



# SCOPE Business Intelligence

## WFP SCOPE SAP HANA DATA WHS2016 Hackathon



**SCOPE**  
Enable the Change

*WFP's beneficiary and transfer management platform*

For any information, please contact:

**Giovanni Suarez Ardila**  
**SCOPE Service Delivery**  
Information Technology Division  
Beneficiary IT Solution Services  
[giovanni.suarezardila@wfp.org](mailto:giovanni.suarezardila@wfp.org)  
[macgiosa@hotmail.com](mailto:macgiosa@hotmail.com)  
Skype: macgiosa  
Whatsapp: +573143590706

Author of this manual:

Giovanni Suarez – SCOPE Service Delivery



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## About this Manual

This document describes the data exposed by the SCOPE Data Warehouse for the WHS 2016 Hackathon.

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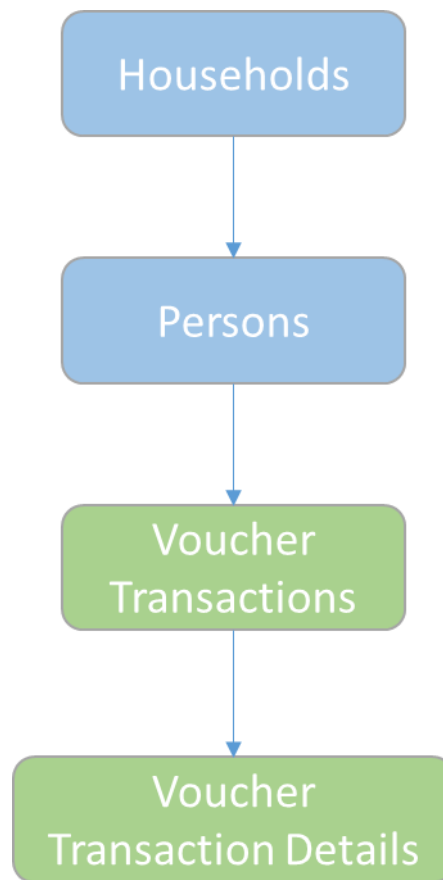
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## Logical Model



## SAP HANA Views

The Views available are divided into two types:

- **DIMENSION VIEW:** fully reusable throughout the system and not stuck up to a single model. These are views on one or more table that can be reused for different purpose.
- **CUBE VIEW:** combination of tables, dimension views and analytical views to deliver a complex business requirement. They combine different analytical views into one source of data for reporting.

The Views are:

- `_SYS_BIC"."WFP.SCOPE/CA_WHS_HOUSEHOLD`
- `_SYS_BIC"."WFP.SCOPE/CA_WHS_PERSON`
- `_SYS_BIC"."WFP.SCOPE/CA_WHS_VOUCHER_TRANSACTION`
- `_SYS_BIC"."WFP.SCOPE/CA_WHS_VOUCHER_TRANSACTION_DETAIL`

In the following pages each of the aforementioned Views' structure is described in addition to the business logic or rules that determined how data is created, stored, changed and displayed.

# 1. HOUSEHOLDS

<b>Package</b>	WFP.SCOPE
<b>View name</b>	CA_WHS_HOUSEHOLD
<b>View Type</b>	Dimension
<b>Full Path</b>	"_SYS_BIC"."WFP.SCOPE/CA_WHS_HOUSEHOLD"
<b>Description</b>	This view exposes the information about the Households registered in SCOPE

## 1.1 Fields

Item	Description
<b>HOUSEHOLD_ID</b>	Household ID
<b>HOUSEHOLD_CLAIMED_FAMILY_SIZE</b>	Household claimed family size
<b>HOUSEHOLD_REGISTRATION_DATE</b>	Household registration date
<b>HOUSEHOLD_REFUGEE_STATUS</b>	Household refugee status
<b>HOUSEHOLD_VULNERABILITY_RATING</b>	Household vulnerability ranking
<b>HOUSEHOLD_INACTIVE_REASON</b>	Household inactive status reason
<b>HOUSEHOLD_FP_VALID</b>	1: Valid 0: Invalid Blank/NULL: Not checked
<b>HOUSEHOLD_PARTNER_ID</b>	Household registration Partner ID
<b>COUNTRY_ID</b>	Country ID
<b>WFP_OFFICE_ID</b>	WFP Office ID
<b>LOCATION_ID</b>	Location ID
<b>LOCATION_TYPE_ID</b>	Location Type ID
<b>LOCATION_TYPE_DESC</b>	Location Type description/name
<b>ADMIN_AREA_ID</b>	Administrative Area ID

