Integrating IS Technology Project 2

Customer Databases Problem

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Problem Statement

- A Financial service firm is facing a customer database problem. Where each service in the firm has different database maintained for its operations.
- This de-centralized model has five different customer database maintained for each of its service, which has been created over time and formed due to various mergers with other firms
- Customers over time have been facing various troubles and dissatisfied since they not only must explain their details every time, they use the service but also their bills, reports are also decentralized over five different modules.

Problem Statement

- Upon analyzing the existing model the following concerns are identified in the system
  - Each service has an has a dedicated database which has applications containing large number of custom code involving different programming language like java and Cobol
  - And based on the customer requirement it is advised that the legacy code should not be altered to suit our need
  - Since there can’t be any changes made to the legacy code the databases cannot be merged into a single database, since that would involve changing the lines of code with new database

Facts Available

- Number of database to be centralized – 5
- Each database has application linked with different coding language
- 40% of customers use only one service
- 30% of customers use two service
- 30% of customers use more than two service
- Data’s in each database are maintained in different formats, once the customer details are added there are average of 12 changes per year

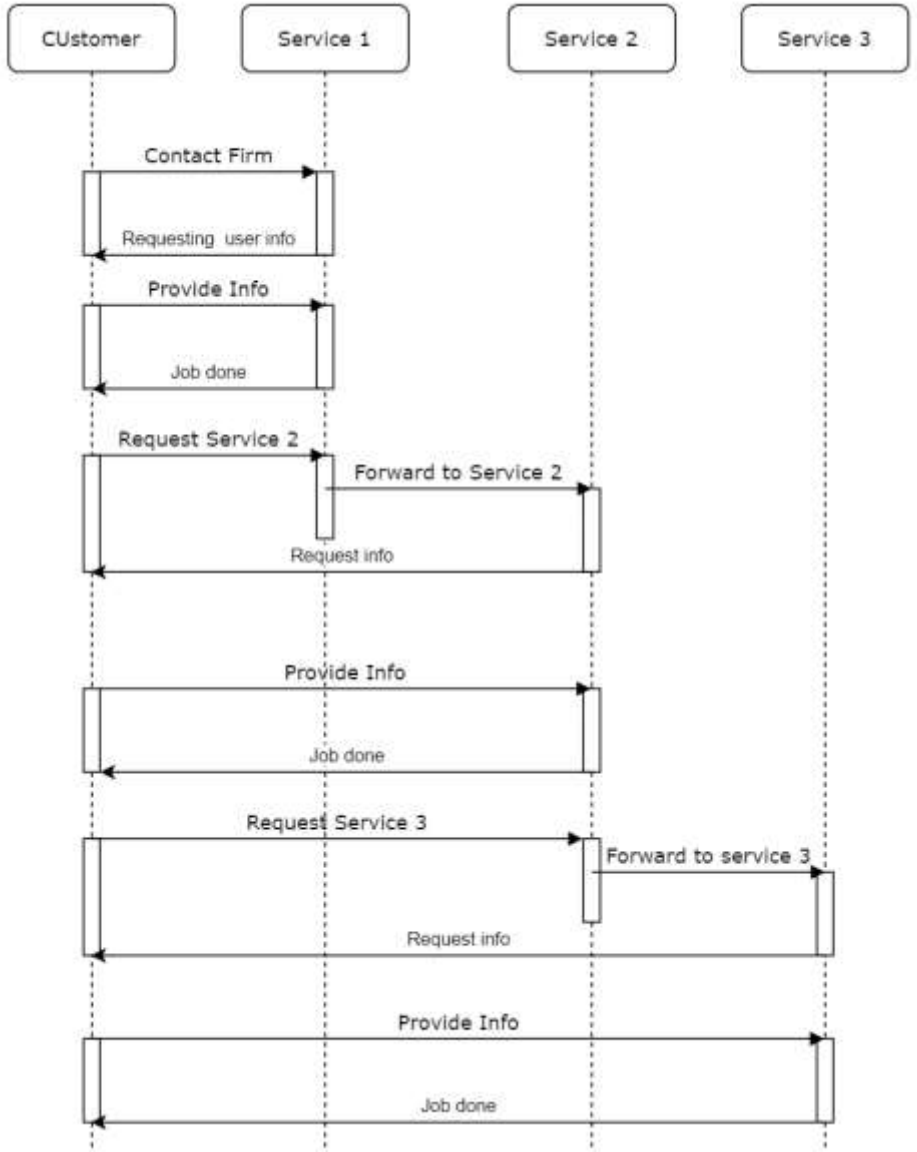
Proposed Solution

- The following two solution steps must be taken to centralize the data input and provide unified reports and bills

