iConnect - Upload Data Alterations

1. High Level Requirement
   - Updating the `/uploadInsured` api in macquaire service
     - Adding new flag as api request to indicate the upcoming file is PCCW policy or not
   - Setting up new route for unmarshalling and processing the PCCW member alteration file
     - Creating new class to handle PCCW member alteration file
     - Implement the logic to determine the plan of each product by the new added field
   - All data in excel will translate to list of EbChangeRecord and return to iConnect
2. Expected Result
   - All data in excel should translate to list of EbChangeRecord
   - Validation and error handling should be done
     - error message should be clearly state that data is violating which validation and attached in API response
     - Check API request parameter: excel file and new added flag is mandatory
     - Validation on excel header, all necessary header will store in `PCCWChangeRecordHeadersService` class
     - Validation on member mandatory field:
       - macquarie-service: Check each member: policy no., effective date, action
       - iConnect experience layer: in `MerberService.validateMembersAlterationRequests()`
   - If member record violate the validation rules, this record should be marked with fail reason and continue the member alteration process
     - macquarie-service: row number of the error data should be stated in `responseMsg`
       - For example (macquarie-service):
         - `responseStatus`: "partially_success"
         - `responseMsg`: "row 8 : missing 'Action'"
         - `epreciousCensusRecordList` : {the rest of the successful data}
     - iConnect experience layer: Locate which row of member data in the excel file based on the `responseStatus` and `responseMsg` from macquarie-service and the validation logic from `MerberService.validateMembersAlterationRequests()`, consolidate the error excel file and attach to api response
       - For example (iConnect experience layer):
         - `responseStatus`: "partially_success"
         - `responseMsg`: "Some of the member data violate the validation rules. For detail, please check the error file."
         - `errorFileName` : {Original member file + fail reason at the last column of each fail record }
         - `epreciousCensusRecordList` : {the rest of the successful data}
     - user can submit the successful data first
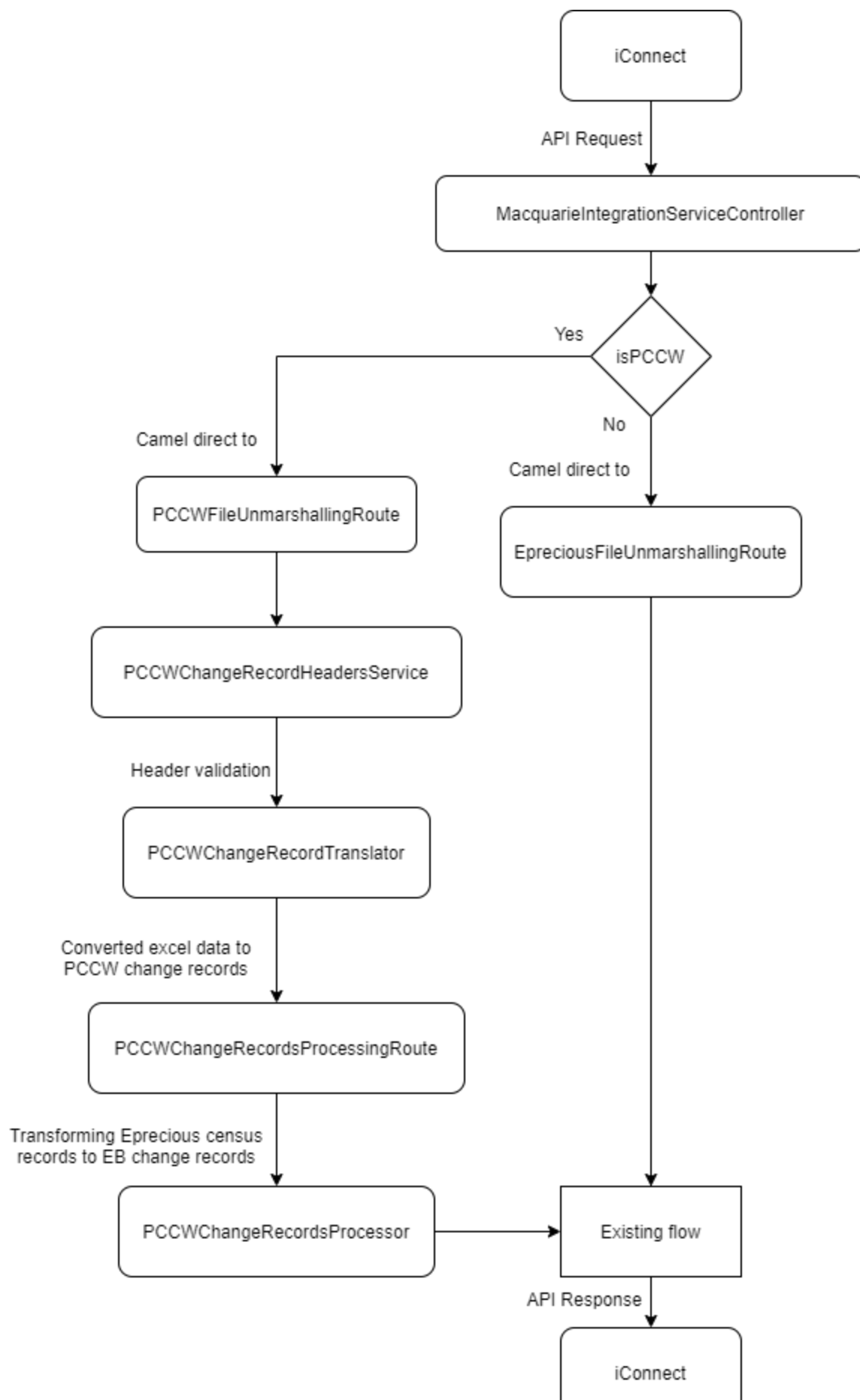3. Technical spec
   - `MacquarieIntegrationServiceController.java`
     - Adding new api request isPCCW flag
     - if isPCCW flag is true, redirect to new route `PCCWFileUnmarshallingRoute`
   - `PCCWFileUnmarshallingRoute.java` (new)
     - Similar with `EpreciousFileUnmarshallingRoute`
     - Camel route for unmarshalling the PCCW member excel file and translate to `PCCWChangeRecord`
   - `PCCWChangeRecordHeadersService.java` (new)
     - Similar with `EpreciousCensusRecordHeadersService`
     - Declare the PCCW member excel file header
   - `PCCWChangeRecordTranslator.java` (new)
     - Similar with `EpreciousCensusRecordTranslator`
     - Map the data from each row of PCCW member excel file to `PCCWChangeRecord`
   - `PCCWChangeRecord` (new)
     - Similar with `EpreciousCensusRecord`
     - Entity class for PCCW member
   - `PCCWChangeRecordsProcessingRoute` (new)
     - Similar with `EpreciousCensusRecordsProcessor`
     - Processing the `PCCWChangeRecord` and translate to `EbChangeRecord`
     - In `processAdd`, `processChange`, `processTerminate`, remove `setLifeProductDetail` and add new method `setMedicalProductDetail`
       - For change or terminate member, as the member is existing member of that policy, user can only input employee number, dependent ID number, Member Name, date of birth and the product information. The rest will be retrieved by policy-service API
       - `setMedicalProductDetail` will set `PCCWChangeRecord.product` and `PCCWChangeRecord.product` base on the relationship code, Grade ,HS option, SMM option and OP option of the member
       - see Appendix 2 for the mapping
       - Can be reference `MacquarieChangeRecordsProcessor.createProductGroup` and `MacquarieChangeRecordsProcessor.createPlanGroup` for set data to `PCCWChangeRecord.product` and `PCCWChangeRecord.product`
4. Test Case (Unit Test / API Request Response)
   - Normal
     - All data in excel should translate to list of EbChangeRecord
   - Error

