

# Doing the impossible:

Upgrading to  
UPDM/Utility  
Network, etc. from  
Smallworld.



# Players

PSNC SCE&G ~~Wayne Meyer~~

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# Doing the impossible:

Use a controlled but **flexible** approach to achieve a successful solution

**Starting** with an assessment of existing platforms, applications and integration points  
Identify current Architecture roadmap aligns with organizational vision for 2020.



Take aim at a moving target - UPDM/Utility Network/APR/ ArcGIS Desktop/Pro & Synergi Pipeline.

# Doing the impossible:

- Retire existing technology
- Ending with a combined enterprise architecture for engineering, planning, operations and sales for SCE&G and PSNC.



# Time Line

2014

SCANA initiative PSNG SCEG Platform Evaluation  
Application & Integration

2015

Mobile  
Data Migration  
Viewers

2018

Assessment

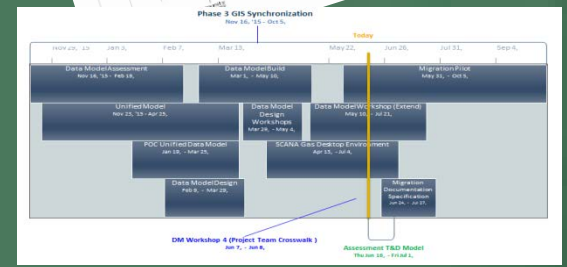
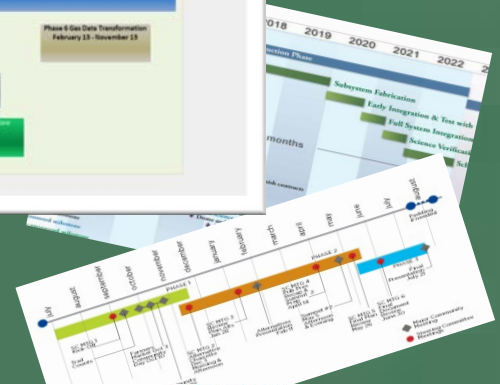
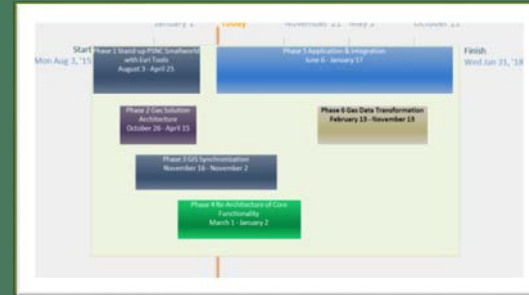
2016

Data Transformation

WFM/Design  
Solution Architecture  
Deployment  
Data Model

Re-Architecture Design

Editing As Built



# Assessment

- **Assessment** SCE&G & PSNC Applications, Integration, Application Criticality and Requirements
- Establish a SCANA **Gas System Architecture Roadmap**
- Enterprise, Consolidated **Common Model**
- Establishment of common Business Requirements Workflows
- Iteration Design