## 1.2 Business Logic

### HOUSEHOLD\_FP\_VALID

This field represents the status of the "Check for fingerprints duplication" (Deduplication) process.

## 2. PERSONS

<b>Package</b>	WFP.SCOPE
<b>View name</b>	CA_WHS_PERSON
<b>View Type</b>	Dimension
<b>Full Path</b>	"_SYS_BIC"."WFP.SCOPE/CA_WHS_PERSON"
<b>Description</b>	This view exposes the information about the Persons registered in SCOPE

### 2.1 Fields

Item	Description
<b>PERSON_ID</b>	Person ID
<b>PERSON_DATE_OF_BIRTH</b>	Person date of birth
<b>PERSON_DATE_OF_BIRTH_IS_EXACT</b>	1 - YES 0 - NO
<b>PERSON_GENDER</b>	Person gender
<b>PERSON_MARITAL_STATUS</b>	Person marital status
<b>PERSON_MENTAL_DISABILITY_STATUS</b>	1 - YES 0 - NO Ability to make decisions/learn independently
<b>PERSON_PHYSICAL_DISABILITY_STATUS</b>	1 - YES 0 - NO Ability to act/move independently
<b>PERSON_PREGNANT</b>	1 - YES 0 - NO
<b>PERSON_BREASTFEEDING</b>	1 - YES 0 - NO
<b>PERSON_BMI</b>	Body mass index
<b>PERSON_MALNOURISHED</b>	1 - YES 0 - NO
<b>PERSON_FINGERPRINTS_VALID</b>	1 - YES 0 - NO Success of fingerprint matching
<b>PERSON_FINGERPRINTS_VALIDITY</b>	Status of the Person fingerprints DeDuplication process 1: Valid 0: Invalid Blank/NULL: Not checked
<b>PERSON_ORIGIN_COUNTRY_ID</b>	Person origin Country ID
<b>PERSON_ORIGINAL_LOCATION_ID</b>	Person original Location ID
<b>PERSON_HOUSEHOLD_ID</b>	Household ID
<b>PERSON_HOUSEHOLD_ROLE</b>	Person role in the Household
<b>PERSON_STATUS</b>	Person status
<b>LOCATION_ID</b>	Location ID
<b>LOCATION_TYPE_ID</b>	Location Type ID
<b>LOCATION_TYPE_DESC</b>	Location Type description/name
<b>ADMIN_AREA_ID</b>	Administrative Area ID
<b>COUNTRY_ID</b>	Country ID
<b>WFP_OFFICE_ID</b>	WFP Office ID



## 2.2 Business Logic

Persons (beneficiaries) are any Men, women and children who have access to the outputs provided by WFP operations.

SCOPE stores basic demographic information for each Persona and relates the Person with a Household.

When fingerprints are captured, the status of the fingerprint validation has the following values:

- FINGERPRINTS\_UNCHECKED (10): Fingerprints unchecked (i.e. not sent to AFIS).
- FINGERPRINTS\_JOB\_STARTED (20): Admin or periodic job selected this identity for verification.
- FINGERPRINTS\_SENT (30): Sent to external system (e.g. AFIS) for verification.
- FINGERPRINTS\_DELIVERED (40): External system acknowledges this person for verification.
- FINGERPRINTS\_REJECTED (50): Record rejected by AFIS (e.g. rejected due to Bad data).
- FINGERPRINTS\_VERIFIED (200): External system verified record as MASTER.
- FINGERPRINTS\_UNRESOLVED (300): Duplicate – unresolved
- FINGERPRINTS\_DUPLICATE (400): Duplicate – rejected
- FINGERPRINTS\_FAILURE (500): Validation fails
- 999: Not Applicable

