DSB Technical Design Document

Revision History

No.	Date Created	Created / Updated By	Update Reason	Reviewed By	Review Date
1	11-Dec-24	Kannan	Initial version		

Table of Contents

1. Introduction

1.1. Purpose

This document outlines the high-level architecture and design of the Alstom DBB application within the Sales force instance. It serves as a reference for system administrators responsible for future maintenance.

1.2 Audience

This table lists the users of this document along with the reasons for their use:

User	Use
Functional and Technical SMEs Developers and Supporting resources	To provide a detailed understanding of the solution

1.3 Common Methods

- NA

2. DBB-1155 Train structure DIN EN 15380-2 for DSB and Dosto(retrieve Assembly instead of Functional location affected)

2.1 Description

The update for fields Functional Location, Equipment and Assembly will be sent bi-directional. The position for LBS Node will also be added, like currently capturing it for Car. Position change or Functional Location change of an Equipment will reflect in DBB.

2.2 Assumptions

- NA

2.3 Reference Documents

#	Title	Organization	Author	Date	Link
1	DBB-1155 Train structure DIN EN 15380-2 for DSB and Dosto(retrieve Assembly instead of Functional location affected)	Alstom	CG		

2.4 Salesforce Solution

AC01: change on interface bi-directional for notification(request Object) ; updating the following 3 fields for notification:Functional location, Equipment and Assembly [instead of Functional location affected]
Functional location TPLNR [Train]
Equipment(Car)> Equipment EQUNR
Asset[LBS]> Assembly BAUTL (currently this is the functional location affected or equipment affected)
For the current customers the logic remain with functional location affected and/or equipment affected

- Request Interface between GSI and DBB should be bi-directional. This is existing functionality. GSI send the notification to DBB using standard rest Api. This is existing functionality
- DBB trigger the notification to GSI using platform event(Notification__e). This is existing functionality
- When DBB Send the notification to GSI, the below listed details to be included in platform event.
    - Functional location (Functional_Location__c) from Request (Case)
    - Equipment (Equipment__c) from Request (Case)
    - Assembly Description (Assembly__c) From Asset with Asset LBS recordtype)
    - In DBB, we need to create a new field Assembly in Request Object and populate the value from Asset. So that in platform event we can pick this value.
- When request created via DBB, these values to be populated when user select the asset. For this purpose, we have to leverage, Request creation LWC asset lookup on change event by calling apex method to get relevant details mentioned above.
- When GSI send the notification to DBB, above mentioned field will be updated by GSI using standard rest Api (Existing functionality)

AC01B: Add position field on Asset-LBS nodes(for Car is already existing and should be kept) interfaced with GSI with position field HEQNR/ RIHEQUI

- In DBB, add new field LBS position(DBB_LBS_Position__c) data type as numeric, in Asset LBS(DBBLBS) recordtype and include in the page layout listed below. This field value will be populated by GSI.
    - LBS
    - LBS(FCRO)
    - LBS(Read Only)

AC01C: Mapping with GSI notification (request in DBB)
Functional location TPLNR [Train]
Car> Equipment EQUNR
Asset[LBS]> Assembly BAUTL (currently this is the functional location affected)

- In DBB, request created by GSI will be standard rest Api and populate above fields as per AC for DSB. DBB will provide the field the names and support

AC02:IF the relevant equipment is no found in DBB then the interface for the notification should take the equipment above[parent equipment: can be train, car or LBS]

- When create a request from GSI, if equipment value not available for the selected asset, GSI will populate the value from parent asset equipment value. No changes required from DBB.

- When create a request from DBB, if equipment value not available for the selected asset, DBB will populate the value from parent asset.
    - In Request object, we have Car – Equipment(CarEquipment__c) field exists. This field hold the value of asset equipment with above mentioned feature. This is existing functionality.

AC03: once the equipment[LBS+ Cars] is changed to other functional location or of position in GSI, the changed should be reflected on DBB

- When request details got updated in DBB (Manually), Functional Location, Position field values remain as it is. To achieve this, we have to populate these values in LWC(CaseCreationComponentMain) asset input picklist change event (this event call Api to get details as the same mentioned in AC1). During the update process, these fields should not override with new values. This has to handle in LWC by checking if creation, populate functional location and position, if update excluded these fiel1756ds in LWC JS controller.
- But when the request change happened via GSI, the values from GSI will be updated including functional location and position. This has to manage in GSI.

2.5 Components List

Name	New / Existing	Action

2.6 UI Mockup

- NA

2.7 Impacted Components

Name	Details
NA	NA

2.8 Dependencies

System	Dependency
NA	NA

3. DBB-1441 Add new 7 fields for the vehicle return Report

3.1 Description

The Vehicle Return Report will be added and displayed with new seven fields to show delay on parking by Operator and Maintainer.