# Assessment

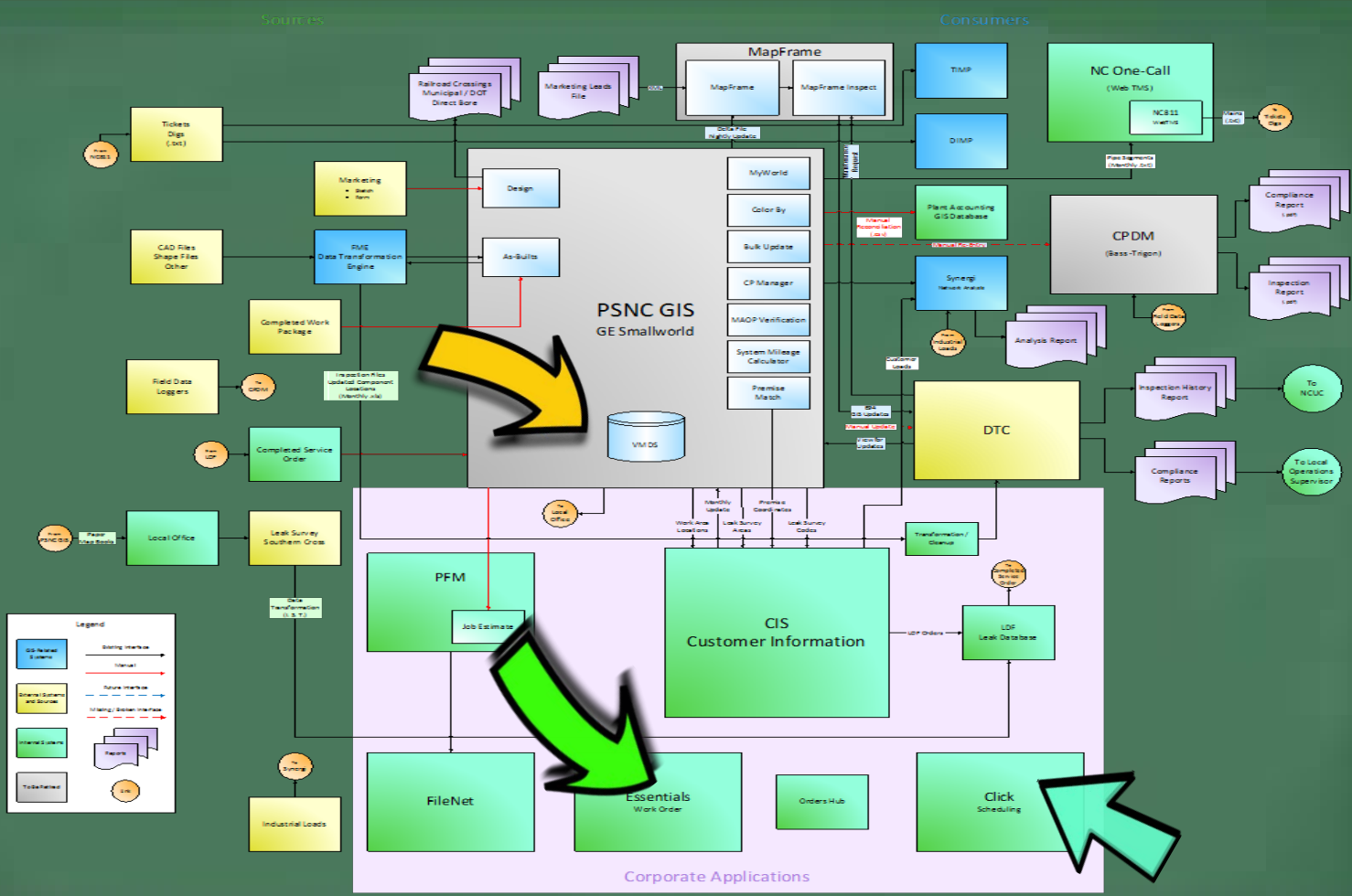


Interview Operation, Business and IT gather current environment and workflows used by the business that need to be supported.

Focus is on technology requirements, rather than each specific button that is clicked in each workflow.



Existing System  
PSNC





**Transmission / ROW Management**

Unique Easements

Inspections  
 • Aerial  
 • Environmental  
 • Ground

Aerial Surveys

Clearing  
 Vegetation Management

**CP**  
 Cathodic Protection

CP Designs

CP Readings

**PSNC GIS**  
 GE Smallworld

Gas Operations Database (DTC)

FME  
 Data Transformation Engine

LocusView

Project Work Packages

New Land Data

Field Inspection and Data Verification

Industrial Loads

SCADA

SCANACAD  
 Job Design

**GIS Viewers**  
 Gas Availability  
 SCADA Viewer  
 Gas Distribution Viewer  
 Essential Viewer  
 TMAP Viewer  
 LDF Viewer  
 Other Viewers...

**SC GIS**  
 Esri ArcGIS

**Edit Functions**

- ROW Updates
- 811 Updates
- GIS CP Updates
- GIS Transmission Updates
- GIS Job Updates

**Spatial Applications**

- CP Manager
- Emergency Shutdown
- Ad Hoc Mapping
- MAOP

**Databases**

- ROW
- Gas / TMAP / DIMP
- Land
- PSNC (ArcGIS Replica)
- Imagery Library

**Unified Gas Projects**  
 Project Database

LDF Viewer  
 Leak Database  
 Inspection and Follow-Up

**CIS**  
 Customer Information

**FileNet**

**Essentials**  
 Work Order

Orders Hub

**Click**  
 Scheduling

SC 811

Korterra  
 Cloud-Based 811 Processing

Uptime  
 Distribution Integrity Management

Uptime  
 Transmission Integrity Management

Synergi  
 Network Analysis  
 CMM

Leak Survey  
 Southern Cross

Customer Calls  
 911 Employees

- Email
- Webservice
- Notifications

CSV

PHMSA Report

Emergency Management  
 Shutdown Report

Asset Data Extract (SAP)

- Meter
- Service
- Transmission
- Other

Existing System  
 SCEEGG



# Assessment

**New system** is to be a functional replacement, but not a like for like. New workflows to create the output, map document/specific are expected.

