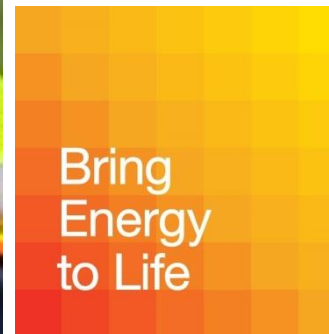


# Direct From The Heart Of A Co-op



Ojas Phansekar

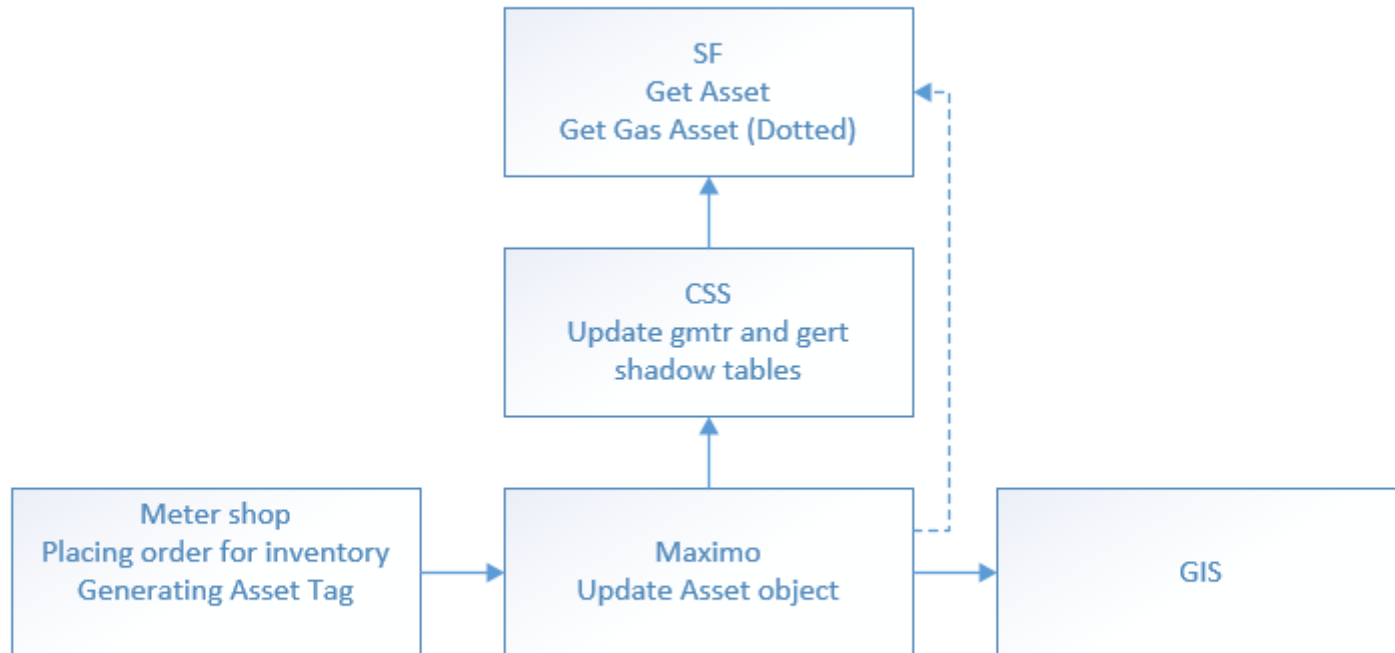
# Induction

---

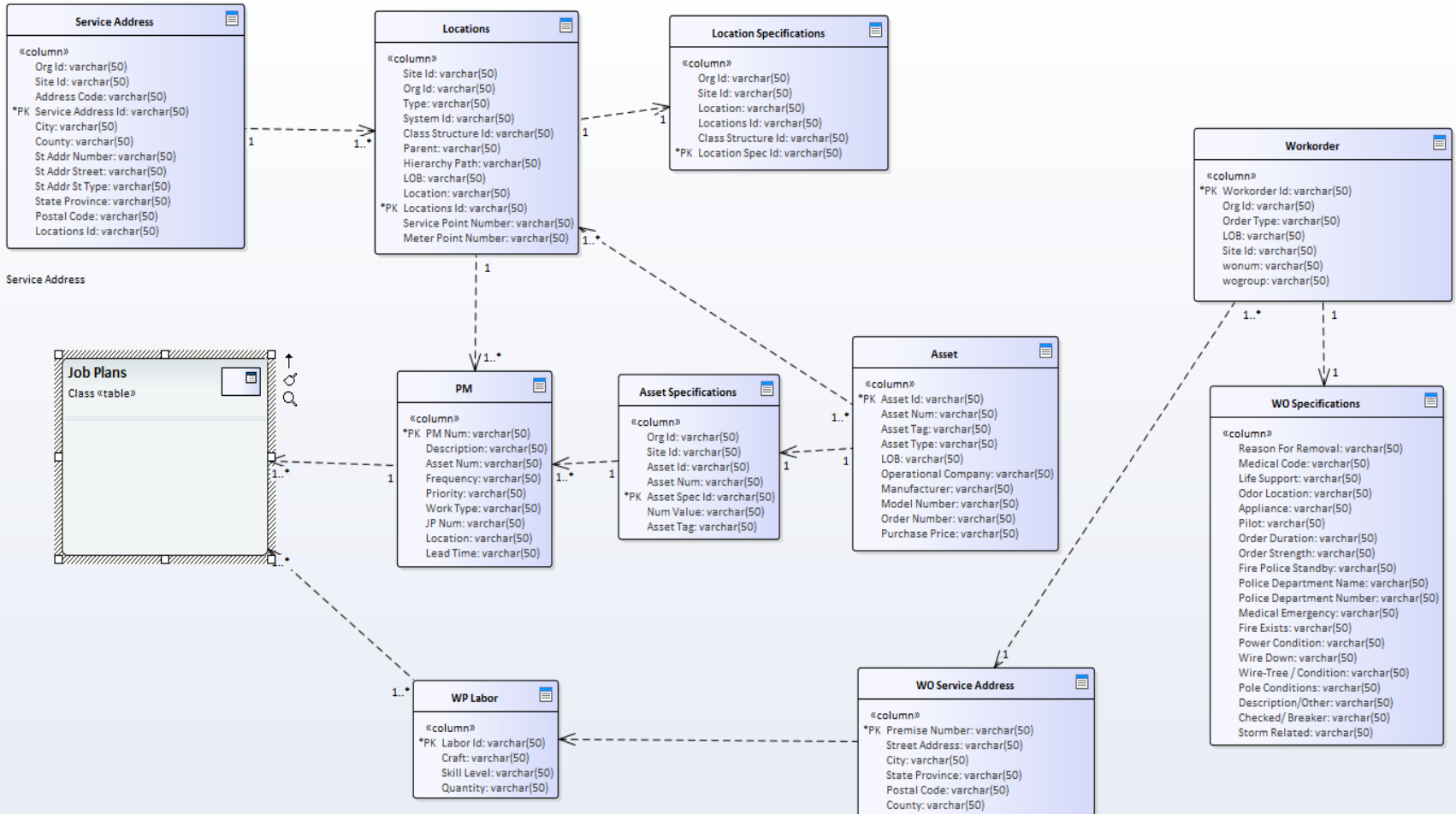
- Introduction to team members
- One-on-One interactions with each team member
- Introduction to the project by Nicolas Raad
- Access to different systems
- Knowing individual contributions to the team