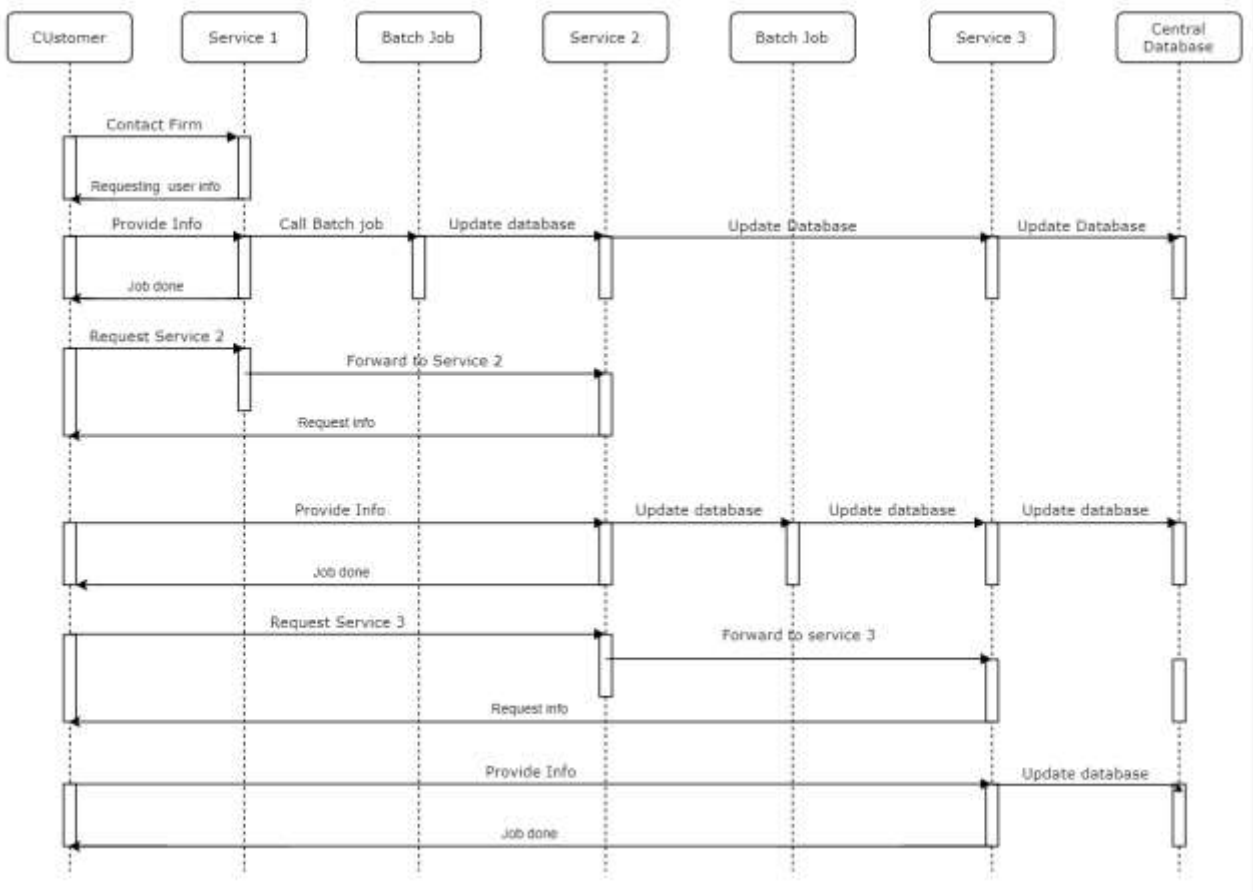
I. To create a centralized unified database to maintain the user data from every database – programs need to be developed to migrate existing data from five database to the central database, programs need to be developed to update the central database in Realtime

