

**Virgin Trains West Coast**

**Staging Design specification**

Reason for Travel

Juanjo Diaz

Technical Consultant

**August 2018**

z

Contents

[1. Document Management 2](#_Toc521941241)

[2. Document Purpose 3](#_Toc521941242)

[2.1 In Document Scope 3](#_Toc521941243)

[2.2 Out of Document Scope 3](#_Toc521941244)

[3. High Level Overview 4](#_Toc521941245)

[3.1. Process Context Diagram 4](#_Toc521941246)

[3.2. Process Flow 5](#_Toc521941247)

[3.2.1 Loading from PreProcessing to Staging 5](#_Toc521941248)

[4. Tables 6](#_Toc521941249)

[4.1. ERD 6](#_Toc521941250)

[4.1. Tables format 7](#_Toc521941251)

[4.1.1 Staging.STG\_JourneyCVI 7](#_Toc521941252)

[4.1.2 Reference.CVIQuestion 7](#_Toc521941253)

[4.1.3 Reference.CVIStandardAnswer 8](#_Toc521941254)

# Document Management

|  |  |  |  |
| --- | --- | --- | --- |
| **Version Control** | | | |
| **Version** | **Date** | **Author(s)** | **Sections Changed** |
| 1.0 | 10/08/2018 | Juanjo Diaz | Initial version document |

| **Distribution List** | | |
| --- | --- | --- |
| **Organisation** | **Name** | **Role** |
| Merkle | Mark Jones | Client Lead |
| Merkle | Lana Huzjak | Project Manager |
| Merkle | Jez Cox | IBM Software SME |
| Merkle | John Whittome | Business Analyst |
| Merkle | Peter Malherbe | AWS SME |
| Merkle | Mat Lynd | Development |
| Merkle | Juanjo Diaz | Technical consultant |
| Merkle | Steve Forster | Technical Solution Lead |
| Merkle | Avtar Aswell | Tester |
| Merkle | Umesh Sinari | Development |

# Document Purpose

The purpose of this document is to describe how are we going to store Reason for Travel data feed.

This document is intended for technical audience who is going to develop/maintain or test this process.

## 2.1 In Document Scope

The following items are in scope for this document:

* Table definition
* Column mappings
* Data flow diagram

## 2.2 Out of Document Scope

The following items are out of scope for this document and will be covered to separate design documents:

* AWS connectivity
* PreProcessing ETL process.

# High Level Overview

## 3.1. Process Context Diagram

Reason for travel is Customer Volunteer Information (CVI) offered during the booking process and it is provided to CRM via Journey data feed. However, as per the provided data examples, the information is common to the whole booking and never changes within the same bookings.

The load process for Reason for Travel (RfT) takes advantage of the Journey data load and will run at the very end of that process. But since it has some particularities (treated as a CVI question), it is defined here, so in case that RfT need to be completed/updated by a different process this document should be a point of reference/review.

Once the data is loaded into PreProcessing.TOCPLUS\_Journey table we will read the reason for travel answer and populate Staging.STG\_JourneyCVI table.

The process is as simple as described above since we are going to use Reference tables that will support RfT question and answers.



Journey housekeeping will look after deleting data for Reason for Travel on the Staging tables.

## 3.2. Process Flow

SSIS Journey Load process will wrap RfT load. Main task for RfT load process is to identify the question type and the answer and provide Reference IDs to Staging.STG\_JourneyCVI table.

It is very unlikely that we are going to receive amendments or updates for existing records, however, if that happen we will update existing row without saving change on the Audit/Archive schema.

## 3.2.1 Loading from PreProcessing to Staging

We will read from three different tables and write into a final Staging table that will contain all reason for travel vs journeys relationships and values. Successfully completion of this process will change PreProcessing.TOCPlus\_Journey.ProcessedInd = 1. However, it is not responsibility of RfT process to change that flag but for TOCPlus Journey Load instead.



# Tables

PreProcessing, Staging and Reference schemas are involved in that process.

* **PreProcessing.TOCPlus\_Journey**: This table contains a Reason for Travel per Journey/Booking on reasonfortravel column.
* **Reference.CVIQuestion**: Stores all Customer Volunteer Information questions from the system.
* **Referene.CVIStandardAnswer**: Stores pre-defined answers offered to the customers.
* **Staging.STG\_JourneyCVI**: Stores Relationship between a Journey, a CVI question and its answer.