# Kick Start

## ➤ First Major Assignment —————> Data Flows



# Data Model On Sparx Enterprise Architecture



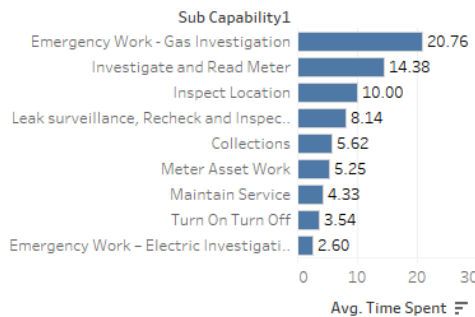
# Project – Defect Analysis

## Defects Analysis

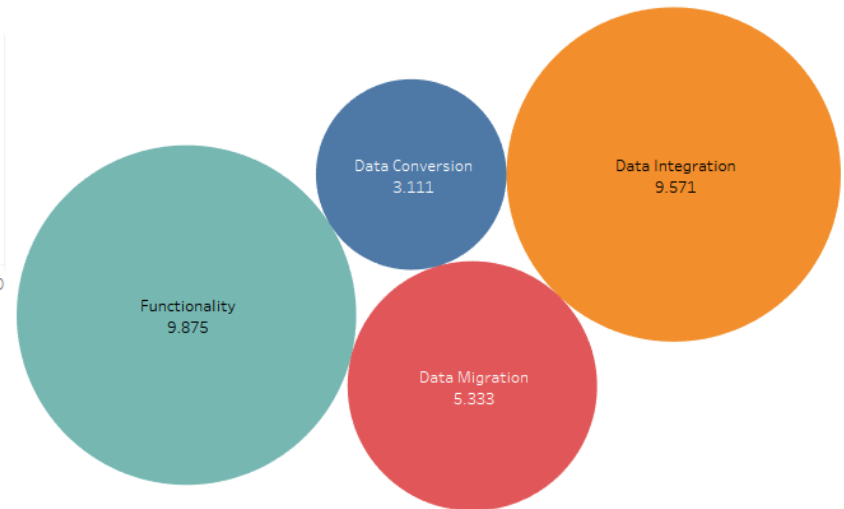
Segregation by Category and Status

Categorization	Status	Defect Count	Time Spent
Data Integration	Closed	8.0	69.0
	Total	12.0	69.0
Functionality	Closed	67.0	657.0
	Open	4.0	
	Total	84.0	657.0
Data Conversion	Closed	11.0	41.0
	Total	12.0	41.0
Data Migration	Closed	7.0	35.0
	Total	7.0	35.0
Grand Total		115.0	802.0

Time Spent by Different Sub-Capabilities on Defects



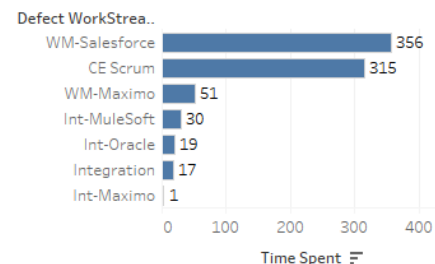
Average Number of Days Spent Per Category



Segregation by Category and Status Other Than Open and Closed

Categorization	Status	Defect Count	Time Spent
Data Integration	In Progress	1.0	
	In QA	1.0	
	New	2.0	
	Total	12.0	69.0
Functionality	Assigned	1.0	
	In Progress	2.0	
	In QA	4.0	
	New	6.0	
	Total	84.0	657.0
Data Conversion	New	1.0	
	Total	12.0	41.0
Data Migration	Total	7.0	35.0
Grand Total		115.0	802.0

