Acharya, Pooja

CapGemini

Business Requirements Document:

Fluke Unified BI Solution

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# Document Purpose

The purpose of this document is intended to provide visibility into the proposed general approach for capturing business requirements for the overall set of KPIs that are in scope of the Unified BI reporting project.

# Intended Audience

The intended audience for this BRD are the business users at various levels of the Fluke business organization, business representatives in the Fluke data steward community and the extended members of the Unified BI project team including Technical Architects, Project Managers etc.

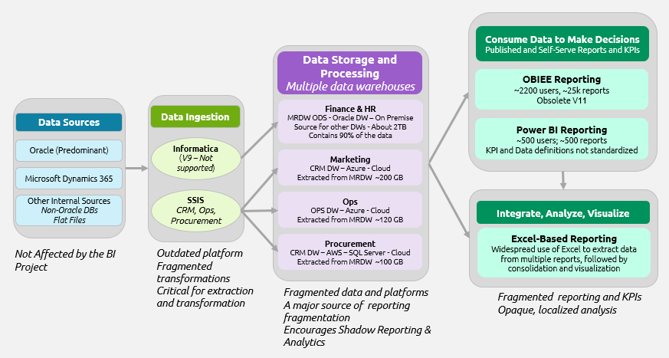
# Stakeholders

Stakeholders include the Unified BI core and extended project team, members of the Fluke IT BI team

# Background & Summary

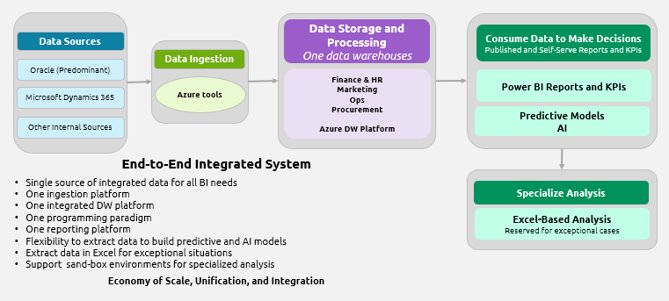
## Current State Data Landscape

This BRD is one of the primary deliverables of the Core Value Focus Area which is being undertaken to prove out and demonstrate the general design approach planned for the Unified BI project.

In the current-state model, significant fragmentation occurs throughout the data journey and allows for independent, non-standardized tools to inform the business decision-making. Operating silos also limit the ability to maximize value creation from holistic data insights. Significant time spent on data preparation activities vs. focusing on decision making. ​ 

## Future State Data Landscape

The future-state model displays a streamlined data journey that decreases/eliminates the existing data/BI fragmentation and shadow analytics by implementing foundational solutions such as ‘Single Source of Truth’, ‘Modernized technology’ so the systems can be integrated and unified.​



Enterprise Reporting & Analytics from a single source of truth

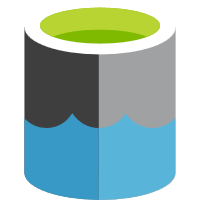
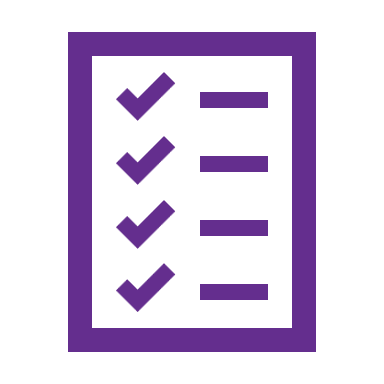
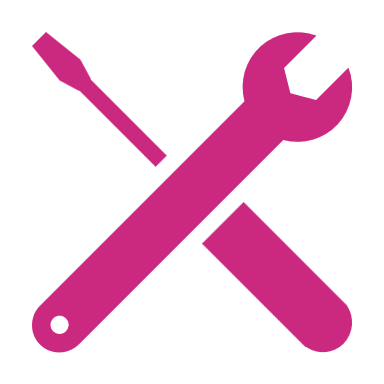
Trusted & governed data; Data stewardship

Future proof architecture

Business value orientation (Insights, AI readiness)

Self-serve data

Modern, Scalable platform



**UNIFIED BI PLATFORM**

# Business Vision & Strategy Framework

The guiding business vision for the solution is to support realization of a ‘One Fluke’ approach to business intelligence & insights. This vision is supported by a focus on the following strategic elements & objectives:

|  |  |  |
| --- | --- | --- |
| Strategic Focus Area | Objective | Core Value Drivers |
| Revenue | Grow core revenue | Core Growth |
| Profitability | Increase Operating margin | OP Margin Expansion (BPS) |
| Working Capital | Maintain working capital level | Cash flow (WCT increase (decrease)) |
| Return on investments | Achieve ROIC targets | ROIC (acquisitions last 36 months) |
| Delivery | Achieve minimum on time delivery targets | OTD % |
| Quality | Achieve minimum quality targets | External PPM (External Defect PPM) |
| ~~Leadership~~ | ~~Maintain internal fill rate below target~~ | ~~Internal Fill Rate (% of Completed Senior Leader Searches Filled by Internal People)~~ |
| People | Maintain voluntary turnover below target | Turnover (Total) |

# Solution Success Factors

Success of the Unified BI project is based on achieving the following goals:

1. Implement an Integrated and consolidated Data foundation

* Single source of truth for current and future insights requirements with built in data validation
* Automated processing, timely & efficient updates

1. Provide a single enterprise BI Platform

* Modern, scalable, unified platform (Azure + Power BI)
* Self Service: Ability for business users to build and maintain their own KPIs and dashboards
* Sandbox functionality
* Business value orientation (Insights, AI readiness)

1. Rationalization of a targeted set of enterprise and function level KPIs (~400 KPIs)

* Establish core set of common Enterprise dashboards
* Base set of dashboards to provide Business Functions with initial set of Power BI based dashboards

# Solution Scope

## In Scope

* Finalize business requirements - validate finalized KPIs and calculation logic from Client business / designated SME
* Loading historical data into the new Unified BI platform per business and data audit requirements defined.
* Data Sourcing - agreements
* BI Reports Design
* BI Report Dashboards and wireframes
* Finalize acceptance criteria for requirements and design artifacts

|  |  |  |  |
| --- | --- | --- | --- |
| **CVD** | **KPI** | **Enterprise KPI** | **Functional KPI** |
| **Delivery (%)** | Customer OTD | Customer OTD to SLT | Factory OTD |
| Customer OTD to CRD | Service Parts OTD |
|  | Service Parts Intercompany OTD |
|  | OTD To ATP |
|  | OTD To CRD Window |
|  | OTD To 1st Acknowledgement Date |
|  | Lab OTD(SVC) |
|  | Brand OTD(SVC) |
| PDBL | PDBL to SLT | Factory PDBL |
| PDBL to CRD | Trade Sales/Parts/Other |
| ATP Bucket |
| PDBL% (SVC) | PDBL External Units (SVC) |
| PDBL Line Quantity (SVC) | PDBL Internal Units (SVC) |
| PDBL $ Amount (SVC) | PDBL By Order Status (SVC) |
|  | PDBL By Tech Status (SVC) |
|  | PDBL By WIP Location/Backlog Bucket (SVC) |
|  | PDBL by Service Group (SVC) |
|  | PDBL by Service Type (SVC) |
|  | PDBL Past Due and On Time (SVC) |
|  | PDBL Offloaded Flag (SVC) |
|  | PDBL Calibration type (SVC) |
|  |  |
| Backlog | Customer Backlog | Entered Backlog |
|  | Factory Backlog |
|  | Service Parts Intercompany Backlog |
| **Revenue/Core Growth (%)** | Orders | Based on Geography /Business Unit(FRS/FPI/Core) | Product orders (Hardware/Software) |
|  | Subscription based orders |
|  | Lease Based |
|  | Deferred Revenue |
|  | On-site services (FPI / Irisys) |
|  | Service (calibration, etc …) |
|  | Service (gold contracts) |
| Shipments |  | Product (Hardware/Software) orders |
|  | Subscription based orders |
|  | Lease Based |
|  | Internal shipments (non-revenue shipments) |
|  | On-site services (FPI / Irisys) |
|  | Service (calibration, etc …) |
|  | Service (gold contracts) |
| Revenue |  | Entity |
|  | Business Unit Sales |
|  | Product sales (product group and family) |
|  | Geography / Region sales |
|  | Factory of origin sales |
| Funnel | Sales Territory Hierarchy | Marketing |
| Sales Stage | Product Hierarchy |
| Marketing Channel Hierarchy | Aging Bucket |
| Product Family Hierarchy | Probability Weighting of Stage |
| Workflow Hierarchy |  |
| Distributor INV | Depends on Region | Region |
| Channel | Account Base |
| Product | Product Base |
| Distributor POS | By Region Hierarchy | By Region |
| By Channel | By Channel |
| By Product Family Hierarchy | By Customer |
| By Workflow Hierarchy | By Product Family Hierarchy |
| Traffic | Date | Event |
| One Fluke Region | Device Category |
| Default Channel Grouping | Site Directory |
| Product | Host Name |
| Product Workflow | Device |
| Landing Page | Page |
| Google Analytics Account | Query |
| Website Land - Locale |  |
| **Profitability (Operating Margin Expansion (OMX))** | Profit Margin |  |  |
| COGS |  |  |
| Operating Expense |  |  |
| Safety |  |  |
| **Working Capital (Cash Flow)** | Working Capital |  |  |
| DPO (Days Payable Outstanding) |  |  |
| DSO (Days Sales Outstanding) |  |  |
| OH/Inventory (Days on Hand) |  |  |
| **Quality (External PPM)** | Quality DPPM |  |  |
| **People/Turnover (%)** | Internal Survey Results |  |  |
| Attrition (%) |  |  |
| **Return in Investments (ROIC) %** |  |  |  |

## Out of Scope

In general, non-technical success factors are outside the scope of this solution including:

1. Enabling Data democratization & empowerment

* Formal data management including data governance, data stewardship, MDM, metadata management & data quality management
* Ensure discoverable and trustworthy data

1. Ensuring user adoption & positive user experience

* Successful change management to support expected adoption of solution by stakeholders
* Training on Standard approach and method to BI implementation
* Communication

• New ad-hoc or derived metrics besides those identified in Workstream 1

* Other functional level OTD KPIs and metrics are out of scope
* Modifications to source data views or tables
* Reason codes standardization and their sourcing into Oracle EBS

# Dependencies and Assumptions

## Dependencies

1. Obtaining needed technical specifications of source data from the source system that support the CVDs
2. Fluke Team needs to provide the business glossary, data definitions

## Assumptions

* BRDs provided by Fluke which are the input for this document are the finalized requirements for CVDs in scope

# Functional Specifications

This section provides details needed for the subsequent design phase. It is a guideline for conceptual, high level and detailed functional specification for Fluke’s future-state model that eliminates the existing data/BI fragmentation for a more Modernized, single source of Truth solution in a unified fashion. The requirements are grouped based on 7 Core Value Focus Areas, each of which is explained in detail from section 11 – 17.

# Common Capabilities

## User Profiles & Scenarios

Table provides a list of the known user profiles associated with CVDs

|  |  |
| --- | --- |
| Business User level | Business User description |
| L1 | C level Executives |
| L2 | SVP, VP and AVP level executives |
| L3 | Senior Managers, Directors and Senior Directors |
| L4 and lower | Managers and Individual Contributors |

## Summary of Specifications

Below are the Functional requirements captured through business interviews and understanding business processes. The table captures a mix of existing and new requirements as given by the business stakeholders. These common capabilities are common across all the Core Value Focus Areas.

This will be used as the base of the Design phase. Design artifacts will have traceability back into the requirement itself.

### Dashboard Summary View

Below is the summary view that will give an aggregation of all the numbers for CVDs and KPIs in scope at an Enterprise level. Each of these CVDs will have corresponding Bowler Information. This will be the landing page for all the L1 Leadership Team.



|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Core Value Drivers** | | | | **Owner** | **Unified BI** | **2020 JOP** | **2021 Target** | | **FBS Response** |
| Shareholders | Core Growth (%) (Excludes FHS) | | | Jason Waxman | yes | % | % | | PDBL PSR, FCal & FNet PSR (orders) |
|
| Operating Margin Expansion (bps) (Excludes FHS) | | | Eduardo Lopez | yes | bps | bps | | PDBL PSR, FCal & FNet PSR (orders) |
|
| Working Capital Turns | | | Eduardo Lopez | yes | turns | turns | |  |
|
| ROIC (%) (Acquisitions, last 36 months) | | | Marc Tremblay | yes | % | % | | FRS PDBL PSR, FRS US PSR (orders) |
|
| Customers | Quality (PPM) (Hardware only, external defects) | | | Neal Nowick | yes | PPM | PPM | |  |
|
| On-Time Delivery (%) (Hardware only, vs. customer request) | | | Neal Nowick | yes | % | % | | PDBL PSR |
|
| FRS - Net Dollar Retention | | | Ankush Malhotra | Yes | % | % | |  |
|
| FRS - Customer Health (Net Promoter Score) | | | Ankush Malhotra | TBD | 0 | 0 | |  |
|  |
| People | Employee Experience (Engagement index) | | | Anne Ensminger | TBD | % | % | |  |
|
| Turnover (%) (All exempts, exclude unfilled positions) | | | Anne Ensminger | Yes | % | % | | FRS and China PSR. Operations WIP. |
|  |
|  | |  |  |  |  |  | |  |  |
|  | |  |  |  |  |  | |  |
| **Key Performance Indicator (KPI)** | | | | **Owner** | **Unified BI** | **2020 JOP** | **2021 Target** | | **FBS Response** |
| Commercial | | 1A | Orders ($M) | Regional Leaders | yes | M | | M | 20 |
| - |
| 1B | Organic Web Traffic (# of sessions) (Americas & EMEA, fluke.com / Cal. / Net.) | Tom Roth | yes | sessions | | Sessions | 30 |
| - |
| 1C | Marketing Opportunity Funnel ($M) (Americas & EMEA, all workflows) | Tom Roth | yes | M | | M | 40.0 |
| 20 |
| Products | | 2A | NPI(New Product Introductions) Orders ($M) | Walter Hock | yes | M | | M | **9** |
| 30 |
| 2B | NPI Forecasted OTD | Walter Hock | yes | % | | % | **1** |
| 40.0 |
| Customers | | 3A | Past Due Backlog (days) | Neal Nowick | yes | days | | days | 20 |
| - |
| 3B | Repair OTD (%) | Corey Christmann | yes | % | | % | 30 |
| - |
| 3C | Calibration OTD (%) | Corey Christmann | yes | % | | % | 40.0 |
| 20 |
| Margin | | 4A | Standard Margin (%) | Regional Leaders | yes | % | | % | **1** |
| 30 |
| 4B | PPV + VAVE ($M) | Neal Nowick | yes | M | | M | **1** |
| 40.0 |
| Working Capital | | 5A | AP DPO (days) | Neal Nowick | yes | days | | days | 20 |
| - |
| 5B | AR DSO (days) | Regional Leaders | yes | days | | days | 30 |
| - |
| 5C | Inventory Turns | Neal Nowick | yes | turns | | turns | 40.0 |
| 20 |

### CVD Data Sources

Address standardization will be leveraged using **Smarty Streets.** Some of its key features include

* Verify that each address is valid and complete
* Convert address into proper [USPS](https://pe.usps.com/text/pub28/28c2_001.htm#ep526236) or international address format
* Geocode returned for each valid address

Smarty Streets' APIs verify, validate, enrich, standardize, geocode, and auto-complete addresses. Hence it is also considered as a source system for the new Azure Data Lake store.

Below table lists down the source systems spread across CVDs and KPIs under each CVD.

|  |  |  |
| --- | --- | --- |
| **CVD** | **KPI** | **Source** |
| **Delivery** | OTD | • Oracle EBS • FRS Subsidiary Flat files  • Excel Flat files |
| PDBL | • Oracle EBS • FRS Subsidiary Flat files  • Excel Flat files |
| Backlog | • Oracle EBS • FRS Subsidiary Flat files  • Excel Flat files |
| **Core Growth** | Funnel | • Oracle EBS (ecom bookings)  • Subsidiary Flat files  • Excel flat files  • MS Dynamics (Cloud & China)  • Salesforce  • Eloqua  • Google Ads  • Google Search console  • Google Analytics  • Shopify  • Aggregated: Azure FlukeSalesAndMarketing database and cube – This cube and model is not flexible to use in current state as well as data components that are not properly maintained. --- this will be the source for METRICS calculations(DAX and MDX) |
| Orders | • Oracle EBS (90%)  • Subsidiary Flat files  • Hyperion |
| Shipment | • Oracle EBS  • Subsidiary Flat files  • Hyperion |
| DIS INV &POS | • Oracle EBS (Distributor specific extracts, Excel files, downloads from portals, csvs will all be made available in Oracle EBS for consumption for CapG team)  • Inventory Files |
| Revenue | • Oracle EBS  • Hyperion  • Subsidiary Flat Files |
| Traffic | * Google Analytics * Google Analytics 4 * Google Search Console * MS Dynamics |
| **OMX** | OMX | * Hyperion * Oracle EBS * Flat files from non-Oracle entities > Janos, eMaint, Brazil, etc. |

### CVD Targets

The Scoring Target is a value that is static and not defined in the system as of today. It is a value that helps to determine how the business is performing with respect to the set benchmark number. This can be a $ Amount, a Rate (%) or in days.

The future state should have the ability to configure these targets. Below is the table that gives an overview of the Targets per CVD and KPI.

|  |  |  |
| --- | --- | --- |
| **CVD** | **KPI** | **TARGET** |
| **Delivery** | OTD | 1.Fixed target of 95% On Time across all levels. Anything below 95% is delayed (Service & Operations) |
| PDBL | 1.Fixed target of 0.3 days (Operations) 2.$ target is derived from the 0.3 days and shipments (Operations)  3.Fixed target of 5% of the total open service lines (Service) |
| Backlog | 1.Backlog in $ and days. increase/decrease. For Target- Use previous year or previous month (previous Data point) to indicate red or green (Operations) |
| **Core Growth** | Funnel | 1.Funnel Sales Targets - These are defined by Lead/Opportunity(opportunities won and opportunities created on)/Won  monthly, sales territory, salesperson, product family, One Fluke Region  2.Funnel Marketing Targets - These are defined by Lead/Opportunity/Won  monthly, campaign Type, product family, One Fluke Region  3.Win Rate - These are defined by Lead/Opportunity/Won  monthly, campaign type, product family, One Fluke Region  4.Assigned Accounts Forecasts(sales Targets) - Targets by Sales Territory - $amount or Growth Rate %  monthly, sales territory, salesperson,currency  5.Sales Quotas(sales Targets):  monthly, sales territory, salesperson, IC metric (multiple targets correlated with the number of Incentive Compensation metrics a person is evaluated on) |
| Orders | Orders/Ship Plan: done yearly and submitted to Fortive  Orders/Ship Forecast: done monthly |
| Shipment | Orders/Ship Plan: done yearly and submitted to Fortive  Orders/Ship Forecast: done monthly |
| DIS INV | Distributor Inventory Target: Distributor, product family ,month, One Fluke Region hierarchy |
| DISPOS | Distributor POS Target: Distributor, product family ,month, One Fluke Region hierarchy |
| Revenue | Revenue Target: monthly, product family, One Fluke Region |
| Traffic | 1.Web Traffic Targets - These are defined by sessions(L1 organic sessions only)  monthly, campaign type, website , One Fluke Region  2.Marketing ROAS Targets  monthly, campaign Type, product family, One Fluke Region  3.eCommerce Revenue Targets  monthly, country, website |
| **OMX** | OMX | 1.OMX Target: ‘X’ BPS for each month set annually updated during the forecast cycles each fiscal month(4-4-5) – this is set at the region, Business Group(FPI, FRS, Core)  2.SMX Target: ‘X’ BPS for each month set annually updated during the forecast cycles each fiscal month(4-4-5) -this is set at the product family level, by month, One Fluke Region hierarchy |

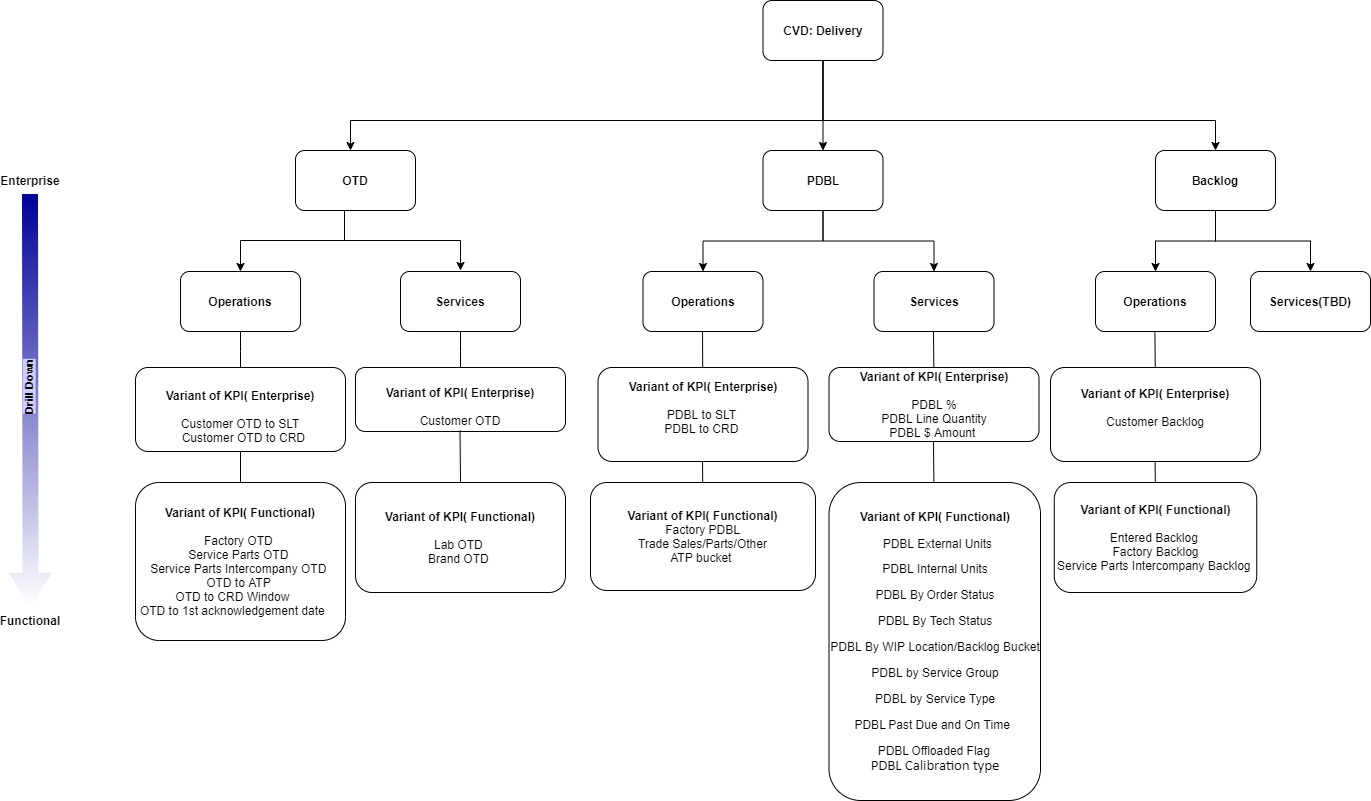
how do we standardize target ingestion from Excel files to data lake. For example, NPI (New Product Introduction(subset of sales) targets will change during the year and ideally we want to maintain target changes during the year to measure variances.

# Core Value Focus Area – Delivery

Delivery is an important KPI for Fluke to measure performance and supply chain efficiency of their product and service lines. This KPI is broadly classified into Operations and Services and can drill down from a high Enterprise level to granular Functional Level. Although at the logical level the Delivery CVD is the same, there is variation in the physical calculations for Operations and Service KPIs.

* Operations Team – Calculates metrics for Finished Products (FG) or parts
* Service Team – Calculates metrics for Repairs and Calibration

This understanding is depicted in the flow chart below.



## Special Design Considerations

### Region Hierarchy

The region hierarchy for Fluke is mutually exclusive and can be dined as

**One Fluke Region-->Country Group-->Country-->State-->City-->Postal Code-->Address**

Where One Fluke Regions are APAC, EMEA, AMERICAS

**Country Group is defined as**

|  |
| --- |
| North America |
| Western Europe |
| Eastern Europe |
| Europe |
| China |
| Asia |
| Australia/New Zealand |
| Latin America |
| Middle East/North Africa |
| Pakistan, Afghanistan, Bangladesh, and Kazakhstan |
| Middle East and Africa |

Based on the business need, Territories are defined for Sales and Marketing. The territory is customizable and mutually inclusive. Territories can be created at the Country, State, city & Postal Code level. The territories will be defined by the Data Stewards and loaded in the Unified BI Solution via a flat file in the agreed format.

### Subsidiary Flat Files

The Subsidiary Flat files are in the CSV and txt format. Below table shows the format for each of the files received.

|  |  |  |
| --- | --- | --- |
| **Subsidiary File Source** | **File Name** | **Format** |
| BEIJING-SS | book\_sub\_bsc.txt | txt file |
| BEIJING-SS | ship\_sub\_bsc.txt | txt file |
| JANOS | book\_sub\_jan.txt | txt file |
| JANOS | ship\_sub\_jan.txt | txt file |
| BRAZIL | brazil\_bookings.txt | txt file |
| BRAZIL | brazil\_shipments.txt | txt file |
| INDIA | india\_bookings.txt | txt file |
| INDIA | india\_shipments.txt | txt file |
| JAPAN | ? | txt file |
| JAPAN | ? | txt file |
| RAYSAFE | raysafe\_bookings\_ind.csv | csv file |
| RAYSAFE | raysafe\_bookings\_sg.csv | csv file |
| RAYSAFE | raysafe\_bookings\_jpn.csv | csv file |
| RAYSAFE | raysafe\_bookings\_de.csv | csv file |
| RAYSAFE | raysafe\_bookings\_se.csv | csv file |
| RAYSAFE | raysafe\_bookings\_uk.csv | csv file |
| RAYSAFE | raysafe\_bookings\_us.csv | csv file |
| RAYSAFE | raysafe\_shipments.csv | csv file |
| LANDAUER | ship\_sub\_LDRLD.txt | txt file |

## OTD – On Time Delivery

OTD is an acronym for On Time Delivery. The main purpose is to track the historical Trade Sales shipment performance against internal (Standard Lead Time) and customer (Customer Request Date) expectations. Misses are analyzed to increase future performance. It is used at all levels in the organization. It is a corporate CVD (Core Value Driver) that is shared widely in the organization and used as low as an individual production cell or product planner.

### OPERATIONS

#### Calculation Requirements

The Operation OTD only applies to FG (Finished Goods) or Parts. Table provides a description of the main calculations performed to achieve this purpose

**Physical Calculations for Operations OTD**

|  |  |  |
| --- | --- | --- |
| Level | Calculation Description | Output |
| Line Level | A standard calculation for each line as the difference between the ‘ship date’ and the ‘standard lead time date’ or ’customer request date’.  If that difference is less than or equal to zero then the shipment is marked as ‘on time’, if the difference is greater than zero then the shipment is marked as ‘late’.    **OTD Measured against SLT (Standard Lead Time)**  **If** "Ship Date" - "Standard Lead Time Date" ≤0 **then** "On Time"  **If** "Ship Date" - "Standard Lead Time Date" >0 **then** "Late"    **OTD Measured against CRD (Customer Request Date)**  **If** "Ship Date" - " Customer Request Date " ≤0 **then** "On Time"  **If** "Ship Date" - " Customer Request Date " >0 **then** "Late"  Notes:  - see Metrics Requirements on how we deal with split and exploded lines  - for CVD Reporting only Trade Sales Lines are accounted for | Binary:  On Time or Late |
| Multi-Line Level (%) | A standard percentage calculation with the numerator being the sum of lines that were shipped On Time and the denominator the total number of shipped lines.    **Total trade sales lines Shipped On Time / Total Trade Sales Lines Shipped** | Percent |

#### Variants of the KPI

**Enterprise Level**

* Customer OTD to SLT
* Customer OTD to CRD

**Functional Level**

* Factory OTD – performance of a specific factory/site (Including Intercompany Shipments)
* Service Parts OTD (FRS: add training, calibration, and on-site repairs)
* Service Parts Intercompany OTD
* OTD to ATP (Available to Promise)
* OTD to CRD Window (early/on time/late)
* OTD to 1st acknowledgement date

#### Dimensions and Data Sources

Source of raw data current or new

* Oracle EBS  
  • FRS Subsidiary Flat files
* Excel Flat files

Each CVD is required to include aggregation capabilities as described in the table below. A common requirement across all dimensions is that a standardized set of aggregation business rules be established

|  |  |  |
| --- | --- | --- |
| **D#** | **Dimension** | **Dimension Description** |
|  |
|  |
| D20 | **Adjustments** | Sales order line adjustments. It is considered as a dimension because Fluke has various types of Demand Forecasts |  |
| D23 | **Buyer** | Employee name and location information of the person who entered the purchasing document in the source system. |  |
| D24 | **Calendar** | Custom Loaded Calendar Table |  |
| D28 | **Currency** | Full International Standards Organization (ISO) name of the monetary unit. |  |
| D29 | **Customer** | Bill-To and Ship-To customer information. |  |
| D30 | **Customer - Channel** | Description of the Customer channel code. |  |
| D31 | **Demand Forecast - Record Type** | Forecast Detail. |  |
| D32 | **Demand Forecast - Type** | Forecast Type Detail. |  |
| D33 | **Destination Geography** | Geographies based on Ultimate Destination |  |
| D43 | **Inventory - ATP Rules** | Order Management attributes. |  |
| D50 | **Inventory - Planners** | Material planner assigned to plan the item. |  |
| D55 | **Location** | Geographical location of the customer. |  |
| D59 | **Oracle Open Sales Orders - Hold Buckets** | Time periods used to review and report days on hold. |  |
| D60 | **Oracle Open Sales Orders - Hold Definitions** | Defining Holds in Order Management |  |
| D63 | **Order Types - Line Type** | Classification of a sales order line. |  |
| D64 | **Order Types - Order Type** | Classification of a sales order. |  |
| D65 | **Organization** | Name of the accounting company. |  |
| D68 | **Planner** | General planning attributes. |  |
| D73 | **Product** | Product detail. |  |
| D93 | **Source System** | Identifier of the source system for the order line. |  |
| D111 | **VOC Dimension - Supplier** | Origin of item; cell or supplier. |  |
| D115 | **Warehouse** | Warehouse details. |  |

Unified Dimensions have been vetted with the Data Steward team for each KPI within a CVD. Please refer to the file called “Fluke Datawarehouse Dimensions summary page.xlsx”  Located at Teams site - [Unified Dimensions](https://teams.microsoft.com/_#/xlsx/viewer/teams/https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards~2FShared%20Documents~2FGeneral~2FTechnical%20Docs~2FFluke%20Datawarehouse%20Dimensions_summary%20page.xlsx?threadId=19:84080666398a41adb35436c2d3b196da@thread.tacv2&baseUrl=https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards&fileId=1ca9b00a-fb1c-4075-9f16-21fa7df43938&ctx=files&rootContext=items_view&viewerAction=view)

To get the most updated list of OTD Dimensions filter the OTD column with values ‘Y’

#### Data Gaps – Ingestion process needs

N/A – all required data is already available in Oracle EBS

#### Drill Down Path

The most common way to slice and dice the KPI according to the company structure to guide the user on the exploration of the data

* Path1: by One Fluke Region (APAC, EMEA, Americas) à Drill by Top 10 countries on further drill down
* Path2: by Product Workflow (Trouble Shooting, Calibration, Installation/Certification Tools, Routine/ Analysis, Safety) àcolumn named as product\_workflow\_name
* Path3: by Product (this list dynamically changes as per Product Workflow slicer selected)
* Path 4: by Factory of Origin (Fluke factory from which the product was manufactured and shipped)
* Path5: by Reason Code - field under the Order Dimension

#### Metrics Requirements

OTD must support the following related metrics to be visual on Dashboard

Considerations:

Split Lines: for OTD metric they are counting as 1 line. Lines can be split for multiple reasons; e.g. manually because ordered quantity is high and we agree with customer to partially deliver line quantity, or by the system (serial number, split B2B,..) …

If a line is e.g. split into 5 (x.1, x.2, x.3, x.4 & x.5) and 2 shipped On-Time and 3 Late:

- Shipped lines will be 5

- For OTD metric we will count the line only once with a line OTD of 40%

Line (x.1) with sub-lines (x.1.1, x.1.2, x.1..3) (a system, PTO item, Configured item, …)

Sub-lines are not taken into account for shipped lines nor for the OTD metric. Only the parent line is counted.

