



Modernizing the Asset Inventory Process

Plus Other Modernizations to the Oracle Assets Module at SNL

Aaron Griffith
Senior Software Systems Engineer
Oracle Fixed Assets Technical Lead

NLIT Summit 2022

Albuquerque, NM

October 18, 2022



- Senior Software Systems Engineer in the Supply Chain Systems Department
 - Oracle Fixed Assets Module Lead
 - Been at SNL for 7.5 Years
 - Previously worked in Finance, Business Intelligence, and IT Audit
 - Also worked at the Savannah River Site as a Summer Cyber Scholar
- Graduate of the University of New Mexico
 - BBA in Management Information Systems
 - MS Information Systems and Assurance

Agenda



1. Property Inventory Background
2. Network Inventory Solution
3. How it was Built
4. Looking Forward
5. Constraints and Lessons Learned
6. Other IT Modernizations to the Oracle Assets Module
7. Questions

Project Background



- A property inventory is conducted annually to demonstrate that SNL's property management policy and procedures are being followed and effective.
- Two Types of Inventory
 - Statistical Sample (~2,500 items)
 - Wall-to-Wall (~100,000+ items)
- Previously, only two methods of inventory
 - Scans
 - Memos
- Inventories can be time-consuming
 - Especially during a wall-to-wall



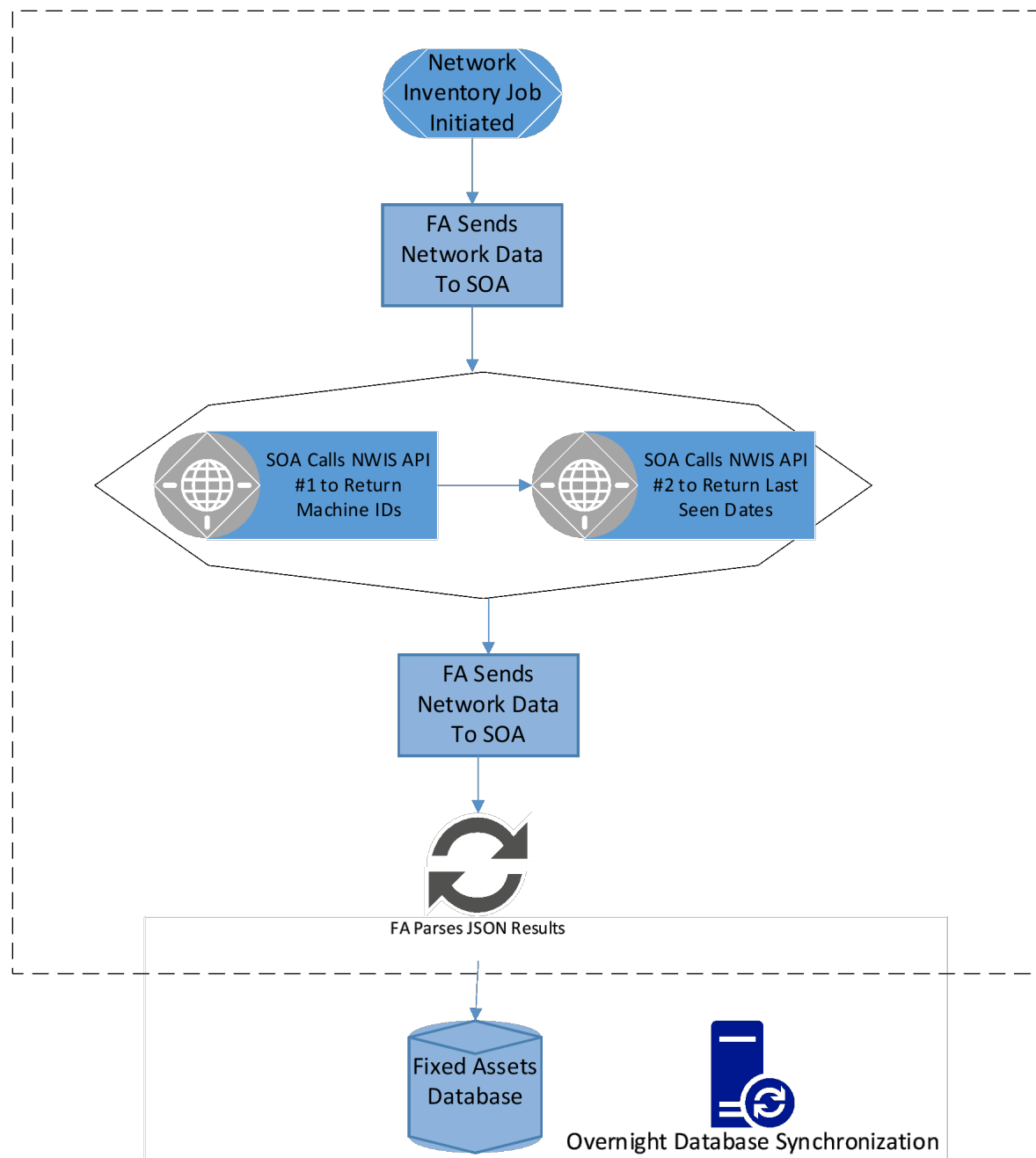
Inventory by Network Identification Solution



- A Fueling Innovations funded, cross-functional team implemented a solution that will account for ~51% of property from a network connection during annual inventory reviews.
 - Team consisted of members from Supply Chain Systems (Oracle), Network Information System, Networking.
 - Oracle Fixed Assets leverages network data to inventory items using Last Seen On Network log times.