Time spent on different Workstreams

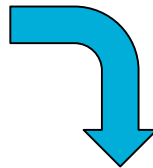


# Data Validation / Data Accuracy / Testing

## PA 2.3 Cutover

External Ref Ids are missing and Pwc(ERIC) is raising a low priority for it

```
select [STATUS],
[EXTERNALREFID],
[DESCRIPTION],
[SERIALNUM],
--[INSTALLDATE],
[CLASSSTRUCTUREID],
[NG_OPCO],
[NG_MANUFACTURER],
[NG_MODELNUM]
from [MX].[asset_recon]
where GROUPNAME like 'NG_VCMTRS'
```



	STATUS	EXTERNALREFID	DESCRIPTION	SERIALNUM	CLASSSTRUCTUREID	NG_OPCO	NG_MANUFACTURER	NG_MODELNUM
1	ACTIVE		Volume Corrector, Mercury-Mini-ATP 0-15#	11082728	1063	5360	MC	Mini-ATP 0-15#
2	ACTIVE		Volume Corrector, Mercury-MiniMax Atp 0-15#	13190466	1063	5360	MC	MiniMax Atp 0-1
3	ACTIVE		Volume Corrector, Mercury-Mini P 0-100#	9503308	1063	5360	MC	Mini P 0-100#
4	ACTIVE		Volume Corrector, Mercury-Minimax ATP 0-150#	13190487	1063	5360	MC	Minimax ATP 0-1
5	ACTIVE		Volume Corrector, Mercury-Mini-ATP 0-60#	926215	1063	5360	MC	Mini-ATP 0-60#
6	ACTIVE		Volume Corrector, Mercury-Mini-P 0-6#	9403775	1063	5360	MC	Mini-P 0-6#
7	ACTIVE		Volume Corrector, Mercury-Mini-PT 0-100#	9806121	1063	5360	MC	Mini-PT 0-100#
8	ACTIVE		Volume Corrector, Mercury-Mini-AT-PT 0-60#	924464	1063	5360	MC	Mini-AT-PT 0-60
9	ACTIVE		Volume Corrector, Mercury-Mini-Max ATP 0-6#	13078205	1063	5360	MC	Mini-Max ATP 0-
10	ACTIVE		Volume Corrector, Mercury-Mini max-atp 0-100#	11046576	1063	5360	MC	Mini max-atp 0-
11	ACTIVE		Volume Corrector, Honeywell-Mini MAX0-6	13078207	1063	5360	HO	Mini MAX0-6
12	ACTIVE		Volume Corrector, Mercury-Mini-atp 0-100#	407336	1063	5360	MC	Mini-atp 0-100#
13	ACTIVE		Volume Corrector, Mercury-Mini max-atp 0-100#	11046544	1063	5360	MC	Mini max-atp 0-
14	ACTIVE		Volume Corrector, Honeywell-Mini MAX0-6	13112103	1063	5360	HO	Mini MAX0-6
15	ACTIVE		Volume Corrector, Mercury-Mini ATPPT 0-6#	12041515	1063	5360	MC	Mini ATPPT 0-6#
16	ACTIVE		Volume Corrector, Mercury-Mini-P 0-6#	207369	1063	5360	MC	Mini-P 0-6#

# Data Validation / Data Accuracy / Testing

## PA 2.3 Cutover

Manufacturer field is null in the Source table VWRI\_Volume\_Corrector\_RI and it is blank in Target table

### Source Table

	vc_status	DESCRIPTION	evc_no	CLASSTRUCTUREID	NG_OPCO	MANUFACTURER	evc_type
1	ACTIVE	Volume Corrector, Honywell-Mini MAX 0-150	11046584	1063	5360	NULL	Mini MAX 0-150
2	ACTIVE	Volume Corrector, Turbo-0-100	508642	1063	5360	NULL	0-100



### Target Table

	STATUS	DESCRIPTION	SERIALNUM	CLASSTRUCTUREID	NG_OPCO	NG_MANUFACTURER	NG_MODELNUM
1	ACTIVE	Volume Corrector, Turbo-0-100	508642	1063	5360		0-100

	STATUS	DESCRIPTION	SERIALNUM	CLASSTRUCTUREID	NG_OPCO	NG_MANUFACTURER	NG_MODELNUM
1	ACTIVE	Volume Corrector, Honywell-Mini MAX 0-150	11046584	1063	5360		Mini MAX 0-150

# Data Validation / Data Accuracy / Testing

## PA 2.3 Cutover

### Wrong Scenario Detected :

#### ❖ One Meter can have multiple Volume Correctors

Checked the hierarchy like having appropriate volume correctors tied to the meters

#### ❖ 1171761, 1173123 Asset Numbers have multiple Volume Correctors

<a href="#">1351955</a>	Volume Corrector, Mercury-Mini-P 0-6#	1185476	1171761		NGRID	
<a href="#">1351956</a>	Volume Corrector, Mercury-MiniMax 0-6#	1185476	1171761		NGRID	

	STATUS	EXTERNALREFID	DESCRIPTION	SERIALNUM	PARENT	CLASSSTRUCTUREID	NG_OPCO	NG_MANUFACTURER	NG_MODELNUM
1	ACTIVE		Volume Corrector, Mercury-Mini-ATP 0-60#	12016743	1173123	1063	5360	MC	Mini-ATP 0-60#
2	ACTIVE		Volume Corrector, Mercury-Mini Max P 0-60#	13243409	1173123	1063	5360	MC	Mini Max P 0-60

List View
Asset
Spare Parts
Safety
Meters
Specifications
Work
Service Address
Map

Asset:   Site:

Parent:

Subassemblies Filter 1 - 2 of 2

Asset	Description	Location	Description
1351955	Volume Corrector, Mercury-Mini-P 0-6#	1185476	METERPOINT-913658100-42402034-1
1351956	Volume Corrector, Mercury-MiniMax 0-6#	1185476	METERPOINT-913658100-42402034-1



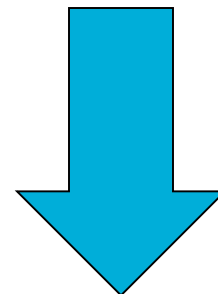
# Data Validation / Data Accuracy / Testing

---

## PA 2.3 Cutover

### Query capturing Multiple Volume Correctors for One Meter

```
Select  A.ASSETNUM
,A.LOCATION
,B.PARENT
,VCV.vc_status
,VCV.DESCRPTION
,VCV.evc_no
,VCV.CLASSSTRUCTUREID
,VCV.NG_OPCO
,VCV.MANUFACTURER,
VCV.evc_type
FROM [Volume_Correctors].[VWRI_Volume_Corrector_RI] VCV
    LEFT JOIN [MX].[asset_recon] A ON
        VCV.[PARENT_EXTERNALREFID] = A.EXTERNALREFID
    LEFT JOIN [MX].[asset_recon] B ON
        A.ASSETNUM = B.PARENT AND
        B.NG_EQTYPE = 'VC'
```



# Data Validation / Data Accuracy / Testing

## PA 2.3 Cutover

	ASSETNUM	LOCATION	PARENT	vc_status	DESCRIPTION	evc_no	CLASSTRUCTUREID	NG_OPCO	MANUFACTURER	evc_type
1	1270106	1467200	1270106	ACTIVE	Volume Corrector, Mercury-Mini-ATP 0-60#	212912	1063	5360	MC	Mini-ATP 0-60#
2	1212333	1372667	1212333	ACTIVE	Volume Corrector, Mercury-Mini-atp 0-6#	1062300	1063	5360	MC	Mini-atp 0-6#
3	1247163	1459718	1247163	ACTIVE	Volume Corrector, Mercury-Mini-P 0-6#	13566	1063	5360	MC	Mini-P 0-6#
4	1246608	1188211	1246608	ACTIVE	Volume Corrector, Mercury-Mini AT P0-6	937754	1063	5360	MC	Mini AT P0-6
5	1247198	1292488	1247198	ACTIVE	Volume Corrector, Mercury-Mini-P 0-6#	9403773	1063	5360	MC	Mini-P 0-6#
6	1281633	1299858	1281633	ACTIVE	Volume Corrector, Mercury-Mini-ATP 0-150#	13084097	1063	5360	MC	Mini-ATP 0-150#
7	1281634	1266555	1281634	ACTIVE	Volume Corrector, Mercury-Mini ATP 0-15#	13078236	1063	5360	MC	Mini ATP 0-15#
8	1281639	1444828	1281639	ACTIVE	Volume Corrector, Mercury-Mini P 0-6#	9901886	1063	5360	MC	Mini P 0-6#
9	1169192	1313961	1169192	ACTIVE	Volume Corrector, Honeywell-Mini MAX	13139410	1063	5360	HO	Mini MAX
10	1169193	1240209	1169193	ACTIVE	Volume Corrector, Honeywell-Mini MAX0-100	11046585	1063	5360	HO	Mini MAX0-100
11	1169227	1415763	1169227	ACTIVE	Volume Corrector, Mercury-Mini-ATP 0-100#	11082733	1063	5360	MC	Mini-ATP 0-100#
12	1169232	1379203	1169232	ACTIVE	Volume Corrector, Mercury-Mini-P 0-6#	9403775	1063	5360	MC	Mini-P 0-6#
13	1169099	1343095	1169099	ACTIVE	Volume Corrector, Mercury-MiniMax ATP 0-6#	13190518	1063	5360	MC	MiniMax ATP 0-6
14	1168334	1337276	1168334	ACTIVE	Volume Corrector, Mercury-Mini-PT 0-60#	9610662	1063	5360	MC	Mini-PT 0-60#
15	1168358	1347813	1168358	ACTIVE	Volume Corrector, Mercury-Mini AT-P0-15	522794	1063	5360	MC	Mini AT-P0-15
16	1170205	1400692	1170205	ACTIVE	Volume Corrector, Mercury-Mini ATP 0-60#	1062317	1063	5360	MC	Mini ATP 0-60#

Query executed successfully. | dmapeus2d01-sql.database.wi... | phanso (201) | NGLanding\_PA2.3 | 00:00:32 | 666 rows

	ASSETNUM	LOCATION	PARENT	vc_status	DESCRIPTION	evc_no	CLASSTRUCTUREID	NG_OPCO	MANUFACTURER	evc_type
1	1173123	1461652	1173123	ACTIVE	Volume Corrector, Mercury-Mini-ATP 0-60#	12016743	1063	5360	MC	Mini-ATP 0-60#
2	1173123	1461652	1173123	ACTIVE	Volume Corrector, Mercury-Mini-ATP 0-60#	12016743	1063	5360	MC	Mini-ATP 0-60#
3	1173123	1461652	1173123	ACTIVE	Volume Corrector, Mercury-Mini Max P 0-60#	13243409	1063	5360	MC	Mini Max P 0-60
4	1173123	1461652	1173123	ACTIVE	Volume Corrector, Mercury-Mini Max P 0-60#	13243409	1063	5360	MC	Mini Max P 0-60