- Uploading excel file that do not match the format
- Some member are missing the mandatory field
- For change or terminate member, policy-service cannot find existing member (TBC, existing flow are also missing…)
- Product setting are violating the mapping excel

5. Appendix

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                          ┌─────────────┐
                          │   iConnect  │
                          └──────┬──────┘
                                 │ API Request
                                 ▼
              ┌──────────────────────────────────────┐
              │   MacquarieIntegrationServiceController│
              └──────────────────┬───────────────────┘
                                 │
                    Yes        ◇ isPCCW ◇
         ┌───────────────────────┘       │ No
         │                               │
         │ Camel direct to               │ Camel direct to
         ▼                               ▼
┌──────────────────────┐    ┌──────────────────────────────┐
│PCCWFileUnmarshallingRoute│ │EpreciousFileUnmarshallingRoute│
└──────────┬───────────┘    └──────────────┬───────────────┘
           │                               │
           ▼                               │
┌──────────────────────────┐              │
│PCCWChangeRecordHeadersService│          │
└──────────┬───────────────┘              │
           │ Header validation            │
           ▼                              │
┌──────────────────────────┐             │
│ PCCWChangeRecordTranslator│             │
└──────────┬───────────────┘             │
           │ Converted excel data to     │
           │ PCCW change records         │
           ▼                             │
┌──────────────────────────────┐        │
│PCCWChangeRecordsProcessingRoute│       │
└──────────┬───────────────────┘        │
           │ Transforming Eprecious census│
           │ records to EB change records │
           ▼                             │
┌──────────────────────────┐            │
│ PCCWChangeRecordsProcessor├──────────►┌──────────────┐
└──────────────────────────┘           │ Existing flow│
                                        └──────┬───────┘
                                               │ API Response
                                               ▼
                                        ┌──────────────┐
                                        │   iConnect   │
                                        └──────────────┘
```

PCCW_member_u..._mapping.xlsx