*LucidChart would not allow me finish my Data flow interactions because of the membership, so I will list the unfinished ones below.*

*After the TransportController creates a transport request in the Transport Model it will then appear on the Transport Tracking Page and User Dashboard.*

*Tracking Pet Transport*

*User checks pet transport status on the Transport Tracking Page which is sent to TransportController. TransportController then retrieves real-time updates from the Transport Model. The estimated arrival time is displayed on the Transport tracking page.*

*Updating Transport Status*

*Driver updates the transport status via the Admin Panel and request is then routed to TransportController. TransportController updates the Transport Model with new status and location data. The updated tracking information appears on the Transport Tracking Page.*

*I chose the MVC architecture because it divides the application into three distinct layers: Model, View, and Controller. This structure promotes* ***separation of concerns****, enhances* ***scalability****, ensures* ***efficient data management****, and supports a* ***user-friendly interface****. Given that the application involves* ***user interactions, matchmaking, and transportation logistics****, keeping these concerns separate makes future updates and feature additions more manageable. The* ***Model layer*** *efficiently handles database operations, storing and managing user and pet profiles, preferences, and adoption requests. The* ***View layer*** *provides an intuitive interface for adopters, fosters, and transporters to interact with the system seamlessly. Meanwhile, the* ***Controller layer*** *processes user inputs, executes matchmaking algorithms, and manages transportation logistics, ensuring smooth communication between the database and the user interface.*