II. Create a batch job to run every 25 seconds with an accompanying batch job program to update other database with the recent updated data

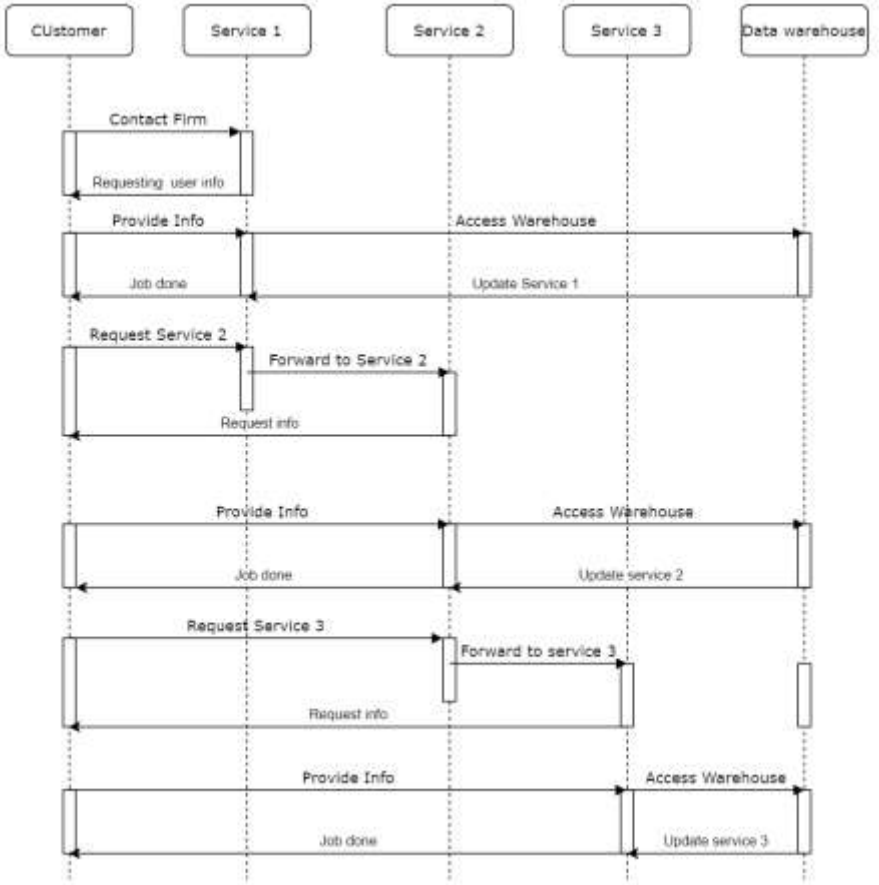
Sequence Diagram – Existing Scenario



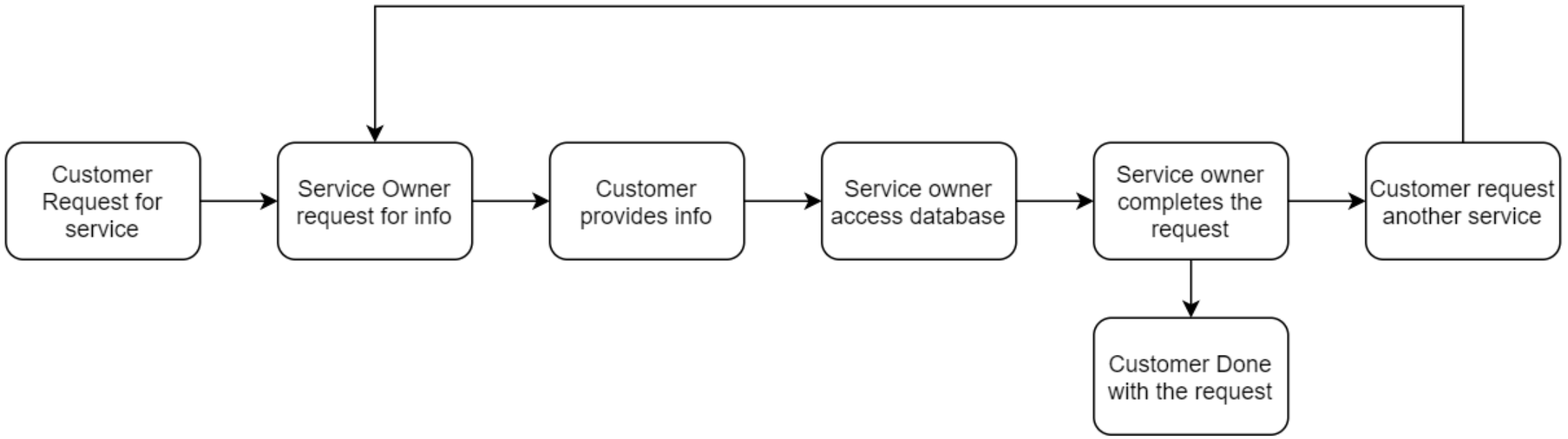
Sequence Diagram – Proposed scenario



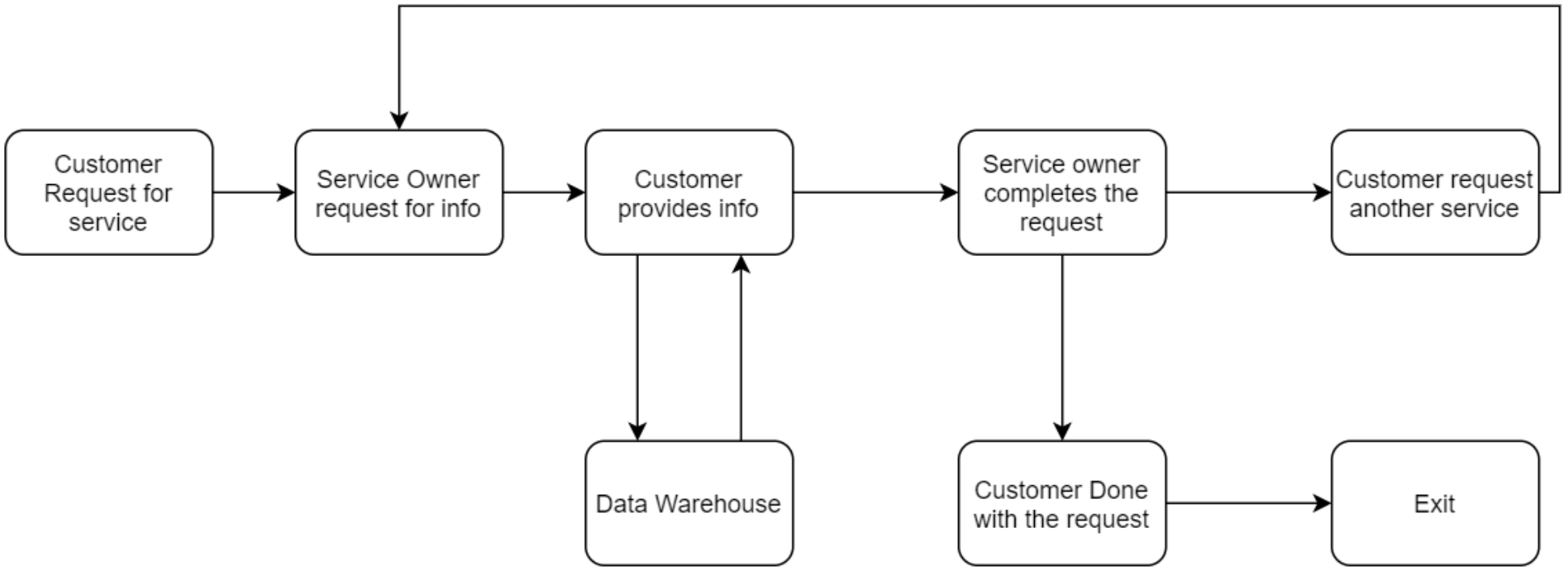
Sequence Diagram – Alternate Design



Structure Diagram - Existing



Structure diagram – Proposed



Design Feasibility

- The propose design is fitted with an improved database solution with a dedicated Datawarehouse which acts as a centralized repository to store, track, and update data from five different database and custom backend applications and batch job are scheduled to synchronize the decentralized database with mail repository (Datawarehouse)
- In a scenario where a new analyst will be requiring to view the information about existing customers, the Datawarehouse provides the opportunity for the analyst to view the user data through dashboards and reports