**List of Metrics Requirements for OTD Enterprise and Functional Level**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Metrics** | **Description** | **Logic** | **Comment** | **Time Dimension** | **PBI?** |
| **# Lines Shipped** | Total number of lines shipped | # Lines | excluding the sub-lines | current month |  |
| **Line OTD to SLT** | Normally 1, except for split lines, where it is the ratio between on time and nr lines |  | split lines logic |  | OTD\_RevisedLineSLT |
| **Line OTD to CRD** | Normally 1, except for split lines, where it is the ratio between on time and nr lines |  | split lines logic |  | OTD\_RevisedLineCRD |
| **# Lines Shipped Late to SLT** | Total number of lines shipped after the Standard Lead Time Date | # Lines where Ship Date > Standard Lead Time Date | excluding the sub-lines | week, MTD |  |
| **# Lines Shipped On Time to SLT** | Total number of lines shipped on/before the Standard Lead Time Date | # Lines where Ship Date ≤ Standard Lead Time Date | excluding the sub-lines | week, MTD |  |
| **OTD % to SLT** | Percentage of lines shipped on or before the Standard Lead Time Date | # Lines Shipped On Time to SLT / # Lines Shipped | Split lines counted as 1 and Sub-lines are excluded | yesterday, week, MTD QTD, YTD |  |
| **# Lines Shipped Late to CRD** | Total number of lines that were   shipped to customer after the Customer Request Date (excluding the sub-lines) | # lines where Ship Date > Customer Request Date | Split lines counted as 1 and Sub-lines are excluded | week, MTD |  |
| **# Lines Shipped On Time to CRD** | Total number of lines that were shipped on/before the Customer Request Date (excluding the sub-lines) | # lines where Ship Date ≤ "Customer Request Date" |  | week, MTD |  |
| **OTD % to CRD Gross** | Percentage of lines shipped on the day on/before the Customer Request Date | # Lines Shipped On Time to CRD / # Lines Shipped | Split lines counted as 1 and Sub-lines are excluded | yesterday, week, MTD QTD, YTD |  |
| **# Lines Shipped On Time to CRD Reason Code** | lines with certain Reason Codes will not be flagged as Late | # lines where  Ship Date ≤ "Customer Request Date"  OR  Last Reason Code = "Customer: Carrier Delay" OR "Customer: Compliance" OR "Customer: Credit" OR "Customer: PO" OR "Fluke Related: AR Holds" |  |  |  |
| **OTD % to CRD Reason Code** | Percentage of lines shipped On Time to CRD or having specific Reason Code | # Lines Shipped On Time to CRD Reason Code / # Lines Shipped | Split lines counted as 1 and Sub-lines are excluded | yesterday, week, MTD QTD, YTD |  |
| **# Lines Shipped On Time to CRD Hold Period** | Lines that were on a customer related hold and Ship Date ≤ (Release date + difference between Book and CRD date)) are not flagged as late | # Lines where  Ship Date ≤ CRD Date  OR  Hold Cause = Customer  AND  Ship Date ≤ (CRD + Release date - Book date) |  |  |  |
| **OTD % to CRD hold period** | Percentage of lines shipped On Time to CRD, or considering the time the line was on a customer hold | # Lines Shipped On Time to CRD Hold Period / # Lines Shipped | Split lines counted as 1 and Sub-lines are excluded |  |  |
| **Lines to Target** | Number of lines to Countermeasure / PSP | # of lines Shipped Late - (# Lines shipped\*(1 - target)) |  | MTD |  |

**List of Metrics Requirements for Functional Level**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | List of Metrics Requirements for OTD Enterprise and Functional Level | | | | | | |
|  | List of Metrics Requirements for OTD Functional Level | | | | | | |
| Metrics | | **Description** | | **Logic** |  | **Time Dimension** | **Comment** |
| # Lines Scheduled Inside | | Total number of lines Scheduled in month | | Count of lines:  Schd date in Month |  | **Scheduled**  Current Month / Future Months | Source: Backlog    Prio 2  Scheduled OTD |
| # Lines Scheduled Late to SLT Inside | | Total number of lines Scheduled after Standard Lead Time Date in month | | Count of lines:  Schd Date > SLT Date & Schd in month  Or  # PDBL lines Inside + # Threads Inside to SLT |  |  |
| # PDBL lines to SLT Inside | | Number of lines that are PDBL and scheduled in month | | Count of lines:  SLT date < “Today”  Schd date is in month |  | Current Month |
| # PDBL lines to SLT Outside | | Number of lines that are PDBL and scheduled in future months | | Count of lines:  SLT date < “Today”  Schd date is in future months |  | Future Months |
| # Threads Inside to SLT  This will only give a valuable result when filtered on current month. When filtered on a past month we show “N/A” | | Number of lines that are not yet PDBL and scheduled late within current month | | Count of lines:  SLT date ≥ “Today”  Schd date > SLT date  Schd date is in current month |  | Current Month |
| # Threads Outside to SLT | | Number of lines that are not yet PDBL but scheduled late in future months | | Count of lines:  SLT date ≥ “Today”  Schd date > SLT date  Schd date is in future months |  | Future Months |
| # Lines Scheduled On Time to SLT Inside | | Total number of lines Scheduled on or before Standard Lead Time Date | | Count of lines:  Schd Date ≤ SLT Date  Schd date is in past or current month |  |  |
| Scheduled COTD % to SLT | | Scheduled percentage of lines shipped on or before the Standard Lead Time Date | | (# Lines Shipped On Time to SLT + # Lines Scheduled On Time to SLT) / (# Lines Shipped + # Lines Scheduled) |  |  |
| Scheduled COTD % to CRD | |  | Same logic as for SLT measurements, only replacing SLT date with CRD | | | |
| ATP date | | Available to promise rule translation into a date | | book date + ATP rule (table for rule into nr of days) |  |  |  |
| OTD To ATP | |  | Same logic as for SLT Measurement, only replacing SLT with ATP date | | | |  |
| OTD To 1st Acknowledged Date | |  | Same logic as for SLT Measurement, only replacing SLT with 1st Acknowledged Date | | | |  |
| CRD Window | | CRD date + the 2 days before | |  |  |  |  |
| # Lines Shipped On Time to CRD Window | | Lines Shipped within CRD window | | Ship date ≥ (CRD -2days) & Ship date ≤ CRD |  |  |  |
| # Lines Shipped Early to CRD Window | | Lines Shipped early to CRD window | | Ship date < (CRD -2days) |  |  |  |
| OTD To CRD Window | | Percentage of lines shipped within CRD window | | # Lines Shipped On Time to CRD Window / # Lines Shipped |  |  |  |
| Yesterday % OTD | | It is the % OTD of yesterday’s shipments | | % OTD of Yesterday’s Shipment |  |  |  |
|  | Projected OTD | | | | | | |
| # new lines | | Expected number of lines to ship in current month from new bookings | | remaining $ bookings conversion / average $ line density |  | **New Conversion**  Current Month / Future Months | -what we are using today, ideally replacing by more leading measurement  -Source: Shipments & Revenue Outlook    Prio 3  Projected OTD |
| % new lines On Time to SLT  (differentiate the 4&5 weeks months) | | historical average % On Time from bookings on and after same day in the month as current day in month | | e.g. 13-Sep = the 11th day of a 5 weeks month. The average % on time from order lines booked on or after day 11 and shipping within month of 5 weeks months last 12 months |  |
| % new lines On Time to CRD | | historical average % On Time from bookings on and after same day in the month as current day in month | | e.g. 13-Sep = the 11th day of a 5 weeks month. The average % on time from order lines booked on or after day 11 and shipping within month of 5 weeks months last 12 months |  |
| # new Lines On Time to SLT | | number of expected lines On Time from new bookings | | # new lines \* % new lines On Time to SLT |  |
| # new Lines On Time to CRD | | number of expected lines On Time from new bookings | | # new lines \* % new lines On Time to CRD |  |
| # lines Projected | | Expected number of lines to ship in current month | | # lines shipped MTD + # lines scheduled Current Month + # new lines Current Month |  | **Projected**  Current Month / Future Months |  |
| # Lines Projected On Time to SLT | | Total Number of lines expected to be On Time to SLT | | # Lines Shipped On Time to SLT MTD + # Lines Scheduled On Time to SLT Current Month + # new Lines On Time to SLT Current Month |  |  |
| # Lines Projected Late to SLT | | Total Number of lines expected to be Late to SLT | | # Lines Shipped On Time to SLT MTD + # Lines Scheduled On Time to SLT Current Month + # new Lines Late to SLT Current Month |  |  |
| projected COTD % to SLT | | Projected on time percentage for the month | | # Lines Projected On Time to SLT Current Month / # Lines Projected Current Month |  |  |
| # Lines Projected On Time to CRD | | Total Number of lines expected to be On Time to CRD | | # Lines Shipped On Time to CRD MTD + # Lines Scheduled On Time to CRD Current Month + # new Lines On Time to CRD Current Month |  |  |
| # Lines Projected Late to CRD | | Total Number of lines expected to be Late to CRD | | # Lines Shipped Late to CRD MTD + # Lines Scheduled Late to CRD Current Month + # new Lines Late to CRD Current Month |  |  |
| projected COTD % to CRD | | Projected on time percentage for the month | | # Lines Projected On Time to CRD Current Month / # Lines Projected Current Month |  |  |

**\*\*CRD / ATP / 1st acknowledged date are static dates – not influenced by holds.**

#### Power BI needed columns

|  |
| --- |
| PBI Needed Columns |
| Buyer |
| Planner |
| Planner Code |
| Factory of Origin |
| Cell |
| Organization Name |
| Ship-From Inventory Code |
| Booked Date |
| Pick Release Date |
| Shipped Year |
| Shipped Month |
| Shipped Wk of Mo No |
| Shipped Date |
| Scheduled Ship Date |
| Standard Lead Time Date |
| Request Date |
| ATP rule |
| First Acknowledged Date, Pushouts, Reschedule– This is part of Order line history table which needs to be available through a new table view to be covered as part of Core Growth Release |
| Item No |
| Item Desc |
| Model |
| Market Model Name |
| Model Group Code |
| Product Family Code |
| Product Group Code |
| Item type code |
| Order No |
| Line No |
| Order Type |
| Line Type |
| Revenue Flag |
| Bill To Customer Name |
| Bill To Channel Code |
| Ship To Customer No |
| Net USD |
| Hold Category |
| Hold Release Date |
| Reason Code |
| OTD Reason Notes |
| Geography / Region 1 |
| Geography / Region 2 |
| Geography / Region 3 |
| Shippable Flag |
| Supplier |
| Company (1Fluke,FHS,FRS,FPI+) |
| Workflow / Workstream |
| BU |
| Trade Sales / Parts / Other / Service / Calibration |
| Forecast Accuracy |

#### KPI Inclusions and/or exclusion from Dashboard

This section defines the filters that would be applied at the BI semantic layer to expose data at the Power BI Dashboard layer.

**Filter for CVD : Sales Type = Trade Sales & Revenue = Y**

Slicers:

Trade Sales: Y or N

Logic:

Order Sales Type: Normal, Service and Special

Logic:

Product Sales Type:

Logic:

Revenue: Y or N

|  |  |  |
| --- | --- | --- |
| **~~Trade Sales~~** | |  |
| **~~Column Name~~** | **~~Condition~~** | **~~What~~** |
| ~~Order Type~~ | ~~Does not Contain~~ | ~~SVC; BILL ONLY; CREDIT MEMO; RMA; FEL RNS~~ |
| ~~Ship-From Inventory Code~~ | ~~IS NOT~~ | ~~DEM~~ |
| ~~Product Family Code~~ | ~~IS NOT~~ | ~~SAH; SAH1; FCSRV; SERVC; PARTS; NUPOW; BMS; DX; PB; RMS; RSSVC; RTSD; FBCO; GCL; FHSSW~~ |
| ~~Model Group Code~~ | ~~IS NOT~~ | ~~PARTS; PSERV; FCSSP~~ |
| ~~Item Type Code~~ | ~~IS NOT~~ | ~~SVC~~ |

|  |  |  |  |
| --- | --- | --- | --- |
| **~~Parts~~** | | |  |
| **~~Column Name~~** | | **~~Condition~~** | **~~What~~** |
| ~~Order Type~~ | | ~~Does not Contain~~ | ~~SVC; BILL ONLY; CREDIT MEMO; RMA; FEL RNS~~ |
| ~~Ship-From Inventory Code~~ | | ~~IS NOT~~ | ~~DEM~~ |
| **~~OR~~** | ~~Product Family Code~~ | ~~IS~~ | ~~SERVC; FCSRV; PARTS; NUPOW~~ |
| ~~Model Group Code~~ | ~~IS~~ | ~~PARTS; PSERV; FCSSP~~ |

|  |  |  |
| --- | --- | --- |
| **~~Other~~** | |  |
| **~~Column Name~~** | **~~Condition~~** | **~~What~~** |
| ~~Order Type~~ | ~~Does not Contain~~ | ~~SVC; BILL ONLY; CREDIT MEMO; RMA; FEL RNS~~ |
| *~~Is not in Trade Sales~~* |  |  |
| *~~Is not in Parts~~* |  |  |
|  |  |  |
|  |  |  |

#### Targets

**Fixed target of 95% On Time across all levels** (In dashboard, marked as Green for anything above 95% , Red otherwise)

Delivery Target value is static and not defined in the system as of today. However the future state should have the ability to define, change and configure the target.

### SERVICES

The main purpose of Service OTD is to track the historical Service Turn Around Time (TAT) performance against internal TAT Goal expectations. Service OTD contains all lines processed through Depot Repair module (MRDW service). All what is in this module is service only receipt. The Service OTD is at a single Line level i.e. RO- Repair Order Line Level.

It is used at all levels in the organization. It is a corporate CVD (Core Value Driver) that is shared widely in the organization and used as low as an individual service cell or model or service type.

#### Calculation Requirements

**Service OTD/Global TAT Measurement:**

The service OTD is a variation of the Customer OTD for operations in a way that, the Service Item selected will determine if the unit will be measured as CAL (Calibration), REP (Repair) or REP + CAL (Repair + Calibration). Unlike the case for Operation OTD, that only applies to FG (Finished Goods) or Parts.

This is measured for External and Internal units separately and reported for External units only.   
(Note: When calculating OTD % in OBI, 12 hours (0.5 days) will be added to TAT goal allowing for end of workday. This does not affect the TAT goal nor the actual TAT, just the OTD % calculation.)  
All is measured with a “running clock”, so fully based on Time Stamps.

**\*\* Measured for External and Internal units separately and reported for External units only.**

**Physical Calculations for Service OTD**

|  |  |  |
| --- | --- | --- |
| Level | Calculation Description | Output |
| Line | **Service OTD /Global TAT Measurement = ‘Ship Date’ - ‘Received Date’ - “customer wait time” - “national holidays”**  When TAT (TurnAroundTime) <= (TAT Goal +0.5) THEN “On Time” When TAT (TurnAroundTime) > (TAT Goal +0.5) THEN “Late”  (Note: When calculating OTD % in OBI, 12 hours (0.5 days) will be added to TAT goal allowing for end of workday. This does not affect the TAT goal nor the actual TAT, just the OTD % calculation.) | Binary:  “On Time” or “Late” |
| Multi-Line (%) | A standard percentage calculation with the numerator being the sum of lines that were shipped On Time and the denominator the total number of shipped lines.  **Total lines Shipped On Time / Total Lines Shipped** | Percent |

#### Variants of the KPI

**Enterprise Level**

* Customer OTD

**Functional Level**

* Lab OTD – performance of a specific Service Lab. Service Type “Repair” and “Calibration” reported separately
* Brand OTD – performance by SVC Brand Name. Service Type “Repair” and “Calibration” reported separately

#### Dimensions and Data Sources

Source of raw data current or new

* Oracle EBS

Each CVD is required to include aggregation capabilities as described in the table below. A common requirement across all dimensions is that a standardized set of aggregation business rules be established

|  |  |  |
| --- | --- | --- |
| **D#** | **Dimension** | **Dimension Description** |
|  |
|  |
| D20 | **Adjustments** | Sales order line adjustments. Types of Adjustments |  |
| D23 | **Buyer** | Employee name and location information of the person who entered the purchasing document in the source system. |  |
| D24 | **Calendar** | Custom Loaded Calendar Table |  |
| D28 | **Currency** | Full International Standards Organization (ISO) name of the monetary unit. |  |
| D29 | **Customer** | Bill-To and Ship-To customer information. |  |
| D30 | **Customer - Channel** | Description of the Customer channel code. |  |
| D31 | Demand Forecast - Record Type | Forecast Detail. |  |
| D32 | Demand Forecast - Type | Forecast Type Detail. |  |
| D33 | **Destination Geography** | Geographies based on Ultimate Destination |  |
| D43 | **Inventory - ATP Rules** | Order Management attributes. |  |
| D50 | **Inventory - Planners** | Material planner assigned to plan the item. |  |
| D55 | **Location** | Geographical location of the customer. |  |
| D59 | **Oracle Open Sales Orders - Hold Buckets** | Time periods used to review and report days on hold. |  |
| D60 | **Oracle Open Sales Orders - Hold Definitions** | Defining Holds **in** Order Management |  |
| D63 | **Order Types - Line Type** | Classification of a sales order line. |  |
| D64 | **Order Types - Order Type** | Classification of a sales order. |  |
| D65 | **Organization** | Name of the accounting company. |  |
| D68 | **Planner** | General planning attributes. |  |
| D73 | **Product** | Product detail. |  |
| D79 | **Repair - Repair Center** | Service Center where the service is done. |  |
| D80 | **Repair - Repair Event** | Indicates the Order Status Change event during a service cycle. |  |
| D81 | **Repair - Repair Tat Rule** | The turnaround time rule that was applied in order to determine the turnaround time (TAT) goal. |  |
| D82 | **Repair - Repair Text** | Junk Dimension |  |
| D83 | **Repair Orders - Incident Status** | Repair incident status details. |  |
| D84 | **Repair Orders - Incident Urgencies** | Repair incident urgency details. |  |
| D85 | **Repair Orders - Texts** | Junk Dimension |  |
| D86 | **Repair Orders - Types** | Repair type details. |  |
| D90 | **Service Type** | Classification of service type. |  |
| D93 | **Source System** | Identifier of the source system for the order line. |  |
| D111 | **VOC Dimension - Supplier** | Origin of item; cell or supplier. |  |
| D115 | **Warehouse** | Warehouse details. |  |
| D120 | **WIP Discrete** | Stores information on Valuation accounts that were charged for issue components, move assemblies, complete assemblies, and charge resources |  |

Unified Dimensions have been vetted with the Data Steward team for each KPI within a CVD. Please refer to the file called “Fluke Datawarehouse Dimensions summary page.xlsx”  Located at Teams site - [Unified Dimensions](https://teams.microsoft.com/_#/xlsx/viewer/teams/https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards~2FShared%20Documents~2FGeneral~2FTechnical%20Docs~2FFluke%20Datawarehouse%20Dimensions_summary%20page.xlsx?threadId=19:84080666398a41adb35436c2d3b196da@thread.tacv2&baseUrl=https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards&fileId=1ca9b00a-fb1c-4075-9f16-21fa7df43938&ctx=files&rootContext=items_view&viewerAction=view)

To get the most updated list of OTD Dimensions filter the OTD column with values ‘Y’ and ‘Service’

#### Data Gaps – Ingestion process needs

N/A – all required data is already available in Oracle EBS

#### Drill Down Path

The most common way to slice and dice the KPI according to the company structure to guide the user on the exploration of the data

* Path1: by Service Center Region i.e. One Fluke Region (APAC, EMEA, Americas)
* Path2: by Service Center Company (Fluke and SSO)
* Path3: by Service Center
* Path4: by SVC Brand Name
* Path5: by Service Type
* Path6: by Service Group
* Path7: by Product Group
* Path8: by Product Family
* Path8: by Offloaded Flag
* Path9: by External Service Flag

#### Metrics Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| List of Metrics Requirements for Service OTD Enterprise Level | | | | |
| Metrics | Description | Logic | Time Dimension | Comment |
| # Lines Shipped | Total number of lines shipped |  | Actual MTD Historical: Day  Week  Month  Quarter  Year | Prio 1  Enterprise Level lagging KPI |
| # Lines Shipped On Time | TAT is within TAT Goal | TAT <= (TAT Goal +0.5) |
| # Lines Shipped Late | TAT is longer as TAT Goal | TAT > (TAT Goal +0.5) |
| OTD % | Percentage of lines shipped On Time | Total lines Shipped On Time / Total Lines Shipped |
| OTD Hits | Count of RepairOrder lines which were shipped LATE | Count of RepairOrder lines which were shipped LATE |  |  |
| List of Metrics Requirements for Service OTD Functional Level | | | | |
| Metrics | Description | Logic | Time Dimension | Comment |
| TAT | NET TurnAroundTime after correction of customer wait time and public holidays | See current OBIEE logic |  |  |
| TATcX | TAT from receive to Ship without correction | See current OBIEE logic |  |  |
| Offloaded Flag | To split instruments serviced In-House and Offloaded | Offload: Unit is offloaded if during the service Tech Status was on a status that contains “OffLoaded”.  See current OBIEE logic |  |  |
| External Service Flag | To split Internal and External Units | Ship-To Customer = Fluke legal entity  Unit is defined as “Loaner” in Oracle  Model contains “LOAN” or “CAL-ONSITE”  See current OBIEE logic |  |  |
| TAT Rule | See OBIEE Background. Existing in OBIEE | See current OBIEE logic |  |  |
| Service Duration | See OBIEE Background. Existing in OBIEE | See current OBIEE logic |  |  |
| Service Count On Time Percentage | See OBIEE Background. Existing in OBIEE | See current OBIEE logic |  |  |
| Service Count | See OBIEE Background. Existing in OBIEE | See current OBIEE logic |  |  |
|  | All calculations currently in OBIEE needs to be provided by Fluke IT team. | See current OBIEE logic |  |  |

#### Power BI needed columns

|  |
| --- |
| PBI Needed Columns |
| |  | | --- | | Operating Company | | Service Center Company | | Service Center Region | | Service Center Country | | Service Center | | BT Customer Name | | BT Country | | ST Customer Name | | ST Country | | ST City | | RMA No | | RMA Line No | | Repair No | | Model | | Item No | | Serial No | | CS Tech Queue | | Service Group | | Product Group | | Product Family Code | | SVC Brand Name | | Accounting Class | | Offloaded Flag | | External Service Flag | | Service Type | | Repair Actuals. “Item No" | | Repair Actuals. “Item Desc" | | CS Diagnosis | | TAT Rule | | TAT Goal | | TAT | | TAT Cx | | Service Count On-Time | | Service Count | | >20 Days Count | | Shipped Date | | Shipped Mo No (Fiscal) | | Shipped Yr | | BT Country Code | | ST Country Code | | RMA Type | | CS Asset No | | Customer PO Ref | | Net Labor Trx | | Net Material Trx | | Net Trx | | Trx Currency Code | | NET EUR | | NET USD | | Product Group Name | | Model Group Code | | %OTD Good | | %OTD Good MTD | | %OTD Target | | CurrYear %OTD Good | | last year %OTD Good | | OTD% Yesterday | | Qty Shipped MTD | | Goal MTD | | Actual MTD | | Gap MTD | | Lab or Onsite | | Service Accounting | | TAT NOT Good Qty | | Receipt Date | | Due Date | |

#### KPI Inclusions and/or exclusion from Dashboard

This section defines the filters that would be applied at the BI semantic layer to expose data at the Power BI Dashboard layer.

**Enterprise Level**

|  |  |  |
| --- | --- | --- |
| Service OTD | |  |
| **Column Name** | **Condition** | **What** |
| External Service Flag | IS | Y |

**Functional Level**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Lab OTD |  | |  | |
| **Column Name** | **Condition** | | **What** | |
| External Service Flag | IS | | Y | |
| Cell OTD | |  | |  |
| **Column Name** | | **Condition** | | **What** |
| Offloaded Flag | | IS | | N |
|  | |  | |  |

#### Targets

**Fixed target of 95% On Time across all levels** (In dashboard, marked as Green for anything above 95% , Red otherwise)

Delivery Target value is static and not defined in the system as of today. However the future state should have the ability to define, change and configure the target.

#### Tektronix Service data

**Requirement**: To include Tektronix Service data with live connection from "//bvprd05.bv.tek.com:1525/SS585P" to Power BI Dataset. This data will be available at Power BI Level.

SSO is Fluke AND Tektronix data (live connection with "//bvprd05.bv.tek.com:1525/SS585P") is part of Power BI dataset in the current state design.

#### Additional Future Needs

* Possibility to combine with Tektronix Oracle data.  
  For example in India, Fluke instruments are serviced in Tektronix systems. To report full Fluke customer experience Fluke Oracle and Tektronix Oracle OTD data needs to be combined.
* Possibility to make updates to the data lake based on the data inferred from the Power BI Dashboard.

For example, if suppose the reason code is blank on any report there should be a way to update it for the OPS representatives.

## PDBL – Past Due Backlog

PDBL is an acronym for **Past Due Backlog** and an Operations L1 KPI. Used as low as an individual production cell or product planner for root cause analyses to increase future performance.

PDBL is the backlog of Trade Sales order lines that are internal (Standard Lead Time) or customer (Customer Request Date) expectations in the past, and not on a Customer backed hold.

### OPERATIONS

#### Calculation Requirements

The Operation PDBL only applies to FG (Finished Goods) or Parts. Table provides a description of the main calculations performed to achieve this purpose

**Physical calculations for the Operations PDBL**

|  |  |  |
| --- | --- | --- |
| Level | Calculation Description | Output |
| Line | **PDBL** is a standard calculation for each line as the difference between the ‘Today date’ and the ‘standard lead time date’/’customer request date’.  If that difference is greater than zero, then the line is marked as ‘Past Due’.    **PDBL Measured against SLT (Standard Lead Time)**  "Today" > "Standard Lead Time Date" = "Past Due to SLT"  **PDBL Measured against CRD (Customer Request Date)**  " Today " > " Customer Request Date " = "Past Due to CRD" | Binary:  Past Due or On time |
| Multi-Line | A standard $ sum calculation | $ Amount |
| Multi-Line | Number of days:    PDBL Days = $ amount PDBL Lines / 1 day of shipments  1 day shipments = months $ shipments / days in the month  For months $ shipments we use shipment forecast during the month and actual at end of month  Days 28 or 35 depending on the month | Number |

#### Variants of the KPI

**Enterprise Level**

* PDBL to SLT
* PDBL to CRD

**Functional Level**

* Factory PDBL - a specific factory/site (Including Intercompany Backlog)
* Trade Sales/Parts/Other
* ATP bucket

#### Dimensions and Data Sources

Source of raw data current or new

* + Oracle EBS
  + FRS Subsidiary Flat files
* Excel Flat files

Each CVD is required to include aggregation capabilities as described in the table below. A common requirement across all dimensions is that a standardized set of aggregation business rules be established

|  |  |  |
| --- | --- | --- |
| **D#** | **Dimension** | **Dimension Description** |
|  |
|  |
| D20 | **Adjustments** | Sales order line adjustments. |  |
| D23 | **Buyer** | Employee name and location information of the person who entered the purchasing document in the source system. |  |
| D24 | **Calendar** | Custom Loaded Calendar Table |  |
| D28 | **Currency** | Full International Standards Organization (ISO) name of the monetary unit. |  |
| D29 | **Customer** | Bill-To and Ship-To customer information. |  |
| D30 | **Customer - Channel** | Description of the Customer channel code. |  |
| D31 | Demand Forecast - Record Type | Forecast Detail. |  |
| D32 | Demand Forecast - Type | Forecast Type Detail. |  |
| D33 | **Destination Geography** | Geographies based on Ultimate Destination |  |
| D43 | **Inventory - ATP Rules** | Order Management attributes. |  |
| D50 | **Inventory - Planners** | Material planner assigned to plan the item. |  |
| D55 | **Location** | Geographical location of the customer. |  |
| D59 | **Oracle Open Sales Orders - Hold Buckets** | Time periods used to review and report days on hold. |  |
| D60 | **Oracle Open Sales Orders - Hold Definitions** | Defining Holds **in** Order Management |  |
| D63 | **Order Types - Line Type** | Classification of a sales order line. |  |
| D64 | **Order Types - Order Type** | Classification of a sales order. |  |
| D65 | **Organization** | Name of the accounting company. |  |
| D68 | **Planner** | General planning attributes. |  |
| D73 | **Product** | Product detail. |  |
| D92 | Snapshot | Snapshot detail. |  |
| D93 | **Source System** | Identifier of the source system for the order line. |  |
| D111 | **VOC Dimension - Supplier** | Origin of item; cell or supplier. |  |
| D115 | **Warehouse** | Warehouse details. |  |

Unified Dimensions have been vetted with the Data Steward team for each KPI within a CVD. Please refer to the file called “Fluke Datawarehouse Dimensions summary page.xlsx”  Located at Teams site - [Unified Dimensions](https://teams.microsoft.com/_#/xlsx/viewer/teams/https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards~2FShared%20Documents~2FGeneral~2FTechnical%20Docs~2FFluke%20Datawarehouse%20Dimensions_summary%20page.xlsx?threadId=19:84080666398a41adb35436c2d3b196da@thread.tacv2&baseUrl=https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards&fileId=1ca9b00a-fb1c-4075-9f16-21fa7df43938&ctx=files&rootContext=items_view&viewerAction=view)

To get the most updated list of PDBL Dimensions filter the PDBL column with values ‘Y’

#### Data Gaps – Ingestion process needs

N/A

#### Drill Down Path

The most common way to slice and dice the KPI according to the company structure to guide the user on the exploration of the data

* Path1: by One Fluke Region (APAC, EMEA, Americas)
* Path2: by product Workflow
* Path3: by Factory of Origin
* Path4: by Reason Code  - field under the Order Dimension

#### Metrics Requirements

Below list must support the following related metrics to be visual on Dashboard

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| List of Metrics Requirements for PDBL | | | | | |
| Metrics | **Description** | **Logic** | **Time Dimension** | **Comment** |
| # lines PDBL to SLT | Backlog lines with SLT in the Past | Count of lines ; SLT < “Today” |  |  |
| $ PDBL to SLT | $ Backlog SLT in the Past | $ value; SLT < “Today” |  |  |
| Days PDBL to SLT | Number of days PDBL to SLT | $ PDBL to SLT / (months $ shipments / ~~working~~ days in month) |  |  |
| # lines PDBL to CRD | Backlog lines with CRD in the Past | Count of lines ; CRD < “Today” |  |  |
| $ PDBL to CRD | $ Backlog CRD in the Past | $ value; CRD < “Today” |  |  |
| Days PDBL to CRD | Number of days PDBL to CRD | $ PDBL to CRD / (months $ shipments / ~~working~~ days in month) |  |  |
| # lines PDBL to ATP | Backlog lines with ATP date in the Past | Count of lines ; ATP date < “Today” |  |  |
| # lines Scheduled PDBL to SLT | Backlog lines with SLT past or current month and scheduled future | Count of lines; SLT ≤ current month  & Schd > current month |  |  |
| $ Scheduled PDBL to SLT | $ Backlog with SLT past or current month and scheduled future | $ value; SLT ≤ current month  & Schd > current month |  |  |
| Days Scheduled PDBL to SLT | Number of days scheduled PDBL to SLT | $ Scheduled PDBL to SLT / (months $ shipments / ~~working~~ days in month) |  |  |
| # lines Scheduled PDBL to CRD | Backlog lines with CRD past or current month and scheduled future | Count of lines; CRD ≤ current month  & Schd > current month |  |  |
| $ Scheduled PDBL to CRD | $ Backlog with CRD past or current month and scheduled future | $ value; CRD ≤ current month  & Schd > current month |  |  |
| Days Scheduled PDBL to CRD | Number of days scheduled PDBL to CRD | $ Scheduled PDBL to CRD / (months $ shipments / ~~working~~ days in month) |  |  |
| Scheduled Overdue to SLT Inside | Number of lines / $ value scheduled overdue & within this month | SLT ≥ “Today”  & Schd  > SLT  & Schd ≤ current month |  |  |
| Scheduled Overdue to SLT Outside | Number of lines / $ value scheduled overdue & future months this month | SLT ≥ “Today”  & Schd  > SLT  & Schd > current month |  |  |
| Scheduled Overdue to CRD Inside | Number of lines / $ value scheduled overdue & within this month | CRD ≥ “Today”  & Schd  > CRD  & Schd ≤ current month |  |  |
| Scheduled Overdue to CRD Outside | Number of lines / $ value scheduled overdue & future months this month | CRD ≥ “Today”  & Schd  > CRD  & Schd > current month |  |  |
| ATP date | Book date + ATP rule days |  |  |  |
| $ target | $ amount equal to 0.3 days | months $ shipments / ~~working~~ days in the month (~~20 or 25~~ 28 or 35) \* 0.3 (days) |  |  |
| $ to target | $ amount to target | $ PDBL - $ target |  |  |

#### Power BI needed columns

The must have columns for enterprise level:

|  |
| --- |
| Manual / Functional Input |
| Backlog date |
| Booked Date |
| Request Date |
| SLT Date |
| Scheduled Date |
| Scheduled Ship Bucket |
| SLT Bucket |
| CRD Bucket |
| Inv Org |
| Backlog Category |
| Sales Order |
| Line Number |
| Bill To Customer |
| Product  Item nr; model, product group code, product family code, model code, workflow, |
| Released Y/N |
| Reserved Y/N |
| Order Quantity |
| Net USD |
| Line Flow Status |
| Warehouse Status |
| On Hold Flag |
| Order Holds |
| Line Holds |
| Order Type |
| Sales Geography |
| Ship to country |
| Factory of Origin |
| Company of Origin |
| Planner |
| Buyer |
| In Transit |

#### KPI Inclusions and/or exclusion from Dashboard

This section defines the filters that would be applied at the BI semantic layer to expose data at the Power BI Dashboard layer.

**Enterprise Level**

|  |  |  |  |
| --- | --- | --- | --- |
| **Trade Sales** | | |  |
| **Column Name** | | **Condition** | **What** |
| Booked Flag | | IS | Y |
| Order Type | | Does not Contain | SVC; BILL ONLY; CREDIT MEMO; RMA; FEL RNS |
| Ship-From Inventory Code | | IS NOT | DEM |
| Product Family Code | | IS NOT | SAH; SAH1; FCSRV; SERVC; PARTS; NUPOW; BMS; DX; PB; RMS; RSSVC; RTSD; FBCO; GCL; FHSSW |
| Product Group Code | | IS NOT | NO DATA; UNKNOWN |
| Model Group Code | | IS NOT | PARTS; PSERV |
| Item Type Code | | IS NOT | SVC |
| OR | On Hold Flag | IS | N |
| Line Hold or Order Hold | IS | Fluke Caused - Hold Type and Hold Category(spreadsheet mapping to bring all holds) |

|  |  |  |  |
| --- | --- | --- | --- |
| **Parts** | | |  |
| **Column Name** | | **Condition** | **What** |
| Booked Flag | | IS | Y |
| Order Type | | Does not Contain | SVC; BILL ONLY; CREDIT MEMO; RMA; FEL RNS |
| Ship-From Inventory Code | | IS NOT | DEM |
| OR | Product Family Code | IS | SERVC; FCSVR; PARTS; NUPOW |
| Model Group Code | IS | PARTS; PSERV; FCSSP |
| OR | On Hold Flag | IS | N |
| Line Hold or Order Hold | IS | Fluke caused - Hold Type and Hold Category (spreadsheet mapping to bring all holds) |

|  |  |  |
| --- | --- | --- |
| **Other** | |  |
| **Column Name** | **Condition** | **What** |
| Order Type | Does not Contain | SVC; BILL ONLY; CREDIT MEMO; RMA; FEL RNS |
| *Is not in Trade Sales* |  |  |
| *Is not in Parts* |  |  |

#### Targets

* Fixed target of 0.3 days (In dashboard, marked as Green for anything below 0.3 , Red otherwise)
* $ target is derived from the 0.3 days and shipments

months $ shipments / days in the month \* 0.3

For months $ shipments we use shipment forecast (shipment Outlook) during the month and actual at end of month. Days 28 or 35 depending on the month

Delivery Target value is static and not defined in the system as of today. However the future state should have the ability to define, change and configure the target.

#### Additional or future needs

Functional Level:

* For backlog review and scheduling there is the need to link to in transit records, PO Backlog, ...
* Scenario planning and AI analytics for backlog predictions and conversion ratios accounting for raw material availability, capacity planning/manufacturing output, FG on hand and new bookings

### SERVICES

The service PDBL is a variation of the Customer OTD for operations in a way that, the Service Item selected will determine if the unit will be measured as CAL (Calibration), REP (Repair) or REP + CAL (Repair + Calibration). Unlike the case for Operation OTD, that only applies to FG(Finished Goods) or Parts.

The service PDBL is a variation of the Backlog and PDBL with a similar logic to define the Due Date. The Due Date is required for PDBL reporting and based on time stamps. Due Date is also required in local time zone.

For service, Customer Holds are part of Due Date calculation. Due Date is the indicator if a line is Past Due or On Time

#### Calculation Requirements

Backlog is any Repair Order Line that has status “**Open”** in Depot Repair.

PDBL = Quantity Open Repair Order Lines where Due Date is in the past.

**\*\* Measured for External and Internal units separately and reported for External units only and is a month end Snapshot.**

**Physical calculations for the Service PDBL**

|  |  |  |
| --- | --- | --- |
| Level | Calculation Description | Output |
| Line | **PDBL** is a standard calculation for each Repair Order line as the difference between the ‘Today date’ and the ‘Due Date’. If that difference is greater than zero, then the line is marked as ‘Past Due’.  **Measured against Due Date**  **If** "Today" - "Due Date" >0 **then** "Past Due"  **If** "Today" - "Due Date" <=0 **then** "On Time"  **Due Date** = Receive Date - “customer wait time” - “national holidays” (all based on time stamps) | Binary:  Past Due or On time |
| Multi - Line (%) | A standard percentage calculation with the numerator being the sum of Open Repair Order lines that are Past Due and the denominator the total number of Open Repair Order lines  **Total count of Open “Past Due” lines / Total count of Open lines** | Percent |
| Multi - Line | **Sum of Open Repair Order lines count that are Past Due** | Quantity |
| Multi - Line | **The $ Amount Sum of Open Repair Order lines that are Past Due** | $ Amount |

#### Variants of the KPI

**Enterprise Level**

* PDBL %
* PDBL Line Quantity
* PDBL $ Amount

**Functional Level**

* PDBL External Units
* PDBL Internal Units
* PDBL By Order Status
* PDBL By Tech Status
* PDBL By WIP Location/Backlog Bucket
* PDBL by Service Group
* PDBL by Service Type
* PDBL Past Due and On Time
* PDBL Offloaded Flag
* PDBL Calibration type

#### Dimensions and Data Sources

|  |  |  |
| --- | --- | --- |
| **D#** | **Dimension** | **Dimension Description** |
|  |
|  |
| D20 | **Adjustments** | Sales order line adjustments.Types of Adjustments |  |
| D23 | **Buyer** | Employee name and location information of the person who entered the purchasing document in the source system. |  |
| D24 | **Calendar** | Custom Loaded Calendar Table |  |
| D28 | **Currency** | Full International Standards Organization (ISO) name of the monetary unit. |  |
| D29 | **Customer** | Bill-To and Ship-To customer information. |  |
| D30 | **Customer - Channel** | Description of the Customer channel code. |  |
| D31 | Demand Forecast - Record Type | Forecast Detail. |  |
| D32 | Demand Forecast - Type | Forecast Type Detail. |  |
| D33 | **Destination Geography** | Geographies based on Ultimate Destination |  |
| D43 | **Inventory - ATP Rules** | Order Management attributes. |  |
| D50 | **Inventory - Planners** | Material planner assigned to plan the item. |  |
| D55 | **Location** | Geographical location of the customer. |  |
| D59 | **Oracle Open Sales Orders - Hold Buckets** | Time periods used to review and report days on hold. |  |
| D60 | **Oracle Open Sales Orders - Hold Definitions** | Defining Holds **in** Order Management |  |
| D63 | **Order Types - Line Type** | Classification of a sales order line. |  |
| D64 | **Order Types - Order Type** | Classification of a sales order. |  |
| D65 | **Organization** | Name of the accounting company. |  |
| D68 | **Planner** | General planning attributes. |  |
| D73 | **Product** | Product detail. |  |
| D79 | **Repair - Repair Center** | Service Center where the service is done. |  |
| D80 | **Repair - Repair Event** | Indicates the Order Status Change event during a service cycle. |  |
| D81 | **Repair - Repair Tat Rule** | The turnaround time rule that was applied in order to determine the turaound time (TAT) goal. |  |
| D82 | **Repair - Repair Text** | Junk Dimension |  |
| D83 | **Repair Orders - Incident Status** | Repair incident status details. |  |
| D84 | **Repair Orders - Incident Urgencies** | Repair incident urgency details. |  |
| D85 | **Repair Orders - Texts** | Junk Dimension |  |
| D86 | **Repair Orders - Types** | Repair type details. |  |
| D90 | **Service Type** | Classification of service type. |  |
| D92 | Snapshot | Snapshot detail. |  |
| D93 | **Source System** | Identifier of the source system for the order line. |  |
| D111 | **VOC Dimension - Supplier** | Origin of item; cell or supplier. |  |
| D115 | **Warehouse** | Warehouse details. |  |
| D120 | **WIP Discrete** | Stores information on Valuation accounts that were charged for issue components, move assemblies, complete assemblies, and charge resources |  |

Unified Dimensions have been vetted with the Data Steward team for each KPI within a CVD. Please refer to the file called “Fluke Datawarehouse Dimensions summary page.xlsx”  Located at Teams site - [Unified Dimensions](https://teams.microsoft.com/_#/xlsx/viewer/teams/https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards~2FShared%20Documents~2FGeneral~2FTechnical%20Docs~2FFluke%20Datawarehouse%20Dimensions_summary%20page.xlsx?threadId=19:84080666398a41adb35436c2d3b196da@thread.tacv2&baseUrl=https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards&fileId=1ca9b00a-fb1c-4075-9f16-21fa7df43938&ctx=files&rootContext=items_view&viewerAction=view)

To get the most updated list of PDBL Dimensions filter the PDBL column with values ‘Y’ and ‘Service’

#### Data Gaps – Ingestion process needs

N/A – all required data is already available in Oracle EBS

#### Drill Down Path

The most common way to slice and dice the KPI according to the company structure to guide the user on the exploration of the data

* Path1: by Service Center Region i.e. One Fluke Region (APAC, EMEA, Americas)
* Path2: by Service Center Company (Fluke and SSO)
* Path3: by Service Center
* Path4: by SVC Brand Name
* Path5: by Service Type
* Path6: by Service Group
* Path7: by Product Group
* Path8: by Offloaded Flag
* Path9: by External Service Flag

#### Metrics Requirements

Below list must support the following related metrics to be visual on Dashboard

|  |  |  |  |
| --- | --- | --- | --- |
| **List of Metrics Requirements for Service PDBL Enterprise Level** | | | |
| **Description** | **Logic** | **Time Dimension** | **Comment** |
| # Lines Past Due Backlog | Total number of Repair Order lines with status Open and Due Date in the past | Snap Shots Weekly, Monthly (month End Closure) for past 2 years + current year |  |
| Past Due Backlog Value | Total value of Repair Order lines Open and Due Date in the past |
| PDBL Percentage | Count of Past Due lines open/total count lines open |
| **List of Metrics Requirements for Service PDBL Functional Level** | | | |
| **Description** | **Logic** | **Time Dimension** | **Comment** |
| Total number of Repair Order lines with status Open and Due Date in the past |  | Actual + Snap Shots Daily, Weekly, Monthly (month End Closure) for past 2 years + current year |  |

#### Power BI needed columns

|  |
| --- |
| Power BI needed columns |
| Service Center Company |
| Service Center Region |
| Service Center Country |
| Service Center |
| BT Customer Name |
| BT Country |
| ST Customer Name |
| ST Country |
| ST City |
| RMA No |
| RMA Line No |
| Repair No |
| Model |
| Item No |
| Serial No |
| CS Tech Queue |
| Service Group |
| Product Group |
| Product Family Code |
| SVC Brand Name |
| Accounting Class |
| Offloaded Flag |
| External Service Flag |
| Service Type |
| Repair Actuals."Item No" |
| Repair Actuals."Item Desc" |
| CS Diagnosis |
| TAT Rule |
| TAT Goal |
| TAT |
| TAT Cx |
| Service Count |
| >20 Days Count |
| RMA Type |
| CS Asset No |
| Customer PO Ref |
| Net Labor Trx |
| Net Material Trx |
| Net Trx |
| Trx Currency Code |
| NET EUR |
| NET USD |
| Product Group Name |
| Model Group Code |
| Lab or Onsite |
| Service Accounting |
| Receipt Date |
| Due Date |
| Overdue% |
| Not Due% |
| Operating Company |
| Overdue Count |
| Not Due Count |
| Snapshot Date |
| Monthly Snapshot Select |
| Weekly Snapshot Select |
| Order Status |
| Tech Status |

#### KPI Inclusions and/or exclusion from Dashboard

This section defines the filters that would be applied at the BI semantic layer to expose data at the Power BI Dashboard layer.