# Data Validation / Data Accuracy / Testing

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## PA 2.3 Mock 3 & Cutover

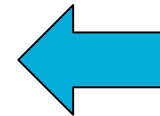
- ❖ Built SQL Queries to create a customized view of the columns from various tables using joins and then navigated on to Salesforce UAT Environment and validated data for each Customer (Residential and Commercial), Billing Account and Premise Profile
- ❖ Below are the few queries which I built by joining various tables following the get calls document

# Data Validation / Data Accuracy / Testing

```

/***** Customer Profile *****/
SELECT      SAD.[KY_CUST_NO]
            ,SAD.[NM_COMPRESSED]
            ,SAD.[NM_CUST_1ST_1]
            ,SAD.[NM_CUST_MID_1]
            ,SAD.[NM_CUST_LST_1]
            ,Cust.[TX_HOME_ACD]
            ,Cust.[TX_HOME_PHN_NO]
            ,Cust.[TX_HOME_PHN_EXTN]
            ,Cust.[TX_BUS_ACD]
            ,Cust.[TX_BUS_PHN_NO]
            ,Cust.[TX_BUS_PHN_EXTN]
            ,Cust.[CD_CUST_TYPE]
            ,demo.[DT_CUST_BIRTH]
            ,SAD.[KY_SSN]
            ,adr.[AD_LN]
            ,bacustcr.[DT_TEMP_MAIL_END]
            ,bacustcr.[DT_TEMP_MAIL_START]
            ,Cust.[NO_LOCK_SEQ_CUST]

FROM [CSS].[CU01TB01_SAD] as SAD
inner join [CSS].[CU03TB01_CUSTOMER] as Cust
on SAD.[KY_CUST_NO] = Cust.[KY_CUST_NO]
inner join [CSS].[CU03TB19_CUST_DEMO] as demo
on Cust.[KY_CUST_NO] = demo.[KY_CUST_NO]
inner join [CSS].[CU02TB02_ADDRESSES] as adr
on SAD.[KY_AD] = adr.[KY_AD]
inner join [CSS].[CU03TB07_BACUSTCR] as bacustcr
on SAD.[KY_BA] = bacustcr.[KY_BA]
where SAD.[KY_CUST_NO] = 866002791
    
```



- ❖ Here we need to actually look into the mapping document and spot check by applying joins .
- ❖ Mapping Documents helped me understand the conversions taken place for various fields

# Data Validation / Data Accuracy / Testing

## Screenshots of Validations Performed:

The following table summarizes the data validation details shown in the first screenshot (BL-00046).

Field	Value	Status
Billing Account Number	BL-00046	✓
CSS Billing Account Number	5025380102	✓
CRIS Billing Account Number		✓
Service Activation Date	9/19/2017	✓
Commodity	Electric	✓
Revenue Class		✓
Account Closed	12/31/1699	✓
Customer Active	3/23/2016	✓
Billing Email Address		✓
Customer Type	Residential	✓
Billing Account Status	Active	✓
Customer	AUBREY CAMPBELL	✓
Premise	5 THIRD AVE APT 3, WOONSOCKET, RI 02895	✓
Service Address	5 THIRD AVE APT 3, WOONSOCKET, RI 02895	✓
Rent/Own	Rent	✓

The second screenshot shows the 'Details' view for the premise '5 THIRD AVE APT 3, WOONSOCKET, RI 02895'. The 'Information' section includes the following data:

Field	Value	Status
Premise Name	5 THIRD AVE APT 3, WOONSOCKET, RI 02895	✓
Premise ID	0255566	✓
CSS Premise ID	502538000	✓
CRIS Premise ID		✓
Leave On for Landlord		✓
Building of Public Assembly		✓
Status of Service		✓
Rent/Own		✓
Has Curb Valve	<input type="checkbox"/>	✓
Curb Valve Location		✓
Premise Status	Active	✓
Premise Type	Single Family	✓
Building Number	856035352	✓
Building Description	Single Family	✓
Premise Address		✓
Address Note		✓
Commodity	Electric	✓
Crew Facility	NE53Z23	✓
GWA	23	✓
Gas Service Territory		✓

The third screenshot shows the 'Details' view for the account 'AUBREY CAMPBELL'. The 'Details' section includes the following data:

Field	Value	Status
Customer Name	AUBREY CAMPBELL	✓
Protected Account(s)	<input type="checkbox"/>	✓
Customer ID	0667894	✓
CSS Customer ID	897656980	✓
CRIS Customer ID		✓
Date Of Birth	10/12/1986	✓
Is Landlord	<input type="checkbox"/>	✓
Under Investigation	<input type="checkbox"/>	✓
Theft Identified	<input type="checkbox"/>	✓
Access Controller		✓
Security Concern		✓
Account Record Type	Residential Customer	✓
Master Customer Profile		✓
Customer Type		✓
Energy Efficiency Lead	<input type="checkbox"/>	✓

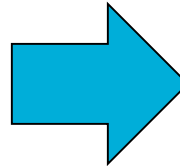
# Data Validation / Data Accuracy / Testing

## PA 2.3 Mock 3 I&R Assets

Target Maximo

Source NG\_Landing

id	StartDescription_LongDescription	StartMeasure	Status	SiteId	NG_LOB	NG_OPCO	NG_MANUFACTURER	NG_MODELNUM	NG_ORDERNUMBER	PLUS
1	NULL	NULL	ACTIVE	NULL	GAS	5360	TE	T130312H	NULL	NULL



Target Maximo

Asset: 1742213 | Site: NGWID | Attachments

Status: ACTIVE | Type: PRODUCTION | Moved? ☐ | Asset Template: ☐ | Returned to Vendor? ☐

Regulatory Type:  | Feature Class:

Details

Parent:  | Calendar:

Maintain Hierarchy? ☐ | Shift:

