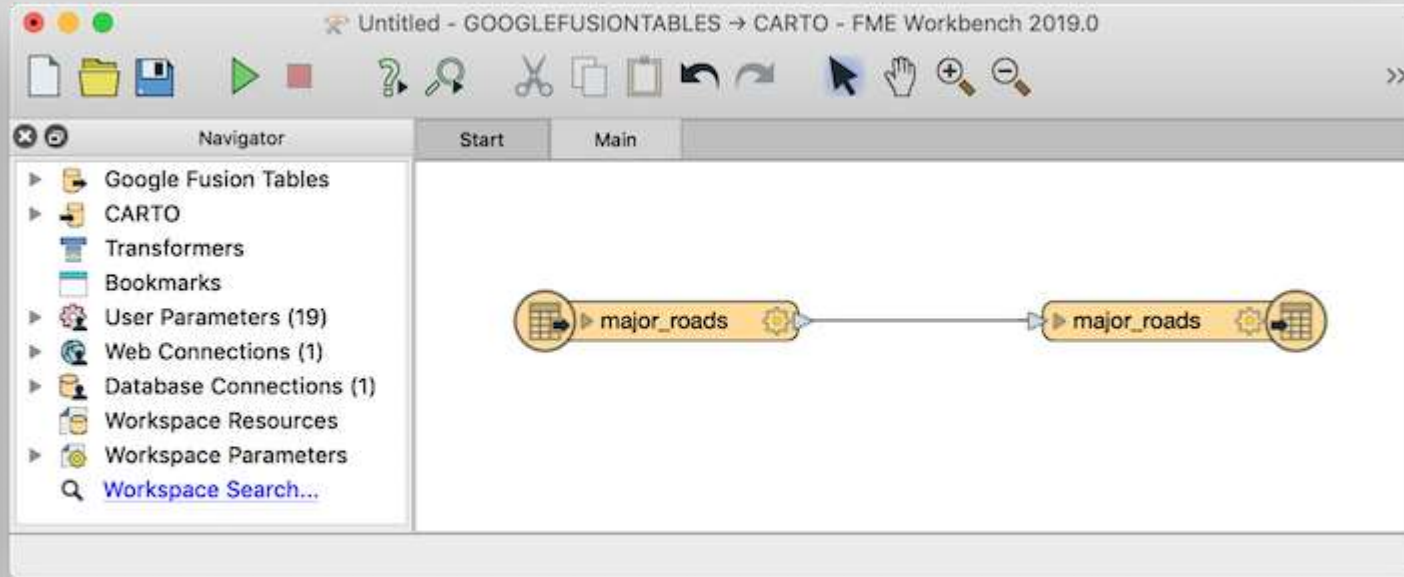# APH Data Automation Project

Dorr Elmatad

Brian Morris

Stefan Wray
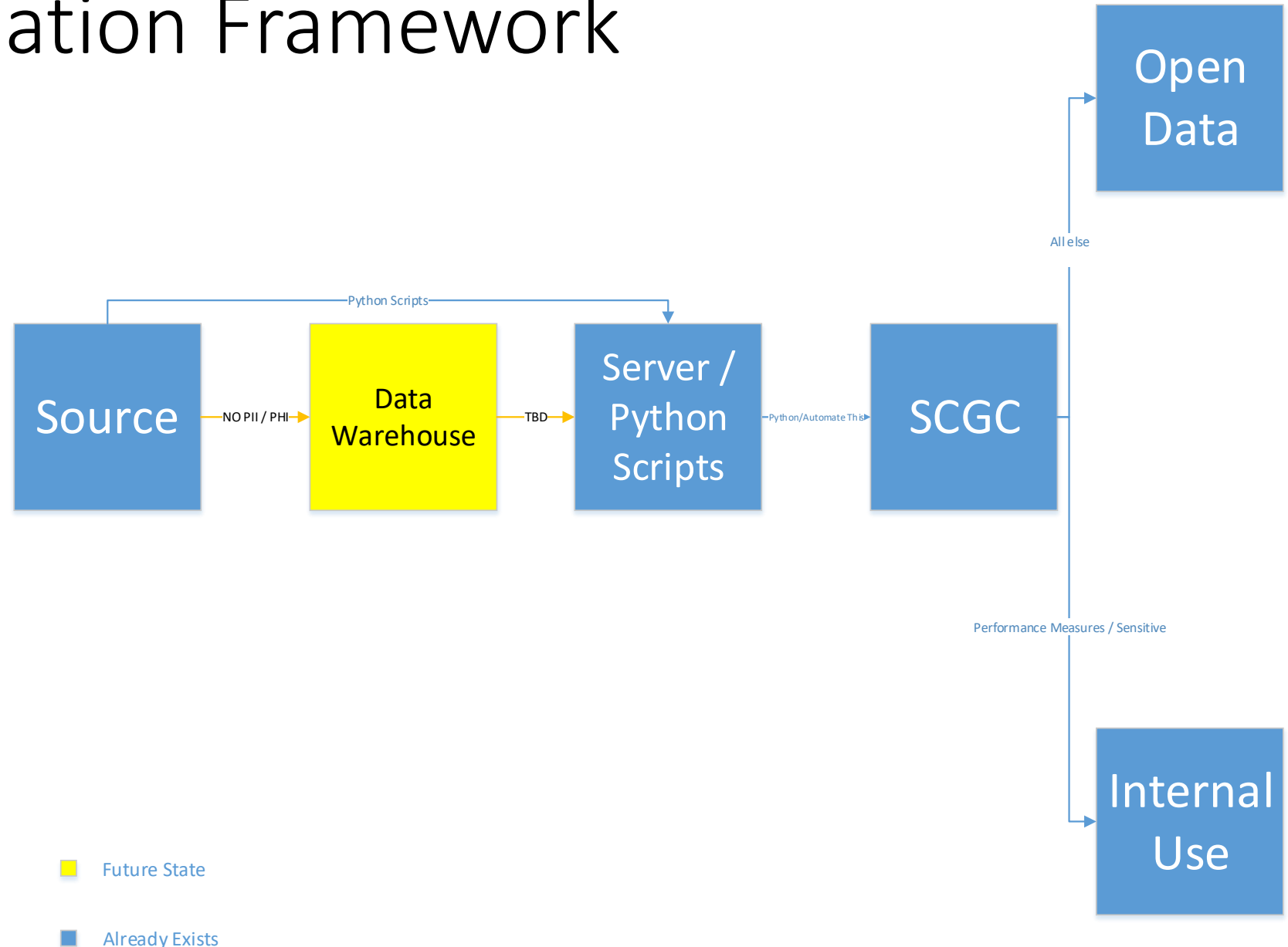
OLD: FME

NEW: Automation Framework

What We Need:
1. Query for Source System (SQL, etc.)
2. SCGC Automation Script
3. Server with scheduled Task

Source — NO PII / PHI → Data Warehouse — TBD → Server / Python Scripts — Python/Automate This → SCGC

Python Scripts

SCGC — All else → Open Data

SCGC — Performance Measures / Sensitive → Internal Use

■ Future State

■ Already Exists

Query of Database

Code Snippet Courtesy of
Brian Morris

```python
import argparse
import base64
from Crypto.Cipher import AES
from Crypto import Random
import cx_Oracle as ora
import pymssql as mssql
import pandas as pd
import time
import xml.etree.ElementTree as et
from socrata.authorization import Authorization
from socrata import Socrata

class OpenDataSet:

    def __init__(self):
        self.connectionType = ""
        self.server = ""
        self.username = ""
        self.password = ""
        self.database = ""
        self.port = ""
        self.query = ""
        self.view = ""
        self.config = ""

    def getConnection(self):
        if self.connectionType == "MSSQL":
            return mssql.connect(server=self.server, user=self.username, password=self.password, database=self.database)
        if conntype == "ORACLE":