**Enterprise Level**

|  |  |  |
| --- | --- | --- |
| PDBL Service | |  |
| **Column Name** | **Condition** | **What** |
| External Service Flag | IS | Y |

#### Scoring Logic/Target

**Fixed target of 5% of the total open service lines**(In dashboard, marked as Green for anything below 5% , Red otherwise)

It means the past due backlog quantity should not be greater than 5% of the total open service lines

Delivery Target value is static and not defined in the system as of today. However the future state should have the ability to define, change and configure the target.

#### Power BI Snapshots

Snapshots for PDBL will be taken and be available for reporting. The snapshot schedule would be as defined below

1. Daily snapshots
2. Weekly and Monthly snapshots taken every Saturday

#### Additional or future needs

Possibility to combine with Tektronix Oracle data.  
For example in India, Fluke instruments are serviced in Tektronix systems. To report full Fluke customer experience Fluke Oracle and Tektronix Oracle OTD data needs to be combined

## BACKLOG

Backlog is any order line that has not been shipped or fulfilled. Flow status is not “closed”, “shipped” or “fulfilled”. It is used by many functions in the organization and monitored constantly for its health.

* Operations is using it at all levels, as this defines what has to / could be shipped.
* Finance is using it as input for shipment forecast.

### OPERATIONS

#### Calculation Requirements

The Operation Backlog only applies to FG (Finished Goods) or Parts. Table provides a description of the main calculations performed to achieve this purpose

**Physical calculations for the Operations Backlog**

|  |  |  |
| --- | --- | --- |
| Level | Calculation Description | Output |
| Multi-Line | A standard $ sum calculation | $ Amount |
| Multi-Line | A standard sum calculation | Number |

#### Variants of the KPI

**Enterprise Level**

* Customer Backlog

Besides standard Oracle EBS dimensions, Customer Backlog is split into different categories:

* Type of backlog
* No Hold
* Finance Hold
* Order Management Hold
* Operations or Trade Compliance Hold
* Scheduled Date Bucket:
* Past – Scheduled date < Current date
* Current – Scheduled date within current month
* Future – Scheduled in Future months
* SLT bucket
* Past
* Current
* Future
* CRD bucket
* Past
* Current
* Future

Or

* Requested Inside (CRD Bucket Past and Current)
* Requested Outside (CRD Bucket Future)
* Trade Sales / Parts / Other

**Functional Level**

* Entered Backlog
* Factory Backlog – a specific factory/site (Including Intercompany Backlog)

#### Dimensions and Data Sources

Source of raw data current or new

* + Oracle EBS
  + FRS Subsidiary Flat files
* Excel Flat files

Each CVD is required to include aggregation capabilities as described in the table below. A common requirement across all dimensions is that a standardized set of aggregation business rules be established

|  |  |  |
| --- | --- | --- |
| **D#** | **Dimension** | **Dimension Description** |
|  |
|  |
| D20 | **Adjustments** | Sales order line adjustments. |  |
| D23 | **Buyer** | Employee name and location information of the person who entered the purchasing document in the source system. |  |
| D24 | **Calendar** | Custom Loaded Calendar Table |  |
| D28 | **Currency** | Full International Standards Organization (ISO) name of the monetary unit. |  |
| D29 | **Customer** | Bill-To and Ship-To customer information. |  |
| D30 | **Customer - Channel** | Description of the Customer channel code. |  |
| D31 | Demand Forecast - Record Type | Forecast Detail. |  |
| D32 | Demand Forecast - Type | Forecast Type Detail. |  |
| D33 | **Destination Geography** | Geographies based on Ultimate Destination |  |
| D43 | **Inventory - ATP Rules** | Order Management attributes. |  |
| D50 | **Inventory - Planners** | Material planner assigned to plan the item. |  |
| D51 | **Inventory - Sub Inventories** | Sub inventory details. |  |
| D55 | **Location** | Geographical location of the customer. |  |
| D59 | **Oracle Open Sales Orders - Hold Buckets** | Time periods used to review and report days on hold. |  |
| D60 | **Oracle Open Sales Orders - Hold Definitions** | Defining Holds **in** Order Management |  |
| D63 | **Order Types - Line Type** | Classification of a sales order line. |  |
| D64 | **Order Types - Order Type** | Classification of a sales order. |  |
| D65 | **Organization** | Name of the accounting company. |  |
| D68 | **Planner** | General planning attributes. |  |
| D73 | **Product** | Product detail. |  |
| D92 | Snapshot | Snapshot detail. |  |
| D93 | **Source System** | Identifier of the source system for the order line. |  |
| D111 | **VOC Dimension - Supplier** | Origin of item; cell or supplier. |  |
| D115 | **Warehouse** | Warehouse details. |  |

Unified Dimensions have been vetted with the Data Steward team for each KPI within a CVD. Please refer to the file called “Fluke Datawarehouse Dimensions summary page.xlsx”  Located at Teams site - [Unified Dimensions](https://teams.microsoft.com/_#/xlsx/viewer/teams/https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards~2FShared%20Documents~2FGeneral~2FTechnical%20Docs~2FFluke%20Datawarehouse%20Dimensions_summary%20page.xlsx?threadId=19:84080666398a41adb35436c2d3b196da@thread.tacv2&baseUrl=https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards&fileId=1ca9b00a-fb1c-4075-9f16-21fa7df43938&ctx=files&rootContext=items_view&viewerAction=view)

To get the most updated list of Backlog Dimensions filter the Backlog column with values ‘Y’

#### Data Gaps – Ingestion process needs

N/A – all required data is already available in Oracle EBS

#### Drill Down Path

The most common way to slice and dice the KPI according to the company structure to guide the user on the exploration of the data

* Path1: by One Fluke Region (APAC, EMEA, Americas)
* Path2: by product Workflow
* Path3: by Factory of Origin

Below list must support the following related metrics to be visual on Dashboard

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| List of Metrics Requirements for Backlog - Enterprise | | | | | | | |
| Metrics | **Description** | **Logic** | | **Time Dimension** | | | **Comment** |
| Scheduled Date Bucket | Scheduled in the Past | Past = | | **Actual**   Day/ Week/ Month | | |  |
|  | Scheduled in the Remaining of current month | Current = | |  |
|  | Scheduled in future months | Future = | |  |
| SLT Bucket | SLT in the Past | Past = SLT date < today | | = PDBL to SLT |
|  | SLT in the Remaining of current month | Current = SLT date ≥ today, but within current month | |  |
|  | SLT in future months | Future = SLT date in future months | |  |
| CRD Bucket | CRD in the Past | Past = CRD date < today | | =PDBL to CRD |
|  | CRD in the Remaining of current month | Current = CRD date ≥ today, but within current month | |  |
|  | CRD in future months | Future = CRD date in future months | |  |
| $ on hold | The $ amount that is on hold | The $ amount that is on hold | |  | | |  |
| JOP | Jump of Point - Starting backlog | Starting backlog at the start of Year / Quarter / Month | |  | | |  |
| MtD Change | Month to date Change (will be Month over month if user selected month-end snap shot) | backlog as per chosen backlog date (either current date or any month end snap shot) – (chosen) Month JOP | |  | | |  |
| QTD Change | Quarter to date Change | backlog as per chosen backlog date (either current or any month end snap shot) – (chosen) Quarter JOP | |  | | |  |
| YTD Change | Year to date Change | backlog as per chosen backlog date (either current or any month end snap shot) – (chosen) Year JOP | |  | | |  |
| YOY Change | Year over Year Change | backlog as per chosen backlog date (either current or any month end snap shot) – backlog same fiscal day 1 year ago | |  | | |  |
| Backlog Forecast |  | For current Month = Month end Actual Backlog + Forecasted Orders – Forecasted Shipments  For future months: same logic but using the forecasted ending backlog instead of the actual | |  | | |  |
| List of Metrics Requirements for Backlog - Functional | | | | | | | |
| Metrics | **Description** | | **Logic** | | **Time Dimension** | **Comment** | |
| Rec’d – Entered | Timeframe between order receipt date and order entered date | | # of days between Entered - Receipt | |  | Order level | |
| Rec’d – Sipped | Timeframe between order receipt date and line shipment date | | # of days between Entered - shipped | |  |  | |
| Book to Ship | Timeframe between order booked date and line shipment date | | # of days between Booked - shipped | |  |  | |
| Pending orders number | Number of orders that is on entered status (booked flag =N) | |  | | Day/ Week/ Month/Year |  | |
| Pending orders $ | $ value of the backlog that is on entered status (booked flag =N) | |  | |  | |
| # Orders entered/booked | Total orders (#) entered / booked | |  | | Bookings  Or  Combines from backlog and shipments tables | |
| # Lines entered/booked | Total Lines (#) entered / booked | |  | |
| $ entered/booked | Total $ entered / booked | |  | |
| # orders on hold | # orders on hold | |  | |  |  | |

#### Metrics Requirements

Below list must support the following related metrics to be visual on Dashboard

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| List of Metrics Requirements for Backlog - Enterprise | | | | | | | |
| Metrics | **Description** | **Logic** | | **Time Dimension** | | | **Comment** |
| Scheduled Date Bucket | Scheduled in the Past | Past = | | **Actual**   Day/ Week/ Month | | |  |
|  | Scheduled in the Remaining of current month | Current = | |  |
|  | Scheduled in future months | Future = | |  |
| SLT Bucket | SLT in the Past | Past = SLT date < today | | = PDBL to SLT |
|  | SLT in the Remaining of current month | Current = SLT date ≥ today, but within current month | |  |
|  | SLT in future months | Future = SLT date in future months | |  |
| CRD Bucket | CRD in the Past | Past = CRD date < today | | =PDBL to CRD |
|  | CRD in the Remaining of current month | Current = CRD date ≥ today, but within current month | |  |
|  | CRD in future months | Future = CRD date in future months | |  |
| $ on hold | The $ amount that is on hold | The $ amount that is on hold | |  | | |  |
| JOP | Jump of Point - Starting backlog | Starting backlog at the start of Year / Quarter / Month | |  | | |  |
| MtD Change | Month to date Change (will be Month over month if user selected month-end snap shot) | backlog as per chosen backlog date (either current date or any month end snap shot) – (chosen) Month JOP | |  | | |  |
| QTD Change | Quarter to date Change | backlog as per chosen backlog date (either current or any month end snap shot) – (chosen) Quarter JOP | |  | | |  |
| YTD Change | Year to date Change | backlog as per chosen backlog date (either current or any month end snap shot) – (chosen) Year JOP | |  | | |  |
| YOY Change | Year over Year Change | backlog as per chosen backlog date (either current or any month end snap shot) – backlog same fiscal day 1 year ago | |  | | |  |
| Backlog Forecast |  | For current Month = Month end Actual Backlog + Forecasted Orders – Forecasted Shipments  For future months: same logic but using the forecasted ending backlog instead of the actual | |  | | |  |
| Conversion | Should be a Percentage of $ Booked and shipped in the same month / Total $ shipments in the same month | $ Booked and shipped in the same month / Total $ shipments in the sme month | |  | | |  |
| List of Metrics Requirements for Backlog - Functional | | | | | | | |
| Metrics | **Description** | | **Logic** | | **Time Dimension** | **Comment** | |
| Rec’d – Entered | Timeframe between order receipt date and order entered date | | # of days between Entered - Receipt | |  | Order level | |
| Rec’d – Sipped | Timeframe between order receipt date and line shipment date | | # of days between Entered - shipped | |  |  | |
| Book to Ship | Timeframe between order booked date and line shipment date | | # of days between Booked - shipped | |  |  | |
| Pending orders number | Number of orders that is on entered status (booked flag =N) | |  | | Day/ Week/ Month/Year |  | |
| Pending orders $ | $ value of the backlog that is on entered status (booked flag =N) | |  | |  | |
| # Orders entered/booked | Total orders (#) entered / booked | |  | | Bookings  Or  Combines from backlog and shipments tables | |
| # Lines entered/booked | Total Lines (#) entered / booked | |  | |
| $ entered/booked | Total $ entered / booked | |  | |
| # orders on hold | # orders on hold | |  | |  |  | |

#### Power BI needed columns

The must have columns for enterprise level:

|  |
| --- |
| Manual / Functional Input |
| Buyer  Planner  Factory of Origin  Cell  Organization Name  Ship-From Inventory Code  PO Received Date (OM)  Entered Date (OM)  Booked Date  Pick Release Date  Scheduled Ship Date  Standard Lead Time Date  Request Date  ATP rule  First Acknowledged Date  Item No  Item Desc  Model  Market Model Name  Model Group Code  Product Family Code  Product Group Code  Company/Subsidiary (1Fluke, FHS, FRS, FPI+)  Workflow / Workstream  BU?  Trade Sales / Parts / Other / Service / Calibration  Shippable Flag  Supplier  Forecast Accuracy  Order No  Line No  Order Type  Line Type  Revenue Flag  Net USD  Quantity  Reserved Quantity  ATP available to reserve Qty  ATP on hand Qty  Hold Flag  Hold Category  Reason Code  OTD Reason Notes  BT Customer Name  BT Channel Code  ST Customer No  Geography / Region 1  Geography / Region 2  Geography / Region 3  Created By  Created by Employee #  Managed by (US only)  Workload Tool Location  Workload Category |

#### KPI Inclusions and/or exclusion from Dashboard

This section defines the filters that would be applied at the BI semantic layer to expose data at the Power BI Dashboard layer.

**Enterprise Level**

|  |  |  |
| --- | --- | --- |
| Customer Backlog | |  |
| **Column Name** | **Condition** | **What** |
| Revenue Flag | IS | Y |
| Booked Flag | IS | Y |
|  |  |  |

**Functional Level**

|  |  |  |
| --- | --- | --- |
| Factory Backlog |  |  |
| **Column Name** | **Condition** | **What** |
| Include non-revenue and entered orders | | |

#### Targets

* Backlog in $ and days. We mainly track the evolution of the backlog; increase/decrease. For Target- Use previous year or previous month (previous Data point) to indicate red or green
* Number of days: measure against last month or against last 13 weeks? (Not included in this version)

Delivery Target value is static and not defined in the system as of today. However the future state should have the ability to define, change and configure the target.

#### Holds Overview

A hold is a status that will stop the normal processing of shipment/fulfillment. Holds are at Order as well as line level. Each order or line can have one or more holds. If the latter case occurs, these holds need to be priorities based on the owner and the category they belong to. This priority is defined for Backlogs only and the logic is not shared across other KPIs. The Category and Owner information is maintained in Oracle EBS as concatenated field.

See below table for reference. This table will reside at Unified BI solution layer and will be maintained through the Data Governance process TBD. The logic to pick up the highest priority from multiple priorities will reside at the Reporting layer.

|  |  |  |
| --- | --- | --- |
| **Owner** | **Category** | **Priority** |
| Compliance | Compliance | 11 |
| OPS | Stop Shipment | 4 |
| OPS | Allocation / Product | 12 |
| OPS | Compliance | 5 |
| OPS | Shipping | 13 |
| Finance | Credit Check | 3 |
| Finance | Cash in Advance | 1 |
| OM/Comm | Letter of Credit | 2 |
| OM/Comm | Customer Request | 8 |
| OM/Comm | Order Change | 10 |
| OM/Comm | Shipping | 9 |
| OM/Comm | Compliance | 6 |
| OM/Comm | Other | 7 |
| Service |  |  |
| N/A | will not stop shipment |  |

#### Additional or future needs

Functional Level:

* Linking line to the B2B order, in-transit record, RMA order
* For backlog review and scheduling there is the need to link to in transit records, PO Backlog, ...
* Scenario planning and AI analytics for backlog predictions and conversion ratios accounting for raw material availability, capacity planning/manufacturing output, FG on hand and new bookings

### SERVICES

**<<TBD>>**

This section will capture the requirements that were not included in Phase 1 development effort due to delay in providing the necessary information or requirement. The implementation of the requirements in this section will be part of the subsequent release after Phase 1 Go Live.

# Core Value Focus Area – Revenue/Core Growth Strategy

Core growth is a measure of internal growth of existing business versus prior year. This excludes impact of sales increase through acquisitions or FX. The main aim of this strategy is to increase sales of existing products or services in existing markets, and thus increase the market share. This core value also aims at improving the distribution network, inventory, and increased promotional activities. The 7 key KPIs under this CVD are

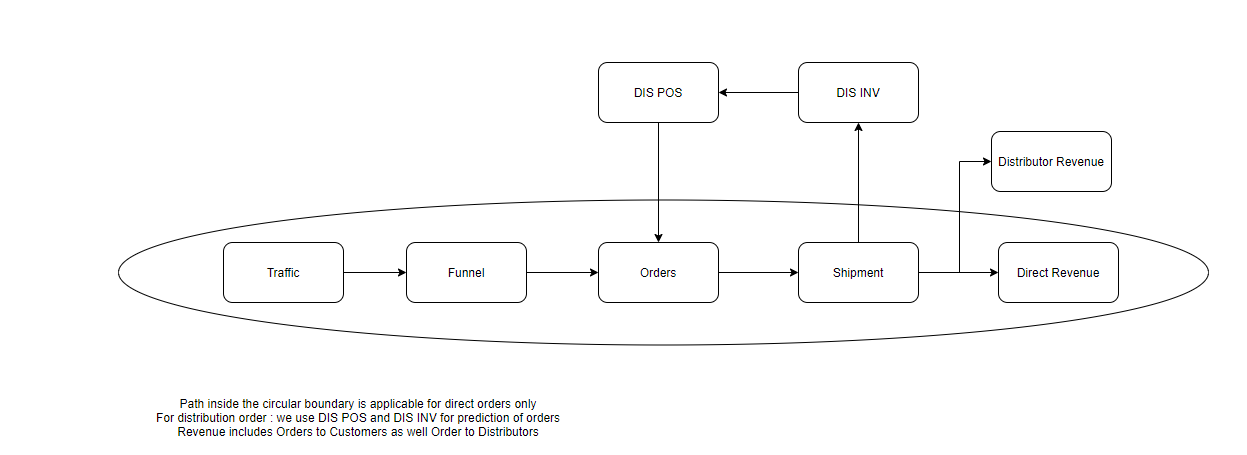
* Funnel
* Orders
* Shipment
* DIS INV
* DIS POS
* Revenue
* Traffic

Each of these are described in detail in from section 12.2 to 12.7. Below is the broad classification of the Core Growth CVD with its Functional Variants

A high-level process flow for this core value driver starts with Funnel, which is responsible for Lead generation through campaigns. The output of Funnel is opportunity aka potential customer base that drives growth and revenue. When a Fluke customer provides a purchase order, it becomes an order that is fulfilled by Fluke and shipped to the customer which becomes a shipment.

For Order predictions, Fluke uses inventory data (DIS INV) to calculate weeks of supply in the market and POS data. POS data is also used for other business tasks such as calculating pay on incentive plans, gauging market consumption, and forecast market demand.

Below flow diagram shows the information flow within these KPIs. ***\*\* process discrepancies could cause Shipment and Revenue to be different***



TRAFFIC

**What is Traffic?**

Web traffic is the amount of data sent and received by visitors to a website. Traffic is determined by the number of visitors and the number of pages they visit as well as additional website performance metrics (technical and revenue generating). Sites monitor the incoming and outgoing traffic to see which parts or pages of their site are effective for driving business goals and if there are any apparent trends, such as one specific page being viewed mostly by people in a particular country or if particular marketing activities generate more leads/ecommerce transaction.

**What does it drive?**

Traffic drives brand exposure, lead generation (funnel creation), ecommerce transactions, revenue, awareness, marketing messaging, and is often times the customers main point of contact with the organization for engagement.

**How is used?**

Traffic can be used to determine which marketing channels are most effective for bringing in customers and effectively converting them into business. It can also be used to increase brand exposure, customer service, publications/company news, and for sale of products via ecommerce.  Traffic metrics can also provide detail on how our website performs from a technical perspective to ensure customers can quickly and effectively interact with our brand.

GSC data can also be used to ensure our sites are rating as high as possible in Google search results in order to maximize traffic to the websites

**At what level is used?**

Traffic is used at all levels of the business from L1 on down to determine overall brand health as well as its correlation to funnel/revenue.

FUNNEL

The top of the total funnel contains the Leads generated from “Marketing Campaigns”. Leads are qualified campaign responses that can be conversions from or campaign sources or directly entered. Leads must meet the defined criteria threshold as per Standard work. The lead portion of the total funnel can contain qualified and non-qualified campaign responses.

The bottom of the total funnel contains “Sales Funnel.”   It is a process by which opportunities are collected and managed for the purpose of driving growth and predicting sales revenue. A sales funnel contains opportunities. Opportunities can be created directly in the sales funnel or converted from a Lead.

ORDERS

“Bookings” from here on will be referred to as “ORDER”, originates from a Fluke customer providing a purchase order and used at all levels in the organization. Orders are considered operational data as opposed to financial data

Orders derive from multiple avenues either by phone, email, fax, or Fluke’s eCommerce platform are examples. Each order has a unique

1) “order number” (SO-Sales Order #)

2) “order type”

3) “customer PO reference”

An order can “DE-BOOK” from here on will be referred to as “CANCELLED ORDER”, initiated by either the customer or by Fluke pending the business circumstances.  A cancelled order will show as a negative amount thus reducing the order amount.

Orders are used to compensate employees with a variable compensation plan. Operations analyzes orders in relation to backlog and inventory levels. Sales use orders to track the commitments of distributors or end-customers.

SHIPMENT

A Shipment originates from a Fluke customer order. A Fluke order becomes a shipment when Fluke ships all or a portion of the order to the customer. Shipments are used at all levels in the organization and are considered as operational data as opposed to financial data. Each shipment has a unique

1) “shipment number”

2) “order number”

3) “ship-to” location

Shipments can be delivered at 100% fulfillment or can be partially shipped.  There are multiple reasons why an order could be partially shipped.

**2 Scenarios:**

1. When there is limited stock of number of items in the line for an order, we need to split the line into multi lines.
2. Order may be open in system which will be fulfilled later (delayed)

Product returns affect shipments, like cancelled orders does to orders.  Returns are common and the goal is to minimize returns as much as possible. Returns show up as a negative amount thus reducing the shipment amount. Sometimes return quantities via an order type RMA won’t match the actual units received back therefore RMA Order will not match 100% with RMA (Return Material Authorization) Shipments.

Shipments are used to compensate employees with a variable compensation plan. Operations analyzes Shipments in relation to backlog and inventory levels.

DISTRIBUTOR INVENTORY (DIS INV)

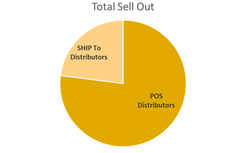
Distributor Inventory data is generated when a seller Reports the on-hand or in-transit inventory data producing information about what products they have, how many and the cost of on-hand or in-transit products. Fluke uses inventory data to calculate weeks or months of supply in the market. Only a subset of distributors provide INV data. These distributors are classified as **INV DISTRIBUTORS**

DISTRIBUTOR POINT OF SALE (DIS POS)

Distributor Point of Sale data is generated when a seller transacts with the end user producing information about what products were sold, how many products were sold, the location where it was sold, date of the sale, and price details about the transaction. Fluke uses POS for critical business tasks such as calculating pay on incentive plans, gauging market consumption, track sale location with postal code granularity, and forecast market demand. JOP’s (Jump Off Point) may also be calculated using this data for such things as compensation and quota setting for the distributors.

The distributors are broadly classified as

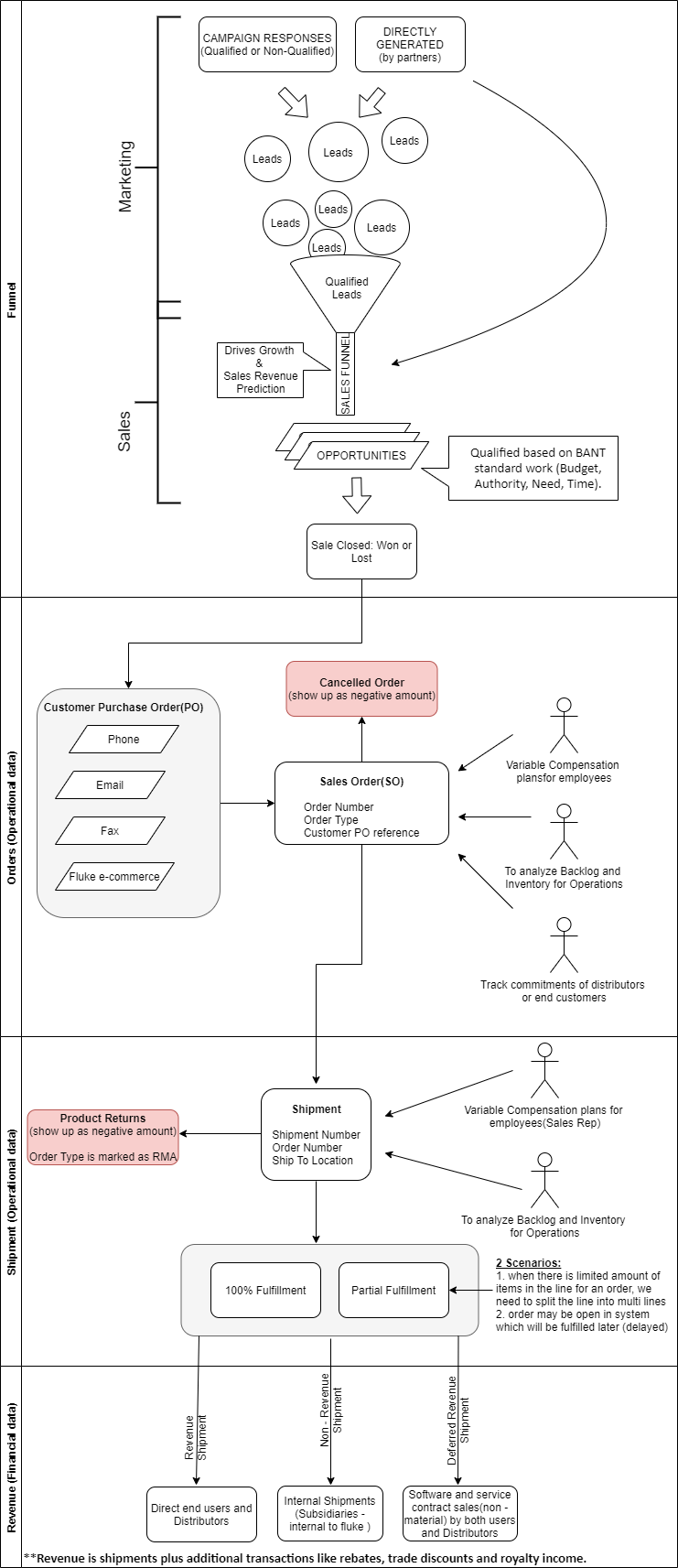
1. **POS Distributors:**Only a subset of distributors that provide POS data.
2. **SHIP-To Distributors:** The distributors who do not provide POS data. For SHIP-To distributors, we use Fluke shipments data as a proxy in absence of POS data to capture full market activity, or Total Sell Out (TSO). Shipment data is real-time because it comes from Fluke Oracle ERP.
3. **TSO (Total Sell Out):** This is a combination of POS distributor sales made to end customers and shipments made to SHIP-To distributors without any duplication. TSO provides information about how much product is being consumed in a given time period.



REVENUE

Revenue is the basis for Fluke’s CVD Core Growth”. Revenue are sales from customers plus any accounting adjustments.  Core growth is a measure of internal growth of existing business (i.e. excludes impact of sales increase through acquisitions or FX) versus prior year.

A key distinction among orders, shipments and revenue is operational vs. financial.  Orders and shipments are considered operational, and revenue is considered financial.  Revenue are shipments plus additional transactions like rebates, trade discounts and royalty income.  However, depending on how a region transacts rebates, shipments can include the impact of rebates and other region’s shipments do not.  Deferred revenue can be another differentiation between shipments and revenue.



## Special Design Considerations

### Fluke Entity Mapping

Entity is a legal or a physical location within Fluke (not tied to org but to location) and can be rolled up into 2 types

* + - **Legal (Tax)** - Legal Entity has Fortive generated FTV ID code. Olympus is used to collect data from Fortive OpCos for legal entity forecast, cash taxes, loan documentation and maintains the FTV Legal IDs. Olympus Entity list view can be a combination of FTV ID code, FLK Entity code and channel code mapping along with corresponding attributes (hence non-legal or Oracle entity is a subset of Legal).
* **Non- Legal (non-Tax)** - Non-Legal (Oracle) Entity has Fluke generated FLK Entity Code. Oracle which feeds to Hyperion is used to maintain these transactions. Fluke Corporate Accounting create entities in Oracle.

**\*\*Fortive and Fluke has different naming convention for its entities. Ultimately Legal Entity Code (FTV ID Code) convention should be the master value. The new Data warehouse solution should have a way in the Data lake to differentiate between the two types of entities.**

Legal entity not always equal to Non-legal (Oracle) entity due to channel codes used to provide Legal views, where Oracle/Hyperion does not have these channel codes. Today Alteryx is used by the Tax team as a programable workflow tool to combine different data sources (Olympus, Oracle, (OBI), Hyperion and other files) into one package / report for the team to do analysis.  Alteryx does not store any data.  In theory, power BI could replace Alteryx if we do this correctly.  The key will be to setting up the Legal / Operational entity mapping correctly in the data lake. Tax team doesn’t use Alteryx 100% of the time to collect data from various sources.  The Tax will pull from OBI to query purchase order data for example as one pull for a specific tax purpose. MANUAL ADJUSTMENTS are done to reconcile reports. Future state should have a unified view from all these disparate systems

A consolidated entity will house multiple entities into one entity.  Consolidated entities could have currency implications where ledgers will have $$ at historical FX rates. Legal entities lack some AR or AP transactional data for Tax team purposes. This can be found in Excel files, hence a process to ingest Excel files to the data lake to provide missing transactional data would be a win for Tax. However, there is an ongoing project on the EBS side to bring more entities onto Oracle so we will see more over time. An alternative, for example, we could accelerate Janos to load EBS per Brazil and India sooner rather than later, that would be a win for Tax team.

Click  [**HERE**](https://teams.microsoft.com/l/file/CD51AD35-DA71-4255-A993-A826F575462A?tenantId=0f634ac3-b39f-41a6-83ba-8f107876c692&fileType=xlsx&objectUrl=https%3A%2F%2Ffortive.sharepoint.com%2Fsites%2FFLK-BI-Data-Stewards%2FShared%20Documents%2FGeneral%2FTechnical%20Docs%2F2021%20Fluke%20Legal%20Entity%20List%20Mapping.xlsx&baseUrl=https%3A%2F%2Ffortive.sharepoint.com%2Fsites%2FFLK-BI-Data-Stewards&serviceName=teams&threadId=19:84080666398a41adb35436c2d3b196da@thread.tacv2&groupId=e3c17037-956c-4558-888f-919b9b56d85c)to refer to the Olympus entity list for Tax and can be used to map non-tax Entity roll ups.  File is located on TEAMS site called “2021 Fluke Legal Entity List Mapping”

### Fluke Currency Views

Fluke has five currency views

1. **Transactional** is the currency used for the transaction and is at lowest level (local currency). For example, in the UK (United Kingdom) entity can sell in $USD and to others in $GBP.  The transactional currency is the currency the transaction was transacted in. The Transactional Currency is what is posted in Oracle based on the PO, Invoice, contract, etc.

**No Formula**

1. **Functional** is tied to the currency of the country of ultimate destination. This may coincide in some cases with the Transactional(when the transaction is made on the same currency as of the country of ultimate destination) or need to be calculated translating the Transactional currency to the Functional using the official corporate exchange rates for a given period

Entity(referenced as Functional in legacy terms) is tied to a Fluke entity and the currency for an order is shown in the Entity’s country currency regardless of the country the product is sold. This is a calculated currency and used to obtain Net USD currency. All entity submissions each month for the financials is provided in $USD per the calculation below.  Then in Hyperion it takes the Reported net USD and converts it back to a Functional currency (tied to the Entity).  For example, ($0.7915 USD / rate .7915) = $1.00 CAD, would be the functional amount.

**Reported net USD / FX rate**

1. **Net USD(Reported)** is the Functional Currency directly translated to USD using the corporate exchange rate for the period.

However due to Fluke’s Entity Structure this is a 3-step process that is used for financial reporting. To obtain the Net USD first Transactional currency is converted to Functional and then to USD. This currency is any order calculated in US dollars if not originally sold in USD. It is used to report Financials each month in US Dollars for consolidated Fluke roll up.

For example, $1 CAD x 0 .7915(FX rate) = $0.7915 $USD this amount would be loaded to Hyperion.  This is the reported net USD amount in Hyperion.

**Transactional Currency x FX Rate**

1. **Net EURO** (not functional view) FPI team is using this for orders and shipments.  This field in MRDW Shipments is derived at Informatica level not at OBI RPD Level. Below is the logic to get Net EUR field in Informatica.  (“Net EUR” field denotes “LOCAL\_NET\_EURO\_EXTD\_AMT” in Shipment Detail table)

**Net Euro = Reported net USD / FX rate**

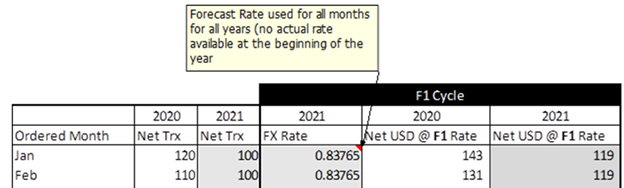
DECODE(ROUND(NET\_USD\_EXTD\_AMT \* 1 / (:SP.FLKMRDW\_GET\_EXCHANGE\_RATE (61, :SP.FLKMRDW\_GET\_GL\_PERIOD(SHIP\_DATE, '1'), 'USD', 'A')),2) ,

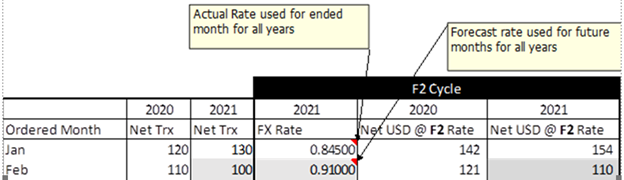
       NULL, 0,

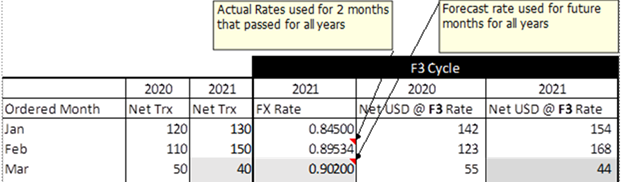
       ROUND(NET\_USD\_EXTD\_AMT \* 1 / (:SP.FLKMRDW\_GET\_EXCHANGE\_RATE (61, :SP.FLKMRDW\_GET\_GL\_PERIOD(SHIP\_DATE, '1'), 'USD', 'A')),2))

1. **Net USD FX Adjusted** (constant currency) - this method is applied for analysis or comparison purposes - for sales and expenses – forecast and budget cycles use constant currency globally. Hyperion has various scenarios, for this calculation.  CC PF (constant currency prior forecast)

Net Transactional Currency values for all years are translated to Net USD FX Adjusted using the most recent actual and forecast rates of the current year. Below is the example how Net USD FX Adjusted is calculated for F1-F3 forecast cycles for 2 years.  All the past years (before 2020) are recalculated in the same way as 2020 in the example below. Cycle continues until F12 and then starts again with the FX rates of the new year.