3.2 Assumptions

- NA

3.3 Reference Documents

#	Title	Organization	Author	Date	Link
1	DBB-1441 Add new 7 fields for the vehicle return Report	Alstom	CG		

3.4 Salesforce Solution

AC00: Add Calculated field Difference in Operator parking [in minutes] = Planned start timestamp - Maintenance Handover Initiated timestamp, Minutes value needed also. [Note: Add a field Operator Parking=If positive = "Parked before" (green label). If negative = "parked too late" (red label)]

- Field value calculation logic
    - Difference in Operator parking [in minutes] = Planned start timestamp - Maintenance Handover Initiated timestamp, Minutes value needed also
        - Planned start timestamp (from VR)
        - Maintenance Handover Initiated timestamp including minutes (Maintainer Handover Initiated will be a time when the MH record is created)
    - Operator Parking = Parked Before (Text color should green) or parked too late (Text color should be Red)
        - If Difference in Operator Parking is positive, then Operator parking value will be Parked before
        - If Difference in Operator Parking is negative, the Operator parking values will be Parked too late.
- Design
    - Add below new fields in VR Object(Vehicle_Return__c) and include the same in VR Report
        - Create new field as Difference in Operator Parking (Operator_Parking_Diff__C)
            - Datatype: Formula (Datetime)
                - Create new field in VR
                    - Name : MH Created Datetime (MH_Created_Datetime__C)
                    - Datatype : datetime
                    - Value: MH Created datetime in VR.

- Populate this field from MH(dbb_process__c, recordtype as MaintainerHandover) using trigger in MH after creating using after insert trigger. So that VR hold the latest MH created datetime.
- Value : Planned Start Date(Planned_Start_Date__c) - MH Created Datetime (MH_Created_Datetime__C)

- In VR Report we need to show the operator parking value with different text color.
  - Create two images one with text as green and text as Parked Before, other one with text color as red and text as Parked too late
  - Add these two images to static resources.
  - Create New field Operator Parking (operator_parking__c) in VR
    - Value:
      - Datatype: formula
      - Value:
        - Parked Before Image from static resource: If Difference in Operator Parking is positive
        - Parked too late image from static resource: If Difference in Operator Parking is negative.
- Add Difference in Operator Parking, Operator Parking fields to VR report.

AC01: Add Calculated field "Difference in Maintainer parking [in minutes] = Planned end timestamp – Vehicle ready for operation timestamp. [Note: Add a field Maintainer Parking =If positive = Parked before (green label). If negative = parked too late (red label)]

- Field value calculation logic
  - Difference in Maintainer parking [in minutes] = Planned end timestamp - Vehicle ready for operation timestamp.
    - Planned start timestamp (from VR)
    - Vehicle ready for operation timestamp (from VR)
  - Maintainer Parking = Parked Before (Text color should green) or parked too late (Text color should be Red)
    - If Difference in Maintainer parking is positive, then Maintainer parking value will be Parked before
    - If Difference in Maintainer parking is negative, the Maintainer parking values will be Parked too late.
- Design
  - Add below new fields in VR Object(Vehicle_Return__c) and include the same in VR Report
    - Create new field as Difference in Maintainer Parking (Operator_Parking_Diff__C)
      - Datatype: Formula (Datetime)

- Value : Planned End Date (Planned_End_Date__c) - ehicle Ready for Operation Timestamp (Vehicle_Ready_for_Operation__c)

- In VR Report we need to show the maintainer parking value with different text color.
  - Leverage the Parked before and Parked too late image created tin ACC00
  - Create New field Maintainer Parking (Maintainer_parking__c) in VR
    - Value:
      - Datatype: formula
      - Value:
        - Parked Before Image from static resource: If Difference in Maintainer Parking is positive
        - Parked too late image from static resource: If Difference in Maintainer Parking is negative.
- Add Difference in Maintainer Parking, Maintainer Parking fields to VR report.

AC02: Add Calculated field Delay minutes for a train = (Planned End timestamp + Delay) - Vehicle Ready for Operation Timestamp [Note: If positive = no delay (green label). If negative = delay (red label). Minutes value needed also.] where Delay= if (Maintenance Handover Initiated timestamp>Planned start timestamp, Maintenance Handover Initiated timestamp - Planned start timestamp; 0)

- Field value calculation logic
  - Delay minutes for a train = (Planned End timestamp + Delay) - Vehicle Ready for Operation Timestamp
    - Planned End timestamp (From VR)
    - Delay (Multiple scenario)
      - If Maintainer Handover Initiated time > Planned start time [VR record]
        - Delay = Maintainer Handover Initiated time - Planned start time (from VR)
      - If Maintainer Handover Initiated time < Planned start time [VR record]
        - Delay = 0
    - If Delay minutes for a train is positive, text color should be green. Else it will be Red. (Not fessible)
- Design
  - Create new fields in VR Object (Vehicle_Return__c)

    - Delay datetime field (Delay__C)
      - Datatype: formula (datetime)
      - Value:
        - If MH Created Datetime in VR (MH_Created_Datetime__C) > Planned Start Date in VR (Planned_Start_Date__c) then
          - Delay = MH Created Datetime - Planned Start Date
        - If MH Created Datetime in VR < Planned Start Date in VR (Planned_Start_Date__c) then
          - Delay = 0
    - Delay Minutes (Delay_Minutes__c)

- Datatype : Formula (datetime)
- Value: (Planned End Date in VR(Planned_End_Date__c)+Delay)- Vehicle Ready for Operation Timestamp(Vehicle_Ready_for_Operation__c)

- All time values should be included minutes.
- Add Delay Minutes and Delay field to VR Return Report.
- Since our VR report is tabular report, we cannot format the text color dynamically.