- would meet the goals of the business, consumers of data

**Interfaces:** workflows will focus on input spec, output spec but new integration points may be needed for the new technology.



# Goals/BUSINESS DRIVERS

Reduce complexity for Server, Desktop and Mobile by using OOTB where possible.

Adopt  standard for data.

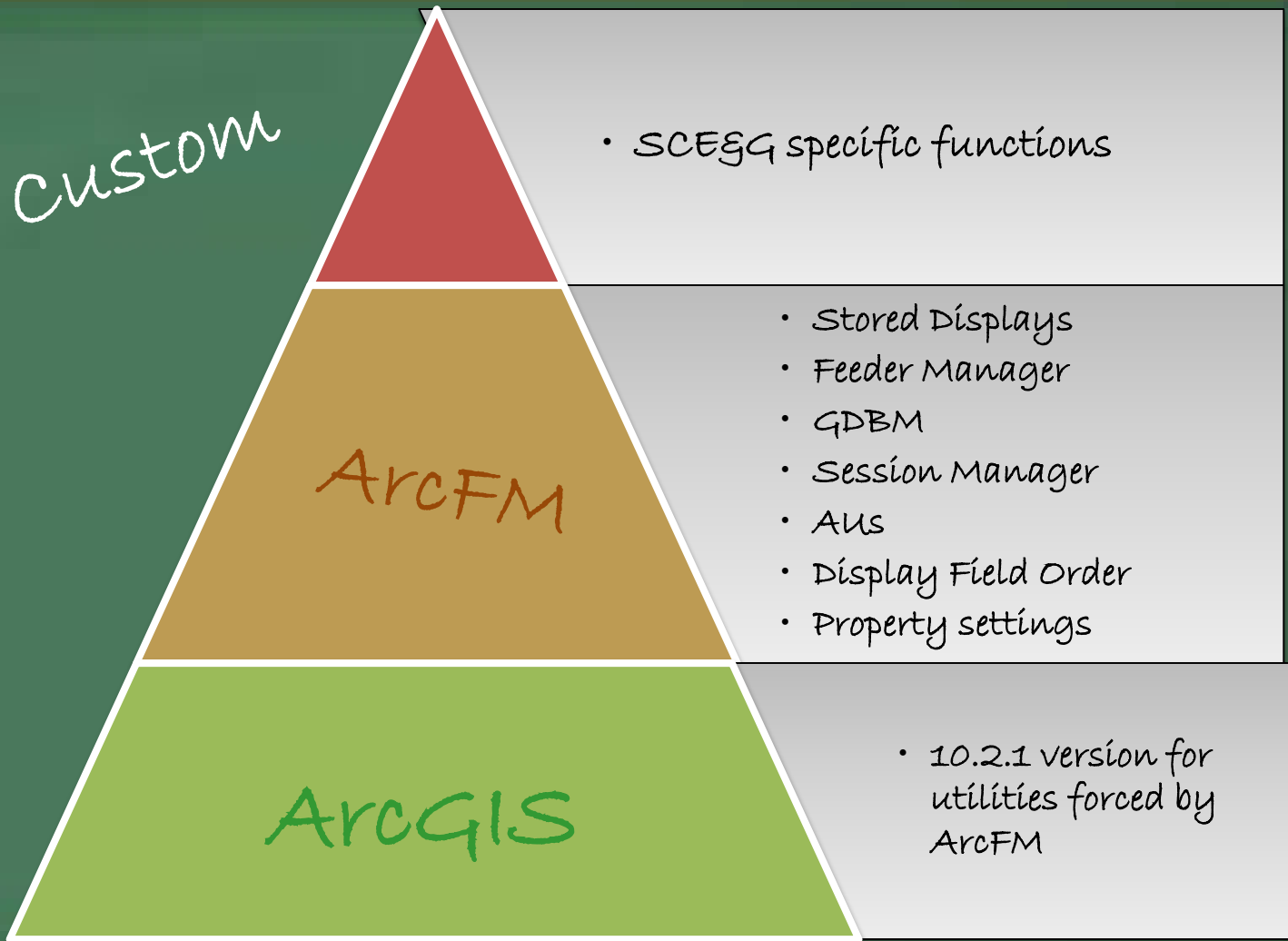


Consolidate PSNC and SCE&G workflows in the GIS ecosystem.