Location: 100142 | Regulating Site 600 George Washington Hwy | Priority:

Bin:  | Serial #:

Rotating Item:  | EPS Reading:

Condition Code:  | Failure Class:

Meter Group: NG\_MTBTH | BATH HEATER | Item Type:

Usage:  | Tool Rate:

Default Repair Facility:  | Line of Business:

Repair Facility Site:  | Division:

Model: T130312H

Operating Company: 5360 | Management Electric Co

Last Boot Replacement Date:

Last Internal Inspection Date:

Address Information

Service Address:  | City: LINCOLN

Formatted Address: 600 GEORGE WASHINGTON HWY | State/Province: RI | Rhode Island

Street Address: 600 GEORGE WASHINGTON HWY | Address: 1073

Purchase Information

Vendor:

Manufacturer:

Manufacturer Date:

Costs

Total Cost: 0.00

YTD Cost: 0.00

Budgeted: 0.00

Internal Field Help

Field: Manufacturer

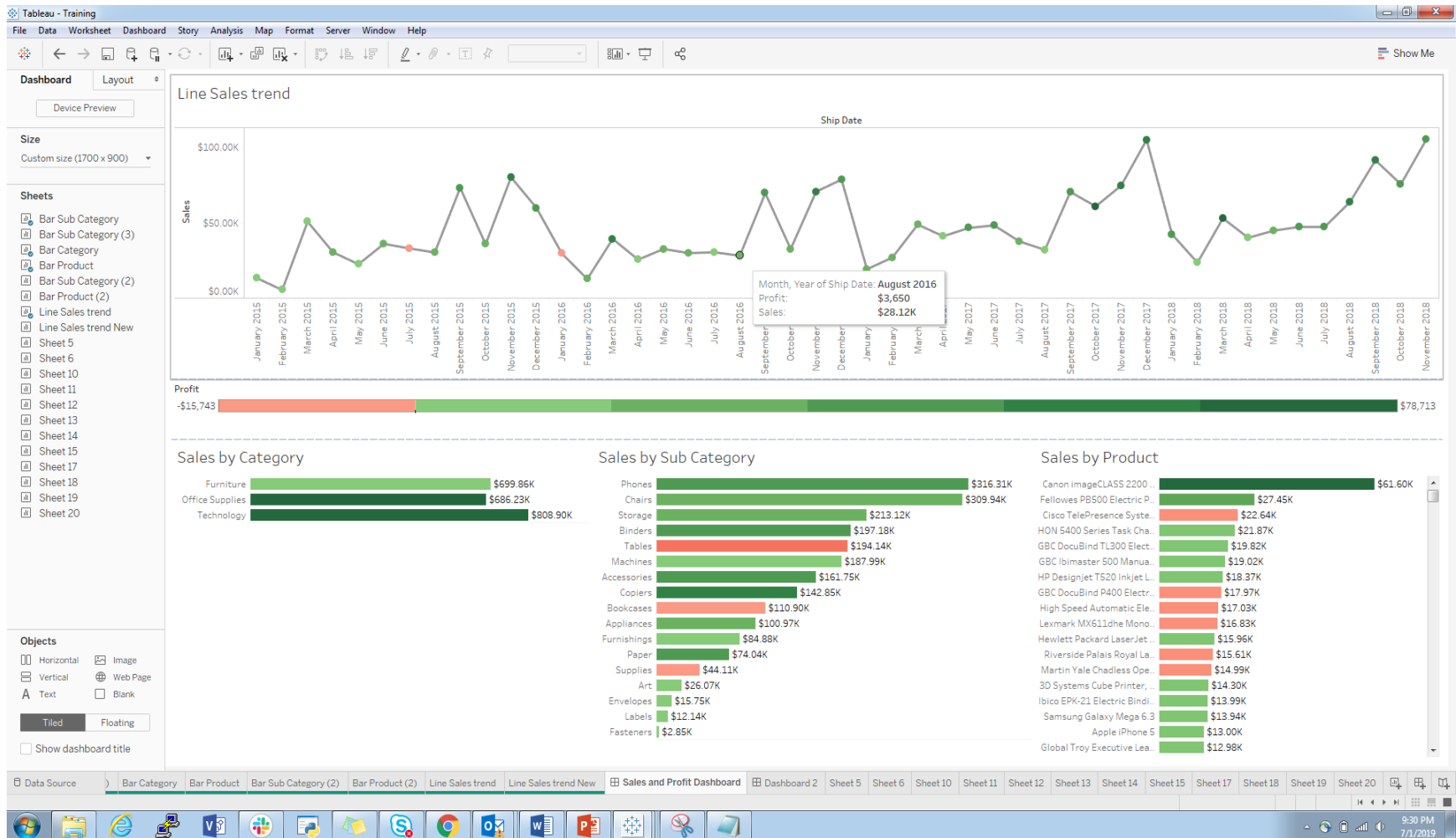
Table Column: KSET:NG\_MANUFACTURER

Manufacturer:

OK

# Learning Outcome – Tableau Training (Reswoods)

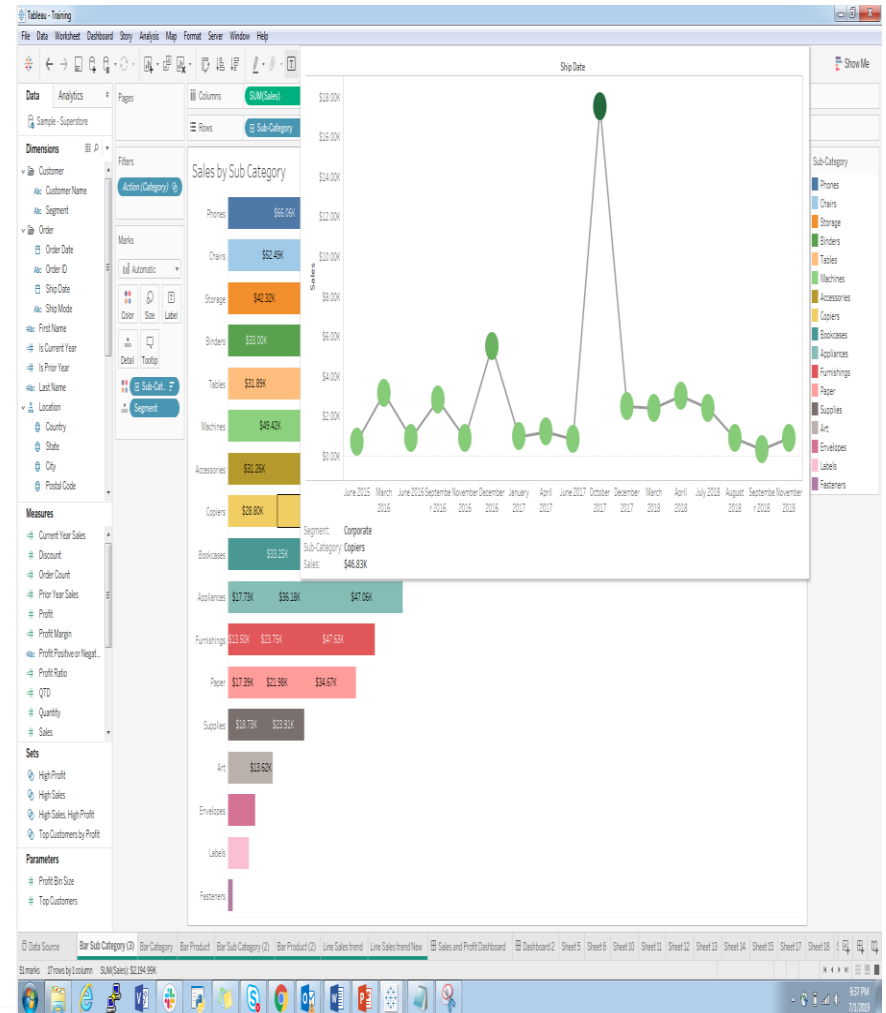
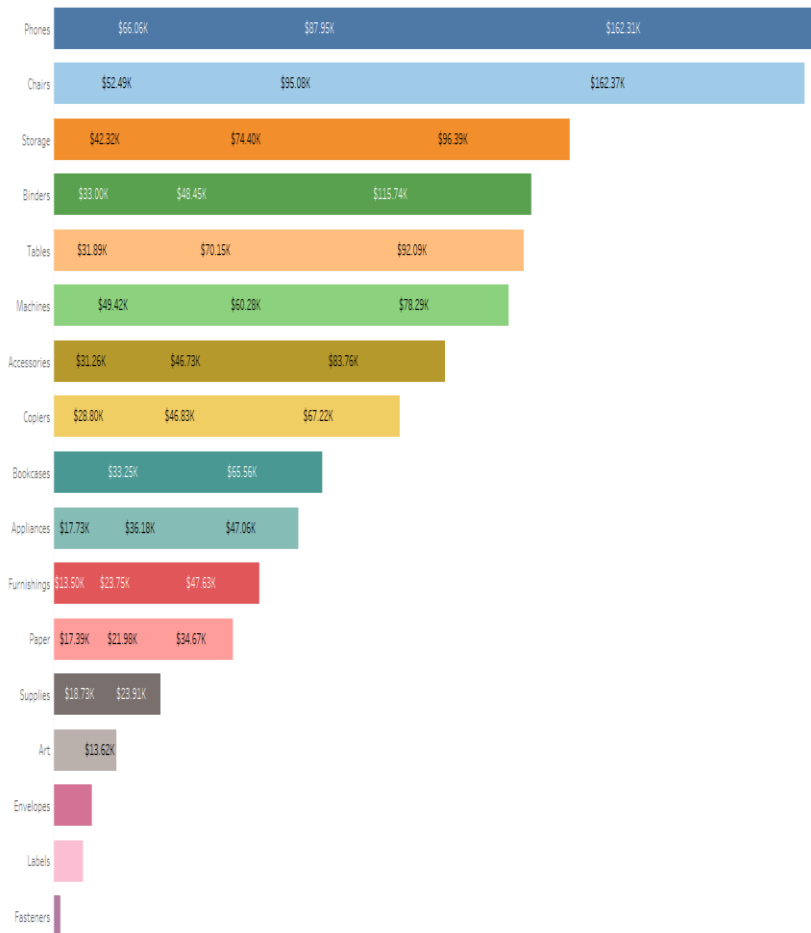
## Dashboard Creation