AC03: add two calculated fields Evaluation of bonus-penalty – catch-up of delay: If Difference in Maintainer parking >=0 then, then label Maintainer Parking “parked before” and “N/A” of catch-up If Difference in Maintainer parking <0 then: Criterias for showing data: 1) For the same handover: If Delay minutes for a train = Difference in Maintainer parking => Labelled “no catch-up” and 0% of catch-up 2) For the same handover: If Delay minutes for a train < Difference in Maintainer parking => Labelled “catch-up” and % of catch-up to be calculated % calculation = (Difference in Maintainer parking - If Delay minutes for a train)/ -Difference in Maintainer parking 3) For the same handover: If Delay minutes for a train >= 0 => Labelled “catch-up” and 100%

- Field value calculation logic
  - Evaluation of bonus-penalty and Catch-up of delay
    - If Difference in Maintainer Parking > 0
      - Evaluation of Bonus-Penalty: N/A
      - Catch-up of Delay: N/A
    - If Difference in Maintainer Parking < 0
      - If Delay minutes for a train = Difference in Maintainer Parking
        - Catch-up Delay:" No Catch-Up"
        - Evaluation of Bonus-Penalty: 0% of Catch-up
      - if Delay minutes for a train < Difference in Maintainer Parking
        - Catch-up Delay: "Catch-up"
        - Evaluation of Bonus-Penalty: X% of Catch-up,
          - X = (Difference in Maintainer Parking - Train Delay)/Difference in Maintainer parking
      - If Delay minutes for a train >= 0
        - Catch-up Delay: "Catch-up"
        - Evaluation of Bonus-Penalty: 100%
- Design
  - Create new fields in VR Object (Vehicle_Return__c)
    - Evaluation of Bonus-Penalty (Evaluation_of_Bonus_Penality__c) and Catch-up Delay (Catchup_Delay__c)
      - Datatype : Formula (Text) for both fields
      - Value:
        - If Difference in Maintainer Parking > 0
          - Evaluation of Bonus-Penalty: N/A
          - Catch-up of Delay: N/A
        - If Difference in Maintainer Parking < 0

- If Delay Minutes = Difference in Maintainer Parking
  - Catch-up Delay:"No Catch-Up"
  - Evaluation of Bonus-Penalty: “0%”
- if Delay Minutes < Difference in Maintainer Parking
  - Catch-up Delay: "Catch-up"
  - Evaluation of Bonus-Penalty: X%,
    - X = (Difference in Maintainer Parking - Delay Minutes)/Difference in Maintainer parking
- If Delay Minutes >= 0
  - Catch-up Delay: "Catch-up"
  - Evaluation of Bonus-Penalty: 100%

- Add Evaluation of Bonus-Penalty, Catch-up Delay to VR Report.

3.5 Components List

Name	New / Existing	Action

3.6 UI Mockup

- NA

3.7 Impacted Components

Name	Details
NA	NA

3.8 Dependencies

System	Dependency
NA	NA

4. DBB-1756: Default category according to damage codes

4.1 Description

The Request created for DSB should have certain Category to be filled based on the Problem code. The category is mapped with the Damage Code, and if there is an update in the Damage Code the category will also be updated.

4.2 Assumptions

- NA

4.3 Reference Documents

#	Title	Organization	Author	Date	Link
1	DBB-1756: Default category according to damage codes	Alstom	CG		

4.4 Salesforce Solution

AC00[SF]: Pick list values for category for DSB on the excel file attached

- Create Metadata (DBB_Default_Category__mdt) for Category list with Default Category, Damage Code Group, Damage Code , Damage Code Description and client name fields.
- Load the data from Excel to Metadata using data loader.
- One damage code should always belong to one damage code group.

AC02[SF+Mobile]: For a particular damage code the category needs to be defaulted. As an example :When damage codes = X, Y, Z then category should be "FC_A*: Critical Significant Defect" as default, and then for other damage code = A, B, C it should be "FC_B: Major Defect, Overnight Repair" category. Mapping Table to be confirmed

- When request created using salesforce, category picklist will be loaded with all applicable category for the logged in client using metadata. When user feed the problem code value, populate the default category from metadata. This can be doable on change event in problem code field (Request creation screen is custom LWC already) by calling apex method and get the default category for the client. All category from metadata for the specific client to be loaded to category picklist in LWC while load the page. To do this, use apex method to get list of categories for the client by passing client name. Since category field is not locked, user can select any available category from the picklist. If no default category found, this field will be empty. Ensure during issue creation, IsEscalated Checkbox should be unchecked. It will be checked only when Category field will be updated. This has to handle in before create trigger.
    - We need to modify the existing request creation lwc(CaseCreationComponentMain).
    - On load of the lwc, we have prepopulate the category values from custom metadata (DBB_Default_Category__mdt) to category input picklist in template
    - When user select damage code in the page, on change event of damage code should call the JS method (get_default_catogery).
        - In this method, we have to call apex class using wire.
            - Create a utility class for request (DBB_Request_Utill) and create a new method called Get_Default_catogory.

        - Damage code and Client as input parameter.
        - Get default category from metadata and return the same. If not value found return empty.
    - This returned value will be populated in category pick list in lwc. If return value is empty, no need populates default value.
    - Since this field is editable, user having option to change before saving.
- This default category population applicable for when create and edit request.

AC03[SF+Mobile]: If there is an update on the damage code the category should be updated automatically . Also, Category can be updated manually as current design

- Covered in above AC. Since we have apex call from change event in damage code field, new default will be populated. Also this list box is editable and user can change the value before save.