Test Evaluate existing technologies that are unproven for utility workflows.

Establish Release Process: Dev, Test, PRE-PROD and PROD tested release is documented.

# Current State Desktop



# Current State Server/Batch

Custom

- Viewers - Server
- Interfaces - Batch

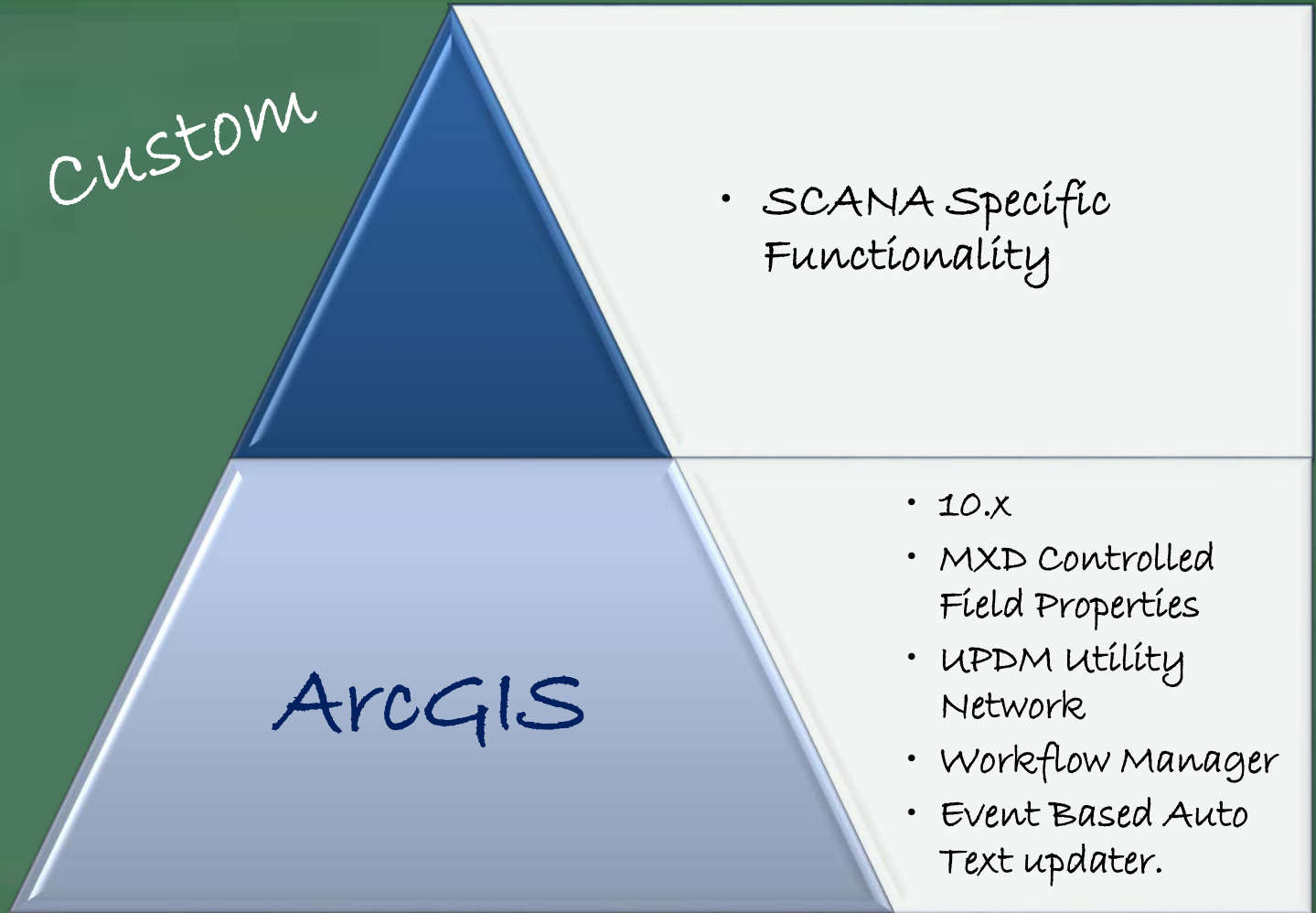
ArcFM/Batch

- GDBM
- Model Name Support
- ArcFM Object Reader

ARCGIS

- 10.2.1 for server  
allowed for Portal

# Desktop Reduced Complexity



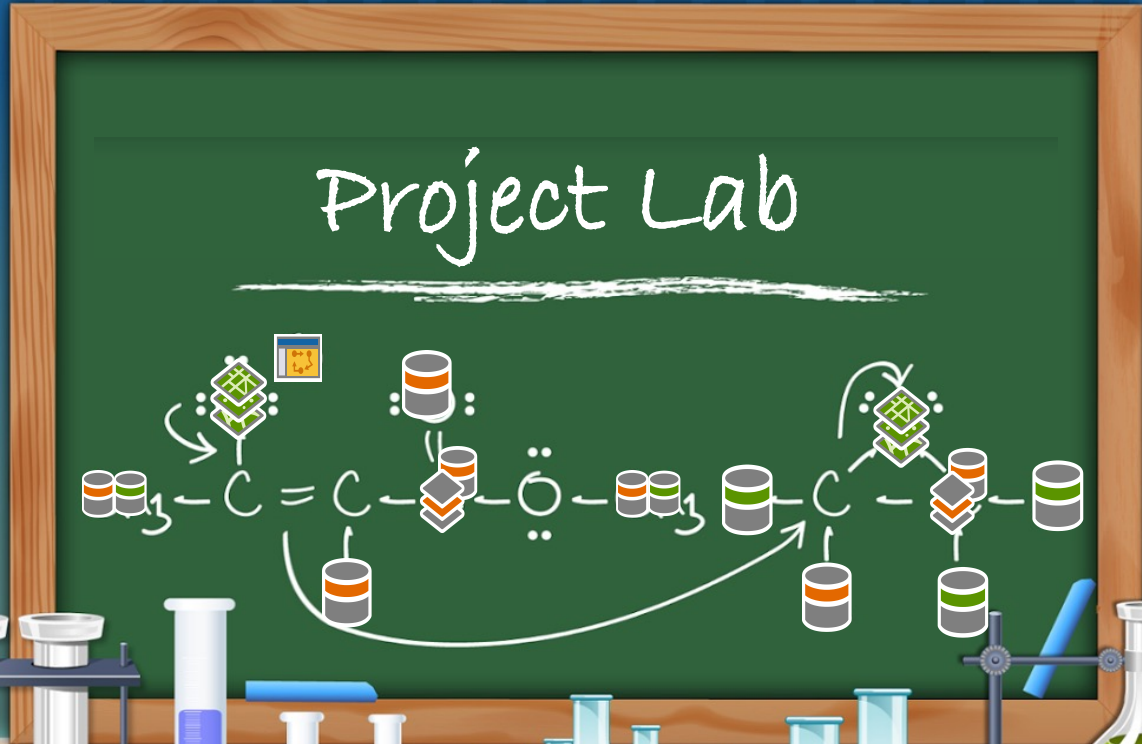
# Server Reduced Complexity

Custom

- Viewers - Server
- Interfaces - Batch

ArcGIS

- 10.X
- Posting Service
- Workflow Manager
- UPDM Network





# Future State Process

LAB #1: Stand up software, UPDM empty dataset, PSNC in GIS as copy from small world with network.



LAB #2: Enable SCEGQ data in **UPDM** manual conversion for testing of editing workflows with larger audience.