****

****

****

**Fortive Treasury provides below FX Rates Excel Files that are fed into Hyperion for Calculations:**

1. monthly average FX rate for the P&L accounts.
2. month end FX rate for the balance sheet accounts.  Both FX rates are stored in Hyperion

**Currency Scenarios:**

1. Actuals apply FX final rate and to historical
2. Forecast applies a preliminary FX rate
3. Budget applies F9 rate for cost accounting (used for product standard cost), does not change
4. Budget applies F9 rate for sales/ open initially then changes until budget is finalized with F1 rates.

FCO is a legal entity (holding company) in US for making non-US sales to countries in currency USD, hence it is a transactional currency as well as functional currency. Used for local reporting only

E.g. sales to Mexico, Canada, South America except Brazil are in USD that are transacted through this Entity FCO.

**USD\*FX Rate**

For FCO orders in USD, there is value to show in local currency. This will help for sales performance/commissions implications.  For example, Canada POS in $CAD and sales team measured in $CAD.  US distributors sell in $USD selling to Canada and report in $USD but need ability to have $CAD view to combine with $CAD transactional $$.  Similar with LAAM sales we transact in $USD and there is value with converting to local currency for analytics in local currency.

A currency dashboard or some sort as single source to access FX rates for all is required.  Also apply some trending charts would be useful to understand potential forecast impacts.

### Posted and Invoiced Date

Hyperion uses “Posted” date, same as Oracle.   The difference between posted and invoice date is due to revenue recognition. Vast majority of the time posted date and invoice date would match. But there can be revenue recognition differences between when something is invoiced and when the revenue is recorded in oracle. Hyperion doesn't care what the posted vs invoice date is, it just pulls the GL balance.  Hyperion will also capture any manual adjustments made to revenue via journal entries.  In summary, posted date will tie to what is booked from the oracle subledger, to the GL, then to Hyperion.

### Fluke Calendar Views

In order to avoid misrepresenting market performance, it is important to acknowledge the different calendars used to measure performance of POS distributors vs SHIP-To distributors. For reporting purposes, Fluke only considers business days when counting number of days in a month.

POS Calendar

POS is reported based on the calendar of the reporting region. The number of days in a month is determined by how many weekdays (mon-fri) are in the given month subtracting any public holidays that fall during the business days during the month.

US example:

POS is reported based on the Gregorian calendar, specifically, the US Public Holiday calendar. The number of days in a month is determined by how many weekdays (Mon-Fri) are in the given month subtracting any US Public Holidays in this list below. These Public Holidays are only subtracted if they fall during a business day. Exclude these US Public Holidays

* New Year's
* Memorial Day
* Independence Day
* Labor Day
* Thanksgiving (two days)
* Christmas Day

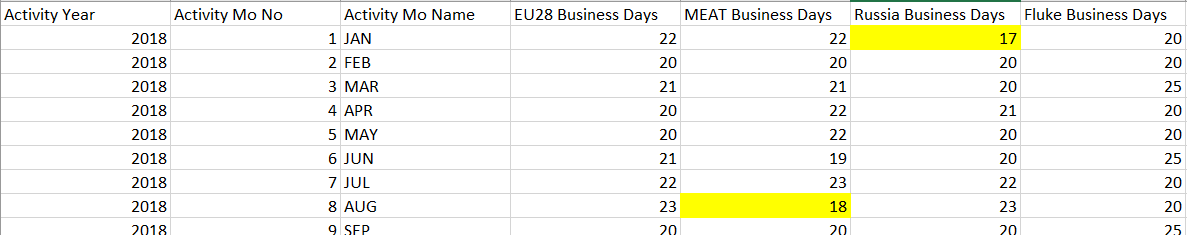
For example, there were 21 business days in January 2021. However, New Year’s Day fell on a Friday, so we exclude counting it, leaving us with 20 days. In January 2022, New Year’s Day will fall on a weekend leaving our count unchanged.

Regional POS Calendar

Due to the existence of holidays that move between the months every year in certain regions (e.g. Ramadan in Middle East, Chinese New Year in China etc.) POS analysis require a use of regional calendars that reflect a proper number of business days in the particular month in the region. This is specifically important for the YOY comparison of daily run rates as presented in the example below:

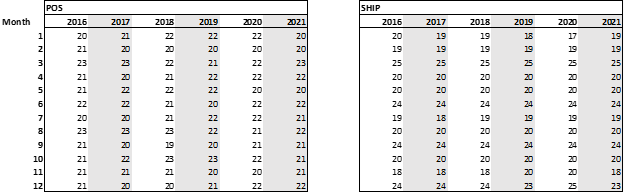
**** 

Example of regional calendar:

****

SHIP To Distributor Calendar

The SHIP Calendar is aligned with Fluke’s fiscal calendar (4-4-5). Maintained in Hyperion. Below are two tables counting number of business days in a month. On the left is how many business days when using the POS calendar. Similarly, on the right is number of business days using the SHIP calendar.

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## Traffic

Web traffic is the amount of data sent and received by visitors to a website. Traffic is determined by the number of visitors and the number of pages they visit as well as additional website performance metrics (technical and revenue generating). Sites monitor the incoming and outgoing traffic to see which parts or pages of their site are effective for driving business goals and if there are any apparent trends, such as one specific page being viewed mostly by people in a particular country or if particular marketing activities generate more leads/ecommerce transaction.

### Calculation Requirements

**Session count = Count(Sessions per Dimension)**

### Variants of the KPI

**Enterprise Level**

* Date
* One Fluke Region
* ~~Default Channel Grouping~~ Traffic Campaign Type \*\* **This is a Dim between GA and CRM**
  + Below are the GA campaign types
    - Organic Search
    - Paid Search
    - Display
    - Direct
    - Referral
    - Social
    - Email
    - Other
  + Below are the CRM campaign types
    - Email Marketing
    - Web Chat
    - PPC – Paid per Click
    - Organic Web
    - Seminars/Workshop
    - Tele Lead Gen
    - Webinar: Live
    - Other
    - Tradeshows/Events
    - Sales Generated
    - eMedia
    - Print Advertising
    - Direct Mail
    - Social Media
    - Incoming Inquiry
    - Learning Management
    - Webinars
* Product
* Product Workflow
* Landing Page, Referral Page
* Google Analytics Account
* Website Lang-Locale

**Functional Level**

* Event
* Device Category
* Site Directory
* Host Name
* Device
* Page
* Google Search Query(attribute of landing page)

### Dimensions and Data Sources

Source of raw data current or new

* Google Analytics
* Google Analytics 4
* Google Search Console
* Dynamics

[UA] BigQuery Export Schema is a table with columns that define each dimension or metric or can be used to derive other dimensions or metrics

|  |  |  |  |
| --- | --- | --- | --- |
| **Data Source** | **Schemas** | **Example Metrics & Dimensions** | **API Documentation** |
| Google Analytics - Universal Analytics [UA] | [UA] BigQuery Export schema | Sessions, Pageviews, Goal Conversions, eCommerce Transactions, Default Channel Grouping, Landing Page Path, URL Path, … | <https://support.google.com/analytics/answer/3437719?hl=en> |
| Google Analytics 4 [GA4] | [GA4] BigQuery Export | Sessions, Pageviews, Goal Conversions, eCommerce Transactions, Default Channel Grouping, Landing Page Path, URL Path, … | <https://support.google.com/analytics/answer/9358801?hl=en&ref_topic=9359001> |
| Google Search Console | Search Analytics | Impressions, Clicks, Query, Pagepath, … | <https://developers.google.com/webmaster-tools/search-console-api-original/v3/searchanalytics> |

Each CVD is required to include aggregation capabilities as described in the table below. A common requirement across all dimensions is that a standardized set of aggregation business rules be established

|  |  |  |
| --- | --- | --- |
| **D#** | **Dimension** | **Dimension Description** |
| D18 | **Account User** | Reference Table |
| D24 | **Calendar** | Custom Loaded Calendar Table |
| D29 | **Customer** | Bill-To and Ship-To customer information. |
| D33 | **Destination Geography** | Geographies based on Ultimate Destination |
| D42 | **Holiday** | Number of holiday days passed during the repair and/or calibration service event. |
| D55 | **Location** | Geographical location of the customer. |
| D65 | **Organization** | Name of the accounting company. |
| D67 | **Period Status** | The current status of the GL accounting period. |
| D92 | Snapshot | Snapshot detail. |
| D93 | **Source System** | Identifier of the source system for the order line. |
| D243 | **Date** | Session Date |
| D244 | **Country** | Country of session based on IP |
| D245 | **Region** | Country mapped to Fluke Region |
| D246 | **Sub-Region** | Country Mapped to Fluke Sub-Region |
| D247 | **Default Channel Grouping** | Digital traffic marketing channel (Organic Search, Paid Search, Email, Social…) |
| D248 | **Product** | Name if the product is shown on a specific hit |
| D249 | **Product Family** | Product Family of the specific product on the hit, also in the URL structure |
| D250 | **Workflow** | Mapping of product familied into "workflows" |
| D251 | **Landing Page** | Landing page of the sessions |
| D252 | **Event** | Event in the session |
| D253 | **Device Category** | Device type in the session |
| D254 | **Website** | Account our website for traffic |
| D255 | **Website Lang-Local** | Language localization for each site |
| D256 | **Hostname** | Hostname |
| D257 | **Page** | Page url of each page in the session |
| D258 | **Query** | Search query captured in search console |

Unified Dimensions have been vetted with the Data Steward team for each KPI within a CVD. Please refer to the file called “Fluke Datawarehouse Dimensions summary page.xlsx”  Located at Teams site - [Unified Dimensions](https://teams.microsoft.com/_#/xlsx/viewer/teams/https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards~2FShared%20Documents~2FGeneral~2FTechnical%20Docs~2FFluke%20Datawarehouse%20Dimensions_summary%20page.xlsx?threadId=19:84080666398a41adb35436c2d3b196da@thread.tacv2&baseUrl=https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards&fileId=1ca9b00a-fb1c-4075-9f16-21fa7df43938&ctx=files&rootContext=items_view&viewerAction=view)

[XLSX File viewer | Microsoft Teams](https://teams.microsoft.com/_#/xlsx/viewer/p2p/https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards~2FShared%20Documents~2FGeneral~2FTechnical%20Docs~2FDimensions~2FFluke%20Datawarehouse%20Dimensions_10-7-21.xlsx?messageId=1633623502144&fileId=3143B4ED-C5A8-43A8-84E1-5D7811D0E0B1&ctx=fileLink&viewerAction=view) – new location

To get the most updated list of Traffic Dimensions filter the Traffic column with values ‘Y’

Detailed description of the Traffic Dimensions (Marketing) is given below.

|  |  |
| --- | --- |
| **Dimension** | **Definition** |
| Date | Date, ideally mapped to fiscal calendar |
| Country | Allocates all web data for any given sessions based on the IP location of the user when the session takes place.  Country is based on actual geographic location, not on what website is visited (i.e. - a user in Germany visits the UK website, that session is attributed to Germany).  This gives us the estimate of market interest based on geographic location. Not all countries have individual websites, this method ensures we are tracking and reporting on their usage of www.fluke.com as well.  We can then drill down to which website those users visit (i.e. - we know that visitor from Germany visited the UK website or any other lang-locale website they visit) |
| Region | Same as "Country" in functionality and based on user location.  Region is determined and mapped to the appropriate Fluke regions defined by our business. (i.e. EMEA, APAC, Americas) |
| Sub-Region | Same as "Country" in functionality and based on user location.  Region is determined and mapped to the appropriate Fluke regions defined by our business. (i.e. EU28, NAMER, SEA) |
| Default Channel Grouping | The marketing channels that are Google Analytics defined that associates web behavior based on which marketing channel created the session.  Google Analytics automatically assigns a channel based on their system definitions.  The default channel groupings are Organic Search, Paid Search, Display, Direct, Referral, Social, Email, (Other) |
| Product | Product is determined by the product at is shown in the URL of any page view. (i.e. 87V) |
| Product Family | Product Family is determined my mapping the product extracted from the URL, then matching with it's associated Product Family based on our business definitions. (i.e. DMMS) |
| Workflow | A group of product families also mapped to match the business definitions of which product families make up a workflow. (i.e. Certification) |
| Landing Page | The landing page is the first page viewed during a session, or in other words, the entrance page. |
| Event | Events are user interactions with content that can be measured independently from a web-page or screen load. Downloads, link clicks, CTA button clicks, and video plays are all examples of actions to track.  We can count both total number of interactions or unique values.  Event's can be view as "micro-conversions", actions that are important on our site but not or main marketing objectives. |
| Device Category | This associates web-traffic to the type of device the user used to access the site.  Desktop, Mobile, or Table. |
| Site Directory | The Directory of the website based on the landing page URL or page URL |
| Google Analytics Account | The account for each website where their unique traffic data is collected |
| Website Lang-Locale | Depending on the website, the language-locale of the website can be extracted from the page path URL or hostname |
| Hostname | The hostname of the website for any page/URL related information, i.e. www.fluke.com, us.flukecal.com |
| Device | The type of device on which the user is searching - desktop, tablet, or mobile. If you have separate properties for your different device types (for example m.example.com for mobile and example.com for desktop |
| Country | The country where the search came from, for example, Canada or Mexico. |
| Page | The final URL linked by a Search result after any *skip redirects* |
| Query | These are the query strings that users searched for on Google. Only non-anonymized query strings that returned your site are shown. |

### Data Gaps – Ingestion process needs

* **\*\*ETL is required for mapping URLs (in all languages) to product family and workflow, as well as site directories and sub-directories**
* **Google Analytics, Google Analytics 4 and GSC(Google Search Console)**
* Language Translation for URL mapping and site search tool(SOLR)

### Drill Down Path

The most common way to slice and dice the KPI according to the company structure   
to guide the user on the exploration of the data

* Path1: by One Fluke Region (APAC, EMEA, Americas) à Drill by Top 10 countries on further drill down
* Path2: by Calendar Fiscal Year > Fiscal Month > Fiscal Week
* Pat 3: by landing page URL or pageview à URL: Hostname > website lang-locale > site directory > site sub-directory > product category page (by PFAM, workflow) > product page (by PFAM, workflow) or article page

### Metrics Requirements

**Functional Dashboard**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Metric/KPI** | **Data Source** | **Definition** | **Calculation** | **Metric Category** |
| Sessions/Visits | Google Analytics | A single visit to your website, consisting of one or more pageviews, along with events, ecommerce transactions and other interactions. The default session timeout is 30 minutes, which means that if someone is inactive on your website for over 30 minutes, then a new session will be reported if they perform another interaction, for example, viewing another page | Sum of Visits  (Count of unique session IDs) | Traffic |
| Pageviews | Google Analytics | An instance of an user visiting a particular page on a website.  A session is comprised of the total page's viewed on the web visit. | Sum of Pageviews | Traffic |
| Unique Pageviews | Google Analytics | Counts a page once even if it was viewed multiple times within a single session. For example, if someone landed on your homepage, then viewed the ‘about us’ page and then navigated back to your homepage, the homepage would have one unique pageview (even though the page was viewed twice during the session). | Sum of Unique Pageviews (sum if distinct page views) | Traffic |
| Users (IP address/device type/GUID) | Google Analytics | An individual person browsing your website (technically, a unique browser cookie). Each user can visit your website multiple times, for example, one user could create three sessions on your website, with each session containing multiple pageviews. By default, each unique browser cookie will be counted as a separate user which means someone visiting your website on multiple devices (each with their own browser cookie) will mean more than one user is reported. | Sum of Users | Traffic |
| Bounce Rate (derived) | Google Analytics | Bounce rate is the percentage of sessions with a single pageview.  Meaning a user leaves our site from the first page they visit/land. | (Sum of Bounces)/Sessions | Site Performance |
| Average Session Duration | Google Analytics | Provides a top-level view of how long users are spending on your website per each session. | (Total Time on Site)/Sessions | Site Performance |
| Average Time on Page | Google Analytics | The average amount of time a users spend on a particular page. | Total Time on Page/Pageviews | Site Performance |
| Total Unique Searches | Google Analytics | The total number of searches users have used in internal site search. | Sum of Unique Searches | Site Performance |
| % Exit (Exit Rate) | Google Analytics | The percentage of pageview that were the last viewed page any session.  The final page viewed on our site before the user leaves our site. | Sum of Exits/Sum of Pageviews | Site Performance |
| Avg. Document Content Loaded Time (sec) (site speed) – Measure of site performance | Google Analytics | Aligning with Fortive reporting for page load speed, focused on mobile. | Total Document Content Loaded Time (ms)/Pageviews | Site Performance |
| Google Analytics | Avg. Document Content Loaded Time : The average time (in seconds) that the browser takes to parse the document and execute deferred and parser-inserted scripts (DOMContentLoaded), including the network time from the user's location to your server. Parsing of the document is finished, the Document Object Model is ready, but referenced style sheets, images, and subframes may not be finished loading. This event is often the starting point for javascript framework execution, e.g., JQuery's onready() callback, etc. |
| Total Goal Completions (This is calculated on the reporting layer since it is dynamic) | Google Analytics | The unique value of forms submitted or ecommerce conversions completed by any user in a single session.  (i.e. a user submits two forms in 1 session, that is 1 goal completion).  Goals signify that users complete a desired action on our website as defined by our main marketing objectives (subject to change). | Sum of Goal Completions | Conversion |
| Conversion Rate % | Google Analytics | The percentage of sessions where there was a Goal Completion (as defined above) for any Goal out of the total number of sessions. | (Sum of Goal Completions, eCommerce Transactions)/Sessions | Conversion |
| Total Events | Google Analytics | Count of all clicks on any outlined event.  Events are user interactions with content that can be measured independently from a web-page or screen load. Downloads, link clicks, CTA button clicks, and video plays are all examples of actions to track.  We can count both total number of interactions or unique values.  Event's can be view as "micro-conversions", actions that are important on our site but not or main marketing objectives. | Sum of Events | Conversion |
| eCommerce Transactions | Google Analytics | Sales of products on the website via ecommerce. | Sum of eCommerce Transactions | Conversion |
| Clicks | Google Search Console | Count of clicks from a Google search result that landed the user on your property. | Sum of Clicks | Traffic |
| Impressions | Google Search Console | How many links to your site a user saw on Google search results. Impressions are counted when the user visits that page of results, even if the result was not scrolled into view. However, if a user views only page 1 but the result is on page 2, the impression is not counted. The count is aggregated by property or page. Note that infinitely scrolling result pages (image search) the impression might require the item to be scrolled into view | Sum of Impressions | Traffic |
| Average Position | Google Search Console | The average position of the *topmost* result from your site. So, for example, if your site has three results at positions 2, 4, and 6, the position is reported as 2. If a second query returned results at positions 3, 5, and 9, your average position would be (2 + 3)/2 = 2.5. If a row of data has no impressions, the position will be shown as a dash (-), because the position doesn't exist | Total Positions/Impressions | Traffic |
| Click-through Rate (CTR) | Google Search Console | Click-through rate: the click count divided by the impression count. If a row of data has no impressions, the CTR will be shown as a dash (-) because CTR would be division by zero. | Clicks/Impressions | Traffic |

### Power BI needed columns

These columns will be captured as part of Dashboard Wireframing sessions and compiled in the Technical Specification Document stored at location - <<TBD>>

### KPI Inclusions and/or exclusion from Dashboard

This section defines the filters that would be applied at the BI semantic layer to expose data at the Power BI Dashboard layer.

### Targets

Historically this has been defined as a growth rate applied to last year session count. That makes the target really easy to derive in the visualization or report. We would want a way to update this growth % as needed. The dimension and granularity for these targets can be defined as follows.

1. **Web Traffic Targets** - These are defined by sessions(L1 organic sessions only)
   1. monthly, campaign type, website , One Fluke Region
2. **Marketing ROAS Targets**
   1. monthly, campaign Type, product family, One Fluke Region
3. **eCommerce Revenue Targets**
   1. monthly, country, website

## Funnel

“Total Funnel” contains five entities:

*Campaign Response*

An interaction initiated by a prospect/customer in response to a marketing stimulus. This measures a recipient’s interest in a marketing message as well as the effectiveness of a campaign to convert interest into action (# of people who took action). This is not a measure of quality.

*Lead*

A lead is a qualified campaign response from a customer, following a Call to Action (CTA) or direct customer interaction. Threshold requirements for a campaign response or captured customer interactions (to qualify as leads) must meet the following (as requested by the customer):

* Request for Demonstration
* Request to speak to a specialist
* Request for pricing or quotation

 Minimum required customer information captured on the lead form is:

* Name
* Email
* Phone
* Zip code (or region/city if zip codes are not applicable) – for LATAM: zip is not required but State is
* Country
* Company
* Campaign response code is also required

*Opportunity*

An opportunity represents a customer in a buying process that has been qualified based on BANT standard work (Budget, Authority, Need, Time). There is and FBS tool to help steer how teams agree on what the bant criteria is, this can have variations within the framework.

*Opportunity Product*

Opportunity Products provides the granularity of what product needs to be considered when calculating the net amount associated with an Opportunity.

*Closed/Won*

The dollar value of all opportunities where the salesperson must have “customer-backed evidence” of a purchase.  The customer must say they bought, or a distributor confirms purchase, etc.

### Calculation Requirements

* Opportunity count = count (distinct oppty\_product\_detail.src\_opportunity\_id
* Opportunity $ Amount = sum (oppty\_product\_detail.net\_extended\_amount\_base)

 \*\* for US and EMEA opportunity amount is always defined as USD. LAAM is in USD but BRAZIL Funnel is local currency (Net price list is BRL)

### Variants of the KPI

**Enterprise Level**

* By Sales Territory Hierarchy
* By Sales Stage
* By Marketing Channel (campaign type) Hierarchy
* By Product Family Hierarchy
* By Workflow Hierarchy

**Functional Level**

* By Marketing Campaign – the actual marketing campaign attached to the lead that is converted to an opportunity (example: Email Newsletter, Homepage Form Fill, Organic Search form fill)
* By Product Hierarchy – specific product(s) attached to the opportunity
* Aging Bucket
* Probability Weighting of Stage

### Dimensions and Data Sources

Source of raw data current or new

* Oracle EBS (ecommerce bookings)

• Subsidiary Flat files

• Excel flat files

• MS Dynamics (Cloud & China)

• Salesforce

• Eloqua

• Google Ads

• Google Search console

• Google Analytics

• Shopify

|  |  |  |  |
| --- | --- | --- | --- |
| **Data Source** | **Schemas** | **Example Metrics & Dimensions** | **API Documentation** |
| Google Analytics - Universal Analytics [UA] | [UA] BigQuery Export schema | Sessions, Pageviews, Goal Conversions, eCommerce Transactions, Default Channel Grouping, Landing Page Path, URL Path, … | <https://support.google.com/analytics/answer/3437719?hl=en> |
| Google Analytics 4 [GA4] | [GA4] BigQuery Export | Sessions, Pageviews, Goal Conversions, eCommerce Transactions, Default Channel Grouping, Landing Page Path, URL Path, … | <https://support.google.com/analytics/answer/9358801?hl=en&ref_topic=9359001> |
| Google Search Console | Search Analytics | Impressions, Clicks, Query, Pagepath, … | <https://developers.google.com/webmaster-tools/search-console-api-original/v3/searchanalytics> |
| Shopify | Sales | Sales Properties, Product Properties, Referral Properties, Customer Properties, … | <https://shopify.dev/apps/shopifyql/sales> |
| Visits | Behavior Properties, Device Properties, Landing Page, Referral Traffic, Marketing Campaigns, … | <https://shopify.dev/apps/shopifyql/visits> |
| Customers | Order Properties, Customer Properties, … | <https://shopify.dev/apps/shopifyql/customers> |
| Eloqua | Campaign | Campaign ID and details | |  | | --- | | [https://fivetran.com/docs/applications/eloqua https://docs.oracle.com/en/cloud/saas/service/18c/cxsvc/c\_osvc\_executing\_analytics\_reports.html](https://fivetran.com/docs/applications/eloqua) | |  | |  | |  | |  | |  | |  | |  | |
| Contact | Contact and lead details |
| Email | Email Sends, opens, clicks |
| Email\_form | Email content details |
| Form | Form content details |
| Form\_submission | Form submission count, location, date |
| Segment | Customer segment definitions and counts |
| Visitor | Visitor |

Each CVD is required to include aggregation capabilities as described in the table below. A common requirement across all dimensions is that a standardized set of aggregation business rules be established

|  |  |  |
| --- | --- | --- |
| **D#** | **Dimension** | **Dimension Description** |
|  |
|  |
| D18 | **Account User** | Reference Table |  |
| D24 | **Calendar** | Custom Loaded Calendar Table |  |
| D28 | **Currency** | Full International Standards Organization (ISO) name of the monetary unit. |  |
| D29 | **Customer** | Bill-To and Ship-To customer information. |  |
| D30 | **Customer - Channel** | Description of the Customer channel code. |  |
| D33 | **Destination Geography** | Geographies based on Ultimate Destination |  |
| D34 | **Employee** | Employee name and location of the person who performs a certain function within the source system. |  |
| D42 | **Holiday** | Number of regional holiday days passed during the calendar month ,repair and/or calibration service event. Those that fall on weekdays only. |  |
| D55 | **Location** | Geographical location of the customer. |  |
| D65 | **Organization** | Name of the accounting company. |  |
| D67 | **Period Status** | The current status of the GL accounting period. |  |
| D69 | **POS Provider Type** | Provider classification. |  |
| D71 | **Price - Price List** | Price List Detail. |  |
| D73 | **Product** | Product detail. |  |
| D79 | **Repair - Repair Center** | Service Center where the service is done. |  |
| D80 | **Repair - Repair Event** | Indicates the Order Status Change event during a service cycle. |  |
| D81 | **Repair - Repair Tat Rule** | The turnaround time rule that was applied in order to determine the turnaround time (TAT) goal. |  |
| D82 | **Repair - Repair Text** | Junk Dimension |  |
| D83 | **Repair Orders - Incident Status** | Repair incident status details. |  |
| D84 | **Repair Orders - Incident Urgencies** | Repair incident urgency details. |  |
| D85 | **Repair Orders - Texts** | Junk Dimension |  |
| D86 | **Repair Orders - Types** | Repair type details. |  |
| D87 | **SalesRep - Sales Agent** | Fluke salesperson or primary sales representative currently associated with the territory who represents the product to distributors and/or direct customers. |  |
| D88 | **SalesRep - Sales Agent Territory** | Postal code mapping to Fluke sales persons and representatives currently associated with territories. |  |
| D89 | **SalesRep - Secondary SalesRep** | Additional party, not usually a Fluke employee, who receives sales credit. These parties are most often in the Electrical and HVAC sales channels. |  |
| D90 | **Service Type** | Classification of service type. |  |
| D91 | **SIC Code** | Standard Industry Classification of end customer. |  |
| D92 | Snapshot | Snapshot detail. |  |
| D93 | **Source System** | Identifier of the source system for the order line. |  |
| D95 | **Status** | Status of returned item. |  |
| D115 | **Warehouse** | Warehouse details. |  |
| D116 | **Warehouse Lab** | Inventory detail. |  |
| D123 | Dim Assigned Distributor Account | Name and profile of the Distributor that was assigned the lead. |  |
| D124 | Dim Assigned Distributor Contact | Distributors contact details. |  |
| D133 | Dim Business Unit | Business Unit details of the customer. |  |
| D134 | Dim Call Date Period | Call dates |  |
| D135 | Dim Call Report Attributes | Call attributes related to calls made by salesperson. |  |
| D136 | Dim Call Report Contact |  |  |
| D137 | Dim Call Report Flag Attributes |  |  |
| D138 | Dim Call Report Product |  |  |
| D139 | Dim Call Report Textual Attributes | Call related textual attributes. |  |
| D140 | Dim Campaign Response Attributes |  |  |
| D141 | Dim Campaign Response Country |  |  |
| D142 | Dim Campaign Response Creation Period | Campaign response dates. |  |
| D143 | Dim Campaign Response Text Attributes | Campaign response attributes. |  |
| D144 | Dim Campaign Response UTM Attributes | Campaign response attributes. |  |
| D145 | Dim Campaign Targeted Product | Targeted product information in the campaign. |  |
| D146 | Dim Campaign | Customer information. |  |
| D151 | Dim Contact Location | Contact details. |  |
| D152 | Dim Created By User | CRM dynamics user information. |  |
| D153 | Dim Credited Sales Territory | Sales Territory information. |  |
| D154 | Dim Crm User | CRM user details. |  |
| D155 | Dim Currency | Currency details. |  |
| D156 | Dim Customer Preferred Distributor Account | Name and profile of the Customer Preferred Distributor on the lead. |  |
| D157 | Dim Customer Preferred Disty MRDW Account | Name and profile of the customer preferred distributor from mrdw.customer. |  |
| D160 | Dim Direct Sales Territory | Direct sales territory. |  |
| D162 | Dim Effective Customer |  |  |
| D163 | Dim Effective Location |  |  |
| D164 | Dim End Customer Location |  |  |
| D165 | Dim End Customer |  |  |
| D166 | Dim End Sales Territory Planning Bridge |  |  |
| D167 | Dim End Sales Territory Planning Secondary |  |  |
| D168 | Dim End Sales Territory Planning |  |  |
| D169 | Dim Estimated Closed Period | Date on which the sales person expects the opportunity to close |  |
| D170 | Dim External Sales Territory | External Sales Territory associated with the lead |  |
| D171 | Dim Functional Currency |  |  |
| D172 | Dim Funnel Attributes | Funnel Status, Funnel Stage. Textual and Flag attributes associated with the Opportunity |  |
| D176 | Dim Lead Account | Account details of the associated leads. |  |
| D177 | Dim Lead Attributes | Lead attributes. |  |
| D178 | Dim Lead Closed Period | Lead closed date, month, year |  |
| D179 | Dim Lead Contact | Lead's contact details. |  |
| D180 | Dim Lead Creation Period | Lead created on Date, month, year |  |
| D181 | Dim Lead Flag Attributes | Flag attributes associated with the leads |  |
| D182 | Dim Lead MRDW Account |  |  |
| D183 | Dim Lead Opportunity Product |  |  |
| D184 | Dim Lead Textual Attribute Location | Textual attributes associated with the leads. |  |
| D185 | Dim Lead Textual Attributes | Textual attributes associated with the leads. |  |
| D186 | Dim ODS Calendar Dates D | ODS dates |  |
| D187 | Dim Opportunity Account Industry |  |  |
| D188 | Dim Opportunity Account | Opportunity account information. |  |
| D189 | Dim Opportunity Attributes | Registration status. |  |
| D190 | Dim Opportunity BU Specific Details | Business Unit details for the opportunities. |  |
| D191 | Dim Opportunity Closed Period | Opportunity Closed Date, month, year |  |
| D192 | Dim Opportunity Contact Industry | Opportunity contact industry information. |  |
| D193 | Dim Opportunity Contact | Name and profile of the contact associated with the lead / opportunity |  |
| D194 | Dim Opportunity Creation Period | Date on which the Opportunity product line was created. |  |
| D195 | Dim Opportunity Disty Flag Attributes | Textual and Flag attributes associated with the Opportunity |  |
| D196 | Dim Opportunity End User Flag Attributes | Textual and Flag attributes associated with the Opportunity |  |
| D197 | Dim Opportunity Flag Attributes | Opportunity attributes information. |  |
| D203 | Dim Owner Territory | Owner territory associated with the lead |  |
| D204 | Dim Owner | Name and profile of the CRM User / Owner of the opportunity |  |
| D210 | Dim Price List | Name and attributes of price list. |  |
| D211 | Dim Primary Sales Territory | Primary sales territory information. |  |
| D217 | Dim Provider Sales Agent Territory Planning Bridge |  |  |
| D218 | Dim Provider Sales Agent Territory Planning Secondary |  |  |
| D219 | Dim Provider Sales Agent Territory Planning |  |  |
| D221 | Dim Representative Account | Representative profile that was assigned the lead. |  |
| D222 | Dim Representative Contact | Name and profile of the representative associated with the lead / opportunity. |  |
| D223 | Dim Request Period |  |  |
| D224 | Dim RLS CRM Business Unit | Row level security for BU data. |  |
| D225 | Dim RLS CRM User | Row level security for CRM users. |  |
| D226 | Dim RLS Fluke Region | Row level security for Fluke Regions. |  |
| D227 | Dim RLS Product Bridge | RLS for product. |  |
| D228 | Dim RLS Product | RLS for product. |  |
| D229 | Dim Sales Territory | Sales territory associated with the lead |  |
| D231 | Dim Secondary Sales Territory | Secondary sales territory information. |  |

Unified Dimensions have been vetted with the Data Steward team for each KPI within a CVD. Please refer to the file called “Fluke Datawarehouse Dimensions summary page.xlsx”  Located at Teams site - [Unified Dimensions](https://teams.microsoft.com/_#/xlsx/viewer/teams/https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards~2FShared%20Documents~2FGeneral~2FTechnical%20Docs~2FFluke%20Datawarehouse%20Dimensions_summary%20page.xlsx?threadId=19:84080666398a41adb35436c2d3b196da@thread.tacv2&baseUrl=https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards&fileId=1ca9b00a-fb1c-4075-9f16-21fa7df43938&ctx=files&rootContext=items_view&viewerAction=view)

[XLSX File viewer | Microsoft Teams](https://teams.microsoft.com/_#/xlsx/viewer/p2p/https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards~2FShared%20Documents~2FGeneral~2FTechnical%20Docs~2FDimensions~2FFluke%20Datawarehouse%20Dimensions_10-7-21.xlsx?messageId=1633623502144&fileId=3143B4ED-C5A8-43A8-84E1-5D7811D0E0B1&ctx=fileLink&viewerAction=view) – new location

To get the most updated list of Funnel Dimensions filter the Funnel column with values ‘Y’

### Data Gaps – Ingestion process needs

FCAL EMEA(IG+FCAL+FNET) excel files coming from distributors showing leads/opportunities will be ending September 2021 because FCAL EMEA recently moved entirely into CRM (MSD). This means no more distributor files will be used.

This process has started, data has been uploaded for FCAL emea, open opportunities. This creates a data error in the opportunity information. Opportunities show created on date of July/August although they are in the funnel much longer and more varied inflow dates. there is also no historical data uploaded. A potential “historical or correction file solution may need to be reviewed/discussed to upload/link data for dashboard/report purposes.

### Drill Down Path

Funnel (Leads, Opportunities, Closed/Won)

* Path1: Leads, Opportunity, and Closed/Won Marketing Channel/Campaign (Lead Source) (ie Sales Generated vs Marketing Generated and the campaigns associated)
* Path2: Opportunity by Entity (APAC, EMEA, North AMERICA, AMERICA)
* Path3: Opportunity by Product Workflow
* Path 4: CRM (Dynamics) Activity Types -*These activities are being used to measure the sales teams to understand their conversion effectiveness and team workload.*
  + 1. Appointments (onsite demo, phone demo , sales visit)
    2. Emails
    3. Tasks
    4. Phone Calls
    5. Call Reports (FPI)

### Metrics Requirements

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| List of Metrics Requirements for Funnel | | | | | |
| Metrics | **Description** | **Logic** | **Time Dimension** | **Comment** |
| Leads #  Created | The count of Leads created in selected time frame (by created on date) | Distinct count of Lead ID | **Actual** / **Prior Year /Target**  Fiscal Calendar up from Day | Open or Qualified or disqualified leads  (How many leads were created during that period) |
| Opportunity $  Created  “Funnel Sustainment” | The $ amount of the product that is attached to the opportunity created in selected time frame (by oppty created on date) | Sum of the dollar amount of all the products associated to the Opportunity | **Actual** / **Prior Year / Target**  Fiscal Calendar up from Day | How many opportunity dollars are you creating in each period |
| Opportunity #  Created | The count of distinct opportunities created in selected time (by created on date) | Distinct count of Opportunity ID | **Actual** / **Prior Year / Target**  Fiscal Calendar up from Day |  |
| Wins $  “success” | The $ amount of the product that is attached to the opportunity Closed/Won and closed in selected time frame (by Actual close date) | Sum of the dollar amount of all the products associated to the Opportunity filtered to Closed/Won Stage | **Actual** / **Prior Year / Target**  Fiscal Calendar up from Day | This is just a filter amount of the Opportunity $ metric (this can be impacted by changing the created on date it is not it is not always the same creation window) |
| Wins # | The count of distinct opportunities Closed/Won and closed in selected time frame (by Actual close date) | Distinct count of Opportunity ID filtered to Closed/Won Stage | **Actual** / **Prior Year / Target**  Fiscal Calendar up from Day |  |
| Days to Win “Funnel Speed” | The count of days from opportunity creation to closed/won date | Count of days from creation to close date (actual close date – created date) | **Actual** / **Prior Year/ Prior year average / YTD Average** Fiscal Calendar up from Day | This metric allows to create a trend over a period of time that shows how fast in average we are closing the funnel, referred as SPEED.  PF, Sales territory, Owner, available filters – Trend by Actual Close Date |
| 3 month rolling Funnel $  “Funnel Size” | The total aggregated amount of Open Opportunity $ summed together for the next 3 months estimated closed date | Sum of Open Opportunity $ for the next 3 month period by estimated close date | Estimated closed data snapshots | Current metric for a period, require snapshots for history |
| 3 month rolling Weighted funnel  “Funnel Size” | The total aggregated amount of Open Opportunity $ multiplied by each stage probability and summed together for the next 3 months estimated closed date | Sum of Open Opportunity $ \* each stage probability for the next 3 month period by estimated close date | Estimated closed data snapshots | Current metric for a period, require snapshots for history | |
| Open Opportunity $ by estimated closed date “Funnel Size” | The $ amount of the product that is attached to the opportunity reported by estimated close date and filtered to OPEN status |  |  | Current metric for a period, require snapshots for history | |
| Lead conversion rate | The rate at which a lead converts to an Opportunity | Count of Qualified Leads by creation period / Count of Total Leads by creation period | **Actual** / **Prior Year** Fiscal Calendar up from Day |  | |
| Opportunity Conversion Rate (Funnel Conversion Rate) | The rate at which an opportunity converts to closed won | Count of Closed Won Opportunities by closed period / Total Count of Opportunities available in the same period | Actual / Prior Year Fiscal Calendar up from Day |  | |
| Opportunity $ by weight “Funnel Shape” | The $ amount of the product that is attached to the Opportunity multiplies by the probability of each stage reported by stage | Sum of opportunity $ \* by each stage probability | Estimated closed data snapshots | Current metric for a period, require snapshots for history | |
| Funnel conversion Rate | The $ amount of the product that is attached to the opportunity filtered by won status closed in a period divided by the amount of the total available opportunities estimated to close at the start of the same period. | Sum of opportunity $ filtered on won status for a selected time period / Total available Open funnel $ at start of the same period |  | This metric is look at in trends of time in order predict / forecast  30/60/90 days, Year (also historical)  Examples: 30 day unweighted funnel snapshot vs 30 days wins for same 30 day period. 90 day unweighted funnel snapshot vs 90 days wins for same 90 day period | |
| Funnel Rate % to Bookings | The % of Booked Order $ amount in a specified period that are the $ amount of the product that is attached to the Opportunity filtered to closed won | Opportunity $ Closed won/ Order $ by booked | **Actual** / **Prior Year** Fiscal Calendar up from Day | This metric is look at in trends of time in order predict / forecast  30/60/90 days, Year (also historical) | |
| Funnel Aging by Stage  “Funnel Shape" | The $ amount of the product that is attached to the Opportunity filtered to open, grouped into age buckets, then grouped further by stage. | Age buckets  <100 days, 100-200 days, 200-300days, >300 days. | **Actual** / **Prior Year** Fiscal Calendar up from Day |  | |

### Power BI needed columns

These columns will be captured as part of Dashboard Wireframing sessions and compiled in the Technical Specification Document stored at location - <<TBD>>

### KPI Inclusions and/or exclusion from Dashboard

 This section defines the filters that would be applied at the BI semantic layer to expose data at the Power BI Dashboard layer.