### 3. VOUCHER TRANSACTIONS

<b>Package</b>	WFP.SCOPE
<b>View name</b>	CA_WHS_VOUCHER_TRANSACTION
<b>View Type</b>	Cube
<b>Full Path</b>	"_SYS_BIC"."WFP.SCOPE/CA_WHS_VOUCHER_TRANSACTION"
<b>Description</b>	This view exposes the information about the Transactions related to Vouchers.

#### 3.1 Fields

Item	Description
TRANSFER_ID	Transfer ID
TRANSFER_RETAILER_ID	Transfer Retailer ID
ENROLMENT_ID	Enrolment ID
TRANSFER_TOKEN_NUMBER	Transfer Token number
TRANSFER_BARCODE_CARD	Transfer Barcode Card ID
TRANSFER_DELIVERY_PREFERENCE	Transfer delivery preference
TRANSFER_CASH_VALUE	Transfer cash value
TRANSFER_CONDITION_FULFILLED	Transfer condition fulfilled: 1 – Fulfilled
TRANSFER_PERCENTAGE_CONDITION_FULFILLED	Transfer percentage of condition fulfilled
FOODBASKET_ID	Food Basket ID
TRANSFER_FOODBASKET_QUANTITY	Food Basket quantity
TRANSFER_PAYMENT_CONFIRMATION_TIME	Transfer payment confirmation timestamp
TRANSFER_LAST_MODIFIED_DATE	Last date when <i>Distribution List</i> data was modified
TRANSFER_LAST_MODIFIED_USER_ID	User ID who modified the <i>Distribution List</i> data
PERSON_ID	Recipient Person ID
HOUSEHOLD_ID	Recipient Household ID
COUNTRY_ID	Country ID
WFP_OFFICE_ID	WFP Office ID
PROJECT_ID	Project ID
INTERVENTION_ID	Intervention ID
INTERVENTION_CURRENCY_ID	Currency ID
DELIVERY_MECHANISM_ID	Delivery Mechanism ID
DELIVERY_MECHANISM_NAME	Delivery Mechanism name
DELIVERY_MECHANISM_MODALITY	Delivery Mechanism modality: 0 – Commodity Voucher 1 – Cash 2 – Cash Voucher
CYCLE_AREA_ID	Distribution Cycle for Area ID
CYCLE_ID	Distribution Cycle ID
CYCLE_NUMBER	Distribution Cycle Number
TRANSFER_VALUE	Transfer Value
VOUCHER_ID	Voucher ID
VOUCHER_VALID_FROM	Voucher start date
VOUCHER_VALID_UNTIL	Voucher end date
VOUCHER_KIFIYA_STATUS	Voucher KIFIYA status (SMS)
VOUCHER_TYPE	Voucher Type 0: COMMODITY VOUCHER 2: VALUE VOUCHER

<b>STATUS_CODE</b>	Distribution Cycle status code for a specific Administrative area
<b>VOUCHER_TRANSACTION_ID</b>	Transaction ID
<b>VOUCHER_TRANSACTION_RECEIPT_NUMBER</b>	Transaction receipt number
<b>VOUCHER_TRANSACTION_DATE</b>	Transaction date
<b>VOUCHER_TRANSACTION_UPLOAD_DATE</b>	Transaction upload date
<b>VOUCHER_TRANSACTION_TERMINAL_ID</b>	Transaction terminal (POS/OWS)
<b>VOUCHER_TRANSACTION_RETAILER_ID</b>	Transaction Retailers ID
<b>VOUCHER_TRANSACTION_CURRENCY_ID</b>	Transaction Currency ID
<b>VOUCHER_TRANSACTION_AMOUNT_CHARGED</b>	Transaction amount charged
<b>VOUCHER_TRANSACTION_TYPE</b>	Transaction type
<b>VOUCHER_TRANSACTION_AUTHENTICATION_TYPE</b>	Transaction authentication type

### 3.2 Business Logic

This view provides the information of each Voucher Transaction. Information related to the Distribution List and Voucher is duplicated as many times as transactions have been executed.