AC04 [SF+ Mobile]: Category should not be displayed on Mobile. When a DBB problem is populated for an issue in Mobile/back office the category needs to be updated immediately on back office/mobile based on the value selected . The user also can have the possibility to change this category value before the issue creation

- When request created via integration or mobile, we should have before trigger to update default category. For this get the default category from metadata using problem code. Before set the default category, we have to check trigger map for current category value. If the value already there, we should not default to default category. This helps to avoid, if user override the category. At the same time, category field will be empty for Integration and mobile if requested created via them.
    - Leverage existing trigger and trigger handler (API Name)
    - Create new method called default category (update_default_category)
    - In this method get the damage code value (DamageCode__c) from trigger.new.
    - Based on damage code, get the default category from metadata using soql.
- Mobile team has to get the damage code description from Custom Metadata instead of getting it from dbbproblem object.

AC05: this table with the relationship between damage codes and category can be changed at any point of time

- Since we are using custom metadata admin can add, modify or delete the values anytime.

AC06: for projects without existing mapping table, there is not default category. If the category was not filled during the issue creation this should be empty

- In DBB, for other projects like: Bawu or Dosto where no mapping available between DBB problem code and Category, the Category field remains empty, if nothing is filled in while issue creation. At that time no default value will be populated. This covered already.

AC07: for projects with existing mapping table: if the Problem Code is not existing in mapping table, then category should be empty

- In case no problem, Code and Category mapping is available then Category field should be empty.

4.5 Components List

Name	New / Existing	Action

4.6 UI Mockup

- NA

4.7 Impacted Components

Name	Details
NA	NA

4.8 Dependencies

System	Dependency
NA	NA

5. DBB-1121 : The picklist shall be only for the project, not for all projects

5.1 Description

Client value for all records should be populated based on, who created the request. Also, this field should be read-only for all users.

5.2 Assumptions

- NA

5.3 Reference Documents

#	Title	Organization	Author	Date	Link
1	DBB-1121 : The picklist shall be only for the project, not for all projects	Alstom	CG		

5.4 Salesforce Solution

AC00: the client field should be populated based on the login user and should be read only across all the DBB application, examples:
field "client" for VR , field "case client" for Request and DBB Process Client for DBB process
Please review all the objects for this functionality

- We have a client value stored in each user. We need to populate the client value when record created in salesforce. This is existing functionality.
- We have this field in multiple objects. During the development, build team will be updated list of objects below.
- The client field (for the objects which are having client field) in page layout should be read-only for all the users.

AC01: for FCRM/ Admin Maintainer/Maintainer/POC with access to multiples projects (DBB-572) the values for case cliente, DBB Process Cliente, client field and all fields related with the project should be pre- defaulted based on the funcional location or train selected for the specific record

- This AC will not be considered due to dependency on DBB-572 and DBB-572 is out of scope for now.

5.5 Components List

Name	New / Existing	Action

5.6 UI Mockup

- NA

5.7 Impacted Components

Name	Details

NA	NA

5.8 Dependencies

System	Dependency
NA	NA

6. DBB-1751: functional location description to be retrieved for Request and Asset

6.1 Description

Functional location and external indicator details should be available in Request record.

6.2 Assumptions

- NA

6.3 Reference Documents

#	Title	Organization	Author	Date	Link
1	DBB-1751: functional location description to be retrieved for Request and Asset	Alstom	CG		

6.4 Salesforce Solution

AC01[SC & Community]: The functional location External indicator [Field in GSI] is updated in a new field in DBB for Asset object (only for Functional location =Train)from GSI each time that this is updated in GSI. Examples ET-6.001 or ET-5.001 or ET-4.001 or ET-3.001.

- In DBB to create a new Text field (DBB_External_Indicator__c) under Asset Object. This field hold the value of External Indicator for functional location which will be update/create by GSI. This field value should be populated only recordtype as DBBTrain.
    - CG team will provide support for providing api names, testing support and sample data.
    - GSI team have to configure this in GSI.
- The field will be Read-only field for all the DBB profiles and will be visible in the page layouts for train record type. However, value will be populated for Dosto client. Since GSI is going to do DML operation for this field, control the value of this field specific to client will be handled in GSI.
- The field will be visible in back office and the community Portal.

AC02: This field is needed only for Dosto and it will be blank for other customers

- Since GSI is going to DML operation for this field, control the value of this field specific to client will be handled in GSI.

- In DBB, if the value populate for other customer, then the value will be visible for that custom too.

AC03 [SC, Community & mobile]: for a request created in DBB, functional location , External indicator remain the same even if there is any change on the functional location description in Asset in DBB (from GSI)

- A new field (DBB_External_Indicator__c) will be created under Request Object to hold the External Indicator value. Functional location field already exist in DBB. When request creation happens via UI, these values will be populated using on change event of asset field in LWC (CaseCreationComponentMain)(Already we have this event to populate the values and need to include these fields too).
    - Inside LWC, we have to populate the above values using on change event for asset input filed (lookup field). When user select asset, the change event gets respective values from existing asset details apex call (Apex Method Name with Class) and populate these values in UI.
- Whenever a Request will be created in DBB from mobile or GSI, we have to leverage before create trigger and populate this value (Note: If values already exist in Trigger.New, no need to get value from asset for that field only). If not exist, then get the functional location and external indicator values from asset.
    - We have to use existing trigger handler(Case Handler trigger class api name)
- If there is any update in Functional location and external indicator on Asset, no update will be done in Request. Basically, this values to populated during creation only. During the update these values remains same as old. But user changed the asset in request, as per existing design new values will be get it from newly selected asset.
    - Since we are updating asset details during only asset selection or edit the request for asset change, any update happened in asset update wont reflect in request.