**Inclusions:** Include all data for Fiscal Calendar, Product Family hierarchy including Product Workflow, Campaign hierarchy including Campaign and Type Descriptions, Opportunity Name and Description, Regions including Sales, Country, and Fluke Regions

### Targets

Targets are set in collaboration by sales and marketing. These targets are static monthly and weekly goals by dollar amount and count of each Lead, Opportunity, and Closed/Won. This is static and uploaded into Dynamics as well as Azure through a simple excel ETL process. The dimension and granularity for these targets can be defined as follows.

1. **Funnel Sales Targets** - These are defined by Lead/Opportunity(opportunities won and opportunities created on)/Won
   1. monthly, sales territory, salesperson, product family, One Fluke Region
2. **Funnel Marketing Targets** - These are defined by Lead/Opportunity/Won
   1. monthly, campaign Type, product family, One Fluke Region
3. **Win Rate** - These are defined by Lead/Opportunity/Won
   1. monthly, campaign type, product family, One Fluke Region
4. **Assigned Accounts Forecasts(sales Targets**) - Targets by Sales Territory - $amount or Growth Rate %
   1. monthly, sales territory, salesperson
5. **Sales Quotas(sales Targets):**
   1. monthly, sales territory, salesperson, IC metric (multiple targets correlated with the number of Incentive Compensation metrics a person is evaluated on)

## Orders

An Order originates from a Fluke customer providing a purchase order from multiple avenues by phone, email, fax, Fluke’s eCommerce platform. An order from a customer is comprised of one or more products.

A Cancelled order is initiated by either the customer or by Fluke pending the business circumstances.  A cancelled order will show as a negative amount thus reducing the order amount.

For SSO Business unit, returned order (RMA order type) is not recorded as an order, nor as an inclusion of backlog.  The value of an RMA can change over time as it may come in as a calibration but then need to be changed repair, or visa-versa.

**\*\* Requirement is to change the naming convention from “Bookings” to “Orders” for all the current and past records.**

### Calculation Requirements

**Physical Calculations for Orders**

|  |  |  |
| --- | --- | --- |
| Level | Calculation Description | Output |
| Line Level | Order Amount = SKU Price \* SKU Quantity  *SKU price = net price after discounts (w/o rebates)* | $ Amount |
| Multi-Line Level | Total Order Amount =Sum of Order Amount | $ Amount |

**Order Types Required:**

ICSO order (internal orders or internal transfer orders) especially for Americas and APAC

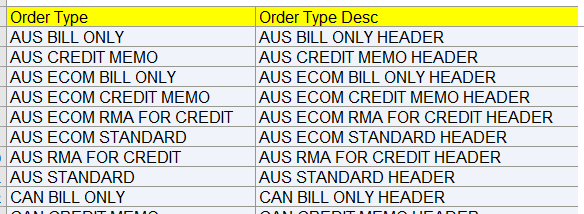
Revenue and non-revenue orders

Regular discount and additional order discount details

Order holds details > reference the Delivery write up

Table below is an example, reference file called, “Fluke Order Type list.xlsx” Link below to file.

<https://fortive.sharepoint.com/:x:/r/sites/FLK-BI-Data-Stewards/Shared%20Documents/Deliverables/2.CapGemini_DesignPhase_Docs/KPI%20BRDs/Fluke%20Order%20Type%20list.xlsx?d=w377577c822d04c05a86ffa22b7cc2f8d&csf=1&web=1&e=FTb9Qq>



### Variants of the KPI

**Enterprise Level**

* Based on Geography /Business Unit(FRS/FPI/Core)

**Functional Level**

* Product (Hardware/Software) Orders
* Subscription based orders
* Lease based orders
* Deferred Revenue
* On-site services (FPI / Irisys & SSO)
* Service (calibration, etc …)
* Service (gold contracts)

### Dimensions and Data Sources

Source of raw data current or new

• Oracle EBS (90%)

• Subsidiary Flat files   
• Hyperion

Each CVD is required to include aggregation capabilities as described in the table below. A common requirement across all dimensions is that a standardized set of aggregation business rules be established

|  |  |  |
| --- | --- | --- |
| **D#** | **Dimension** | **Dimension Description** |
|  |
|  |
| D18 | **Account User** | Reference Table |  |
| D19 | **Accounting Class** | The valuation and variance accounts that are associated with this accounting class determine which GL accounts are charged and when. |  |
| D20 | **Adjustments** | Sales order line adjustments.Types of Adjustments |  |
| D24 | **Calendar** | Custom Loaded Calendar Table |  |
| D28 | **Currency** | Full International Standards Organization (ISO) name of the monetary unit. |  |
| D29 | **Customer** | Bill-To and Ship-To customer information. |  |
| D30 | **Customer - Channel** | Description of the Customer channel code. |  |
| D33 | **Destination Geography** | Geographies based on Ultimate Destination |  |
| D34 | **Employee** | Employee name and location of the person who performs a certain function within the source system. |  |
| D39 | **General Ledger** | General ledger account . |  |
| D40 | **General Ledger - GL Account Segment** | General ledger account details. |  |
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| D45 | **Inventory - Demand Types** | Identifies a forecasted or an actual demand. |  |
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| D55 | **Location** | Geographical location of the customer. |  |
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| D57 | **Modifiers** | Definition of discount headers and lines. |  |
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| D60 | **Oracle Open Sales Orders - Hold Definitions** | Defining Holds **in** Order Management |  |
| D61 | **Oracle Open Sales Orders - Sources** | Feeder System Names that create orders in Order Management tables |  |
| D62 | **Oracle Open Sales Orders - Texts** | Junk Dimension |  |
| D63 | **Order Types - Line Type** | Classification of a sales order line. |  |
| D64 | **Order Types - Order Type** | Classification of a sales order. |  |
| D65 | **Organization** | Name of the accounting company. |  |
| D66 | **Payment Terms** | Determines the amount of each installment |  |
| D67 | **Period Status** | The current status of the GL accounting period. |  |
| D68 | **Planner** | General planning attributes. |  |
| D69 |  | Provider classification. |  |
| D71 | **Price - Price List** | Price List Detail. |  |
| D73 | **Product** | Product detail. |  |
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| D92 | Snapshot | Snapshot detail. |  |
| D93 | **Source System** | Identifier of the source system for the order line. |  |
| D95 | **Status** | Status of returned item. |  |
| D97 | **Transaction - Transaction Source** | Indicates the source of the transaction. |  |
| D98 | **Transaction - Transaction Type** | Classify a particular transaction |  |
| D115 | **Warehouse** | Warehouse details. |  |
| D116 | **Warehouse Lab** | Inventory detail. |  |
| D117 | **Warranty Cost - Record Owner** | Details about the Technical Service person, group or organization responsible for this record. |  |
| D118 | **Warranty Cost - Resource** | Stores information on Warranty Resource Costs. |  |
| D131 | Dim Booked Period | Fiscal booked date, month, year etc. |  |
| D132 | Dim Booking Final Destination | Hierarchy locations. |  |

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[XLSX File viewer | Microsoft Teams](https://teams.microsoft.com/_#/xlsx/viewer/p2p/https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards~2FShared%20Documents~2FGeneral~2FTechnical%20Docs~2FDimensions~2FFluke%20Datawarehouse%20Dimensions_10-7-21.xlsx?messageId=1633623502144&fileId=3143B4ED-C5A8-43A8-84E1-5D7811D0E0B1&ctx=fileLink&viewerAction=view) – new location

To get the most updated list of Orders Dimensions filter the Orders column with values ‘Y’

### Data Gaps – Ingestion process needs

Non oracle entities fulfilled by flat files standard work .

### Drill Down Path

The most common way to slice and dice the KPI according to the company structure to guide the user on the exploration of the data

* Path1: by Region/Geography hierarchy (APAC, EMEA, Americas / China, Europe, USA)
* Path2: by Product hierarchy (product group, product family, Model, Sku)
* Path3: by Customer / Channel
* Path4: by Sales Territory
* Path5: by Third Party Rep (is another expression of a specific territory)
* Path6: by Organization Code to see local and indent bookings

\*\*Channel is a subset of Customers (customer channel example - electrical channel and brick and mortar professional business, or retailer channel like Amazon, Lowes, Home Depot, or IMRO channel Industrial Maintenance and Repair)

Fluke internally will need to align globally how to define channel / customer structure for standard use whether region based or global based, etc. There is no one segmentation that is appropriate for all, so each region/country must decide the values to be used on their customer master. Values should be maintain in EBS Customer Master

### Metrics Requirements

For all reporting purposes we use activity period flag. All KPIs need to reflect that. In OBIEE Orders subject area there are dates for "Requested Period" and a folder for "Activity Period" and one for "Booked Period". Activity period will show the latest "status" of the order to reflect the most accurate amount and quantities. When the order is placed (booked period) an order could change with more lines, correct an error, update the pricing, etc. The Activity Period will capture these changes.

* Activity Date
* Activity Day Name
* Activity Day of MO
* Activtiy Day of Yr
* Activtiy MO
* Activty MO Name
* Activity MO No
* Activity
* Activity No
* Activity Qtr Seq No
* Activity Wk of MO
* Activity Wk of MO No
* Activity of Yr
* Activity Wk of Yr No
* Activity Seq No
* Activity Yr
* Activity Yr Ago Date
* Activity Period

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **List of Metrics Requirements for ORDERS** | | | | | |
| **Metric** | **Description** | **Logic** | **Time Dimension** | **Comment** |  |
| YOY growth % | Actuals vs. Prior Year expressed % form | (Total Bookings Current Year / Total Bookings Prior Year) - 1 | **Actual** / **Prior Year / Plan / Forecast**  Month/ Quarter/ Year | Core growth formula will need updating pending acquisitions during the year(s). Can we flag data when we integrate acquired company’s data? And the source system |  |
| YOY growth $ | Actuals vs. Prior Year expressed in $ form | (Total Bookings Current Year - Total Bookings Prior Year) |  |
| 2yr stacked growth % | Actuals vs. Prior 2 Year expressed in % form | (Total Bookings Current Year / 2 years prior Bookings) – 1    For example: (Bookings 2021 / Bookings 2019) - 1 |  |
| Core Growth | Actuals vs. Prior Year expressed in % form.   **Excluding acquisitions and FX impacts** | (Total Bookings Current Year / Total Bookings Prior Year) – 1 |  |
| % to Plan | Actuals divided by plan expressed in % form | (Total Bookings Current Year / Total Bookings Plan) |  |
| % to Forecast | Actuals divided by forecast expressed in % form | (Total Bookings Current Year / Total Bookings Forecast) |  |
| $ variance to Plan | Actuals vs. Plan expressed in $ form | (Total Bookings Current Year - Total Bookings Plan) |  |
| $ variance to Forecast | Actuals vs. Forecast expressed in $ form | (Total Bookings Current Year - Total Bookings Forecast) |  |
| Software Sales metrics | |  | | --- | | Churn (Lost) | | Upsell / Cross-sell | | SaaS Price Increase | | New logos | | SaaS ARR (ending and beginning) | | Net Dollar Retention – Fortive measure | | **Churn = beginning units \* % of lost customers**  **Upsell = beginning units \* % upsold items**  **SaaS price increase = year over year price change**  **New logos = number of net new customers**  **ARR (annual recurring revenue) is a sum of churn, upsell, price increase and new logos**  **NDR = sum of churn, upsell and price increase divided by beginning ARR.** |  |  |  |
| NPI | New product introduction. \*\*NPI is not part of Hyperion and so needs to be ingested in data lake from some external source live csv,txt etc | Specific combination of product model’s ability to flag.  Include CPD flag for china product development NPIs |  |
| VLO | Very large orders | Ability to flag orders over a certain dollar amount that may vary by product group |  |
| DSA | Daily Sales Average | Selected time frame divided by the number of fiscal days in that time frame |  |
| # of Lines Booked | Total number of lines booked in each order | Total number of lines booked in each order |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

\*\***All new metrics derived can be added in future based on the underlying CVD Data Models**

### Power BI needed columns

These columns will be captured as part of Dashboard Wireframing sessions and compiled in the Technical Specification Document stored at location - <<TBD>>

### KPI Inclusions and/or exclusion from Dashboard

This section defines the filters that would be applied at the BI semantic layer to expose data at the Power BI Dashboard layer.

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Condition** | **What** |
|  |  | There are no Fluke specific inclusion or exclusion criteria, all associated data to bring in? |
| SSO has specific coding to pull their bookings/shipments correctly |  | CASE WHEN "Product"."Product Family Code" = 'CVAS' THEN '03-CVAS' WHEN "Product"."Product Family Code" = 'PARTS' THEN '01-Parts' WHEN "- Order Detail"."Service Fulfillment No" = EVALUATE('LAG(%1,1,0) OVER (ORDER BY %2)',"- Order Detail"."Service Fulfillment No","- Order Detail"."Service Fulfillment No")  AND "Serviced Product"."Model" IS NULL AND EVALUATE('LAG(%1,1,0) OVER (ORDER BY %2)' ,"Product"."Model","- Order Detail"."Service Fulfillment No")  = 'CAL-ONSITE' THEN '01-CAL-ONSITE'  WHEN "Order"."Order No"  = 617017357 AND "Order"."Line No" = 2 THEN '01-CAL-ONSITE'    WHEN Product."Item No" = '2795877' THEN '01-CAL-ONSITE'  WHEN Product."Item No" = '2563101' THEN '01-Service Commision' WHEN Product."Item No" = '1670916' THEN '02-Service Processing Fee' WHEN Product."Item No" = '2802563'  OR Product."Item No" = '2584651'  OR Product."Item No" = '2584660'  OR Product."Item No" = '2802556'  THEN '03-Fluke Europe PRE-CAL' WHEN Product."Item No" = '5071762' THEN '11-SHIPPING AND HANDLING CHARGES-NOT SSO Revenue' WHEN Product."Item No" = '5134889' THEN '12-LOGISTICS AND CUSTOM CLEARANCE-NOT SSO Revenue' WHEN Order."Order Type" like '%BILL ONLY'  THEN '02-Bill Only-Credit'  WHEN Order."Order Type" like '%CREDIT MEMO'  THEN '02-Bill Only-Credit' WHEN Order."Order Type" like '%SVC%'  THEN '01-SVC Shipment'   WHEN "Order"."Order No"  = 619037482 THEN '01-SVC Shipment'   WHEN "Order"."Order No"  = 610261034 THEN '01-SVC Shipment'   ELSE '100-Other' END |
| SSO has specific coding to pull their bookings/shipments correctly |  | CASE WHEN "Product"."Product Family Code" = 'CVAS' THEN '10-Service' WHEN "Product"."Product Family Code" = 'PARTS' THEN '20-Parts' WHEN "- Order Detail"."Service Fulfillment No" = EVALUATE('LAG(%1,1,0) OVER (ORDER BY %2)',"- Order Detail"."Service Fulfillment No","- Order Detail"."Service Fulfillment No")  AND "Serviced Product"."Model" IS NULL AND EVALUATE('LAG(%1,1,0) OVER (ORDER BY %2)' ,"Product"."Model","- Order Detail"."Service Fulfillment No")  = 'CAL-ONSITE' THEN '01-CAL-ONSITE'  WHEN "Order"."Order No"  = 617017357 AND "Order"."Line No" = 2 THEN '01-CAL-ONSITE'    WHEN Product."Item No" = '2795877' THEN '01-CAL-ONSITE' WHEN Product."Item No" = '2563101' OR Product."Item No" = '1670916' OR Product."Item No" = '5071762' OR Product."Item No" = '5134889' THEN '10-Service' WHEN Product."Item No" = '2802563'  OR Product."Item No" = '2584651'  OR Product."Item No" = '2584660'  OR Product."Item No" = '2802556'  THEN '02-NLL' WHEN Order."Order Type" like 'ERU%'  THEN '06-RUL' WHEN Order."Order Type" like '%SVC%' AND Inventory."Ship-From Inventory Name" = 'Fluke Netherlands Service' THEN '02-NLL'  WHEN Order."Order Type" like '%SVC%' AND Inventory."Ship-From Inventory Name" = 'Fluke France Lab' THEN '02-NLL' WHEN Order."Order Type" like '%SVC%' AND Inventory."Ship-From Inventory Name" = 'Fluke United Kingdom Service' THEN '03-UKL' WHEN Order."Order Type" like '%SVC%' AND Inventory."Ship-From Inventory Name" = 'Fluke Germany Service' THEN '04-DEL' WHEN Order."Order Type" like '%SVC%' AND Inventory."Ship-From Inventory Name" = 'Fluke Glottertal Lab' THEN '05-DGL' WHEN Order."Order Type" like 'EUK%'  THEN '03-UKL' WHEN Order."Order Type" like 'EDE%'  THEN '04-DEL' WHEN Order."Order Type" like 'DGL%'  THEN '05-DGL' ELSE '02-NLL' END |

### Targets

Order scoring logic starts with the annual budgeting process where the commercial regional teams perform standard work to sum up sub-region growth expectations. Typically, this starts with Distributor growth expectations and other macroeconomic growth considerations as an example. The budget process sets the bar then monthly forecasts are conducted in-year to update quarterly forecast expectations. The budget or plan target is static once Fortive approves. The Forecast target is dynamic throughout the year. The target is both $ amount and growth rate vs. prior year.

**Orders/Ship Plan: done yearly and submitted to Fortive**

**Orders/Ship Forecast: done monthly**

### Additional or future needs

* Ability to link funnel, bookings, backlog, shipment, customer POS data by Customer and product group for ML (machine learning) analytics
* Fluke internally to define a relationship between funnel and order/customer.  Logic to be built to understand relationship.

## Shipments

A Fluke order from a customer is comprised of one or more products. Order becomes a shipment when Fluke ships all or a portion of the order to the customer. Software sales and service contract sales (non-material) involve deferred revenue where product is not physically shipped.

### Calculation Requirements

**Physical Calculations for Shipments**

|  |  |  |
| --- | --- | --- |
| Level | Calculation Description | Output |
| Line Level | Order Amount = SKU Price \* SKU Quantity  *SKU price = net price after discounts (w/o rebates)* | $ Amount |
| Multi-Line Level | Total Order Amount =Sum of Order Amount | $ Amount |

**Order Types Required:**

ICSO order (internal orders or internal transfer orders) especially for Americas and APAC

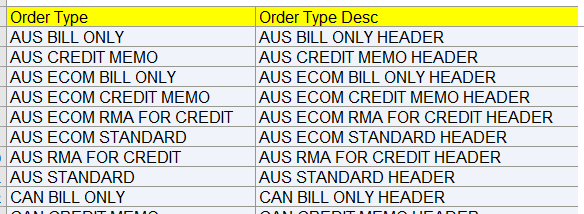
Revenue and non-revenue orders

Regular discount and additional order discount details

Order holds details > reference the Delivery write up

Table below is an example, reference file called, “Fluke Order Type list.xlsx” Link below to file

<https://fortive.sharepoint.com/:x:/r/sites/FLK-BI-Data-Stewards/Shared%20Documents/Deliverables/2.CapGemini_DesignPhase_Docs/KPI%20BRDs/Fluke%20Order%20Type%20list.xlsx?d=w377577c822d04c05a86ffa22b7cc2f8d&csf=1&web=1&e=FTb9Qq>



### Variants of the KPI

**Functional Level**

* Internal shipments (non-revenue shipments)
* Product (Hardware/Software) orders
* Subscription based orders
* Lease based orders
* On-site services (FPI / Irisys)
* Service (calibration, etc …)
* Service (gold contracts)

### Dimensions and Data Sources

Source of raw data current or new

• Oracle EBS

• Subsidiary Flat files   
• Hyperion

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|  |  |  |
| --- | --- | --- |
| **D#** | **Dimension** | **Dimension Description** |
|  |
|  |
| D9 | **Account Receivables - Aging Bucket** | Time periods used to review and report on open receivables. |  |
| D10 | **Account Receivables - Batch Sources** | Controls the standard transaction type assigned to a transaction and determine whether receivables automatically numbers transactions and transaction batches. |  |
| D11 | **Account Receivables - Collectors** | Name and profile of the collectors who tracks collection of receivables. |  |
| D12 | **Account Receivables - Customers** | Customer that receives the invoice. |  |
| D13 | **Account Receivables - Dispute Reasons** | Details of dispute transactions. |  |
| D14 | **Account Receivables - Lookup Values** | Reference Table |  |
| D15 | **Account Receivables - Parties** | Party that receives the invoice. |  |
| D16 | **Account Receivables - Party Sites** | Party site that receives the invoice. |  |
| D17 | **Account Receivables - Term Lines** | Payment terms details. |  |
| D18 | **Account User** | Reference Table |  |
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| D67 | **Period Status** | The current status of the GL accounting period. |  |
| D68 | **Planner** | General planning attributes. |  |
| D69 | **POS Provider Type** | Provider classification. |  |
| D71 | **Price - Price List** | Price List Detail. |  |
| D73 | **Product** | Product detail. |  |
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| D117 | **Warranty Cost - Record Owner** | Details about the Technical Service person, group or organization responsible for this record. |  |
| D118 | **Warranty Cost - Resource** | Stores information on Warranty Resource Costs. |  |
| D233 | Dim Shipped Period | Ship dates |  |
| D234 | Dim Shipping Attributes | Shipping information. |  |
| D235 | Dim Ship-To Customer | Ship-To customer information. |  |
| D236 | Dim Ship-To Location | Ship-To customer information. |  |
| D237 | Dim Ship-To Territory Planning Bridge | Ship-To customer information. |  |
| D238 | Dim Ship-To Territory Planning Secondary | Ship-To customer information. |  |
| D239 | Dim Ship-To Territory Planning | Ship-To customer information. |  |

Unified Dimensions have been vetted with the Data Steward team for each KPI within a CVD. Please refer to the file called “Fluke Datawarehouse Dimensions summary page.xlsx”  Located at Teams site - [Unified Dimensions](https://teams.microsoft.com/_#/xlsx/viewer/teams/https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards~2FShared%20Documents~2FGeneral~2FTechnical%20Docs~2FFluke%20Datawarehouse%20Dimensions_summary%20page.xlsx?threadId=19:84080666398a41adb35436c2d3b196da@thread.tacv2&baseUrl=https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards&fileId=1ca9b00a-fb1c-4075-9f16-21fa7df43938&ctx=files&rootContext=items_view&viewerAction=view)

[XLSX File viewer | Microsoft Teams](https://teams.microsoft.com/_#/xlsx/viewer/p2p/https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards~2FShared%20Documents~2FGeneral~2FTechnical%20Docs~2FDimensions~2FFluke%20Datawarehouse%20Dimensions_10-7-21.xlsx?messageId=1633623502144&fileId=3143B4ED-C5A8-43A8-84E1-5D7811D0E0B1&ctx=fileLink&viewerAction=view) – new location

To get the most updated list of Shipment Dimensions filter the Shipment column with values ‘Y’

### Data Gaps – Ingestion process needs

Non-Oracle entity flat files

### Drill Down Path

* Path1: by Region/Geography hierarchy (APAC, EMEA, Americas / China, Europe, USA)
* Path2: by Product Workflow (Trouble Shooting, Calibration, Installation/Certification Tools, Routine/ Analysis, Safety) àcolumn named as product\_workflow\_name
* Path3: by Product  (this list dynamically changes as per Product Workflow slicer selected)
* Path4: by Customer / Channel
* Path5: by Sales Territory
* Path6: by Third Party Rep
* Path7: by Factory of Origin
* Path8: SHIP\_FROM\_INVENTORY\_NAME (required for SSO)
* Path9: Organization Code/Name to see Local and Indent

### Metrics Requirements

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **List of Metrics Requirements for Shipments** | | | | |
| **Metric** | **Description** | **Logic** | **Time Dimension** | **Comment** |
| YOY growth % | Actuals vs. Prior Year expressed % form | (Total Shipments Current Year / Total Shipments Prior Year) - 1 | **Actual** / **Prior Year / Plan / Forecast**  Month/ Quarter/ Year | Core growth formula will need updating pending acquisitions during the year(s). |
| YOY growth $ | Actuals vs. Prior Year expressed in $ form | (Total Shipments Current Year - Total Shipments Prior Year) |
| 2 yr stacked YOY growth % | Actuals vs. Prior Year expressed in % form | (Total Shipments Current Year / 2 years prior Shipments) – 1    For example: (Shipments 2021 / Bookings 2019) - 1 |
| Core Growth | Actuals vs. Prior Year expressed in % form.   **Excluding acquisitions and FX impacts** | (Total Shipments Current Year / Total Shipments Prior Year) – 1 |
| % to Plan | Actuals divided by plan expressed in % form | (Total Shipments Current Year / Total Shipments Plan) |
| % to Forecast | Actuals divided by forecast expressed in % form | (Total Shipments Current Year / Total Shipments Forecast) |
| $ variance to Plan | Actuals vs. Plan expressed in $ form | (Total Shipments Current Year - Total Shipments Plan) |
| $ variance to Forecast | Actuals vs. Forecast expressed in $ form | (Total Shipments Current Year - Total Shipments Forecast) |
| Software Sales metrics | |  |  | | --- | --- | | Churn (Lost) |  | | Upsell / Cross-sell |  | | SaaS Price Increase |  | | New logos |  | | SaaS ARR (ending and beginning) |  | | Net Dollar Retention – Fortive measure |  | | **Churn = beginning units \* % of lost customers**  **Upsell = beginning units \* % upsold items**  **SaaS price increase = year over year price change**  **New logos = number of net new customers**  **ARR (annual recurring revenue) is a sum of churn, upsell, price increase and new logos**  **NDR = sum of churn, upsell and price increase divided by beginning ARR.** |  |  |
| NPI | New product introduction | Specific combination of product models ability to flag.  Include CPD flag for china product development NPIs |
| VLO | Very large orders | Ability to flag orders over a certain dollar amount that may vary by product group |
| DSA | Daily Sales Average | Selected time frame divided by the number of fiscal days in that time frame |
| # of Lines Shipped | Total number of lines shipped in each order |  |  |  |
| Indent Sales |  | Combo of Entity code and ship to geography will provide the indent shipment amount. Indent shipment is a product shipped from one country to another country. For example, US ships product to China (01 entity to a ship to China geo) and China gets credit for the sale. |  |  |
|  |  |  |  |  |
|  |  |  |  |  |

### Power BI needed columns

These columns will be captured as part of Dashboard Wireframing sessions and compiled in the Technical Specification Document stored at location - <<TBD>>

### KPI Inclusions and/or exclusion from Dashboard

 This section defines the filters that would be applied at the BI semantic layer to expose data at the Power BI Dashboard layer.

|  |  |  |
| --- | --- | --- |
| **Column Name** | **Condition** | **What** |
| Revenue Flag | Yes | Need to select revenue flag as “Y” to exclude internal transfers |
| SSO has specific coding to pull their bookings/shipments correctly.  SSO revenue into the different buckets (like On-Site, asset management, etc.) as required.  This is created by IT need needs to be available in new system too |  | CASE WHEN "Product"."Product Family Code" = 'CVAS' THEN '03-CVAS' WHEN "Product"."Product Family Code" = 'PARTS' THEN '01-Parts' WHEN "- Order Detail"."Service Fulfillment No" = EVALUATE('LAG(%1,1,0) OVER (ORDER BY %2)',"- Order Detail"."Service Fulfillment No","- Order Detail"."Service Fulfillment No")  AND "Serviced Product"."Model" IS NULL AND EVALUATE('LAG(%1,1,0) OVER (ORDER BY %2)' ,"Product"."Model","- Order Detail"."Service Fulfillment No")  = 'CAL-ONSITE' THEN '01-CAL-ONSITE'  WHEN "Order"."Order No"  = 617017357 AND "Order"."Line No" = 2 THEN '01-CAL-ONSITE'    WHEN Product."Item No" = '2795877' THEN '01-CAL-ONSITE'  WHEN Product."Item No" = '2563101' THEN '01-Service Commision' WHEN Product."Item No" = '1670916' THEN '02-Service Processing Fee' WHEN Product."Item No" = '2802563'  OR Product."Item No" = '2584651'  OR Product."Item No" = '2584660'  OR Product."Item No" = '2802556'  THEN '03-Fluke Europe PRE-CAL' WHEN Product."Item No" = '5071762' THEN '11-SHIPPING AND HANDLING CHARGES-NOT SSO Revenue' WHEN Product."Item No" = '5134889' THEN '12-LOGISTICS AND CUSTOM CLEARANCE-NOT SSO Revenue' WHEN Order."Order Type" like '%BILL ONLY'  THEN '02-Bill Only-Credit'  WHEN Order."Order Type" like '%CREDIT MEMO'  THEN '02-Bill Only-Credit' WHEN Order."Order Type" like '%SVC%'  THEN '01-SVC Shipment'   WHEN "Order"."Order No"  = 619037482 THEN '01-SVC Shipment'   WHEN "Order"."Order No"  = 610261034 THEN '01-SVC Shipment'   ELSE '100-Other' END |
| SSO has specific coding to pull their bookings/shipments correctly.  SSO revenue into the different buckets (like On-Site, asset management, etc.) as required.  This is created by IT need needs to be available in new system too |  | CASE WHEN "Product"."Product Family Code" = 'CVAS' THEN '10-Service' WHEN "Product"."Product Family Code" = 'PARTS' THEN '20-Parts' WHEN "- Order Detail"."Service Fulfillment No" = EVALUATE('LAG(%1,1,0) OVER (ORDER BY %2)',"- Order Detail"."Service Fulfillment No","- Order Detail"."Service Fulfillment No")  AND "Serviced Product"."Model" IS NULL AND EVALUATE('LAG(%1,1,0) OVER (ORDER BY %2)' ,"Product"."Model","- Order Detail"."Service Fulfillment No")  = 'CAL-ONSITE' THEN '01-CAL-ONSITE'  WHEN "Order"."Order No"  = 617017357 AND "Order"."Line No" = 2 THEN '01-CAL-ONSITE'    WHEN Product."Item No" = '2795877' THEN '01-CAL-ONSITE' WHEN Product."Item No" = '2563101' OR Product."Item No" = '1670916' OR Product."Item No" = '5071762' OR Product."Item No" = '5134889' THEN '10-Service' WHEN Product."Item No" = '2802563'  OR Product."Item No" = '2584651'  OR Product."Item No" = '2584660'  OR Product."Item No" = '2802556'  THEN '02-NLL' WHEN Order."Order Type" like 'ERU%'  THEN '06-RUL' WHEN Order."Order Type" like '%SVC%' AND Inventory."Ship-From Inventory Name" = 'Fluke Netherlands Service' THEN '02-NLL'  WHEN Order."Order Type" like '%SVC%' AND Inventory."Ship-From Inventory Name" = 'Fluke France Lab' THEN '02-NLL' WHEN Order."Order Type" like '%SVC%' AND Inventory."Ship-From Inventory Name" = 'Fluke United Kingdom Service' THEN '03-UKL' WHEN Order."Order Type" like '%SVC%' AND Inventory."Ship-From Inventory Name" = 'Fluke Germany Service' THEN '04-DEL' WHEN Order."Order Type" like '%SVC%' AND Inventory."Ship-From Inventory Name" = 'Fluke Glottertal Lab' THEN '05-DGL' WHEN Order."Order Type" like 'EUK%'  THEN '03-UKL' WHEN Order."Order Type" like 'EDE%'  THEN '04-DEL' WHEN Order."Order Type" like 'DGL%'  THEN '05-DGL' ELSE '02-NLL' END |

### Targets

Shipment scoring logic is driven by the order target process stated above in addition to an estimated backlog conversion rate. After orders have been established, backlog analysis is conducted to determine at what conversion rate will be applied by product family to derive the shipment amount.

Similar to orders, the budget or plan target is static once Fortive approves. The Forecast target is dynamic throughout the year. The target is both $ amount and growth rate vs. prior year.

**Orders/Ship Plan: done yearly and submitted to Fortive**

**Orders/Ship Forecast: done monthly**

### Additional or future needs

* Ability to link funnel, bookings, backlog, shipment, customer POS data by Customer and product group for ML (machine learning) analytics
* Fluke internally to define a relationship between funnel and order/customer.  Logic to be built to understand relationship.

## Distributor Inventory (DIS INV)

INV data is generated when a seller Reports the on-hand or in-transit inventory data producing information about what products they have, how many and the cost of on-hand or in-transit products.

**Timing of INV Data:**

INV data is generated by distributors in-month, from the 1st to the last day of each month. Immediately, between the 1st and the 15th of the following month, Fluke collects the INV data from the distributors and BI Team publishes the report.

### Calculation Requirements

**Average Quarterly Price calculation**

Fluke distributors usually show quantity and cost in their detailed Inventory reports. It is often uncertain what price and level of discount the reported cost represents. In order to ensure consistency and accuracy when aggregating Inventory at the total level Fluke average quarterly price should be used in the calculation of final Inventory number.

**Fluke Average Quarterly Price (3 months rolling) = Distributor net shipments/ Shipment quantity**

**Final Inventory = Inventory quantity (reported by distributor) \* Fluke Average Quarterly Price**

\*\*If the particular item reported in Inventory was not shipped to the distributor in the last 3 months the next 3 months rolling should be used until the item is found in the distributor shipment number.

Calculation should look through all the available shipment data in the system and if the item is not found (in case it’s incorrectly reported by distributor) calculation should result in zero value.