#### **VOUCHER\_TRANSACTION\_AUTHENTICATION\_TYPE**

- FINGERPRINT
- PIN\_CODE
- NOT\_REQUIRED

#### **VOUCHER\_TRANSACTION\_TYPE**

- PERFORMED\_PURCHASE (111): POS purchase
- ABORTED\_PURCHASE (112): POS transaction aborted
- AUTHENTICATION\_FAILED (113): POS transaction failed authentication
- VOIDED\_TRANSACTION (114): POS transaction void
- ADDED\_VOUCHER\_TO\_CARD (3): Card voucher top up
- REMOVED\_EXPIRED\_VOUCHER (100): Expired vouchers deleted from card
- SMS\_PURCHASE\_TRANSACTION (200): Confirm SMS received from person, and is done
- ABORTED\_SMS\_PURCHASE (201): Person cancelled transaction
- ABORTED\_SMS\_PURCHASE\_TIMED\_OUT (202): No confirm SMS received from beneficiary within 5 minutes
- PAPER\_PURCHASE\_TRANSACTION (300): Purchase with paper voucher, no digital confirmation
- OFFLINE\_REDEMPTION (900): OWS Redemption

#### **TRANSFER\_TOKEN\_NUMBER**

Security number used to validate the electronic transfer of the entitlement. This number can be the smartcard number, bank account number, barcode card number, mobile number or any other number used by the Person (beneficiary) to receive the assistance.

## 4. VOUCHER TRANSACTION DETAILS

<b>Package</b>	WFP.SCOPE
<b>View name</b>	CA_WHS_VOUCHER_TRANSACTION_DETAIL
<b>View Type</b>	Cube
<b>Full Path</b>	"_SYS_BIC"."WFP.SCOPE/CA_WHS_VOUCHER_TRANSACTION_DETAIL"
<b>Description</b>	This view exposes the details of each Voucher transaction.

### 4.1 Fields

Item	Description
<b>VOUCHER_TRANSACTION_ID</b>	Transaction ID
<b>VOUCHER_TRANSACTION_RECEIPT_NUMBER</b>	Transaction receipt number
<b>VOUCHER_TRANSACTION_DATE</b>	Transaction date
<b>VOUCHER_TRANSACTION_TERMINAL_ID</b>	Transaction terminal (POS/OWS)
<b>VOUCHER_TRANSACTION_TYPE</b>	Transaction type
<b>VOUCHER_TRANSACTION_RETAILER_ID</b>	Transaction Retailers ID
<b>VOUCHER_TRANSACTION_CURRENCY_ID</b>	Transaction Currency ID
<b>POS_COMMODITY_CODE</b>	Commodity POS code
<b>POS_COMMODITY_NAME</b>	Commodity POS name
<b>VOUCHER_TRANSACTION_DETAIL_ID</b>	Transaction detail ID
<b>VOUCHER_TRANSACTION_DETAIL_DEDUCTED_QUANTITY</b>	Transaction detail deducted quantity
<b>VOUCHER_TRANSACTION_DETAIL_AMOUNT_CHARGED</b>	Transaction detail amount charged
<b>VOUCHER_TRANSACTION_DETAIL_QUANTITY_REMAINING</b>	Transaction detail remaining quantity
<b>VOUCHER_ID</b>	Voucher ID
<b>VOUCHER_VALID_FROM</b>	Voucher start date
<b>VOUCHER_VALID_UNTIL</b>	Voucher end date
<b>VOUCHER_KIFIYA_STATUS</b>	Voucher KIFIYA status
<b>VOUCHER_TYPE</b>	Voucher Type 0: COMMODITY VOUCHER 2: VALUE VOUCHER
<b>PERSON_ID</b>	Recipient Person ID
<b>HOUSEHOLD_ID</b>	Recipient Household ID
<b>COUNTRY_ID</b>	Country ID
<b>WFP_OFFICE_ID</b>	WFP Office ID
<b>PROJECT_ID</b>	Project ID
<b>INTERVENTION_ID</b>	Intervention ID
<b>INTERVENTION_CURRENCY_ID</b>	Intervention Currency ID
<b>DELIVERY_MECHANISM_ID</b>	Delivery Mechanism ID
<b>DELIVERY_MECHANISM_NAME</b>	Delivery Mechanism name
<b>DELIVERY_MECHANISM_MODALITY</b>	Delivery Mechanism modality: 0 – Commodity Voucher 1 – Cash 2 – Cash Voucher
<b>CYCLE_AREA_ID</b>	Distribution Cycle for Area ID
<b>CYCLE_ID</b>	Distribution Cycle ID
<b>CYCLE_NUMBER</b>	Distribution Cycle Number

