Key design principle and Phasing

Key design principles

Working backwards from Monetisation & Externalisation and the end state vision for LaaP, we have focused on the underlying key design principles which will help us to build a robust, scalable and modular infrastructure.

1. **Making tech layers modular**

   The orchestration layer consisting of integrations for Order creation, Updation, Cancellation and Status updates standardisation is built such that it can work with any ops tech partner with the given APIs built platform agnostic so as to have a plug and play type model for ops tech players. Additionally, the solutions and features built on the ops tech players wrt LaaP are generic and standardised all across to built similar learning curves and visibility keeping long term view on optionality and migration. Furthermore, even the DML built in house has the capability to work with multiple orchestration layers while having the same requirements for integrations and standardised outputs/inputs.

2. **Ops tech reliability**

   The ops tech partner reliability and it's scalability with large volume is critical for smooth functioning of LaaP tech infra. While partnering with an ops tech player, the ops tech reliability is primarily measured on Infrastructure scalability and feature modularity. LaaP requires creating quick solutions on the go so as to make on ground operations faster and more efficient. This in turn relies heavily on the ops tech ability to create quick, out of the stack solutions for complex on ground problems without having to change product/tech architecture. Hence, building a robust framework for measuring the reliability of a new ops tech player and an already integrated one will be critical for managing sustained growth in LaaP.

3. **Defining operating roles of tech layers**

   Decision making layer, Orchestration layer and the ops tech layer, all have defined boundaries and operating roles. For instance, the role of the orchestration layer is that of a broker i.e to transfer information and standardize it for Meesho's consumption and shall not extend to any decision making or intelligence gathering. The latter is only limited to the DML which will also prove to be Meesho's IP in the long run. Similarly, the ops tech layer's is to govern the movement of the shipment from pickup to drop and shall not be responsible for communicating with any layer other than the orchestration layer(broker). The tech layers hence defined, along with new feature developments will be built around these guardrails constantly adhering to the operating roles of each layer. This is also done to have clear liability management in the event of failure and create a separation of intent between the LaaP tech layers.

4. **Standardising validations and ancillary services**

   Across the entire journey of the ops tech partner, there are multiple new feature requirements that are developed. Now, with the integrations of multiple ops tech partners in the current LaaP ecosystem and the possibility of new ops tech partner integrations coming in the future, these features would have to be replicated across. Hence, there is a critical need to develop and follow a standard framework of validations, requirement generations and logical checks that would be developed across all ops tech partners to ease fault detection, standardize feature development, incorporate cross learnings and reduce time for new ops tech integrations. This is already being followed along with a standardized approach for shipment event tracking and a documented framework is being built for future integrations.

Phase wise PoV

Phase 1

We will be focussing on delivering features critical to business priorities- ensuring we are building systems for handling scale and driving reliability.

1. Hedging risks on orch layer: Depending on just 1 external orchestration layer (beyond 10% OC) has it's own key man risks and hence, focus will be on building an in-house orchestration layer with our 0 to 1 learnings.
2. The current manual DML has a 15-20% ceiling on scale (owing to manual file upload challenges for LaaP configurations) and as we scale to our Diwali targets solving for issues in PDD infrastructure, lane level capacity checks, real-time serviceability infrastructure and unlocking 100% scale (which are paper cuts today) will become more critical, hence the need for Auto DML.
3. Building optionality in ops tech layer will also be a key focus, in order to hedge ourselves from potential downtime/scalability risks. Owing to which, we have already integrated with FarEye as our 3rd ops tech player(expansion in progress), and working backwards from the Diwali scale up plan, we plan to bring in a 4th ops tech player as well.
4. Returns will also be a clear business priority (clear cost saving lever, CPS working here), we would also start investing in this direction.

Phase 2

In phase 2, while we start scaling up LaaP to upwards our Diwali targets, we'll need to start building additional features and layers which will be required to handle stabilised scale, life cycle management of orders, partners as well as focusing on building partner/vendor onboarding frameworks and interfaces to aid rapid on ground scale up. This will also inherit the need of secondary product like payments, liability & recon visibility, trust & safety and support.

Phase 3

Phase 3 is the final frontier that'll enable us to externalise and monetise LaaP. This will encompass v3 of Auto DML (which will essentially help us in building LaaP to operate on multiple new supply chains without the need for tech changes), a client onboarding interface, billing and reconciliation for client, weight profiling for shipments to estimate cost and a support infra additions for customer success (client).

Phase 4

Phase 4 is about solving for building more plug and play kind of setup for ops tech layers, where we envision a playstore kind of ecosystem. This will a) help drive more competition and coverage and b) take us a step closer towards the vision of having any kind of tech player come and work with us. Here we'll work on publishing a guiding framework (akin to say building a standard like IEEE) for players to come and work with us.