### Variants of the KPI

**Enterprise Level:**

* Depends on Regions –(2 different ways of calculation)
  + Importing data Directly from DIS
  + Using POS data and Shipment Data to calculate implied INV
* Channel
* Product

**Functional Level:**

* Region
* Account base
* Product base

### Dimensions and Data Sources

Source of raw data current or new

* Oracle EBS (Distributor specific extracts, Excel files, downloads from portals, csvs will all be made available in Oracle EBS for consumption for CapG team)
* Inventory Files

Each CVD is required to include aggregation capabilities as described in the table below. A common requirement across all dimensions is that a standardized set of aggregation business rules be established

|  |  |  |
| --- | --- | --- |
| **D#** | **Dimension** | **Dimension Description** |
|  |
|  |
| D18 | **Account User** | Reference Table |  |
| D19 | **Accounting Class** | The valuation and variance accounts that are associated with this accounting class determine which GL accounts are charged and when. |  |
| D20 | **Adjustments** | Sales order line adjustments.Types of Adjustments |  |
| D24 | **Calendar** | Custom Loaded Calendar Table |  |
| D28 | **Currency** | Full International Standards Organization (ISO) name of the monetary unit. |  |
| D29 | **Customer** | Bill-To and Ship-To customer information. |  |
| D30 | **Customer - Channel** | Description of the Customer channel code. |  |
| D33 | **Destination Geography** | Geographies based on Ultimate Destination |  |
| D34 | **Employee** | Employee name and location of the person who performs a certain function within the source system. |  |
| D42 | **Holiday** | Number of holiday days passed during the repair and/or calibration service event. |  |
| D55 | **Location** | Geographical location of the customer. |  |
| D56 | **MFG** | Reference Table |  |
| D57 | **Modifiers** | Definition of discount headers and lines. |  |
| D59 | **Oracle Open Sales Orders - Hold Buckets** | Time periods used to review and report days on hold. |  |
| D60 | **Oracle Open Sales Orders - Hold Definitions** | Defining Holds **in** Order Management |  |
| D61 | **Oracle Open Sales Orders - Sources** | Feeder System Names that create orders in Order Management tables |  |
| D62 | **Oracle Open Sales Orders - Texts** | Junk Dimension |  |
| D63 | **Order Types - Line Type** | Classification of a sales order line. |  |
| D64 | **Order Types - Order Type** | Classification of a sales order. |  |
| D65 | **Organization** | Name of the accounting company. |  |
| D67 | **Period Status** | The current status of the GL accounting period. |  |
| D68 | **Planner** | General planning attributes. |  |
| D69 | **POS Provider Type** | Provider classification. |  |
| D71 | **Price - Price List** | Price List Detail. |  |
| D73 | **Product** | Product detail. |  |
| D87 | **SalesRep - Sales Agent** | Fluke salesperson or primary sales representative currently associated with the territory who represents the product to distributors and/or direct customers. |  |
| D88 | **SalesRep - Sales Agent Territory** | Postal code mapping to Fluke sales persons and representatives currently associated with territories. |  |
| D89 | **SalesRep - Secondary SalesRep** | Additional party, not usually a Fluke employee, who receives sales credit. These parties are most often in the Electrical and HVAC sales channels. |  |
| D90 | **Service Type** | Classification of service type. |  |
| D91 | **SIC Code** | Standard Industry Classification of end customer. |  |
| D92 | Snapshot | Snapshot detail. |  |
| D93 | **Source System** | Identifier of the source system for the order line. |  |
| D97 | **Transaction - Transaction Source** | Indicates the source of the transaction. |  |
| D98 | **Transaction - Transaction Type** | Classify a particular transaction |  |

Unified Dimensions have been vetted with the Data Steward team for each KPI within a CVD. Please refer to the file called “Fluke Datawarehouse Dimensions summary page.xlsx”  Located at Teams site - [Unified Dimensions](https://teams.microsoft.com/_#/xlsx/viewer/teams/https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards~2FShared%20Documents~2FGeneral~2FTechnical%20Docs~2FFluke%20Datawarehouse%20Dimensions_summary%20page.xlsx?threadId=19:84080666398a41adb35436c2d3b196da@thread.tacv2&baseUrl=https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards&fileId=1ca9b00a-fb1c-4075-9f16-21fa7df43938&ctx=files&rootContext=items_view&viewerAction=view)

[XLSX File viewer | Microsoft Teams](https://teams.microsoft.com/_#/xlsx/viewer/p2p/https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards~2FShared%20Documents~2FGeneral~2FTechnical%20Docs~2FDimensions~2FFluke%20Datawarehouse%20Dimensions_10-7-21.xlsx?messageId=1633623502144&fileId=3143B4ED-C5A8-43A8-84E1-5D7811D0E0B1&ctx=fileLink&viewerAction=view) – new location

To get the most updated list of DIS INV Dimensions filter the DIS INV column with values ‘Y’

### Data Gaps – Ingestion process needs

Data comes in different formats from different distributors across the globe

* **Current Process:**
* Multiple teams around the globe are receiving hundreds of files that are pre-processed to enhance, clean, standardize the data.
* Data flows into OBIE directly, so clean files are placed on a specific folder and there is a program that picks up the files and imports those into OBIE.
* **Desired New process**
* Raw Data is automatically ingested to the data lake.
* Transformations queries already programed to take/transform the data to make it available in the curated layer without any manual interventions.

### Drill Down Path

The most common way to slice and dice the KPI according to the company structure   
to guide the user on the exploration of the data

* Path1: by Region/Geography hierarchy (APAC, EMEA, Americas / China, Europe, MEAT, Russia, USA)
* Path2: by Product Workflow (Trouble Shooting, Calibration, Installation/Certification Tools, Routine/ Analysis, Safety) column named as product\_workflow\_name
* Path3: by Product  (this list dynamically changes as per Product Workflow slicer selected)
* Path4: by Customer / Channel Code
* Path5: by Sales Territory

### Metrics Requirements

New metrics <<Andrea to confirm the formula>>

MOI and MOIBL are acronyms for Months of inventory (MOI) and months of inventory and backlog (MOIBL). These are two metrics (with related reports) we are using to measure and evaluate distributor inventory levels. It is a reference to months of distributor stock on hand at distributors sites. Inventory levels are reported by distributors at different levels of granularity. This can be as high level as a total currency value, value by Product Family, or Item number. It can also be reported in quantities by product family or item number. This information must then be adapted, transformed and calculated into an inventory value.

The Americas region is uploading the data into oracle. In other regions the data is maintained in excel.

Reports are generated based on the inventory values.

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **List of Metrics Requirements for Distributor Inventory** | | | | |
| **Metric** | **Description** | **Logic** | **Time Dimension** | **Comment** |
| MOI | Actuals vs. Prior Year expressed % form | Ending month inventory / POS expressed in months | Week/Month /Quarter/Year/ |  |
| MOIBL | Actuals vs. Prior Year expressed in $ form | (Ending Inventory + Backlog ) / ( 3 Prior Month POS) / 3 |
| MOIBL YOY (months) | Months of change in inventory+Backlog Year over year | MOIBL Current year month – MOIBL current month previous year | Week/Month /Quarter/Year/ |  |
| MOI YOY | Months of change in inventory Year over year | MOI Current year month – MOI current month previous year | Week/Month /Quarter/Year/ |  |
| WOI | Weks of INV | Total INV / POS evaluated in weeks |  | $ amount |
| WOIBL | Weeks of INV and Backlog | Total (INV+ Backlog )/ POS evaluated in weeks |  | $ amount |
| Inventory Coverage % ] | Percentage of Reporting coverage of distributors | $ INV reported/ Total $ amount  Total shipments of distributors (POS) who provided inventory $/Total shipments $ (using 12 months rolling time windows)  Total $ amount = $ of INV reported\* (Total shipment/ Shipment to DIS that reported INV) | Week/Month /Quarter/Year/ | Based on $ of inventory |
|  |  |  |  |  |

### Power BI needed columns

These columns will be captured as part of Dashboard Wireframing sessions and compiled in the Technical Specification Document stored at location - <<TBD>>

### KPI Inclusions and/or exclusion from Dashboard

**N/A - all manual effort coming from Excel files, no inventory loaded in Oracle**

### Targets

For those distributors that provide POS and/or their inventory data to Fluke an inventory target will be assigned to those larger distributors. The inventory target is dependent on the distributor's targeted order growth rate and POS targeted growth rate. A potential variable that could come into play for the inventory target is the distributor’s business model changes. For example, a distributor could decide to carry more Fluke inventory to go after new market. This should be understood during the order budget / forecast process the commercials teams conduct. The inventory target is a dollar amount level. The dimension and granularity for these targets can be defined as follows.

1. **Distributor Inventory Target:** Distributor, product family ,month, One Fluke Region hierarchy

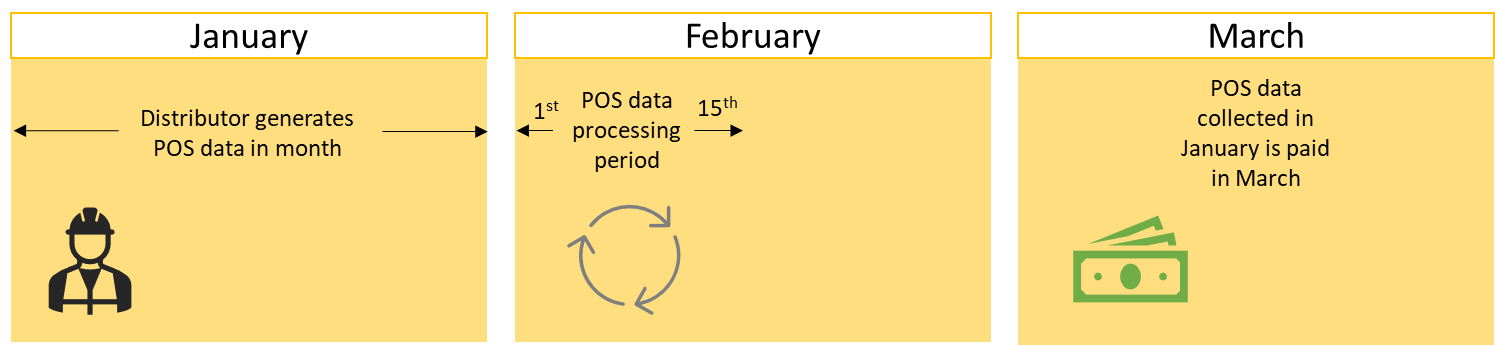
## Distributor Point of Sale (DIS POS)

POS is an acronym for Point-of-Sale. POS data is generated when a seller transacts with the end user producing information about what products were sold, how many products were sold, the location where it was sold, date of the sale, and price details about the transaction. Fluke uses POS for critical business tasks such as calculating pay on incentive plans, gauging market consumption, track sale location with postal code granularity, and forecast market demand. As of today, most POS data is not available in real-time because distributors only allow access to this data after the close of each month.

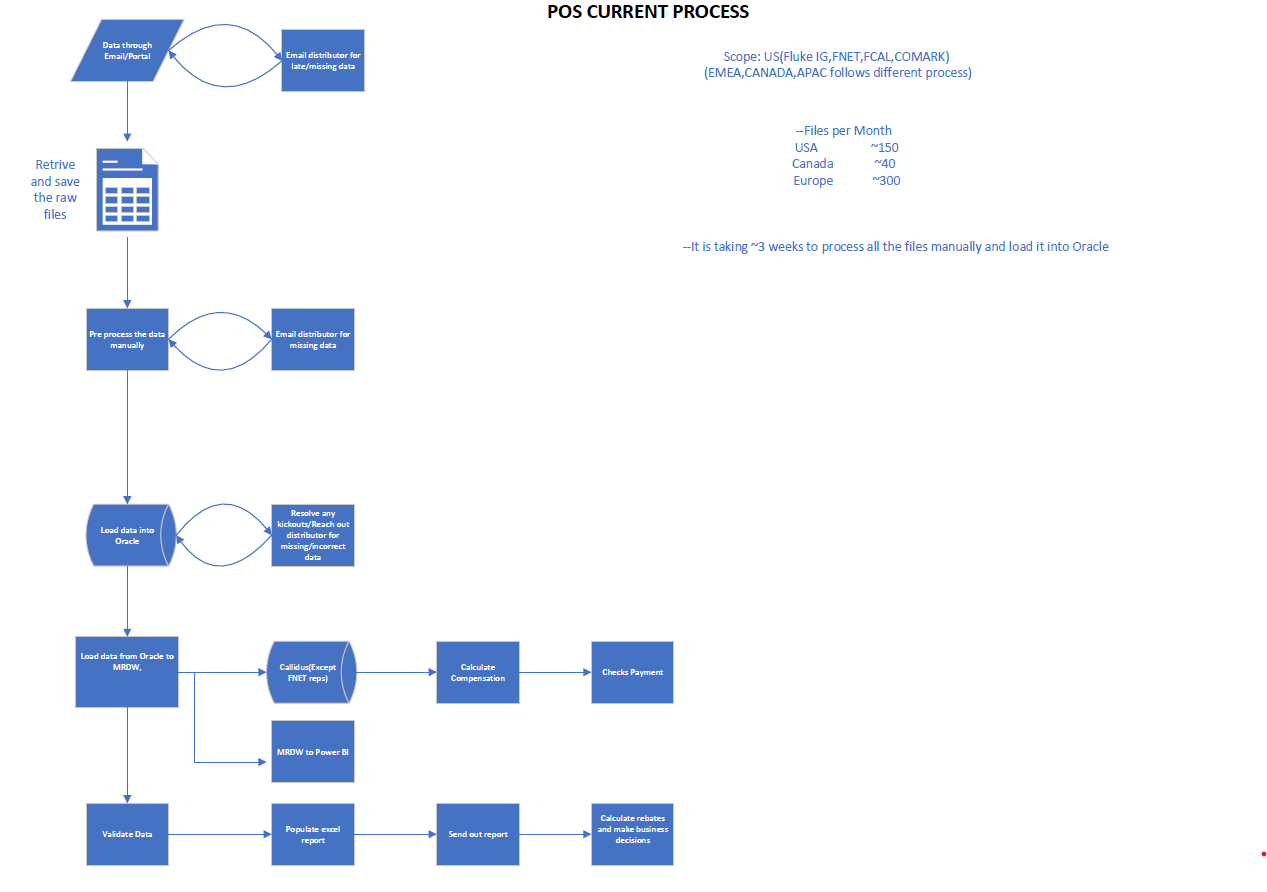
**Timing of POS Data:**

POS data is generated by distributors in-month, from the 1st to the last day of each month. Immediately, between the 1st and the 15th of the following month, Fluke collects the POS data from the distributors and BI Team publishes the report.

Employees on incentive plans receive commission in the month following the POS data processing period. For example, POS from January gets paid in March.



**Important Note:** Regarding APAC it is confirmed that APAC calculates the POS based on reported Distributor Inventory at the beginning of each period and the shipments during the period, this is a good method to evaluate TSO (Total Sales Out) in a market however has limitations from a compensation point of view because doesn’t identify the where the sales occurred at the granular level.



### Calculation Requirements

Because of the different calendars associated with the POS Data and the Shipment Data, Daily Run Rates are used. Daily run rates help to properly compare performance of two classifications of distributors who report using different calendars.



Where, **TSO = Total Sell Out (TSO) = POS Distributors + Ship-To Distributors**

Strengths and weaknesses of using Run Rates (RR)

* **Strength:** allows accurate YoY comparisons (eliminating time dimension of the equation), allow comparison aggregated data from different calendars
* **Weakness** can’t quickly see total revenue as calculations are required every time we need to understand the total revenue amount.

For pure POS Data Distributor COST is utilized, because in order to combine *daily run rates*between pure POS Data and Shipments, Distributor Cost is equivalent to Shipments Net for those non-POS Distributors.

Aggregations are done like in Orders/Shipments and Revenue

This will be calculated in 2 ways:

1. Using COST provided by the DIS
2. Using avg COST of the last 3 months shipment based on Products
   1. Total amount of COST(shipments) in last 3 months/ Total amount of PRODUCTS sold

**Average Quarterly Price calculation**

Fluke distributors usually show quantity and cost in their detailed Inventory reports. It is often uncertain what price and level of discount the reported cost represents. In order to ensure consistency and accuracy when aggregating Inventory at the total level Fluke average quarterly price should be used in the calculation of final Inventory number.

**Fluke Average Quarterly Price (3 months rolling) = Distributor net shipments/ Shipment quantity**

**Final Inventory = Inventory quantity (reported by distributor) \* Fluke Average Quarterly Price**

\*\*If the particular item reported in Inventory was not shipped to the distributor in the last 3 months the next 3 months rolling should be used until the item is found in the distributor shipment number.

Calculation should look through all the available shipment data in the system and if the item is not found (in case it’s incorrectly reported by distributor) calculation should result in zero value.

### Variants of the KPI

**Enterprise Level:**

* + By Region Hierarchy
  + By Channel
* By Product Family Hierarchy
* By Workflow Hierarchy

**Functional Level**

* + By Region
  + By Channel
* By Customer
* By Product Family Hierarchy

Geography is defined by: Provider Country and End Customer Country (part of Customer dimension in MRDW POS)

### Dimensions and Data Sources

Source of raw data current or new

* Oracle EBS (Distributor specific extracts, Excel files, downloads from portals, csvs will all be made available in Oracle EBS for consumption for CapG team)
* Inventory Files

Each CVD is required to include aggregation capabilities as described in the table below. A common requirement across all dimensions is that a standardized set of aggregation business rules be established

|  |  |  |
| --- | --- | --- |
| **D#** | **Dimension** | **Dimension Description** |
|  |
|  |
| D18 | **Account User** | Reference Table |  |
| D20 | **Adjustments** | Sales order line adjustments.Types of Adjustments |  |
| D24 | **Calendar** | Custom Loaded Calendar Table |  |
| D28 | **Currency** | Full International Standards Organization (ISO) name of the monetary unit. |  |
| D29 | **Customer** | Bill-To and Ship-To customer information. |  |
| D30 | **Customer - Channel** | Description of the Customer channel code. |  |
| D33 | **Destination Geography** | Geographies based on Ultimate Destination |  |
| D34 | **Employee** | Employee name and location of the person who performs a certain function within the source system. |  |
| D42 | **Holiday** | Number of holiday days passed during the repair and/or calibration service event. |  |
| D43 | **Inventory - ATP Rules** | Order Management attributes. |  |
| D44 | **Inventory - Buckets** | Time periods used to review and report on hand inventory. |  |
| D45 | **Inventory - Demand Types** | Identifies a forecasted or an actual demand. |  |
| D46 | **Inventory - Freight** | Inventory Freight Details. |  |
| D47 | **Inventory - Item Locations** | Locator defines the physical location of a product. |  |
| D48 | **Inventory - Lot Numbers** | Specifies a batch of an item identified by a number. |  |
| D49 | **Inventory - Org Items** | Codes used to group products with similar characteristics. |  |
| D50 | **Inventory - Planners** | Material planner assigned to plan the item. |  |
| D51 | **Inventory - Sub Inventories** | Subinventory details. |  |
| D52 | **Inventory - Transaction Source Types** | Details about an Oracle Inventory charges a transaction. |  |
| D53 | **Inventory - Transaction Types** | Transaction type details. |  |
| D54 | **Inventory - UNSPSC Code** | Hierarchical convention used to classify products and services. |  |
| D55 | **Location** | Geographical location of the customer. |  |
| D56 | **MFG** | Reference Table |  |
| D57 | **Modifiers** | Definition of discount headers and lines. |  |
| D59 | **Oracle Open Sales Orders - Hold Buckets** | Time periods used to review and report days on hold. |  |
| D60 | **Oracle Open Sales Orders - Hold Definitions** | Defining Holds **in** Order Management |  |
| D61 | **Oracle Open Sales Orders - Sources** | Feeder System Names that create orders in Order Management tables |  |
| D62 | **Oracle Open Sales Orders - Texts** | Junk Dimension |  |
| D63 | **Order Types - Line Type** | Classification of a sales order line. |  |
| D64 | **Order Types - Order Type** | Classification of a sales order. |  |
| D65 | **Organization** | Name of the accounting company. |  |
| D67 | **Period Status** | The current status of the GL accounting period. |  |
| D68 | **Planner** | General planning attributes. |  |
| D69 | **POS Provider Type** | Provider classification. |  |
| D71 | **Price - Price List** | Price List Detail. |  |
| D73 | **Product** | Product detail. |  |
| D87 | **SalesRep - Sales Agent** | Fluke salesperson or primary sales representative currently associated with the territory who represents the product to distributors and/or direct customers. |  |
| D88 | **SalesRep - Sales Agent Territory** | Postal code mapping to Fluke salespersons and representatives currently associated with territories. |  |
| D89 | **SalesRep - Secondary SalesRep** | Additional party, not usually a Fluke employee, who receives sales credit. These parties are most often in the Electrical and HVAC sales channels. |  |
| D90 | **Service Type** | Classification of service type. |  |
| D91 | **SIC Code** | Standard Industry Classification of end customer. |  |
| D92 | Snapshot | Snapshot detail. |  |
| D93 | **Source System** | Identifier of the source system for the order line. |  |
| D97 | **Transaction - Transaction Source** | Indicates the source of the transaction. |  |
| D98 | **Transaction - Transaction Type** | Classify a particular transaction |  |
| D207 | Dim POS Provider Type | POS provider information. |  |

Unified Dimensions have been vetted with the Data Steward team for each KPI within a CVD. Please refer to the file called “Fluke Datawarehouse Dimensions summary page.xlsx”  Located at Teams site - [Unified Dimensions](https://teams.microsoft.com/_#/xlsx/viewer/teams/https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards~2FShared%20Documents~2FGeneral~2FTechnical%20Docs~2FFluke%20Datawarehouse%20Dimensions_summary%20page.xlsx?threadId=19:84080666398a41adb35436c2d3b196da@thread.tacv2&baseUrl=https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards&fileId=1ca9b00a-fb1c-4075-9f16-21fa7df43938&ctx=files&rootContext=items_view&viewerAction=view)

[XLSX File viewer | Microsoft Teams](https://teams.microsoft.com/_#/xlsx/viewer/p2p/https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards~2FShared%20Documents~2FGeneral~2FTechnical%20Docs~2FDimensions~2FFluke%20Datawarehouse%20Dimensions_10-7-21.xlsx?messageId=1633623502144&fileId=3143B4ED-C5A8-43A8-84E1-5D7811D0E0B1&ctx=fileLink&viewerAction=view) – new location

To get the most updated list of DIS POS Dimensions filter the DIS POS column with values ‘Y’

### Data Gaps – Ingestion process needs

* Data comes in different formats
* Data is preprocessed using Power Queries transformation to generate a standard file that can be uploaded
* Data is manually uploaded to Oracle EBS
* Data is enhanced in Oracle EBS and through Informatica and flows into OBIEE
* Data is verified in OBIEE
* Currently multiple teams around the globe are receiving 100s of files that:
  1. They are pre-processing to enhance, clean, standardize the data for Oracle data ingestion
  2. Data flows into Oracle and it is automatically also processed to even clean it of enhance it
  3. Informatica takes it from there and goes into MRDW with additional processes
* Desired New process
  1. Raw Data is automatically ingested to the data lake.
  2. Transformations queries already programed to take/transform the data to make it available in the curated layer without any manual interventions (each new provider POS or INV, a functional analyst will need to build the transformation query).

### Drill Down Path

The most common way to slice and dice the KPI according to the company structure to guide the user on the exploration of the data

* Path1: by Region/Geography hierarchy (APAC, EMEA, Americas / China, Europe, MEAT, Russia, USA)
* Path2: by Product Workflow (Trouble Shooting, Calibration, Installation/Certification Tools, Routine/ Analysis, Safety) column named as product\_workflow\_name
* Path3: by Product  (this list dynamically changes as per Product Workflow slicer selected)
* Path4: by Customer / Channel Code
* Path5: by Sales Territory

### Metrics Requirements

Month YOY%, 3-month YOY%, MTD, QTD, YTD

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **POS Metrics Variants** | | | | | |
| **Metric** | **Description** | **Logic** | **Time Dimension** | **Comment** |  |
| YOY growth % | Actuals vs. Prior Year expressed % form | (Total POS Current Year / Total POS Prior Year) - 1 | **Actual** / **Prior Year / Plan / Forecast**  Month/ Quarter/ Year |  |  |
| YOY growth $ | Actuals vs. Prior Year expressed in $ form | (Total POS Current Year - Total POS Prior Year) |  |
| 2 year stack | Actuals vs. Prior 2 Year expressed in % form | (Total POS Current Year / 2 years prior POS) – 1    For example: (POS 2021 / POS 2019) - 1 |  |
| 3 year stack | Actuals vs. Prior 3 year expressed in % form | (Total POS Current Year / 3 years prior POS) - 1 For example: (POS 2022 / POS 2019) - 1 |  |
| % to Plan | Actuals divided by plan expressed in % form | (Total POS Current Year / Total POS Plan) |  |
| z% to Forecast | Actuals divided by forecast expressed in % form | (Total POS Current Year / Total POS Forecast) |  |
| $ variance to Plan | Actuals vs. Plan expressed in $ form | (Total POS Current Year - Total POS Plan) |  |
| $ variance to Forecast | Actuals vs. Forecast expressed in $ form | (Total POS Current Year - Total POS Forecast) |  |
| % Coverage | Percentage of the total shipments $ that is covered in reported POS $ over a given period | Total shipments $ of distributors who provided POS /Total shipments $ (using 12 months rolling time windows) |  |

### Power BI needed columns

These columns will be captured as part of Dashboard Wireframing sessions and compiled in the Technical Specification Document stored at location - <<TBD>>

### KPI Inclusions and/or exclusion from Dashboard

 This section defines the filters that would be applied at the BI semantic layer to expose data at the Power BI Dashboard layer.

### Targets

Similar to 12.6.9 above for distributor inventory, POS scoring logic and targets are part of the order budget / forecasting cycles. For those distributors that provide POS data to Fluke a target will be assigned to those larger distributors. The POS target is related to the distributor's targeted order growth rate. The target will be both a dollar amount and a growth rate vs. prior year. The dimension and granularity for these targets can be defined as follows.

1. **Distributor POS Target:** Distributor, product family ,month, One Fluke Region hierarchy

## Revenue

Revenue are shipments plus additional transactions like rebates, trade discounts and royalty income.  However, depending on how a region transacts rebates, shipments can include the impact of rebates and other region’s shipments do not. For example, shipments for EMEA include rebates / discount, however, in the America's region they do not due to how rebates are transacted in a separate stand-alone product family.

Core growth is a measure of internal growth of existing business (i.e. **excludes impact of sales increase through acquisitions or FX**) versus prior year.

### Calculation Requirements

**Revenue = List Shipments + Service Revenue + Markup – Trade discounts – Rebates – Cash Discounts**

**Deferred Revenue = Net shipment/posted Date**

**Americas:**

Deferred revenue is processed in 2 ways:

**1)** Automatically calculated by Oracle based on the transaction’s “Service Start Date” and “Service End Date”. The calculation for deferred revenue is based on the service period **by day** until the service period end date. For example, If the service period is for 12 months starting July 3rd, 2021 (beginning of Fluke’s July fiscal month) through fiscal end of month July 30th 2021, there are 28 days. July’s deferred revenue amount will be =

$120,000 / 365 days \* 28 days July = $9,205.48

**2)** Manually calculated using same method in #1 and entered into Oracle via a journal entry process.

Deferred revenue per US GAAP rules is reported by “Short Term” and Long Term”. Short term is the amount for any transactions that have 12 or fewer months remaining. Long term is the amount for any transactions that have more than 12 months remaining.

**EMEA:**

EMEA uses same process as the Americas for deferred revenue, Ronald (EMEA controller) confirmed.

However, there is one nuance in Russia regarding invoicing that’s worth noting here.

* Russia has a TORG system related to when goods and services are exchanged. In short, it means the seller cannot accept revenue until the customer signs to say they are happy with the goods or services. This can be up to 10 days after shipment. Some processes manually recognize revenue/booked monthly)

**APAC:**

Except India, all APAC commercial entities – China, SEA, Japan, Korea and Australia, follow the same way as the US for deferred revenue calculation and report.

* Automatically calculated by Oracle.
* The same definition for short-term and long-term.

India is not on Oracle, deferred revenue is manually calculated and booked in local ERP.

**Core Growth (%) = (current year net revenue - prior year net revenue)/100**

|  |  |  |
| --- | --- | --- |
| **Level** | **Calculation Description** | **Output** |
| GL account excluding Transfers accounts | |  |  |  | | --- | --- | --- | | **Label** | **GL Acct** | **Acct Name** | | List Shipments | 410100 | SHIPMENTS - US LIST | | List Shipments | 410101 | UNALLOCATED REVENUE | | List Shipments | 410102 | TRAINING REVENUE | | List Shipments | 410120 | UNDEFINED | | List Shipments | 410150 | LEASE INCOME | | ***Add*** | **List Shipments Total** | | | Service Revenue | 410200 | SERVICE REVENUE | | ***Add*** | **Service Revenue Total** | | | Markup | 410300 | MARKUP | | ***Add*** | **Markup Total** | | | Trade Discounts | 410400 | TRADE DISCOUNTS | | Trade Discounts | 410410 | TRADE DISCOUNTS  -  SERVICE | | ***Subtract*** | **Trade Discounts Total** | | | Rebates | 410500 | CATALOG REBATES | | Rebates | 410515 | CUSTOMER REBATES | | ***Subtract*** | **Rebates Total** | | | Cash Discounts | 410600 | CASH DISCOUNTS | | Cash Discounts | 410700 | RETAIL CHARGEBACKS | | ***Subtract*** | **Cash Discounts Total** | | |  |  |  | | ***Sum*** | **Total Revenue** | | | $ amounts |
| GL account Transfers | |  |  |  | | --- | --- | --- | | **Label** | **GL Act** | **Act Name** | |  | 422000 | TRANSFERS - US LIST - REG INST | |  | 422001 | TRANSFERS - FSP TO FCO | |  | 422020 | TRANSFERS - SERVICE | |  | 422030 | TRSFER US LIST-INTER EURO | | ***Add*** | **List Transfers Total** | | |  | 422100 | TRNSFER DISCOUNT - REGULAR INST | |  | 422130 | TRANSFER MARKUP | | ***Subtract*** | **Transfer Discounts Total** | | |  |  |  | | ***Sum*** | **Total Revenue** | | | $ amount |
| Total Net Revenue | Core Growth = (Total Net Revenue Current Year / Total Net Revenue Prior Year) expressed as a %.  **Excluding acquisitions and FX impacts** | % to prior year |

**\*\*Note that the same formula applies to intercompany sales that nets to zero impact when rolled up to total Fluke level.  The general ledger accounts for intercompany transactions that start with “Transfers”.**

### Variants of the KPI

**Functional Level**

* Entity
* Business Unit sales
* Product sales (product group and family)
* Geography / Region sales
* Factory of origin sales

### Dimensions and Data Sources

Source of raw data current or new

• Oracle EBS

• Hyperion

• Subsidiary Flat Files

Each CVD is required to include aggregation capabilities as described in the table below. A common requirement across all dimensions is that a standardized set of aggregation business rules be established

|  |  |  |
| --- | --- | --- |
| **D#** | **Dimension** | **Dimension Description** |
|  |
|  |
| D9 | **Account Receivables - Aging Bucket** | Time periods used to review and report on open receivables. |  |
| D10 | **Account Receivables - Batch Sources** | Controls the standard transaction type assigned to a transaction and determine whether receivables automatically numbers transactions and transaction batches. |  |
| D11 | **Account Receivables - Collectors** | Name and profile of the collectors who tracks collection of receivables. |  |
| D12 | **Account Receivables - Customers** | Customer that receives the invoice. |  |
| D13 | **Account Receivables - Dispute Reasons** | Details of dispute transactions. |  |
| D14 | **Account Receivables - Lookup Values** | Reference Table |  |
| D15 | **Account Receivables - Parties** | Party that receives the invoice. |  |
| D16 | **Account Receivables - Party Sites** | Party site that receives the invoice. |  |
| D17 | **Account Receivables - Term Lines** | Payment terms details. |  |
| D18 | **Account User** | Reference Table |  |
| D19 | **Accounting Class** | The valuation and variance accounts that are associated with this accounting class determine which GL accounts are charged and when. |  |
| D20 | **Adjustments** | Sales order line adjustments.Types of Adjustments |  |
| D24 | **Calendar** | Custom Loaded Calendar Table |  |
| D28 | **Currency** | Full International Standards Organization (ISO) name of the monetary unit. |  |
| D29 | **Customer** | Bill-To and Ship-To customer information. |  |
| D30 | **Customer - Channel** | Description of the Customer channel code. |  |
| D33 | **Destination Geography** | Geographies based on Ultimate Destination |  |
| D34 | **Employee** | Employee name and location of the person who performs a certain function within the source system. |  |
| D39 | **General Ledger** | General ledger account . |  |
| D40 | **General Ledger - GL Account Segment** | General ledger account details. |  |
| D41 | **General Ledger - GL Ledger** | Stores General Ledger Information |  |
| D42 | **Holiday** | Number of holiday days passed during the repair and/or calibration service event. |  |
| D43 | **Inventory - ATP Rules** | Order Management attributes. |  |
| D44 | **Inventory - Buckets** | Time periods used to review and report on hand inventory. |  |
| D45 | **Inventory - Demand Types** | Identifies a forecasted or an actual demand. |  |
| D46 | **Inventory - Freight** | Inventory Freight Details. |  |
| D47 | **Inventory - Item Locations** | Locator defines the physical location of a product. |  |
| D48 | **Inventory - Lot Numbers** | Specifies a batch of an item identified by a number. |  |
| D49 | **Inventory - Org Items** | Codes used to group products with similar characteristics. |  |
| D50 | **Inventory - Planners** | Material planner assigned to plan the item. |  |
| D51 | **Inventory - Sub Inventories** | Subinventory details. |  |
| D52 | **Inventory - Transaction Source Types** | Details about an Oracle Inventory charges a transaction. |  |
| D53 | **Inventory - Transaction Types** | Transaction type details. |  |
| D54 | **Inventory - UNSPSC Code** | Hierarchical convention used to classify products and services. |  |
| D55 | **Location** | Geographical location of the customer. |  |
| D56 | **MFG** | Reference Table |  |
| D57 | **Modifiers** | Definition of discount headers and lines. |  |
| D59 | **Oracle Open Sales Orders - Hold Buckets** | Time periods used to review and report days on hold. |  |
| D60 | **Oracle Open Sales Orders - Hold Definitions** | Defining Holds **in** Order Management |  |
| D61 | **Oracle Open Sales Orders - Sources** | Feeder System Names that create orders in Order Management tables |  |
| D62 | **Oracle Open Sales Orders - Texts** | Junk Dimension |  |
| D63 | **Order Types - Line Type** | Classification of a sales order line. |  |
| D64 | **Order Types - Order Type** | Classification of a sales order. |  |
| D65 | **Organization** | Name of the accounting company. |  |
| D66 | **Payment Terms** | Determines the amount of each installment |  |
| D67 | **Period Status** | The current status of the GL accounting period. |  |
| D68 | **Planner** | General planning attributes. |  |
| D69 | **POS Provider Type** | Provider classification. |  |
| D71 | **Price - Price List** | Price List Detail. |  |
| D73 | **Product** | Product detail. |  |
| D79 | **Repair - Repair Center** | Service Center where the service is done. |  |
| D80 | **Repair - Repair Event** | Indicates the Order Status Change event during a service cycle. |  |
| D81 | **Repair - Repair Tat Rule** | The turnaround time rule that was applied in order to determine the turnaround time (TAT) goal. |  |
| D82 | **Repair - Repair Text** | Junk Dimension |  |
| D83 | **Repair Orders - Incident Status** | Repair incident status details. |  |
| D84 | **Repair Orders - Incident Urgencies** | Repair incident urgency details. |  |
| D85 | **Repair Orders - Texts** | Junk Dimension |  |
| D86 | **Repair Orders - Types** | Repair type details. |  |
| D87 | **SalesRep - Sales Agent** | Fluke salesperson or primary sales representative currently associated with the territory who represents the product to distributors and/or direct customers. |  |
| D88 | **SalesRep - Sales Agent Territory** | Postal code mapping to Fluke sales persons and representatives currently associated with territories. |  |
| D89 | **SalesRep - Secondary SalesRep** | Additional party, not usually a Fluke employee, who receives sales credit. These parties are most often in the Electrical and HVAC sales channels. |  |
| D90 | **Service Type** | Classification of service type. |  |
| D91 | **SIC Code** | Standard Industry Classification of end customer. |  |
| D92 | Snapshot | Snapshot detail. |  |
| D93 | **Source System** | Identifier of the source system for the order line. |  |
| D95 | **Status** | Status of returned item. |  |
| D97 | **Transaction - Transaction Source** | Indicates the source of the transaction. |  |
| D98 | **Transaction - Transaction Type** | Classify a particular transaction |  |
| D115 | **Warehouse** | Warehouse details. |  |
| D116 | **Warehouse Lab** | Inventory detail. |  |
| D117 | **Warranty Cost - Record Owner** | Details about the Technical Service person, group or organization responsible for this record. |  |
| D118 | **Warranty Cost - Resource** | Stores information on Warranty Resource Costs. |  |

Unified Dimensions have been vetted with the Data Steward team for each KPI within a CVD. Please refer to the file called “Fluke Datawarehouse Dimensions summary page.xlsx”  Located at Teams site - [Unified Dimensions](https://teams.microsoft.com/_#/xlsx/viewer/teams/https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards~2FShared%20Documents~2FGeneral~2FTechnical%20Docs~2FFluke%20Datawarehouse%20Dimensions_summary%20page.xlsx?threadId=19:84080666398a41adb35436c2d3b196da@thread.tacv2&baseUrl=https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards&fileId=1ca9b00a-fb1c-4075-9f16-21fa7df43938&ctx=files&rootContext=items_view&viewerAction=view)

[XLSX File viewer | Microsoft Teams](https://teams.microsoft.com/_#/xlsx/viewer/p2p/https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards~2FShared%20Documents~2FGeneral~2FTechnical%20Docs~2FDimensions~2FFluke%20Datawarehouse%20Dimensions_10-7-21.xlsx?messageId=1633623502144&fileId=3143B4ED-C5A8-43A8-84E1-5D7811D0E0B1&ctx=fileLink&viewerAction=view) – new location

To get the most updated list of Revenue Dimensions filter the Revenue column with values ‘Y’

### Data Gaps – Ingestion process needs

Non-Oracle entity flat file submissions

### Drill Down Path

The most common way to slice and dice the KPI according to the company structure   
to guide the user on the exploration of the data

* Path1: by Region hierarchy (APAC, EMEA, Americas / China, Europe, USA)
* Path2: by Product Workflow (Trouble Shooting, Calibration, Installation/Certification Tools, Routine/ Analysis, Safety) column named as product\_workflow\_name
* Path3: by Product  (this list dynamically changes as per Product Workflow slicer selected)
* Path4: by Factory of Origin
* Path5: by Entity and Account structures
* Path6: by SVC(Service) Brand Name (SSO)