### 4.2 Business Logic

This view provides the detail of each Voucher Transaction. Information related to the Voucher is duplicated as many times as details the transaction have.

The detail of each transaction reports the quantity purchased, the amount charged and the remaining quantity for each of the commodities available for the voucher, the ones defined in the Food Basket.

Information relevant to the Intervention currency and the transaction currency is included since they are not necessarily the same.

**VOUCHER\_KIFIYA\_STATUS**

- NEW
- UPDATED
- SENT

YYY was engaged in XXX to provide the solution named: ZZZ. This solution integrates with SCOPE and customize the Beneficiary Registration to accommodate WFP XXX specific requirements. For example, to use mobile phone as a Point of Sale (PoS) device.

## Glossary

**SCOPE:** is WFP's beneficiary and transfer management platform. SCOPE is an online application to manage assistance from beginning to end. The platform's core features are registering beneficiaries, creating distribution lists for partners and exporting invoices for retailers. In addition, SCOPE can also act as a service provider by offering transfer solutions when local providers are not available.

**ADMINISTRATIVE AREAS:** An administrative division, administrative unit, administrative entity or country subdivision (or, sometimes, geopolitical division or subnational entity) is a portion of a country or other region delineated for the purpose of administration.

**AFIS:** Automated Fingerprint Identification System. This system is in charge of the process of automatically matching one or many unknown fingerprints against a database of known and unknown prints.

**COMMODITY VOUCHERS** are operationally and qualitatively distinct from in-kind transfers. Commodity vouchers entail cash-like business processes and can often be easily converted to cash based value vouchers. WFP treats and will report commodity vouchers as a distinct transfer modality neither cash based nor in-kind.

**VALUE VOUCHERS (or just vouchers),** whether paper or digital, do not limit entitlements to specific quantities of specific commodities but give beneficiaries choice within a range of items and certain retail networks, will be recognized and reported as restricted CBTs.

**CBT:** Cash Based Transfers. Beneficiaries receive currency or value entitlement (e.g. value vouchers).

**TRANSFER MODALITY:** is the mode (in-kind, commodity voucher, or cash-based) through which transfers are effected. Each modality can be used alone or in combination with others.

**DELIVERY MECHANISMS:** are means through which transfers are affected. For example, a beneficiary can receive transfers directly (as cash in hand through a bank or an agent) or indirectly (through a mobile money system, prepaid card, bank accounts, etc.).

**POS:** The point of sale (POS) or point of purchase (POP) is the time and place where a retail transaction is completed. It is the point at which a customer makes a payment to the merchant in exchange for goods or after provision of a service.

**OWS:** SCOPE Offline Workstation. It's the setup that allows COs to operate SCOPE – with reduced functionality – without Internet connectivity.

**FSP:** Financial Service Provider. Any businesses that manage money, including credit unions, banks, credit-card companies, insurance companies, accountancy companies, consumer-finance companies, stock brokerages, investment funds and some government-sponsored enterprises.

**SAP HANA:** a platform that serves as a foundation for new business applications that support in-memory technology. It facilitates real-time online analytical processing (OLAP) based on an online transaction processing (OLTP) data structure.