            dsn_tns = ora.makedsn(self.server, self.port, self.database)
            return ora.connect(self.username, self.password, dsn_tns)
        else:
            return "unknown"

def main(args):
    # Get the dataset name from the command line
    if args.DataSet != "":

        # Get the dataset info from the XML
        ods = getDatasetInfo(args.DataSet)
        # Create the connection to the database
        connection = ods.getConnection()
        # Create the dataframe
        df = pd.read_sql(ods.query, con=connection)
        # Close the database connection
        connection.close
        # Save the dataframe to a file
        writeFile(df, args.FileName)
        # Post the file to SCGC?
        if args.Upload == True:
```

SCGC Automation

Server and scheduled Tasks

Name	Status	Triggers	Next Run Time	Last Run Time	Last Run Result
🕐 1 Day Schedule	Ready	At 5:48 AM every day	7/16/2019 5:48:00 AM	Never	
🕐 30 Day Schedule SCGC	Ready	At 9:46 AM on day 7 of January, February, March, April, ...	8/7/2019 9:46:37 AM	Never	
🕐 365 Day Schedule SCGC	Ready	At 5:55 AM every 365 days	7/14/2020 5:55:30 AM	Never	
🕐 7 Day Schedule SCGC	Ready	At 4:00 AM every Sunday of every week, starting 7/12/2019	7/21/2019 4:13:36 AM	7/14/2019 4:57:19 AM	The operation completed successfully. (0x0)
🕐 90 Day Schedule SCGC	Ready	At 5:40 AM every 90 days	10/13/2019 5:40:10 ...	Never	

Future Ideas

Log Files

Error Handling

Automation Request Process