# Learning Outcomes – Tableau Training

## Insights From Data Visualization

Sales by Sub Category

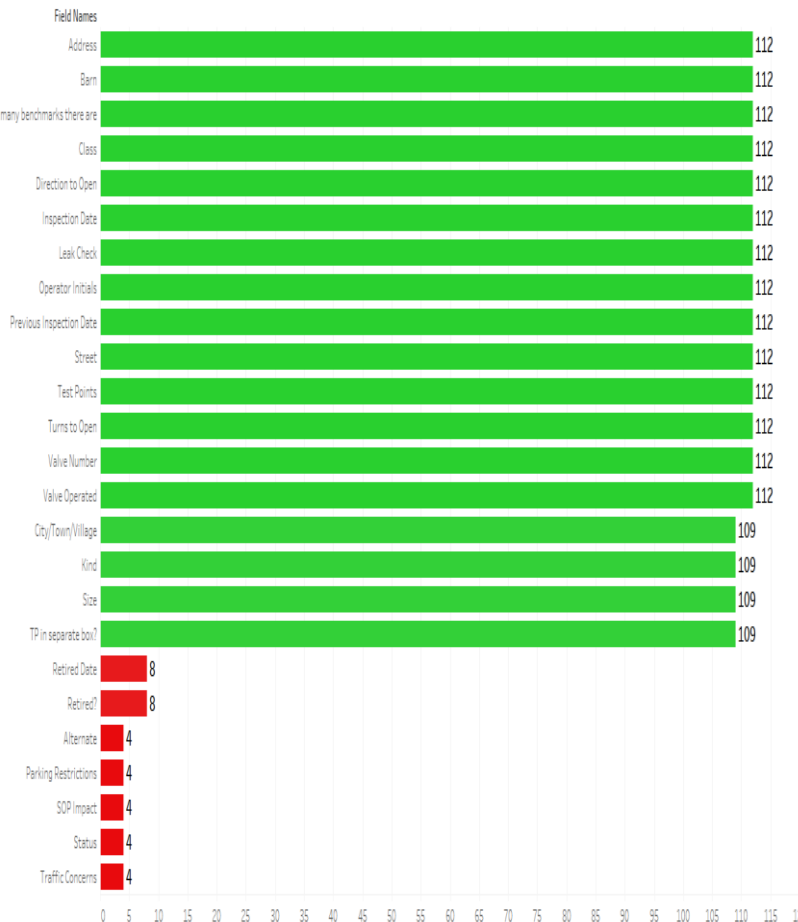




# Helping Tool Preparation

## Tableau

### Reporting Specs Analysis



## Python

In [20]: `data.FieldNames.value_counts()`

Out[20]:

Barn	112
Leak Check	112
Address	112
Street	112
Valve Number	112
Previous Inspection Date	112
Valve Operated	112
Class	112
Operator Initials	112
Test Points	112
Direction to Open	112
Turns to Open	112
Benchmarks 1,2,3,4 - however many benchmarks there are	112
Inspection Date	112
City/Town/Village	109
Kind	109
Size	109
TP in separate box?	109
Retired?	8
Retired Date	8
Alternate	4
Status	4
SOP Impact	4
Traffic Concerns	4
Parking Restrictions	4

Name: FieldNames, dtype: int64

# Reporting Process Flows

---

- Set up a start to end structure for the following :
  1. Creating a new report
  2. Enhancing a Report
  3. Reporting a Production Issue
  4. Access to Reports

- 
- ```

graph TD
    subgraph Help_Desk [Help Desk]
        Start(( )) --> OpenTicket[Open Case/Issue Ticket]
        OpenTicket --> CreateForm[Create Production Support Ticket (SR#)]
        CreateForm --> JudgeForm[Judge Form for PTO/PT/PT/PT]
        JudgeForm --> Critical{Critical Report Building or HR Accounting?}
        Critical --> UseForm[Use HR Report Document for Confirmation]
        UseForm --> CloseTicket[Close Production Support Issue Ticket]
    end

    subgraph IT_Application_Support [IT Application Support]
        Critical --> Config{Configuration on target Platform/Report?}
        Config --> UpdateForm[Update Production Support Ticket (SR#)]
        UpdateForm --> JudgeForm2[Judge Form for PTO/PT/PT/PT]
        JudgeForm2 --> Existing1{Existing Issue in Enhancement?}
        Existing1 --> Enhance[Report Enhancement Process Flow]
        Enhance --> CloseTicket2[Close Production Support Issue Ticket]
        Existing1 --> NoEnhance1[No Enhancement]
        NoEnhance1 --> JudgeForm3[Judge for PTO/PT/PT/PT]
        JudgeForm3 --> Publish[Publish Data]
        Publish --> Enhance2[Report Enhancement Process Flow]
        Enhance2 --> CloseTicket2
    end

    subgraph Data_Management [Data Management]
        JudgeForm3 --> IdentifyCause[Identify Root Cause]
        IdentifyCause --> PublishData[Publish Data]
        PublishData --> PublishReport[Publish Report]
        PublishReport --> WorkFlow[Work the Issue]
        WorkFlow --> TestFlow[Test Flow]
        TestFlow --> Enhance3[Report Enhancement Process Flow]
        Enhance3 --> CloseTicket2
        Enhance3 --> PublishData2[Publish Data]
        PublishData2 --> PublishReport2[Publish Report]
        PublishReport2 --> Enhance4[Report Enhancement Process Flow]
        Enhance4 --> CloseTicket2
    end
  
```

# Learning Outcomes

---

- ❖ Information and practical session on Data Profiling and Data Quality Scorecards
- ❖ Learned to use AgileCraft and Atlassian Jira
- ❖ Understood the way an architect puts his mind into thinking about the process flows
- ❖ Also got an opportunity to work in Sprints and understand the importance of Program Increments(PI)
- ❖ Worked in Program Anchor(PA) which helped me understand the importance of Mocks, Dev Environments and Production
- ❖ Got to Attend ,Learn and Perform hands on Git and SourceTree
- ❖ Also got an opportunity to improvise my Data Visualization Skills (Tableau and PowerBI) in the form of Trainings organized by National Grid
- ❖ Learned the importance of Data Accuracy while performing Data Validations.
- ❖ Thumb Rule to Remember : Any Data Loss is Dangerous, therefore this step is very important after data conversions

nationalgrid | gas business  
**enablement**