LAB #3: Process for moving SCEGQ data into UPDM format through Python



LAB #4: Develop Essentials Interfaces and Viewer for LAB.

# Architecture Goals

Template

External Interfaces

Click

Essentials

- valve
- Patrol Crossing

LAB

Portal

Server

Desktop

SDE

External

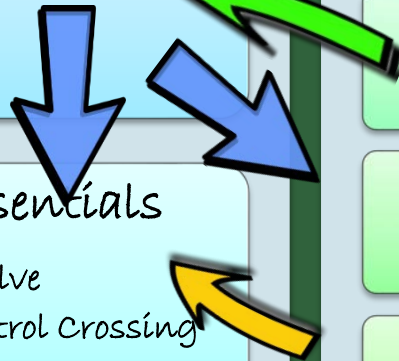
Dash Board

Viewer

IPad

IPhone

GI/Microsoft



Success

## Reduce Complexity

**UPDM** common model (PSNC and SCE&G), migration tools  
FME for Small world to GIS and Python for GIS to GIS

**Evaluated Technologies:** Functional replacement for legacy system.

**Consolidate:** Documented workflows

**Release Process:** Proven, Test release processes in a LAB Environment

To reach the unreachable,  
The unreachable,  
The unreachable star  
And I'll always dream  
The impossible dream  
Yes, and I'll reach  
The unreachable star