## 4.1. ERD



Please be aware that Customer could possibly supply empty/blank/null answers, for that type of scenarios we will insert a special type of answer called EMPTY. For more information please visit SCVStandardAnswer table section.

## 4.1. Tables format

This section defines structure of new tables involved on RfT process. For already existing tables, please read TOCPlus\_Journey related documentation.

## Staging.STG\_JourneyCVI

Stores Relationship between a Journey and a CVI question and its answer.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COLUMN\_NAME** | **PK** | **DATA TYPE** | **NULLABLE** | **LENGTH** | **Description** |
| JourneyID | TRUE | BIGINT | NO |  | Unique Identifier for a Journey  FK to Staging.STG\_Journey |
| CVIQuestionID | TRUE | INT | NO |  | Unique Identifier for a Customer Volunteer Information Question.  FK to Reference.CVIQuestion |
| CVIAnswerID | TRUE | BIGINT | NO |  | Unique Identifier for a Customer Volunteer Information Answer. Depending on Question Type it will be FK to: Reference.CVIStandardAnswer Staging.CVIOpenAnswer Staging.CVIDateAnswer Staging.CVINumericAnswer |
| CreatedBy | FALSE | INT | NO |  | UserID who has created this row |
| CreatedDate | FALSE | DATETIME | NO |  | When this row was created |
| LastUpdatedBy | FALSE | INT | NO |  | UserID who has updated this row |
| LastUpdatedDate | FALSE | DATETIME | NO |  | When this row was updated |

## Reference.CVIQuestion

Stores all Customer Volunteer Question from the system.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COLUMN\_NAME** | **PK** | **DATA TYPE** | **NULLABLE** | **LENGTH** | **Description** |
| QuestionID | TRUE | INT | NO |  | Unique Identifier for a Customer Volunteer Information Question. |
| Name | FALSE | NVARCHAR | NO | 20 | Short description for a CVI Question. |
| Description | FALSE | NVARCHAR | YES | 512 | Long description about that Question. May be used to store the question presented to the customer if available. |
| Type | FALSE | VARCHAR | NO |  | Value to define which type of answers are associated to that question. STANDARD: Values offered to the customer. OPEN: Open text. Free text. DATE: Date data type stored as answer (i.e. DoB) NUMERIC: Numeric data type answer type (i.e. Number of children) |
| CreatedBy | FALSE | INT | NO |  | UserID who has created this row |
| CreatedDate | FALSE | DATETIME | NO |  | When this row was created |
| LastUpdatedBy | FALSE | INT | NO |  | UserID who has updated this row |
| LastUpdatedDate | FALSE | DATETIME | NO |  | When this row was updated |

Initial value need to be set up to accommodate Reason for Travel question.

|  |  |
| --- | --- |
| **CVIQuestionID** | 1 |
| **Name** | REASON\_FOR\_TRAVEL |
| **Description** | When a customer does a booking, he/she is asked about what is the reason for his/her travel. |
| **Type** | STANDARD |
| **CreatedBy** | TBC |
| **CreatedDate** | NOW() |
| **LastUpdatedBy** | TBC |
| **LastUpdatedDate** | NOW() |

## Reference.CVIStandardAnswer

Stores pre-defined answers offered to the customers.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **COLUMN\_NAME** | **PK** | **DATA TYPE** | **NULLABLE** | **LENGTH** | **Description** |
| AnswerID | TRUE | INT | NO |  | Unique Identifier for a Customer Volunteer Information Answer |
| Value | FALSE | NVARCHAR | NO | 50 | Option offered to the customer to answer |
| Description | FALSE | NVARCHAR | YES | 512 | Long description about that Answer. |
| CreatedBy | FALSE | INT | NO |  | UserID who has created this row |
| CreatedDate | FALSE | DATETIME | NO |  | When this row was created |
| LastUpdatedBy | FALSE | INT | NO |  | UserID who has updated this row |
| LastUpdatedDate | FALSE | DATETIME | NO |  | When this row was updated |

Initial value need to be set up to accommodate Reason for Travel answers.