AC04[SC, Community & mobile]: the functional location , External indicator needs to be displayed in mobile as well, on the asset selection tab and on the header (screenshot attached)
Note : GSI CR CHG0080075

- Mobile team to update.

6.5 Components List

Name	New / Existing	Action

6.6 UI Mockup

- NA

6.7 Impacted Components

Name	Details
NA	NA

6.8 Dependencies

System	Dependency
NA	NA

7. DBB-2625: Construction Type for Cars from GSI to DBB

7.1 Description

Client value for all records should be populated based on, who created the request. Also, this field should be read-only for all users.

7.2 Assumptions

- NA

7.3 Reference Documents

#	Title	Organization	Author	Date	Link
1	DBB-2625: Construction Type for Cars from GSI to DBB	Alstom	CG		

7.4 Salesforce Solution

AC01[Community + SF]:Field " Construction Type Description " in GSI should map to field "Car Type" in DBB [In GSI field name/Table name : MAKTX/ MINST]. The values for this field should flow from GSI to DBB

- In DBB, an existing field “Car Type” in Asset will be mapped with Construction Type Description field from GSI (Currently this field exist and not utilized)
- Car Type field data type need to be change from Picklist to text field
- Page layout visibility remains as it is.
- Always this field value will be created or updated by GSI only. In DBB, these field will be read-only in page layout.
- Car Type field will be displayed in Community Portal along with back office and Mobile.

AC02 [Mobile]:Car Type in DBB should be displayed in Mobile, only the first 3 characters (possible to modify in the future)

- Mobile team to update

AC03[Community + SF+Mobile]: Change applicable only for Dosto since the construction type for ENNO EMS CS, LNVG RMV BaWu DSB ... is longer and is not the car type. Example for Dosto values: A01, A02,B01,B02,C01

- The field will be visible, and the information will come from GSI will be populated in the field Car Type and it's applicable for all the customers. If GSI updated empty values, then field will be empty only. No automation in DBB to populate these value.

AC04[Community + SF+Mobile]: Remove the existing values for Car type in DBB :Tail, Head & Car and make this free text noT editable in back office and Mobile

- When change the datatype from picklist to text, old values will be remained as text. We can perform update operation in anonymous window in developer console to remove all existing values.

7.5 Components List

Name	New / Existing	Action

7.6 UI Mockup

- NA

7.7 Impacted Components

Name	Details
NA	NA

7.8 Dependencies

System	Dependency
NA	NA

8. DBB-1856: Restriction Linked with Concession

8.1 Description

The user should have provision to add multiple Restrictions to a Concession. The Vehicle Return document should also have status information about the associated Restriction and Concession.

8.2 Assumptions

- NA

8.3 Reference Documents

#	Title	Organization	Author	Date	Link
1	DBB-1856: Restriction Linked with Concession	Alstom	CG		

8.4 Salesforce Solution

AC00/ FCRM / POC should be able to add more than one restriction for a concession(through a VR or directly in Concession tab). However, Restriction is not mandatory for concession, If the restriction is created based on a concession , the concession id should be populated for the restriction [the restrictions should be visible in the Related Tab of the Concession and the concession should be visible in the Related Tab for the restriction] One restriction can have one concession

- In Concession, we have to create a lookup for Restriction. So that one concession has one restriction. Also, One Restriction have multiple Concession. (Existing lookup for concession in restriction should be removed).
- Since restriction is separate object, we have concession related list for restriction page. From the related list user can create new concession.
    - Leverage standard new button in related list to create new concession
- FCRM/POC can add restriction and concession. Rest all don't have this visible.
    - Manage this via profiles for FCRM and POC.
- It is not mandatory to attach Restriction to Concession, Concession can be created without attaching any restriction.
    - Set restriction lookup in concession not mandatory in object level.
- In VR, we have concession related list. User can add new concession by clicking new button.
    - Leverage standard new button in related list.
- At any point of time only open concession to be added to VR.
    - Add this validation via existing Before trigger(insert and update) in Concession Object.
- If concession is closed, user can not add or remove restriction
    - Add this validation via existing before update trigger in concession object

AC01/ FCRM should be able to add an existing concession manually to VR [as per current process only a new concession can be created for a VR

- In DBB, VR page Concession related list already exist with create new concession.

- User will get Concession list on the search suggestion which are associated with the respective Asset on VR record.
    - Add lookup filter to display the concession which are not closed and functional location should be same as VR.