### Metrics Requirements

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Table:  List of Metrics Requirements for Revenue** | | | | | |
| **Metric** | **Description** | **Logic** | **Time Dimension** | **Comment** |  |
| YOY growth % | Actuals vs. Prior Year expressed % form | (Total Net Revenue Current Year / Total Net Revenue Prior Year) - 1 | **Actual** / **Prior Year / Plan / Forecast**  Month/ Quarter/ Year | Core growth formula will need updating pending acquisitions during the year(s |  |
| YOY growth $ | Actuals vs. Prior Year expressed in $ form | (Total Net Revenue Current Year - Total Net Revenue Prior Year) |  |
| 2 year stack | Actuals vs. Prior Year expressed in % form | (Total Net Revenue Current Year / 2 years prior Net Revenue) – 1    For example: (Revenue 2021 / Revenue 2019) - 1 |  |
| Core Growth | Actuals vs. Prior Year expressed in % form.   **Excluding acquisitions and FX impacts** | (Total Net Revenue Current Year / Total Net Revenue Prior Year) – 1    Core growth = volume + price / Prior Year revenue    Volume = Current Year revenue - price – acquisitions/divestitures - FX |  |
| % to Plan | Actuals divided by plan expressed in % form | (Total Net Revenue Current Year / Total Net Revenue Plan) |  |
| % to Forecast | Actuals divided by forecast expressed in % form | (Total Net Revenue Current Year / Total Net Revenue Forecast) |  |
| $ variance to Plan | Actuals vs. Plan expressed in $ form | (Total Net Revenue Current Year - Total Net Revenue Plan) |  |
| $ variance to Forecast | Actuals vs. Forecast expressed in $ form | (Total Net Revenue Current Year - Total Net Revenue Forecast) |  |
| Software Sales metrics | |  | | --- | | Churn (Lost) | | Upsell / Cross-sell | | SaaS Price Increase | | New logos | | SaaS ARR (ending)    Net Dollar Retention – Fortive measure | | Churn = beginning units \* % of lost customers  Upsell = beginning units \* % upsold items  SaaS price increase = year over year price change  New logos = number of net new customers  ARR (annual recurring revenue) is a sum of churn, upsell, price increase and new logos  NDR = sum of churn, upsell and price increase divided by beginning ARR. |  |  |  |
| Volume / Rebate / Discounts / Product  Mix |  |  |  |
| Price Realization |  |  |  |
|  |  |  |  |

### Power BI needed columns

These columns will be captured as part of Dashboard Wireframing sessions and compiled in the Technical Specification Document stored at location - <<TBD>>

### KPI Inclusions and/or exclusion from Dashboard

This section defines the filters that would be applied at the BI semantic layer to expose data at the Power BI Dashboard layer.

|  |  |  |
| --- | --- | --- |
| Revenue Lines | |  |
| **Column Name** | **Condition** | **What** |
|  |  |  |
| SSO has specific coding to pull their bookings/shipments correctly.  SSO revenue into the different buckets (like On-Site, asset management, etc.) as required.  This is created by IT need needs to be available in new system too |  | CASE WHEN "Product"."Product Family Code" = 'CVAS' THEN '03-CVAS' WHEN "Product"."Product Family Code" = 'PARTS' THEN '01-Parts' WHEN "- Order Detail"."Service Fulfillment No" = EVALUATE('LAG(%1,1,0) OVER (ORDER BY %2)',"- Order Detail"."Service Fulfillment No","- Order Detail"."Service Fulfillment No")  AND "Serviced Product"."Model" IS NULL AND EVALUATE('LAG(%1,1,0) OVER (ORDER BY %2)' ,"Product"."Model","- Order Detail"."Service Fulfillment No")  = 'CAL-ONSITE' THEN '01-CAL-ONSITE'  WHEN "Order"."Order No"  = 617017357 AND "Order"."Line No" = 2 THEN '01-CAL-ONSITE'    WHEN Product."Item No" = '2795877' THEN '01-CAL-ONSITE'  WHEN Product."Item No" = '2563101' THEN '01-Service Commision' WHEN Product."Item No" = '1670916' THEN '02-Service Processing Fee' WHEN Product."Item No" = '2802563'  OR Product."Item No" = '2584651'  OR Product."Item No" = '2584660'  OR Product."Item No" = '2802556'  THEN '03-Fluke Europe PRE-CAL' WHEN Product."Item No" = '5071762' THEN '11-SHIPPING AND HANDLING CHARGES-NOT SSO Revenue' WHEN Product."Item No" = '5134889' THEN '12-LOGISTICS AND CUSTOM CLEARANCE-NOT SSO Revenue' WHEN Order."Order Type" like '%BILL ONLY'  THEN '02-Bill Only-Credit'  WHEN Order."Order Type" like '%CREDIT MEMO'  THEN '02-Bill Only-Credit' WHEN Order."Order Type" like '%SVC%'  THEN '01-SVC Shipment'   WHEN "Order"."Order No"  = 619037482 THEN '01-SVC Shipment'   WHEN "Order"."Order No"  = 610261034 THEN '01-SVC Shipment'   ELSE '100-Other' END |
| SSO has specific coding to pull their bookings/shipments correctly.  SSO revenue into the different buckets (like On-Site, asset management, etc.) as required.  This is created by IT need needs to be available in new system too |  | CASE WHEN "Product"."Product Family Code" = 'CVAS' THEN '10-Service' WHEN "Product"."Product Family Code" = 'PARTS' THEN '20-Parts' WHEN "- Order Detail"."Service Fulfillment No" = EVALUATE('LAG(%1,1,0) OVER (ORDER BY %2)',"- Order Detail"."Service Fulfillment No","- Order Detail"."Service Fulfillment No")  AND "Serviced Product"."Model" IS NULL AND EVALUATE('LAG(%1,1,0) OVER (ORDER BY %2)' ,"Product"."Model","- Order Detail"."Service Fulfillment No")  = 'CAL-ONSITE' THEN '01-CAL-ONSITE'  WHEN "Order"."Order No"  = 617017357 AND "Order"."Line No" = 2 THEN '01-CAL-ONSITE'    WHEN Product."Item No" = '2795877' THEN '01-CAL-ONSITE' WHEN Product."Item No" = '2563101' OR Product."Item No" = '1670916' OR Product."Item No" = '5071762' OR Product."Item No" = '5134889' THEN '10-Service' WHEN Product."Item No" = '2802563'  OR Product."Item No" = '2584651'  OR Product."Item No" = '2584660'  OR Product."Item No" = '2802556'  THEN '02-NLL' WHEN Order."Order Type" like 'ERU%'  THEN '06-RUL' WHEN Order."Order Type" like '%SVC%' AND Inventory."Ship-From Inventory Name" = 'Fluke Netherlands Service' THEN '02-NLL'  WHEN Order."Order Type" like '%SVC%' AND Inventory."Ship-From Inventory Name" = 'Fluke France Lab' THEN '02-NLL' WHEN Order."Order Type" like '%SVC%' AND Inventory."Ship-From Inventory Name" = 'Fluke United Kingdom Service' THEN '03-UKL' WHEN Order."Order Type" like '%SVC%' AND Inventory."Ship-From Inventory Name" = 'Fluke Germany Service' THEN '04-DEL' WHEN Order."Order Type" like '%SVC%' AND Inventory."Ship-From Inventory Name" = 'Fluke Glottertal Lab' THEN '05-DGL' WHEN Order."Order Type" like 'EUK%'  THEN '03-UKL' WHEN Order."Order Type" like 'EDE%'  THEN '04-DEL' WHEN Order."Order Type" like 'DGL%'  THEN '05-DGL' ELSE '02-NLL' END |

### Targets

Revenue target is an outcome of the order and shipment budget and forecasting cycles. Revenue targets will be essentially the shipment target with a few additional adjustments for rebates, discounts and other revenue related adjustments. The target will be both a dollar amount and a growth rate vs. prior year. . The dimension and granularity for these targets can be defined as follows

1. **Revenue Target:** 
   1. monthly, product family, One Fluke Region

### Additional or future needs

Integrate regional market data points (GDP, Manufacturing PMI, unemployment rates, etc.) as a benchmark for revenue expectations.  Create ML / regression analysis models applying government data or other 3rd party sources as indication of performance.

Fluke has a need to understand our “net margin” by customer.  This includes all the impacts associated with doing business with that customer, for example, impact of freight, off invoice rebates, commissions to third party reps, marketing fees, etc.  We need to ensure the data lake is set up to accommodate this need.

# Core Value Focus Area –Profitability Strategy

## OMX - Operating Margin Expansion

OMX is a metric that measures, in general, how efficient the business is utilizing resources relative to sales within same time period, i.e., Month, Quarter or Year to Date.  For example, June sales and expenses current year measured against June of prior year sales and expenses.  If the OMX metric is positive, it’s an indication that the business is managing sales and resources effectively.  If the measure is negative, it’s an indication that somewhere in the business needs investigating to problem solve.  To calculate OMX one needs the company’s sales, (COGS) cost of goods sold and operating expenses.  These components are defined by the company’s chart of accounts which is an accounting term for the various general ledger accounts that make up the company's P&L (profit & loss) statement i.e sales, product margin and expenses.

For Fluke’s (COA) chart of account structure details Click >  [**HERE**](https://teams.microsoft.com/l/file/FB38FBDE-0A14-46F7-BBA4-258ED3509C49?tenantId=0f634ac3-b39f-41a6-83ba-8f107876c692&fileType=xlsx&objectUrl=https%3A%2F%2Ffortive.sharepoint.com%2Fsites%2FFLK-BI-Data-Stewards%2FShared%20Documents%2FGeneral%2FTechnical%20Docs%2FCopy%20of%20Chart_of_accounts_map_2021.xlsx&baseUrl=https%3A%2F%2Ffortive.sharepoint.com%2Fsites%2FFLK-BI-Data-Stewards&serviceName=teams&threadId=19:84080666398a41adb35436c2d3b196da@thread.tacv2&groupId=e3c17037-956c-4558-888f-919b9b56d85c)

Fluke’s COA is structured with major, minor and class codes that make up the six-digit code for a general ledger account. **510100 is the account number** for Standard Cost and can be derived as follows

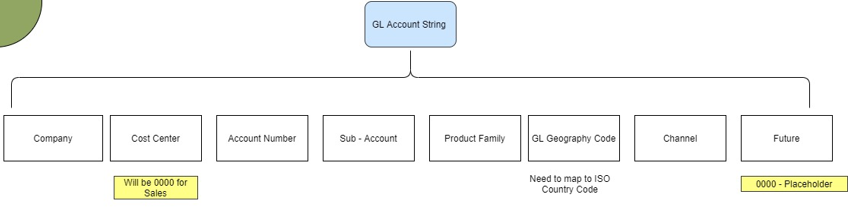
**5 1 0 1 0 0**

Class

Account

Minor Code for Cost of Sales

Major Code for COGS



**The other major codes are as follows:**

1 = Assets

2 = Liabilities

3 = Equity

4 = Revenue/ Net Sales

5 = COGS (Cost of Goods Sold)

6 = Cost Center Expenses

7 = Corp income/expense (Included in Operating Profit calculation)

8 = Corp income/expense (Excluded from Operating Profit calculation)

**Minor Codes within these Major codes are:**

|  |  |  |
| --- | --- | --- |
| ASSETS | 1 | CURRENT ASSETS |
| 2 | FIXED ASSETS/CIP |
| 3 | OTHER ASSETS |
| 4 | GOODWILL & INTANGIBLE ASSETS |
| LIABILITIES | 1 | CURRENT LIABILITIES |
| 2 | LONG TERM DEBT |
| 3 | LT DEFERRED INCOME TAXES |
| 4 | OTHER DEFERRED ITEMS |
| EQUITY | 1 | COMMON STOCK |
| 2 | ADDITIONAL PAID IN CAPITAL |
| 3 | RETAINED EARNINGS |
| 4 | CUMULATIVE TRANSLATION ADJUSTMENT |
| REVENUE | 1 | SHIPMENTS |
| 2 | TRANSFERS |
| 4 | TRANSFERS - FNET |
| 8 | FSC |
| COGS | 1 | COST OF SALES |
| 2 | COST OF TRANSFERS |
| 4 | COST OF TRANSFERS - FNET |
| COST CENTER EXPENSES | 0 | WAGES, BENEFITS, & TRAVEL |
| 1 | SUPPLIES |
| 2 | OTHER |
| 3 | MARKETING |
| 4 | FACILITIES |
| 5 | MANUFACTURING |
| 9 | ALLOCATIONS |
| CORP INCOME/EXPENSE ABOVE OP | 1 | OPERATING EXPENSES |
| 2 | OPERATING EXPENSES - INTERCO |
| CORP INCOME/EXPENSE BELOW OP | 0 | NON-OPERATING EXPENSES |
| 1 | NON-OPERATING EXPENSES |

### Calculation Requirements

Applying the major codes defined above the formula is

**Gross Margin =  Major code 4 – Major code 5 – major code 6&7 with CC starting with 1 or 2**

**Operating Expenses = Major code 6 – Major code 7**

**Operating Profit =  Gross margin – Major code 6 – Major code 7**

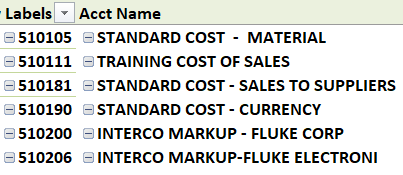
Operating Margin expansion or contraction Current Year month vs. Prior Year month expressed in Basis Points (Bps) = (10,000\*percentage change).  OMX includes impacts of FX, Acquisition, and restructuring.

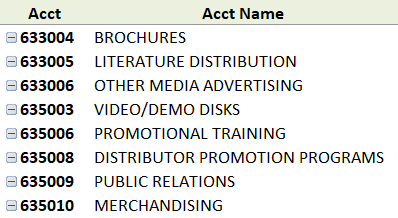
“Basis point” is simply a term used in finance to refer to an increment of 0.01%. Put differently, the expressions “basis point”, “1/100th of 1%”, “0.01%”, and “0.0001” all have the same meaning.

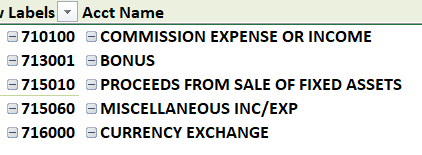
Eg: 4% increase in rate = 3.5%+50 BPS

| Basis Points | Percentage Terms |
| --- | --- |
| 1 | 0.01% |
| 5 | 0.05% |
| 10 | 0.1% |
| 50 | 0.5% |
| 100 | 1% |
| 1000 | 10% |
| 10000 | 100% |

Below are Examples of the accounts that make up major codes 5, 6 and 7.

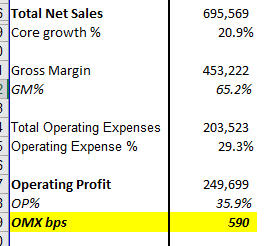






Detailed description of the calculation method

|  |  |
| --- | --- |
| Calculation Description | Output |
| Operating Profit / Net Sales = OM %. | % |
| Current year OM% - Prior year OM% = OMX | % |
| OMX \* 10,000 = OMX basis point change | Expressed in basis points |



### Variants of the KPI

**Functional Level**

Slices will be limited to Hyperion hierarchy data. Hyperion is the financial record for Fluke and OBI is for operations

* Entity
* Functional group
* Region groupings
* Factory
* Cost Center

### Dimensions and Data Sources

Source of raw data current or new

* Hyperion
  + *Look at current Hyperion query of what is captured for MRDW*
* Oracle EBS
* Flat files from non-Oracle entities > Janos, eMaint, Brazil, etc.

Each CVD is required to include aggregation capabilities as described in the table below. A common requirement across all dimensions is that a standardized set of aggregation business rules be established

|  |  |  |
| --- | --- | --- |
| **D#** | **Dimension** | **Dimension Description** |
| D1 | **Account Payables - Aging Period** | Time periods used to review and report on open payables. |
| D2 | **Account Payables - Hold Codes** | Detailed information about the hold. |
| D3 | **Account Payables - Invoice Status** | The status of the payables invoice. Examples: Never Validated, Unpaid, Validated. |
| D4 | **Account Payables - Lookup Values** | Reference Table |
| D5 | **Account Payables - Suppliers** | Vendor information. |
| D6 | **Account Payables - Suppliers Sites** | Vendor site that sends the invoice. |
| D7 | **Account Payables - Terms** | Payment terms details. |
| D8 | **Account Payables - Text** | Junk Dimension |
| D9 | **Account Receivables - Aging Bucket** | Time periods used to review and report on open receivables. |
| D10 | **Account Receivables - Batch Sources** | Controls the standard transaction type assigned to a transaction and determine whether receivables automatically numbers transactions and transaction batches. |
| D11 | **Account Receivables - Collectors** | Name and profile of the collectors who tracks collection of receivables. |
| D12 | **Account Receivables - Customers** | Customer that receives the invoice. |
| D13 | **Account Receivables - Dispute Reasons** | Details of dispute transactions. |
| D14 | **Account Receivables - Lookup Values** | Reference Table |
| D15 | **Account Receivables - Parties** | Party that receives the invoice. |
| D16 | **Account Receivables - Party Sites** | Party site that receives the invoice. |
| D17 | **Account Receivables - Term Lines** | Payment terms details. |
| D18 | **Account User** | Reference Table |
| D19 | **Accounting Class** | The valuation and variance accounts that are associated with this accounting class determine which GL accounts are charged and when. |
| D20 | **Adjustments** | Sales order line adjustments.Types of Adjustments |
| D21 | **BOM Item Costs - Resources** | Defines the time an assembly spends at an operation and the cost that is incurred at the operation. |
| D23 | **Buyer** | Employee name and location information of the person who entered the purchasing document in the source system. |
| D24 | **Calendar** | Custom Loaded Calendar Table |
| D25 | **Commission - Customer Type** | Customer classification for commission transaction. |
| D26 | **Commission - Plan** | Commission Plan Name. |
| D27 | **Commission - Transaction Type** | Type of transaction in process source. |
| D28 | **Currency** | Full International Standards Organization (ISO) name of the monetary unit. |
| D29 | **Customer** | Bill-To and Ship-To customer information. |
| D30 | **Customer - Channel** | Description of the Customer channel code. |
| D31 | Demand Forecast - Record Type | Forecast Detail. |
| D32 | Demand Forecast - Type | Forecast Type Detail. |
| D33 | **Destination Geography** | Geographies based on Ultimate Destination |
| D36 | FND - Currencies | Stores information about currencies. |
| D37 | FND - Lookup Values | Reference Table |
| D38 | FND - Users | Stores information about application users. |
| D39 | **General Ledger** | General ledger account . |
| D40 | **General Ledger - GL Account Segment** | General ledger account details. |
| D41 | **General Ledger - GL Ledger** | Stores General Ledger Information |
| D42 | **Holiday** | Number of holiday days passed during the repair and/or calibration service event. |
| D43 | **Inventory - ATP Rules** | Order Management attributes. |
| D44 | **Inventory - Buckets** | Time periods used to review and report on hand inventory. |
| D45 | **Inventory - Demand Types** | Identifies a forecasted or an actual demand. |
| D46 | **Inventory - Freight** | Inventory Freight Details. |
| D47 | **Inventory - Item Locations** | Locator defines the physical location of a product. |
| D48 | **Inventory - Lot Numbers** | Specifies a batch of an item identified by a number. |
| D49 | **Inventory - Org Items** | Codes used to group products with similar characteristics. |
| D50 | **Inventory - Planners** | Material planner assigned to plan the item. |
| D51 | **Inventory - Sub Inventories** | Subinventory details. |
| D52 | **Inventory - Transaction Source Types** | Details about an Oracle Inventory charges a transaction. |
| D53 | **Inventory - Transaction Types** | Transaction type details. |
| D54 | **Inventory - UNSPSC Code** | Hierarchical convention used to classify products and services. |
| D55 | **Location** | Geographical location of the customer. |
| D56 | **MFG** | Reference Table |
| D57 | **Modifiers** | Definition of discount headers and lines. |
| D59 | **Oracle Open Sales Orders - Hold Buckets** | Time periods used to review and report days on hold. |
| D60 | **Oracle Open Sales Orders - Hold Definitions** | Defining Holds **in** Order Management |
| D63 | **Order Types - Line Type** | Classification of a sales order line. |
| D64 | **Order Types - Order Type** | Classification of a sales order. |
| D65 | **Organization** | Name of the accounting company. |
| D67 | **Period Status** | The current status of the GL accounting period. |
| D68 | **Planner** | General planning attributes. |
| D71 | **Price - Price List** | Price List Detail. |
| D73 | **Product** | Product detail. |
| D74 | **Purchase Orders - Buyers** | Buyer details. |
| D75 | **Purchase Orders - Hazard Classes** | contains code and description for hazardous items which gets automatically printed into purchase order, RFQ and Receipt Travelers |
| D76 | **Purchase Orders - Line Types** | Classification of a Purchase order line. |
| D77 | **Purchase Orders - Routing Headers** | Primary routing of the item after it has been received |
| D79 | **Repair - Repair Center** | Service Center where the service is done. |
| D80 | **Repair - Repair Event** | Indicates the Order Status Change event during a service cycle. |
| D81 | **Repair - Repair Tat Rule** | The turnaround time rule that was applied in order to determine the turaound time (TAT) goal. |
| D82 | **Repair - Repair Text** | Junk Dimension |
| D83 | **Repair Orders - Incident Status** | Repair incident status details. |
| D84 | **Repair Orders - Incident Urgencies** | Repair incident urgency details. |
| D85 | **Repair Orders - Texts** | Junk Dimension |
| D86 | **Repair Orders - Types** | Repair type details. |
| D87 | **SalesRep - Sales Agent** | Fluke salesperson or primary sales representative currently associated with the territory who represents the product to distributors and/or direct customers. |
| D88 | **SalesRep - Sales Agent Territory** | Postal code mapping to Fluke sales persons and representatives currently associated with territories. |
| D89 | **SalesRep - Secondary SalesRep** | Additional party, not usually a Fluke employee, who receives sales credit. These parties are most often in the Electrical and HVAC sales channels. |
| D90 | **Service Type** | Classification of service type. |
| D91 | **SIC Code** | Standard Industry Classification of end customer. |
| D93 | **Source System** | Identifier of the source system for the order line. |
| D96 | Sub Inventory | Unique physical or logical separations of material inventory, such as raw inventory, finished goods, or defective material |
| D97 | **Transaction - Transaction Source** | Indicates the source of the transaction. |
| D98 | **Transaction - Transaction Type** | Classify a particular transaction |
| D99 | **Vendor** | Vendor that sends the invoice. |
| D100 | **VOC Dimension - Admin** | Full name of the person who created this unit data. |
| D101 | **VOC Dimension - Admin Dates** | The date/time stamp when this unit data was created. |
| D102 | **VOC Dimension - Assembly** | VOC Assembly. |
| D103 | **VOC Dimension - Class Group Map** | Higher level classification |
| D104 | **VOC Dimension - Condition** | List of conditions for an Order |
| D105 | **VOC Dimension - Corrective Actions** | List of corrective actions. |
| D106 | **VOC Dimension - Diagnosis** | List of values on return order. |
| D107 | **VOC Dimension - Function** | List of test functions performed. |
| D108 | **VOC Dimension - RMA Text** | Junk Dimension |
| D109 | **VOC Dimension - Serial Number Code** | Determines relationship between serial number and manufacturing date of product. |
| D110 | **VOC Dimension - Sub Function** | List of test sub functions performed. |
| D111 | **VOC Dimension - Supplier** | Origin of item; cell or supplier. |
| D112 | **VOC Dimension - Symptom** | Symptoms of defect. |
| D113 | **VOC Dimension - Text** | Free form text. |
| D114 | **VOC Dimension - Warranty Map** | Warranty Status for the returned item. |
| D115 | **Warehouse** | Warehouse details. |
| D116 | **Warehouse Lab** | Inventory detail. |
| D117 | **Warranty Cost - Record Owner** | Details about the Technical Service person, group or organization responsible for this record. |
| D118 | **Warranty Cost - Resource** | Stores information on Warranty Resource Costs. |
| D120 | **WIP Discrete** | Stores information on Valuation accounts that were charged for issue components, move assemblies, complete assemblies, and charge resources |
| D121 | Dim Account Creation Period | CRM account creation dates. |
| D122 | Dim Activity Period | Dates related to Finance. |
| D123 | Dim Assigned Distributor Account | Name and profile of the Distributor that was assigned the lead. |
| D124 | Dim Assigned Distributor Contact | Distributor contact details. |
| D125 | Dim Average Type |  |
| D126 | Dim Bill-To Customer | Distributor Channel, Rep Agency, Distributor Number etc. |
| D127 | Dim Bill-To Location | Distributor Branch Location, Distributor Country etc. |
| D128 | Dim Bill-To Territory Planning Bridge | Bill-To customer information. |
| D129 | Dim Bill-To Territory Planning Secondary | Bill-To customer information. |
| D130 | Dim Bill-To Territory Planning | Distributor Name, Filter Rep Agency Field |
| D131 | Dim Booked Period | Fiscal booked date, month, year etc. |
| D132 | Dim Booking Final Destination | Hierarchy locations. |
| D133 | Dim Business Unit | Business Unit details of the customer. |
| D134 | Dim Call Date Period | Call dates |
| D135 | Dim Call Report Attributes | Call attributes related to calls made by sales person. |
| D136 | Dim Call Report Contact |  |
| D137 | Dim Call Report Flag Attributes |  |
| D138 | Dim Call Report Product |  |
| D139 | Dim Call Report Textual Attributes | Call related textual attributes. |
| D147 | Dim Commission Cust type | Commission Customer information. |
| D148 | Dim Commission Plan |  |
| D149 | Dim Commission Trx Type | Commisssion transactiontype information. |
| D150 | Dim Commission Ultimate destination | Ultimate destination details like ISO\_Country etc. |
| D151 | Dim Contact Location | Contact details. |
| D152 | Dim Created By User | CRM dynamics user information. |
| D153 | Dim Credited Sales Territory | Sales Territory information. |
| D154 | Dim Crm User | CRM user details. |
| D155 | Dim Currency | Currency details. |
| D156 | Dim Customer Preferred Distributor Account | Name and profile of the Customer Preferred Distributor on the lead. |
| D173 | Dim Industry | Name and attributes of the Fluke Industry |
| D174 | Dim Inventory | Inventory details. |
| D175 | Dim Invoiced Period |  |
| D198 | Dim Order Customer Channel | Customer channel information. |
| D199 | Dim Order Line Type | Order line type information. |
| D200 | Dim Order Status | Order status information. |
| D201 | Dim Order Type | Order type details. |
| D202 | Dim Organization | Organization information. |
| D203 | Dim Owner Territory | Owner territory associated with the lead |
| D204 | Dim Owner | Name and profile of the CRM User / Owner of the opportunity |
| D231 | Dim Secondary Sales Territory | Secondary sales territory information. |
| D232 | Dim Serviced Product |  |
| D233 | Dim Shipped Period | Ship dates |
| D234 | Dim Shipping Attributes | Shipping information. |
| D235 | Dim Ship-To Customer | Ship-To customer information. |
| D236 | Dim Ship-To Location | Ship-To customer information. |
| D237 | Dim Ship-To Territory Planning Bridge | Ship-To customer information. |
| D238 | Dim Ship-To Territory Planning Secondary | Ship-To customer information. |
| D239 | Dim Ship-To Territory Planning | Ship-To customer information. |
| D240 | Dim SIC Code |  |
| D241 | Dim Snapshot Creation Period | Snapshot creation dates. |
| D242 | Dim Transactional Currency | TRX currency information. |

Unified Dimensions have been vetted with the Data Steward team for each KPI within a CVD. Please refer to the file called “Fluke Datawarehouse Dimensions summary page.xlsx”  Located at Teams site - [Unified Dimensions](https://teams.microsoft.com/_#/xlsx/viewer/teams/https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards~2FShared%20Documents~2FGeneral~2FTechnical%20Docs~2FFluke%20Datawarehouse%20Dimensions_summary%20page.xlsx?threadId=19:84080666398a41adb35436c2d3b196da@thread.tacv2&baseUrl=https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards&fileId=1ca9b00a-fb1c-4075-9f16-21fa7df43938&ctx=files&rootContext=items_view&viewerAction=view) - however, since Hyperion is the source for OMX, dimensions will be limited to what is from Hyperion.

[XLSX File viewer | Microsoft Teams](https://teams.microsoft.com/_#/xlsx/viewer/p2p/https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards~2FShared%20Documents~2FGeneral~2FTechnical%20Docs~2FDimensions~2FFluke%20Datawarehouse%20Dimensions_10-7-21.xlsx?messageId=1633623502144&fileId=3143B4ED-C5A8-43A8-84E1-5D7811D0E0B1&ctx=fileLink&viewerAction=view) – new location

### Data Gaps – Ingestion process needs

N/A

### Drill Down Path

* Path1: by One Fluke Region  (APAC, EMEA, Americas / China, Europe, USA)
* Path2: by Organization hierarchy (function, entity, cost center)
* Path3: by Factory of Origin
* Path4: by Entity and Account structures
* Path5: by SVC(Service) Brand Name (SSO)

### Metrics Requirements

\*\*Note: There are current Operational reports with global metrics reviewed with L1 and L2 leaders. Forecast reviews is an important venue to ensure we have all of those metrics documented here as a starting place, there will be more in future to add. L2 wireframe dashboards will be key with OMX so that cost center owners can view, understand and analyze their area of business.

*Decision to make if weekly or monthly calcs in the fact metric table?*

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Metric** | **Description** | **Logic** | **Time Dimension** | **Comment** |  |
| YOY growth % | Actuals vs. Prior Year expressed % form | (Total Margin Current Year / Total Margin Prior Year) - 1 | Actual / Prior Year / Plan / Forecast  Month/ Quarter/ Year | Will need ability to flag “Fluke Core” as a roll up (excluding FRS/FPI) |  |
| YOY growth $ | Actuals vs. Prior Year expressed in $ form | (Total Margin Current Year - Total Margin Prior Year) |  |
| 2 year stack | Actuals vs. Prior Year expressed in % form | (Total Margin Current Year / 2 years prior Margin) – 1    For example: (Margin 2021 / Margin 2019) - 1 |  |
| 3 year stack | Actuals vs. Prior Year expressed in % form | (Total Margin Current Year / 3 years prior Margin) – 1    For example: (Margin 2021 / Margin 2018) - 1 |  |
| % to Plan | Actuals divided by plan expressed in % form | (Total Margin Current Year / Total Margin Plan) |  |
| % to Forecast | Actuals divided by forecast expressed in % form | (Total Margin Current Year / Total Margin Forecast) |  |
| $ variance to Plan | Actuals vs. Plan expressed in $ form | (Total Margin Current Year - Total Margin Plan) |  |
| $ variance to Forecast | Actuals vs. Forecast expressed in $ form | (Total Margin Current Year - Total Margin Forecast) |  |
| Forecast Accuracy | Actual Expense vs Forecast or Plan expressed in % form | Actual Exp $ / Forecast Exp $ |  | Expressed as % |  |
| Std Margin % | Standard margin as % to sales for various slices | Standard Margin $  /  Net Sales $ |  | Expressed as % |  |
| Gross Margin % | Gross margin as % to sales for various slices | Gross Margin $ / Net Sales $ |  | Expressed as % |  |
| Variable % of Sales | Variable expenses relative to sales | Variable Expense / Net Sales |  |  |  |
| Fixed % of Sales | Fixed expenses relative to sales | Fixed Expense / Net Sales |  |  |  |
| PPV – purchase price variance |  |  |  |  |  |
| VAVE – value analysis value engineering | Metric all Fortive OpCos maintain in tool called iSource | See document saved in the UBI TEAMs site under General/Tech Docs |  |  |  |

**SMX – Standard margin Expansion**

**Standard Margin Performance Bridge**

A standard global formula to evaluate standard margin performance by region, product, customer is a requirement and dashboard build.

* Volume
* Price
* Discounts
* Mix
* Standard Cost
* Translation FX
* Accounting Adjustments

*Double check with Michael and team formulas are current, if not update for BI team*

Formulas below are currently being applied for the SMX bridge, however, some of these formulas may change in the near future pending the policy deployment efforts. FBS team plan to finalize the approach (formulas)  soon in 2022.

Note that the calculations are based on a per unit basis.

1. Volume metric isolates the increase or decrease of units sold for the time frame for a given product

**Volume = (Current Year Local Sales – Prior Year local sales) \* Prior Year Margin % \* Prior Year FX rate**

1. Price metric isolates the average sales price increase or decrease for the time frame for a given product

**Price = (Current Year Local List Sales - Prior Year Local List Sales) \* Current Year Quantity \* Prior Year FX rate**

1. Discount metric compares List and Net sales adjustments for the time frame accounting for quantity and FX to determine if more or fewer discounts were given for the time frame

**Discounts = (Prior Year Local List Sales - Prior Year Local Net Sales) - (Current Year Local List Sales - Current Year Local Net Sales) \* Current Year Quantity \* Prior Year FX Rate**

1. Mix metric focuses on the margin weighting of types of products sold for the time frame (Margin Profiles ) did fluke sell products with higher product margin or lower

**Mix = Current Year Margin - Prior Year Margin - Volume - Price - Discounts - Std Cost – FX (NOTE, this formula for Mix may change)**

**Standard Cost = (Prior Year Cost - Current Year Cost) \* Current Year Quantity**

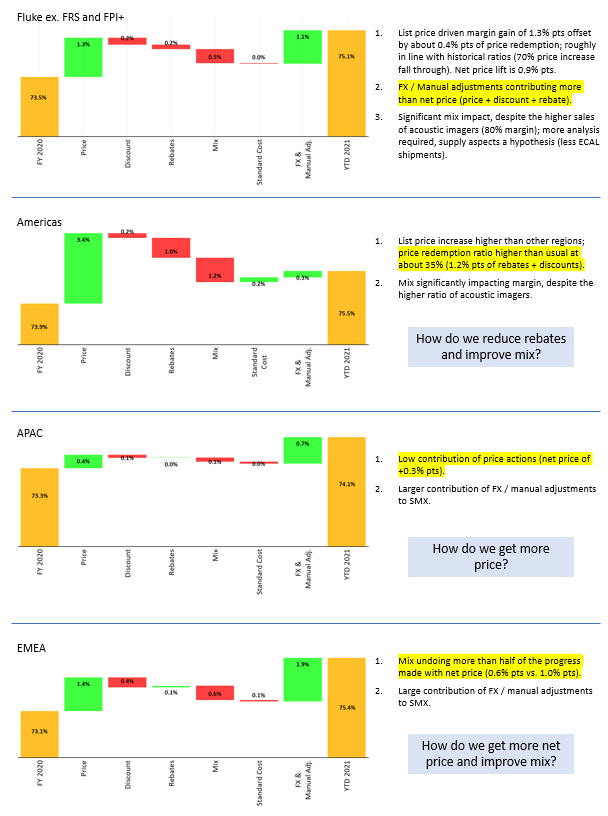
**FX = (Current Year FX rate - Prior Year FX rate) \* Current Year Local Sales**

**\*\* Margin = Net USD – Standard Cost**

**\*\* Local Sales = country’s currency transactions**

Table

Description automatically generated

****

### Power BI needed columns

These columns will be captured as part of Dashboard Wireframing sessions and compiled in the Technical Specification Document stored at location - <<TBD>>

### KPI Inclusions and/or exclusion from Dashboard

N/A

Intra company Invoice flags

### Targets

The dimension and granularity for these targets can be defined as follows.

1. **OMX Target: ‘**X’ BPS for each month set annually updated during the forecast cycles each fiscal month(4-4-5) – this is set at the region, Business Group(FPI, FRS, Core)
2. **SMX Target: ‘**X’ BPS for each month set annually updated during the forecast cycles each fiscal month(4-4-5) -this is set at the product family level, by month, One Fluke Region hierarchy

### Additional or future needs

Introducing RPA to show dynamic variable-based forecasting.  Highlighting fixed and variable expenses relative to sales.

# Core Value Focus Area - Working Capital Strategy

Working Capital (WC) is the difference between the company’s short-term assets (i.e. Trade receivables, inventory) and the company’s current liabilities (i.e. deferred revenue and Trade payables, in other words, money owed).  WC is a measure of a company’s operational efficiency and short-term financial health.  It’s imperative for a business to have the right balance of working capital to remain solvent and grow. WC is a key financial KPI for Fortive aiming to generate free cash flow which can be invested into the business. True understanding of working capital needs may involve plotting month-by-month inflows and outflows for your business.  This will bring visibility of a company’s seasonality impacts and provide the ability to plan for certain actions to balance working capital accordingly.

The simple formula for Working Capital (WC) as follows:

**Working Capital = Short term Assets – Current Liabilities**

**WC =  (Accounts Receivable + Inventory) – (Deferred Revenue + Accounts Payable)**

Working Capital components:

1. Assets (Inventory, Trade Receivable)

***Accounts Receivable (AR)***

In simple terms accounts receivable (AR) is money owed to the company from their customers for a good or service performed that the customer purchased.  Typically, money owed is not due immediately as customers have established payment terms with the company.  Common payment terms, for example, are 30 days or 90 days from the invoice date.  With accrual-based accounting, receivables are recorded on the balance as an asset as it is expected that payment will occur per the agreed upon terms.   In general the goal with receivables is to collect payment as soon as possible.  To ensure customers pay on time per the agreed upon terms the metric **DSO (Days Sales Outstanding)** is calculated to understand if customers are paying faster or slower.

***Inventory (INV)***

Inventory assets are goods or items of value that a company plans to sell for profit. These items include any raw production materials, parts, inventory in transit and products that are either finished or unfinished.  Anything that a company will incorporate for future use in business operations.  In general, the goal with inventory is to manage the various stages like raw, WIP (work in progress) and finished goods to be efficient as possible.  The metric **DHO (Days On Hand)** or **Inventory Turns** is calculated to understand if a company is maximizing their inventory value.

1. Liabilities (Trade Payables & Deferred Revenue (short term) & realized Rebate Liability)

***Deferred Revenue***

Deferred revenue, in accrual accounting, is money received for goods or services which has not yet been earned. For example, if Fluke Networks team sells a Gold Service bundle, the customer pays us in one lump sum for the 12-month agreement, but it is recorded as a liability until Fluke delivers that service each month, at which time it is converted into revenue.  Deferred revenue is payment received for products or services to be delivered in the future.  Another example of deferred revenue.  If a software company sells a monthly magazine subscription at a single payment of $12 a year, the company earns a deferred revenue of $1 for each month it delivers a magazine to its customers.  Only the short-term part of deferred revenue is part of working capital, I.e., if a gold contract is 24 months, then only the 12 months' worth are part of the working capital calculations

***Accounts Payable (AP)***

Accounts payable (AP) is the total amount of short-term obligations or debt a company has to pay to its creditors for goods or services bought on credit. For example, Fluke purchases batteries from a vendor to power laser distant meters that Fluke manufacturers.  Fluke must pay that vendor for the goods received.  An invoice sent by the vendor is recorded by Fluke (a liability) indicating we owe them monies at a certain time.  The sum of all outstanding amounts owed to vendors is shown on Fluke’s balance sheet.  In summary, AP shows the balance that has not yet been paid to the associated vendor to complete the transaction.  In general, the goal with payables is to maximize payment terms as much as possible.  Paying too early could hurt the company’s cash flow but paying too late could damage vendor relationships.  To monitor payments the metric **DPO (Days Payable Outstanding)** is calculated to understand payment timing.

