support autonomous trip testing externally, to enable self-service testing.
- This would enable POS providers and Enterprise with custom integrations to independently test AV order flows without requiring Uber PEng resources.
- It would also reduce implementation bottlenecks, allowing AV features to be enabled at scale across integrated merchants, accelerating merchant uptake of AV delivery.

- Partners often want to test calling GetOrderDetails at multiple stages in the trip, so giving them the same control to "walk" interactively through the trip stages would be very helpful