AC02/ print on VR documents with the concession and restrictions with status open or active in case that the VR has restriction or concessions(It can be the case that the VR only has concessions and not restrictions).GFL03 Part B[new name Fleet Management Document 03 Part B] for status Vehicle ready, GFL04 Part B [new name Fleet Management Document 04 Part B] for status vehicle ready for Operation& GFL05 Part B[new name Fleet Management Document 05 Part B] for status closed (templates attached)

- Generate the PDF document for VR, in which content will have the information about attached Concession and Restrictions.
    - In DBB we are generating GFLXX documents for VR including Part A and Part B as separate document for each. This is existing functionality.
    - All these documents should be renamed like below.
        - Instead GFL, we should have “Fleet Management Document”. Ex: GFL03 Part B should be “Feet Management Document 03 Part B”
    - All Part A document remains same. No change required except the file name change mentioned above.
    - For All Part B document, we have to add restriction and concession details as mentioned in template (Refer JIRA attachment)
    - If no Concession available for VR, then inside the table we have to show “X”.
    - If only concession available for VR, DBB will show only Concession.
    - If both Concession and Restriction are attached, then the tables will be shown as attached JIRA.
    - Existing VF page to be modified as per the above requirement.
    - While create table in VF, we have to leverage standard CSS only. Not the advanced CSS as this might cause issue when rendering as pdf.

- DBB should update pdf generation VF for Part B as mentioned below.
    - The document format should get it from the template attached in JIRA
    - Document should have below fields
        - Before generation of table, we have to populate below list variable
            - List of Concession (open or active status) for the VR
            - List of Restriction (open or active status) for the VR
            - Concession Label = If client is DSB then “Deviation” Else “Concession”
            - Restriction Label = “Restriction”
        - Once we have the above-mentioned variable, then we need to check #of Concession and #of Restriction. If both are zero, then no need to display the anything in the table. Instead of that generate a table with one row and one column. The values should be X. If we have the value for both then display both as per template. If we have any one display that only.

- In the Document, Concession section, the Table will consist of Concession Number, Concession Description and required End date & Time.
- Another Table in the document will be for Restriction, which will consist of Restriction Number, associated concession Number, Impacted Car, Impacted Equipment, restriction Type, Title, Created Date and Expected Clouser Date/Time.
- Expected Clouser Date/Time will be same as Required End date & Time.
- The labels of this PDF should support translation.

AC02B: Possibility to have a Concession without a restriction

- This is existing functionality.

AC03/FCRM should not be able to create/add a concession on Vehicle return closed

- In DBB, need to add a validation that no new Concession can be added or created whenever VR Status is closed.
- DBB have New Concession button in concession related list page.
    - We are planning to leverage standard functionality to restrict this.
    - We need to add this validation as mentioned in above AC 00.

AC04: change the template for the document GFL01Part B (attached the new template)

- Covered as part of AC 02.

AC05/ In general all documents linked with VR should be renamed(including the title) as following:

- Covered as part of AC02

AC06: GFL02 Part A &B should not be sent for DSB project

- As per the discussion with IS&T, we are not implementing this as this is specific to this customer and we are going avoid more customization.

AC07: the email templates which have GFLXX in the body of the email should be renamed by Fleet Management Document XX

- For all the customer, inside the email including header and body, we have to rename GFL to “Fleet Management Document”
    - We have to modify the existing email templates.

AC08[Mobile +SF]: VR Restriction or Concession not approved should not possible to move to Vehicle Ready for Operation "VR cannot be moved to Vehicle Ready for Operation as the concession or Restriction is not approved."

- In case, the Concession is not approved in the attached VR record, then VR status cannot be changed to "Vehicle Ready for Operation".

- In case associated Handover record status changed to “Closed” and Concession is not approved, even then the error will be thrown. And the value for Handover record status will remains the same.
    - In VR, if any Concession not approved, system should not allow to change the status to “Vehicle Ready for Operation”. We have to do this via before update trigger by calling handler method and Error notification saying VR cannot be moved to Vehicle Ready for Operation as the concession or Restriction is not approved."
    - Also, in some scenarios, VR will be moved to “Vehicle Ready for operation” when Handover record status changed. Here also we have to control this using trigger.
        - In Handover after update trigger, we are changing VR status to Vehicle Ready for operation. Before change this, we have to check this VR have any Concession or restriction is in not approved status. If yes, then we would not change the status of VR and revert back the Handover data to previous with Error notification saying VR cannot be moved to Vehicle Ready for Operation as the concession or Restriction is not approved."

AC09: On going mapping review + bidirectional interface

- Out of Scope as discussed in call with Business.

AC10 : It should only be possible to add a restriction to an open concession ; it should be impossible to add or remove a restriction to a closed concession. It should only be possible to add a concession to an open VR ; it should be impossible to associate or remove a concession to a closed VR

- Already covered in above AC's

8.5 Components List

Name	New / Existing	Action

8.6 UI Mockup

- NA

8.7 Impacted Components

Name	Details
NA	NA

8.8 Dependencies

System	Dependency
NA	NA

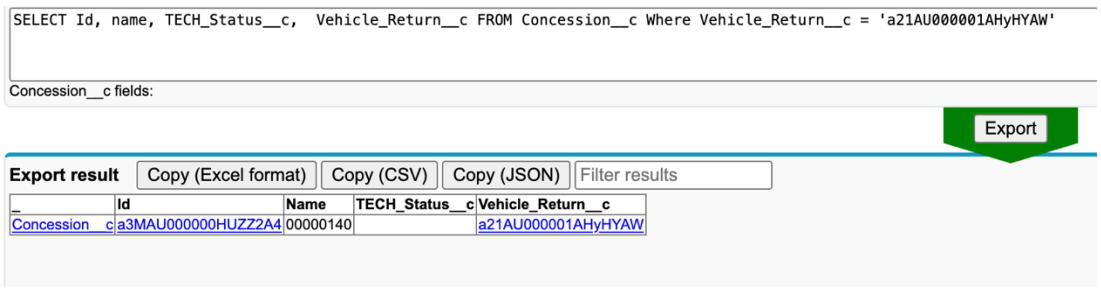
Mobile Solution Description

AC06/ VR Restriction or Concession not approved should not be possible to move to Vehicle Ready for Operation "VR cannot be moved to Vehicle Ready for Operation as the concession or Restriction is not approved."