|  |  |
| --- | --- |
| **AnswerID** | 1 |
| **Value** | EMPTY |
| **Description** | Value used when a customer provides no answer or empty answer to a question |
| **CreatedBy** | TBC |
| **CreatedDate** | NOW() |
| **LastUpdatedBy** | TBC |
| **LastUpdatedDate** | NOW() |
|  |  |
| **AnswerID** | 2 |
| **Value** | BUSINESS |
| **Description** | Description to be provided by VTWC |
| **CreatedBy** | TBC |
| **CreatedDate** | NOW() |
| **LastUpdatedBy** | TBC |
| **LastUpdatedDate** | NOW() |
|  |  |
| **AnswerID** | 3 |
| **Value** | FAMILY |
| **Description** | Description to be provided by VTWC |
| **CreatedBy** | TBC |
| **CreatedDate** | NOW() |
| **LastUpdatedBy** | TBC |
| **LastUpdatedDate** | NOW() |
|  |  |
| **AnswerID** | 4 |
| **Value** | THATS\_FOR\_ME\_TO\_KNOW |
| **Description** | Description to be provided by VTWC |
| **CreatedBy** | TBC |
| **CreatedDate** | NOW() |
| **LastUpdatedBy** | TBC |
| **LastUpdatedDate** | NOW() |
|  |  |
| **AnswerID** | 5 |
| **Value** | FRIENDS |
| **Description** | Description to be provided by VTWC |
| **CreatedBy** | TBC |
| **CreatedDate** | NOW() |
| **LastUpdatedBy** | TBC |
| **LastUpdatedDate** | NOW() |
|  |  |
| **AnswerID** | 6 |
| **Value** | EVENT |
| **Description** | Description to be provided by VTWC |
| **CreatedBy** | TBC |
| **CreatedDate** | NOW() |
| **LastUpdatedBy** | TBC |
| **LastUpdatedDate** | NOW() |
|  |  |
| **AnswerID** | 7 |
| **Value** | WORKING\_9\_TO\_5 |
| **Description** | Description to be provided by VTWC |
| **CreatedBy** | TBC |
| **CreatedDate** | NOW() |
| **LastUpdatedBy** | TBC |
| **LastUpdatedDate** | NOW() |
|  |  |
| **AnswerID** | 8 |
| **Value** | DAYOUT |
| **Description** | Description to be provided by VTWC |
| **CreatedBy** | TBC |
| **CreatedDate** | NOW() |
| **LastUpdatedBy** | TBC |
| **LastUpdatedDate** | NOW() |
|  |  |
| **AnswerID** | 9 |
| **Value** | HOLIDAY |
| **Description** | Description to be provided by VTWC |
| **CreatedBy** | TBC |
| **CreatedDate** | NOW() |
| **LastUpdatedBy** | TBC |
| **LastUpdatedDate** | NOW() |
|  |  |
| **AnswerID** | 10 |
| **Value** | OTHER |
| **Description** | Description to be provided by VTWC |
| **CreatedBy** | TBC |
| **CreatedDate** | NOW() |
| **LastUpdatedBy** | TBC |
| **LastUpdatedDate** | NOW() |
|  |  |
| **AnswerID** | 11 |
| **Value** | STUDY |
| **Description** | Description to be provided by VTWC |
| **CreatedBy** | TBC |
| **CreatedDate** | NOW() |
| **LastUpdatedBy** | TBC |
| **LastUpdatedDate** | NOW() |
|  |  |
| **AnswerID** | 12 |
| **Value** | RETAIL\_THERAPY |
| **Description** | Description to be provided by VTWC |
| **CreatedBy** | TBC |
| **CreatedDate** | NOW() |
| **LastUpdatedBy** | TBC |
| **LastUpdatedDate** | NOW() |
|  |  |
| **AnswerID** | 13 |
| **Value** | NONE |
| **Description** | Description to be provided by VTWC |
| **CreatedBy** | TBC |
| **CreatedDate** | NOW() |
| **LastUpdatedBy** | TBC |
| **LastUpdatedDate** | NOW() |
|  |  |
| **AnswerID** | 14 |
| **Value** | BRING\_BACK\_BRITISH\_RAIL |
| **Description** | Description to be provided by VTWC |
| **CreatedBy** | TBC |
| **CreatedDate** | NOW() |
| **LastUpdatedBy** | TBC |
| **LastUpdatedDate** | NOW() |

**END**