WC as mentioned above is measure of a company’s operational efficiency and short-term financial health.  **Similar to AR, AP, and Inventory metrics above we calculate WC Turns to measure efficiency over time.  Higher the turns the more efficient a company is utilizing its working capital.**

For Fluke’s chart of account structure (COA) details Click >  [Here](https://teams.microsoft.com/l/file/FB38FBDE-0A14-46F7-BBA4-258ED3509C49?tenantId=0f634ac3-b39f-41a6-83ba-8f107876c692&fileType=xlsx&objectUrl=https%3A%2F%2Ffortive.sharepoint.com%2Fsites%2FFLK-BI-Data-Stewards%2FShared%20Documents%2FGeneral%2FTechnical%20Docs%2FCopy%20of%20Chart_of_accounts_map_2021.xlsx&baseUrl=https%3A%2F%2Ffortive.sharepoint.com%2Fsites%2FFLK-BI-Data-Stewards&serviceName=teams&threadId=19:84080666398a41adb35436c2d3b196da@thread.tacv2&groupId=e3c17037-956c-4558-888f-919b9b56d85c)

Fluke’s COA is structured with major, minor and class codes that make up the six-digit code for a general ledger account. 112100 is the account number for Accounts Receivable Trade Account and can be derived as follows

Refer to sample reporting to derive which GL accounts make up the WC components

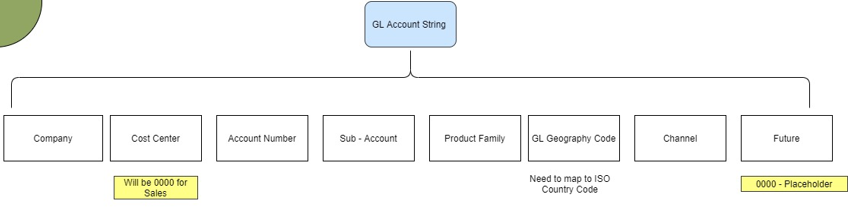
**1 1 2 1 0 0**

Class/ AR Trade

Account

Minor Code for Current Assets

Major Code for Assets



Major codes are as follows – 1 to 3 are Balance Sheet accounts:

1 = Assets

2 = Liabilities

3 = Equity

4 = Revenue/ Net Sales

5 = COGS (Cost of Goods Sold)

6 = Cost Center Expenses

7 = Corp income/expense (Included in Operating Profit calculation)

8 = Corp income/expense (Excluded from Operating Profit calculation)

Minor Codes within these Major codes are:

|  |  |  |
| --- | --- | --- |
| ASSETS | 1 | CURRENT ASSETS |
| 2 | FIXED ASSETS/CIP |
| 3 | OTHER ASSETS |
| 4 | GOODWILL & INTANGIBLE ASSETS |
| LIABILITIES | 1 | CURRENT LIABILITIES |
| 2 | LONG TERM DEBT |
| 3 | LT DEFERRED INCOME TAXES |
| 4 | OTHER DEFERRED ITEMS |
| EQUITY | 1 | COMMON STOCK |
| 2 | ADDITIONAL PAID IN CAPITAL |
| 3 | RETAINED EARNINGS |
| 4 | CUMULATIVE TRANSLATION ADJUSTMENT |

Fluke Currency Views

Fluke has five currency views

1. **Transactional** is the currency used for the transaction and is at lowest level (local currency). For example, in the UK (United Kingdom) entity can sell in $USD and to others in $GBP.  The transactional currency is the currency the transaction was transacted in. The Transactional Currency is what is posted in Oracle based on the PO, Invoice, contract, etc.

**No Formula**

1. **Functional** is tied to the currency of the country of ultimate destination. This may coincide in some cases with the Transactional(when the transaction is made on the same currency as of the country of ultimate destination) or need to be calculated translating the Transactional currency to the Functional using the official corporate exchange rates for a given period

Entity(referenced as Functional in legacy terms) is tied to a Fluke entity and the currency for an order is shown in the Entity’s country currency regardless of the country the product is sold. This is a calculated currency and used to obtain Net USD currency. All entity submissions each month for the financials is provided in $USD per the calculation below.  Then in Hyperion it takes the Reported net USD and converts it back to a Functional currency (tied to the Entity).  For example, ($0.7915 USD / rate .7915) = $1.00 CAD, would be the functional amount.

**Reported net USD / FX rate**

1. **Net USD(Reported)** is the Functional Currency directly translated to USD using the corporate exchange rate for the period.

However due to Fluke’s Entity Structure this is a 3-step process that is used for financial reporting. To obtain the Net USD first Transactional currency is converted to Functional and then to USD. This currency is any order calculated in US dollars if not originally sold in USD. It is used to report Financials each month in US Dollars for consolidated Fluke roll up.

For example, $1 CAD x 0 .7915(FX rate) = $0.7915 $USD this amount would be loaded to Hyperion.  This is the reported net USD amount in Hyperion.

**Transactional Currency x FX Rate**

1. **Net EURO** (not functional view) FPI team is using this for orders and shipments.  This field in MRDW Shipments is derived at Informatica level not at OBI RPD Level. Below is the logic to get Net EUR field in Informatica.  (“Net EUR” field denotes “LOCAL\_NET\_EURO\_EXTD\_AMT” in Shipment Detail table)

**Net Euro = Reported net USD / FX rate**

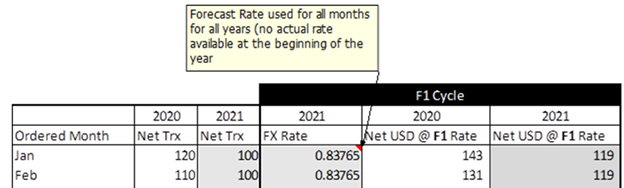
DECODE(ROUND(NET\_USD\_EXTD\_AMT \* 1 / (:SP.FLKMRDW\_GET\_EXCHANGE\_RATE (61, :SP.FLKMRDW\_GET\_GL\_PERIOD(SHIP\_DATE, '1'), 'USD', 'A')),2) ,

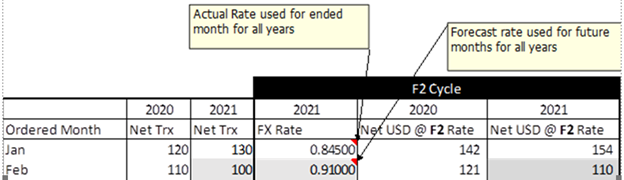
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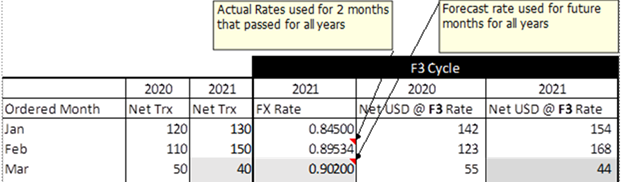
       ROUND(NET\_USD\_EXTD\_AMT \* 1 / (:SP.FLKMRDW\_GET\_EXCHANGE\_RATE (61, :SP.FLKMRDW\_GET\_GL\_PERIOD(SHIP\_DATE, '1'), 'USD', 'A')),2))

1. **Net USD FX Adjusted** (constant currency) - this method is applied for analysis or comparison purposes - for sales and expenses – forecast and budget cycles use constant currency globally. Hyperion has various scenarios, for this calculation.  CC PF (constant currency prior forecast)

Net Transactional Currency values for all years are translated to Net USD FX Adjusted using the most recent actual and forecast rates of the current year. Below is the example how Net USD FX Adjusted is calculated for F1-F3 forecast cycles for 2 years.  All the past years (before 2020) are recalculated in the same way as 2020 in the example below. Cycle continues until F12 and then starts again with the FX rates of the new year.

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**Fortive Treasury provides below FX Rates Excel Files that are fed into Hyperion for Calculations:**

1. monthly average FX rate for the P&L accounts.
2. month end FX rate for the balance sheet accounts.  Both FX rates are stored in Hyperion

**Currency Scenarios:**

1. Actuals apply FX final rate and to historical
2. Forecast applies a preliminary FX rate
3. Budget applies F9 rate for cost accounting (used for product standard cost), does not change
4. Budget applies F9 rate for sales/ open initially then changes until budget is finalized with F1 rates.

FCO is a legal entity (holding company) in US for making non-US sales to countries in currency USD, hence it is a transactional currency as well as functional currency. Used for local reporting only

E.g. sales to Mexico, Canada, South America except Brazil are in USD that are transacted through this Entity FCO.

**USD\*FX Rate**

For FCO orders in USD, there is value to show in local currency. This will help for sales performance/commissions implications.  For example, Canada POS in $CAD and sales team measured in $CAD.  US distributors sell in $USD selling to Canada and report in $USD but need ability to have $CAD view to combine with $CAD transactional $$.  Similar with LAAM sales we transact in $USD and there is value with converting to local currency for analytics in local currency.

A currency dashboard or some sort as single source to access FX rates for all is required.  Also apply some trending charts would be useful to understand potential forecast impacts.

### Calculation Requirements

Working Capital formula includes Assets, Liabilities, and Inventory

**WC =  (Accounts Receivable + Inventory) – (Deferred Revenue + Accounts Payable)**

**DSO (Days Sales Outstanding) = (Total Receivables / current + 2 prior month sales) \* 91 days**

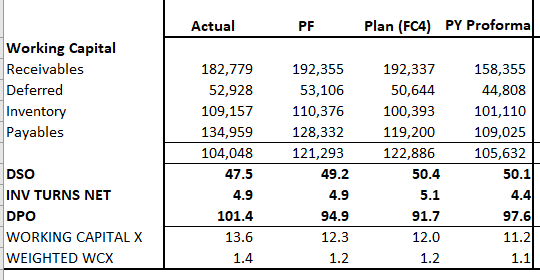
**Inventory Turns = (next 3 months COGS / Inventory) \* 4**

***Note*** *for Inventory COGS reference table below for the Oct-Dec calculations as it deviates from prior months formulas.*

**DPO(Days Payable Outstanding) = (Total Accounts Payable / current + 2 prior month COGS) \* 91 days**

**WC Turns = (prior month sales + current month sales + next month sales)  \* 4 / Total WC**

Table below is an illustration of WC reporting and calculation outputs:



### Variants of the KPI

**Functional Level**

Slices will be limited to Hyperion hierarchy data. Hyperion is the financial record for Fluke

* **By Regions** - Three regions (Americas, EMEA, APAC) and FRS and FHS
* **By Sites** - Within the three regions the various sites
* **By Factory** - Lastly within each site there could be calcs by factory, i.e., inventory by factory at the Everett site

*\*\*Note: Ensure supporting WC components for SSO are available*

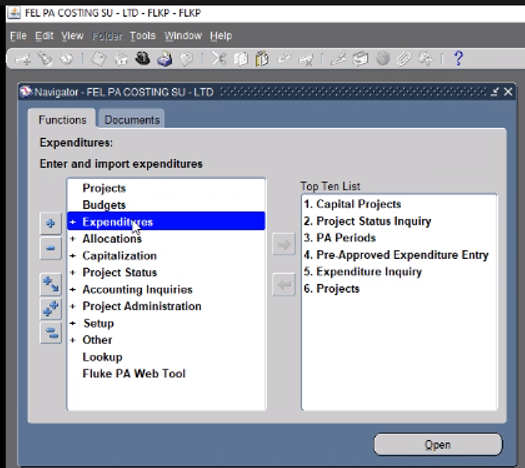
Capital Expenditures (CapEx):

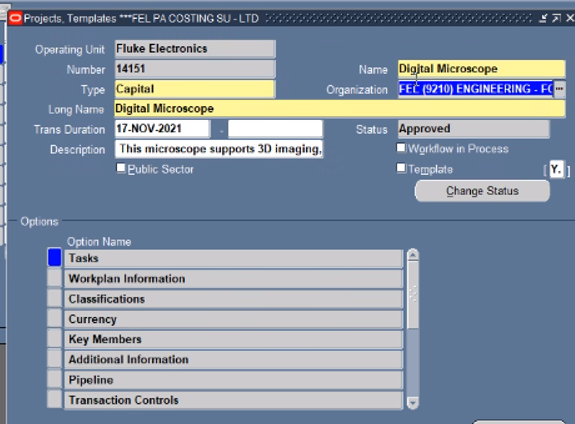
**The below is associated with (entities) FLM, FEL, FCO, SSO and FHS Oracle GL and associated capex information**

Capital expenditure is a company expense to buy, maintain or improve fixed assets. For example, spending on repairing or replacing an HVAC unit or buying new equipment for a factory would classify as capital expenditure. These assets are recorded on the balance sheet and each have an accounting useful life and deprecate over time.

CapEx actuals spend is pulled from an Oracle report (general ledger) and has an associated project number, see the two tables below. **The CapEx GL account is 128000.**

To distinguish between Fluke and SSO for this GL Account we need to look at Project/CAR(Capital Appropriation Request) Numbers





The cost center is the key to distinguish SSO, Region, FHS, etc. Need mapping in Data Lake to report these variants automatically. There is a cost center (Excel file) mapping that knows which cost center belongs to which business entity. The mentioned Oracle report above contains cost center, project #, monthly spend, description, etc. Another requirement is to have ability to pull PO detail report associated with a CapEx project number, this will enhance forecasting accuracy and limit process gaps each month. As a side note, in the actuals there will be spend with no project number and the FA analyst will need to reconcile and true up the following month. This is due to as examples, various manual adjustments, use tax, ICMU true up, etc.

### Dimensions and Data Sources

Source of raw data current or new

* Hyperion
* Oracle EBS
* Flat files from non-Oracle entities > Janos, eMaint, Brazil, etc.

Each CVD is required to include aggregation capabilities as described in the table below. A common requirement across all dimensions is that a standardized set of aggregation business rules be established

|  |  |  |
| --- | --- | --- |
| **D#** | **Dimension** | **Dimension Description** |
| D1 | **Account Payables - Aging Period** | Time periods used to review and report on open payables. |
| D2 | **Account Payables - Hold Codes** | Detailed information about the hold. |
| D3 | **Account Payables - Invoice Status** | The status of the payables invoice. Examples: Never Validated, Unpaid, Validated. |
| D4 | **Account Payables - Lookup Values** | Reference Table |
| D5 | **Account Payables - Suppliers** | Vendor information. |
| D6 | **Account Payables - Suppliers Sites** | Vendor site that sends the invoice. |
| D7 | **Account Payables - Terms** | Payment terms details. |
| D8 | **Account Payables - Text** | Junk Dimension |
| D9 | **Account Receivables - Aging Bucket** | Time periods used to review and report on open receivables. |
| D10 | **Account Receivables - Batch Sources** | Controls the standard transaction type assigned to a transaction and determine whether receivables automatically numbers transactions and transaction batches. |
| D11 | **Account Receivables - Collectors** | Name and profile of the collectors who tracks collection of receivables. |
| D12 | **Account Receivables - Customers** | Customer that receives the invoice. |
| D13 | **Account Receivables - Dispute Reasons** | Details of dispute transactions. |
| D14 | **Account Receivables - Lookup Values** | Reference Table |
| D15 | **Account Receivables - Parties** | Party that receives the invoice. |
| D16 | **Account Receivables - Party Sites** | Party site that receives the invoice. |
| D17 | **Account Receivables - Term Lines** | Payment terms details. |
| D18 | **Account User** | Reference Table |
| D19 | **Accounting Class** | The valuation and variance accounts that are associated with this accounting class determine which GL accounts are charged and when. |
| D20 | **Adjustments** | Sales order line adjustments. Types of Adjustments |
| D21 | **BOM Item Costs - Resources** | Defines the time an assembly spends at an operation and the cost that is incurred at the operation. |
| D23 | **Buyer** | Employee name and location information of the person who entered the purchasing document in the source system. |
| D28 | **Currency** | Full International Standards Organization (ISO) name of the monetary unit. |
| D29 | **Customer** | Bill-To and Ship-To customer information. |
| D30 | **Customer - Channel** | Description of the Customer channel code. |
| D31 | Demand Forecast - Record Type | Forecast Detail. |
| D32 | Demand Forecast - Type | Forecast Type Detail. |
| D33 | **Destination Geography** | Geographies based on Ultimate Destination |
| D34 | **Employee** | Employee name and location of the person who performs a certain function within the source system. |
| D36 | FND - Currencies | Stores information about currencies. |
| D37 | FND - Lookup Values | Reference Table |
| D38 | FND - Users | Stores information about application users. |
| D39 | **General Ledger** | General ledger account . |
| D40 | **General Ledger - GL Account Segment** | General ledger account details. |
| D41 | **General Ledger - GL Ledger** | Stores General Ledger Information |
| D42 | **Holiday** | Number of holiday days passed during the repair and/or calibration service event. |
| D43 | **Inventory - ATP Rules** | Order Management attributes. |
| D44 | **Inventory - Buckets** | Time periods used to review and report on hand inventory. |
| D45 | **Inventory - Demand Types** | Identifies a forecasted or an actual demand. |
| D46 | **Inventory - Freight** | Inventory Freight Details. |
| D47 | **Inventory - Item Locations** | Locator defines the physical location of a product. |
| D48 | **Inventory - Lot Numbers** | Specifies a batch of an item identified by a number. |
| D49 | **Inventory - Org Items** | Codes used to group products with similar characteristics. |
| D50 | **Inventory - Planners** | Material planner assigned to plan the item. |
| D51 | **Inventory - Sub Inventories** | Subinventory details. |
| D52 | **Inventory - Transaction Source Types** | Details about an Oracle Inventory charges a transaction. |
| D53 | **Inventory - Transaction Types** | Transaction type details. |
| D54 | **Inventory - UNSPSC Code** | Hierarchical convention used to classify products and services. |
| D55 | **Location** | Geographical location of the customer. |
| D56 | **MFG** | Reference Table |
| D57 | **Modifiers** | Definition of discount headers and lines. |
| D59 | **Oracle Open Sales Orders - Hold Buckets** | Time periods used to review and report days on hold. |
| D60 | **Oracle Open Sales Orders - Hold Definitions** | Defining Holds **in** Order Management |
| D61 | **Oracle Open Sales Orders - Sources** | Feeder System Names that create orders in Order Management tables |
| D62 | **Oracle Open Sales Orders - Texts** | Junk Dimension |
| D63 | **Order Types - Line Type** | Classification of a sales order line. |
| D64 | **Order Types - Order Type** | Classification of a sales order. |
| D65 | **Organization** | Name of the accounting company. |
| D66 | **Payment Terms** | Determines the amount of each installment |
| D67 | **Period Status** | The current status of the GL accounting period. |
| D68 | **Planner** | General planning attributes. |
| D73 | **Product** | Product detail. |
| D74 | **Purchase Orders - Buyers** | Buyer details. |
| D75 | **Purchase Orders - Hazard Classes** | contains code and description for hazardous items which gets automatically printed into purchase order, RFQ and Receipt Travelers |
| D76 | **Purchase Orders - Line Types** | Classification of a Purchase order line. |
| D77 | **Purchase Orders - Routing Headers** | Primary routing of the item after it has been received |
| D79 | **Repair - Repair Center** | Service Center where the service is done. |
| D80 | **Repair - Repair Event** | Indicates the Order Status Change event during a service cycle. |
| D81 | **Repair - Repair Tat Rule** | The turnaround time rule that was applied in order to determine the turaound time (TAT) goal. |
| D82 | **Repair - Repair Text** | Junk Dimension |
| D83 | **Repair Orders - Incident Status** | Repair incident status details. |
| D84 | **Repair Orders - Incident Urgencies** | Repair incident urgency details. |
| D85 | **Repair Orders - Texts** | Junk Dimension |
| D86 | **Repair Orders - Types** | Repair type details. |
| D90 | **Service Type** | Classification of service type. |
| D91 | **SIC Code** | Standard Industry Classification of end customer. |
| D93 | **Source System** | Identifier of the source system for the order line. |
| D95 | **Status** | Status of returned item. |
| D96 | Sub Inventory | Unique physical or logical separations of material inventory, such as raw inventory, finished goods, or defective material |
| D97 | **Transaction - Transaction Source** | Indicates the source of the transaction. |
| D98 | **Transaction - Transaction Type** | Classify a particular transaction |
| D99 | **Vendor** | Vendor that sends the invoice. |
| D115 | **Warehouse** | Warehouse details. |
| D116 | **Warehouse Lab** | Inventory detail. |
| D117 | **Warranty Cost - Record Owner** | Details about the Technical Service person, group or organization responsible for this record. |
| D118 | **Warranty Cost - Resource** | Stores information on Warranty Resource Costs. |
| D120 | **WIP Discrete** | Stores information on Valuation accounts that were charged for issue components, move assemblies, complete assemblies, and charge resources |
| D121 | Dim Account Creation Period | CRM account creation dates. |
| D122 | Dim Activity Period | Dates related to Finance. |
| D123 | Dim Assigned Distributor Account | Name and profile of the Distributor that was assigned the lead. |
| D124 | Dim Assigned Distributor Contact | Distributor contact details. |
| D126 | Dim Bill-To Customer | Distributor Channel, Rep Agency, Distributor Number etc. |
| D127 | Dim Bill-To Location | Distributor Branch Location, Distributor Country etc. |
| D128 | Dim Bill-To Territory Planning Bridge | Bill-To customer information. |
| D129 | Dim Bill-To Territory Planning Secondary | Bill-To customer information. |
| D130 | Dim Bill-To Territory Planning | Distributor Name, Filter Rep Agency Field |
| D131 | Dim Booked Period | Fiscal booked date, month, year etc. |
| D132 | Dim Booking Final Destination | Hierarchy locations. |
| D158 | Dim Deliver-To Customer | Customer information. |
| D159 | Dim Deliver-To Location | Customer information. |
| D160 | Dim Direct Sales Territory | Direct sales territory. |
| D174 | Dim Inventory | Inventory details. |
| D175 | Dim Invoiced Period |  |
| D198 | Dim Order Customer Channel | Customer channel information. |
| D199 | Dim Order Line Type | Order line type information. |
| D200 | Dim Order Status | Order status information. |
| D201 | Dim Order Type | Order type details. |
| D202 | Dim Organization | Organization information. |
| D209 | Dim Posted Period |  |
| D232 | Dim Serviced Product |  |
| D233 | Dim Shipped Period | Ship dates |
| D234 | Dim Shipping Attributes | Shipping information. |
| D235 | Dim Ship-To Customer | Ship-To customer information. |
| D236 | Dim Ship-To Location | Ship-To customer information. |
| D237 | Dim Ship-To Territory Planning Bridge | Ship-To customer information. |
| D238 | Dim Ship-To Territory Planning Secondary | Ship-To customer information. |
| D239 | Dim Ship-To Territory Planning | Ship-To customer information. |
| D240 | Dim SIC Code |  |

Unified Dimensions have been vetted with the Data Steward team for each KPI within a CVD. Please refer to the file called **“Fluke Datawarehouse Dimensions\_10-7-21.xlsx”**  Located at Teams site - [Unified Dimensions](https://teams.microsoft.com/_#/xlsx/viewer/teams/https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards~2FShared%20Documents~2FGeneral~2FTechnical%20Docs~2FFluke%20Datawarehouse%20Dimensions_summary%20page.xlsx?threadId=19:84080666398a41adb35436c2d3b196da@thread.tacv2&baseUrl=https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards&fileId=1ca9b00a-fb1c-4075-9f16-21fa7df43938&ctx=files&rootContext=items_view&viewerAction=view) - since Hyperion is main source for Working Capital, dimensions will be limited to what is from Hyperion.

[XLSX File viewer | Microsoft Teams](https://teams.microsoft.com/_#/xlsx/viewer/p2p/https:~2F~2Ffortive.sharepoint.com~2Fsites~2FFLK-BI-Data-Stewards~2FShared%20Documents~2FGeneral~2FTechnical%20Docs~2FDimensions~2FFluke%20Datawarehouse%20Dimensions_10-7-21.xlsx?messageId=1633623502144&fileId=3143B4ED-C5A8-43A8-84E1-5D7811D0E0B1&ctx=fileLink&viewerAction=view) – new location

### Data Gaps – Ingestion process needs

N/A

### Drill Down Path

Path1: by One Fluke Region  (APAC, EMEA, Americas / China, Europe, USA)

Path2: by Entity group (I.e., Japan 92 and 93)- **do not include elimination entities**

Path3: by Factory Hierarchy (Region à Site àSub Factories)

Path4: by Factory of Origin for inventory – I.e. worldwide inventory for factory and xyz product

**Elimination Entities**

E1: Global Elim

E5: Euro Elim

EF: Elim with FHS

EK: Elim with SSO

PT: with channel PTEL

### Metrics Requirements

\*\*Note: There are current Operational reports with global metrics reviewed with L1 and L2 leaders. Forecast reviews is an important venue to ensure we have all of those metrics documented here as a starting place, there will be more in future to add. L2 wireframe dashboards will be key with Working Capital components.

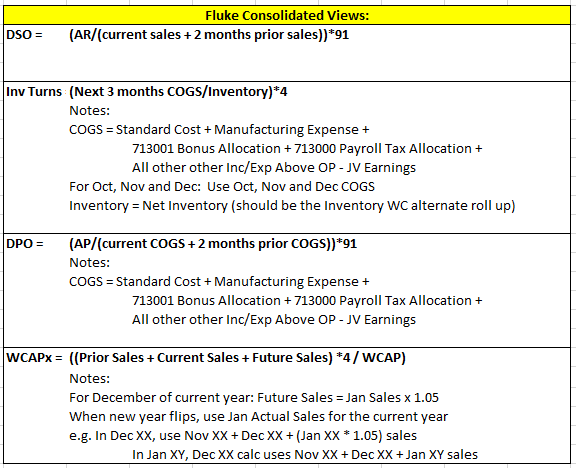
**Wireframe List for reports / dashboards:**

* L1 WC dashboard for DSO, INV, DPO and WC
* *(ability to drill into more detail for the above WC components)*
* Past Due > 30 days by Top 10 customers
* Past Due by Entity top 5 and worse 5
* Unapplied Credits by top 25 customers
* AP Open Balances
* CapEx by Region by project
* CapEx detail spend
* CapEx open CAR report (replicate Darby’s current report)
* CapEx Act vs. Forecast (or Plan) by region / function
* Open order (PO) report associated with each project #
* Inventory detail showing raw / WIP / finished > auto report to verify finished goods and ICMU
* Job Cost Variance Report (Oracle vs. BOM in PDM (not in Oracle (yet) )
* Fluke Sub GL Detail Report – provides ICMU detail – this is key for close week
* Item (product) Detail Report showing Item #, Acct #, Adjusted Factory, Inventory Code, important to include who processed transactions
* Inventory Owner Report – showing at point in time which Factory owns what inventory
* There are multiple AR reports that require **Monarch software** tool to convert Oracle reports into a usable MS Excel file format. Requirement here is to ensure PBI can pull these AR reports so we can decommission Monarch. Refer to Finance’s list of reports to cover this requirement.

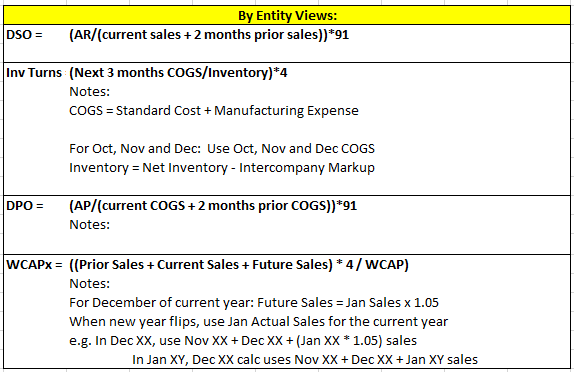
|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Metric** | **Description** | **Logic** | **Time Dimension** | **Comment** |
| AR Past Due $ | Dollar amount past due customer payment terms | Sum of total $ amount past due customer terms | Month/Quarter/PY  Actual/Forecast/Plan |  |
| AR Past Due % | Past due as a percent of sales in same time period | Sum of total $ amount past due customer terms divided by total sales | Month/Quarter/PY  Actual/Forecast/Plan |  |
| Slow Moving Inventory $ | Inventory $ (product) not selling at defined pace | Anything greater than 90 days (DOH) in $ | Month/Quarter/PY  Actual/Forecast/Plan |  |
| Slow Moving Inventory $ | Slow inventory as a percent of total inventory in same time period | Anything greater than 90 days (DOH) as a % | Month/Quarter/PY  Actual/Forecast/Plan |  |
| DSO – days sales outstanding | Average number of days to collect from customers | (Total Receivables / current + 2 prior month sales) \* 91 days | Month/Quarter/PY  Actual/Forecast/Plan |  |
| Inventory Turns | Number of times inventory is sold or used in defined time period | (next 3 months COGS / Inventory) \* 4 | Month/Quarter/PY  Actual/Forecast/Plan |  |
| Weighted Inventory Turns |  | Standard inventory turn calc multiply each month per following weighting: 3.33% for Jan-Mar. 6.66% for Apr-Jun. 10.00% for Jul-Sep and 13.33% for Oct-Dec |  |  |
| DPO – days payables outstanding | Number of days it takes to pay company’s vendor(s) | (Total Accounts Payable / current + 2 prior month COGS) \* 91 days | Month/Quarter/PY  Actual/Forecast/Plan |  |
| WC Turns | Measures how effective a company’s generates sales for every dollar of WC used | (prior month + current month + next month sales) \*4 / Total WC ) | Month/Quarter/PY  Actual/Forecast/Plan |  |
| Weighted WC Turns | A weighted amount is applied to the WC turn to compare against time frames | takes 10% of Q1, 20% of Q2, 30% of Q3 and 40% of Q4.  For example, each month of Q1 is 10%/3, each month of Q2 is 20%/3, etc.  Then the weighted numbers are summed. | Month/Quarter/PY  Actual/Forecast/Plan |  |
| AR Past Due Aging | Shows $$ amount past due in 30 day buckets, 0-30, 30-60, etc. | Sum of $ by customer with amounts past due 30 days bucket, past due 30-60 days bucket, past due 60-90 days bucket, past due 90-180 days budcket | Month/Quarter/PY  Actual/Forecast/Plan |  |
| AP stat invoices inflow $ | Invoices payable in stated time frame | Monthly Activity for category: Receiving and Purchase Invoices excluding Intercompany totals | Month/Quarter/PY  Actual/Forecast/Plan |  |
| AP stat payments $ | Payments in stated time frame | Monthly AP Activity category: payments excluding intercompany payments | Month/Quarter/PY  Actual/Forecast/Plan |  |
| AP stat holds $ | $ amount of payables on hold in stated time frame | Sum of total AP holds | Month/Quarter/PY  Actual/Forecast/Plan |  |
| AP $ holds by Type | AP holds by defined type | Sum of total AP holds by hold type | Month/Quarter/PY  Actual/Forecast/Plan |  |
| Inventory Reserves for Excess and Obsolete | Defined inventory $ amount that is deemed old and potentially wont be consumed in the future | Reserves established for: Full value of any inventory in excess of 2 years demand based on either forecast, annualized last 12 mos or prior 2 year usage. The full value of any inventory components not used for +1 year | To be reviewed quarterly and reviewed by management | All regions follow this Fortive policy but the mechanics to build up that this number varies by region. Will document the buildup in 2022 |
| Other ?? |  |  |  |  |
|  |  |  |  |  |

**Tables below are the correct FTV calculations nuances, and all regions required to apply.**

**Fluke consolidated view**



**Table view by entity**



Add commentary in table above: Net inventory at entity level excludes SSO inventory accounts that are eliminated in the elimination entities. This process is completed offline today. Data is in Hyperion, we can include the math in the UBI reports.

### Power BI needed columns

These columns will be captured as part of Dashboard Wireframing sessions and compiled in the Technical Specification Document stored at location - <<TBD>>

### KPI Inclusions and/or exclusion from Dashboard

Need to ensure easy identification of Inter-company transactions.  For example, within Fortive there are intercompany receivables to other Fortive companies are included in the WC calculation as well as rebate liability.  Fortive also has intercompany payables (AP) in the WC calculation.

### Targets

For any WC target(s) variations that are not loaded in Hyperion we will have the ability to load targets into the data lake for reporting automation.  The below is intended to capture all the possible WC related targets that Fluke requires.

The dimension and granularity for these targets can be defined as follows.

1. **DSO Target**: ‘x.x’ days for each time period.  Target set annually then updated during the forecast cycles each fiscal month – for each commercial Region or BU, Entity and total Fluke
2. **Accounts Receivables Target:** $$ dollars for each time period.  Target set annually then updated during the forecast cycles each fiscal month – for each commercial Region or BU, Entity and total Fluke
3. **Inventory Turns Target:** ‘x.x’ turns for each time period.  Target  set annually updated during the forecast cycles each fiscal month - for each commercial Region or BU and total Fluke
4. **DPO Target:** ‘x.x’ days for each time period.  Target set annually then updated during the forecast cycles each fiscal month – for each commercial Region or BU, Entity and total Fluke
5. **WC Turns Target:** ‘x.x’ turns for each time period.  Target  set annually updated during the forecast cycles each fiscal month - for each commercial Region or BU and total Fluke
6. Other targets

### Additional or future needs

Automated variance reconciliations.

# Core Value Focus Area - Quality

# Core Value Focus Area – People

# Core Value Focus Area - Return on Investments

# Non-Functional Specifications

## Visualization Requirements <<TBD on wireframe sessions, Dashboard>>

## Standard Reporting Requirements <<TBD on wireframe sessions, Dashboard>>

### OTD

* KPI Visuals
* Navigation of in-depth analysis for the KPI cards(If the indicator is red then, on-click we can show summary table or relevant data points )
* SLT and CRD run chart (Line graphs with current year line thicker than rest of the years)
* 4 charts (Pareto charts) depicting for Top reasons why the target hasn’t reached
* Enable Drill down for region pareto
* QTD/MTD/YTD an additional filter (Hierarchy filter)

### PDBL

### Backlog

## Ad Hoc Reporting Requirements <<TBD on wireframe sessions, Dashboard>>

* Filters application and sync for in-depth details of the visuals
* Regional view for OTD dashboard will be replica of Factory view with some minor changes
* Additional filters, slicers, and few enhancements of visuals can be accommodated before UAT

## Other Visualization Requirements <<TBD on wireframe sessions, Dashboard>>

* Toggle between Percent and Absolute Values
* Toggle between Functional and services

## Data Retention and Refresh

**Data retention**

* **Raw** – lifecycle management at ADLS level (Hot, Warm and Cold) - Forever
* **Curated** – Forever with Lifecycle management
* **Synapse** – 5 years

**Refresh rates**

* Minimum for everything is daily, except:
* Shipments every 1 hour
* Backlog every 1 hour in month and then snap shots end of each fiscal month to retain min 5 years
* AR, AP, Inventory weekly snap shots each Saturday in month, then snap shots end of each fiscal month to retain min 5 years

Refresh at each layer: ETL refresh -Internal-PBI If each one takes 20-30 mins whole refresh will be more than 1 hr

*Patrick - One request >* could we refresh last week of each fiscal month orders every hour?- this will be determined later in the development phase

* Shipments every 1 hour [PvB] Does this include “Posted Revenue” as this is required multiple times a day because of Time Zone.
* Backlog every 1 hour in month and then snap shots end of each fiscal month to retain min 5 years [PvB] Service requires this always hourly (as is today), not only on month closure.
* AR, AP, Inventory weekly snap shots each Saturday in month, then snap shots end of each fiscal month to retain min 5 years [PvB] Service requires daily snap-shot of backlog (as is today) with weekly and month end filter option.
* [PvB] Today we have also in place the real-time booking reports which are also needed in future.

Przemek - Currently in EMEA we use an OBI agent running every 2 hours called “Real Time order line activity (EMEA)” to track bookings of the same day. It runs every day, not only in the last week. Can we make sure that this is still available in the new data lake?

**Jim - Questions for Team**

Will the above recommendation inhibit speed performance for end user?

Will the above recommendation materially impact anything upstream or downstream with today’s processes?

How do we handle those one-off requests the need more than 5 years?  It will be asked.

With intra-day refresh rate, how do we ensure no duplications?

Last day of each fiscal month Finance has process for “real-time” shipments… With the data lake model how close can we get to “real time”  and can refreshes like this still work with non-Oracle entities?

## Performance Requirements

## Security Requirements

Access to metric is based on the user’s role. Separate roles would be given for Functions vs Locations. A user would need to have access to both the metric’s function and location in order to see the values associated with the metric. If a user has access to a metric, then the user would also have access to any further drilldown/drill through reports for that metric.

## Availability Requirements

## Usability Requirements

## Support Requirements

## Documentation Requirements

## Data Management Requirements

# Appendices

## Appendix A: Business Terms and Acronyms Glossary

|  |  |
| --- | --- |
| Table 5: List of Business Terms & Acronyms | |
| Term | **Meaning** |
| COTD | Customer On Time Delivery |
| SLT | Standard Lead Time |
| CRD | Customer Request Date |
| MTD | Month to date |
| PDBL | Past Due Backlog |
| CVD | Core Value Driver |
| FG | Finished Goods |
| ATP | Available to Promise |
| TAT | Turn Around Time |
| RO | Repair Order |
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