- In DBB, if the Restriction or Concession is not approved in the attached VR record, then VR status cannot be changed to "Vehicle Ready for Operation" in Operator Handover. An Error will be thrown: "VR cannot be moved to Vehicle Ready for Operation as the concession or Restriction is not approved."
- In DBB, if the Restriction or Concession is not approved in the attached VR record then FCRM/ Maintainer won't be able initiate OH from VR Modal.

Api Name: Concession__c

Query type: SOQL

- 

Assumptions

ID		Assumption
1		FRM/Maintainer will proceed with initiating OH even if concession has not been added to the VR.

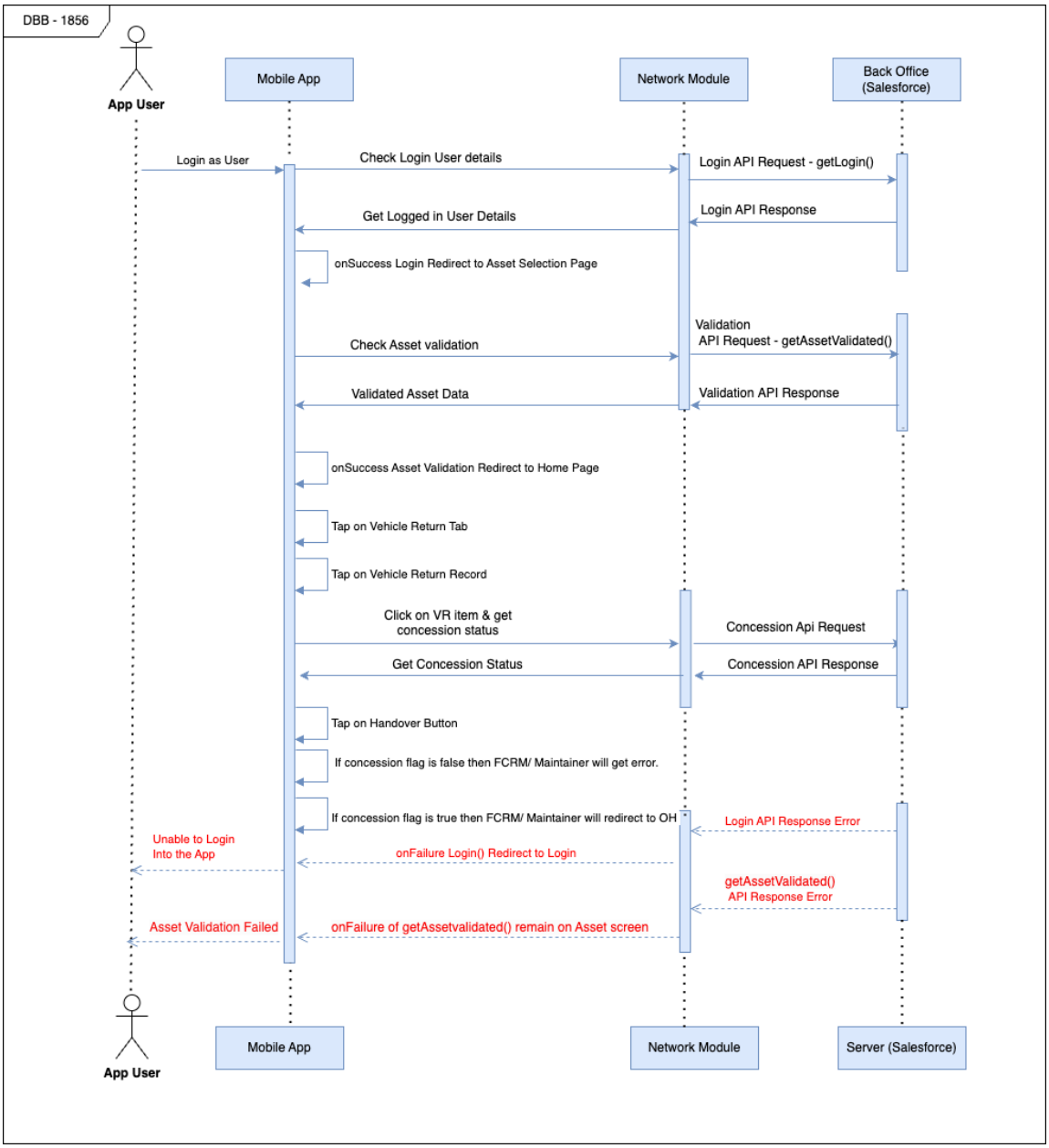
Solution Details

Components

Name	Type	Action
VehiclePopUp.js	JavaScript file	

userSync.json	json file	
VehicleRow.js	JavaScript file	

Sequence Diagram



9. DBB-605: DBB & CP in the same domain

9.1 Description

Once the user login in Customer Portal should be able to login in DBB back office directly by clicking on the tile, without adding login credentials to DBB. Also, the user will be having same level of access in DBB as in Customer Portal.

9.2 Assumptions

- NA

9.3 Reference Documents

#	Title	Organization	Author	Date	Link
1	DBB-605: DBB & CP in the same domain	Alstom	CG		

9.4 Salesforce Solution

AC00:Users should be able to access DBB after be login in CP without need to be logging again

- When user login to portal using portal login URL, user can switch to DBB without re-login. Also user can login to DBB and can be switch to customer portal from contact page without re-login to portal. Basically one login allow the user to use DBB and customer portal.
    - Current DBB user profile and related permissions, Current portal user profiles and related permissions to me merged with single profile. This will be part of other story (I@&T is working on this). The user will be attached to newly created profile.
    - This newly created profile will be added customer portal configuration (under workspace settings)
    - Since the profile has salesforce license and liked to customer portal, user can access both.

AC01: The user account in DBB and CP should be the same

- The user will have the same Profile, permission sets in DBB, which are assigned in the customer portal. Not in Scope, IS&T will built the solution

9.5 Components List

Name	New / Existing	Action

9.6 UI Mockup

- NA

9.7 Impacted Components

Name	Details
NA	NA

9.8 Dependencies

System	Dependency
NA	NA

10. DBB-2631: Create a solution to make DBB data accessable for a new data interface

10.1 Description

Expose the salesforce asset data to GSI

10.2 Assumptions

- NA

10.3 Reference Documents

#	Title	Organization	Author	Date	Link
1	DBB-2631: Create a solution to make DBB data accessable for a new data interface	Alstom	CG		

10.4 Salesforce Solution

AC00:
Following Data need to be made available for a newly created interface
|DBB report (filed created date & slot)| [Date & time report was generated]
|DBB field Incremental Operational km| [Incremental Mileage]
|DBB field Operational km| [Actual Mileage]
|Functionnal Location ID|
|Operation Mode code group (Vehicle status. Available / not available)| [Under commercial service, Vehicle Ready for Oper1441ation = Available, Other status = Not available] <-Transformation field
|Take (Type + description) from the vehicle return with status differente to approuved , open , close)| [VO type, VO Description]
|"NA" ({+}empty value{+})| [Blank column with constant string 'NA']
|DBB field Incremental Operational hours|
|DBB field Operational hours|
|DBB field Vehicle Return "Planned End-Date" from the vehicle return with status differente to approuved , open , close)| [Planned End date (only date)]

- In DBB build the platform event with text area field to hold the values.

- In DBB create a apex class (batch class run at 6:30 AM CET) to populate the values below in JSON format. We need to fetch all the VR for BAWU which status is approved.
    - |DBB report (filed created date & slot)| [Date & time report was generated]
        - Current Date Time = Current date time from System at the time platform event trigger.
        - Oliver is going to share the format of the datetime.
    - |DBB field Incremental Operational km| [Incremental Mileage]
        - Incremental Mileage = Asset Object: Incremental Mileage
    - |DBB field Operational km| [Actual Mileage]
        - Actual Mileage = Asset Object: Actual Mileage
    - |Functional Location ID|
        - Functional Location ID = Asset Object: Functional Location
    - |Operation Mode code group (Vehicle status. Available / not available)| [Under commercial service, Vehicle Ready for Operation = Available, Other status = Not available] <-Transformation field
        - When the Operation Mode code group value is “Under Commercial Service” or “Vehicle Ready for Operation” then value sent to DIB is “Available”. For any other value DBB will send “Not Available” value to DIB for Operation Mode Code group
        - Operation Mode code group = if asset operation mode code group is equal to “Under Commercial Service or Vehicle Ready for Operation” value is “Available”, Else, value is “Not Available”
    - |Take (Type + description) from the vehicle return with status different to approved , open , close)| [VO type, VO Description]
        - Field belongs to Vehicle Order:
            - If no VO found for VR, Type = “NA”
            - If VO found for VR , Type = Type + “#” + Description from VR.
    - |"NA" ({+}empty value{+})| [Blank column with constant string 'NA']
        - Static Text = “NA”
    - |DBB field Incremental Operational hours|
        - Incremental Operational hours = Asset Object: Incremental Operational hours
    - |DBB field Operational hours|
        - Operational hours = Asset Object: Operational hours
    - |DBB field Vehicle Return "Planned End-Date" from the vehicle return with status difference to approved , open , close)| [Planned End date (only date)]--Vehicle Return
        - Field belongs to vehicle Return:
            - Value is planned end date from VR

- In the apex class, we have to fetch all the relevant date (all open VR and related asset, VO at the time of execution) to sObject list.
- List must be iterated for transformation mentioned above including format of datetime etc..
- If more then on VO found for VR, we have to add all related VO as for each VR in JSON. (This format yet to confirm by Oliver)
- Once all the values are framed as JSON, then we have push this platform event.
- After the push, we have to log the status to Integration log object along with JSON string.

AC01: Data needs to be accessible for the interface ref #CHG0086919

- GSI should receive a data in JSON format from platform event and process as per requirements.

AC02: CSV file with data needs to be sent once a day at 6:30AM CET

- Covered in AC00.

10.5 Components List

Name	New / Existing	Action

10.6 UI Mockup

- NA

10.7 Impacted Components

Name	Details
NA	NA

10.8 Dependencies

System	Dependency
NA	NA