7 How We Did It

- Process is kicked off by a Control-M automated job that runs a PL/SQL Package.
- Oracle Assets makes calls to SOA Suite
- SOA Suite calls 2 NWIS APIs, sends the results of the second API back to Oracle Assets
- Oracle Assets parses the results and inserts them into the database



Output into Oracle Database



☰	SL_TRANSACTION_ID	ASSET_NUMBER	SL_INV_SOURCE	SL_LAST_SEEN_ON_NW
	667543	S1059601	NWID	9/18/2020 6:49:00 PM
	667538	S1036381	NWID	12/21/2020 8:30:00 PM
	667540	S974794	NWID	2/20/2020 9:11:00 PM
	667539	S1059601	NWID	9/18/2020 6:49:00 PM
	667534	S1036381	NWID	12/21/2020 8:30:00 PM
▶	667536	S974794	NWID	2/20/2020 9:11:00 PM

Results

- In 2021, we were able to inventory 570 items (26%) using the network solution.
- In 2022, we surpassed 600 network items!
- Expected to save 10,000 labor hours.
- Avoids the purchase of additional scanners.
- 3 year ROI of ~\$900,000



Constraints and Lessons Learned



- Calling Microsoft API's from Oracle
 - Solution – Use SOA Suite as a “Middle-Man”
- Request Time-Outs Due to Record Size
 - Send requests in batches
- COVID-19 and Remote Work

Looking Forward



- Wall-to-Wall this year.
- Adding mobile device date.
- Minimal maintenance.

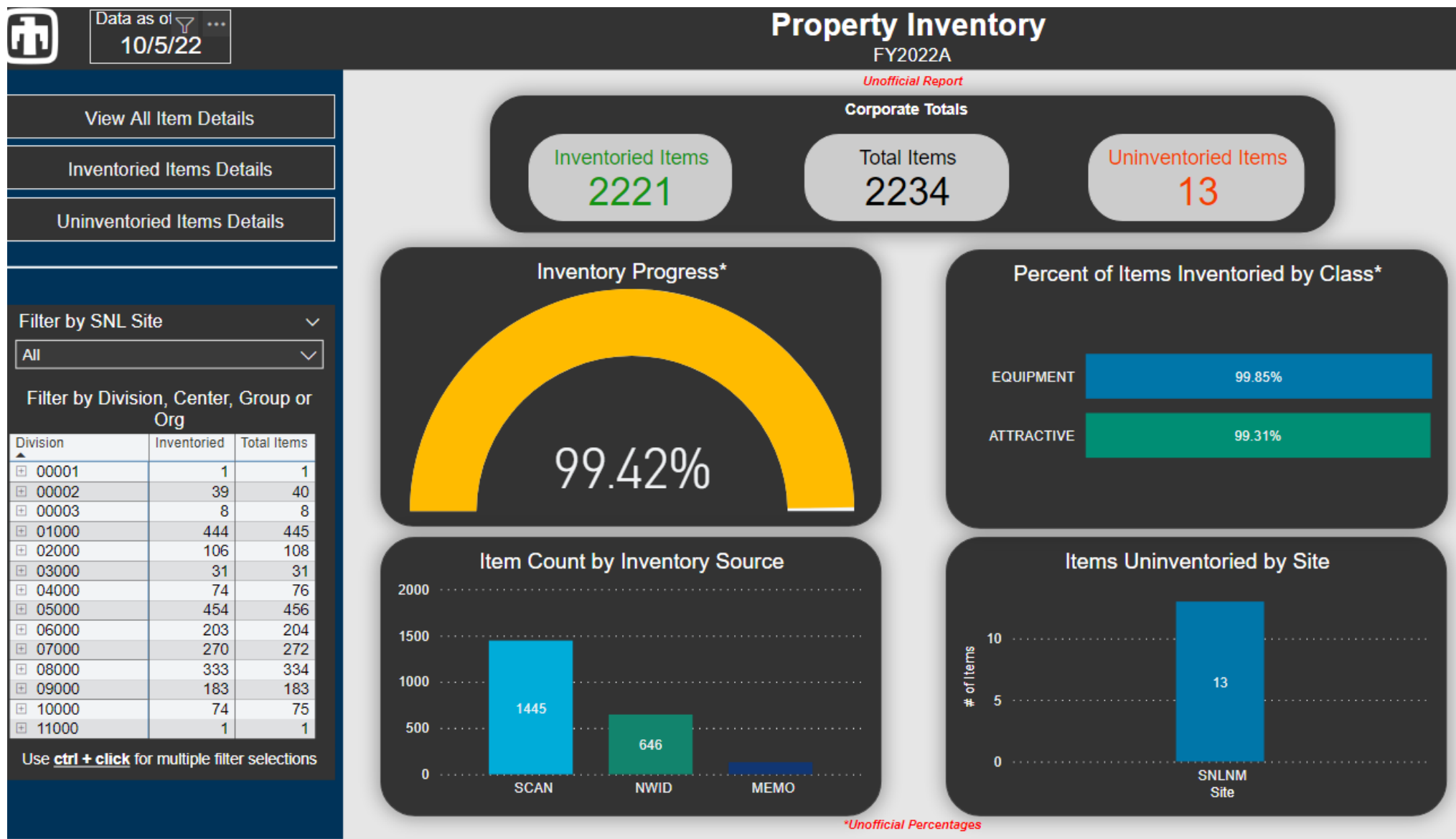
Inventory Reporting Modernization

Previous Reporting Methods

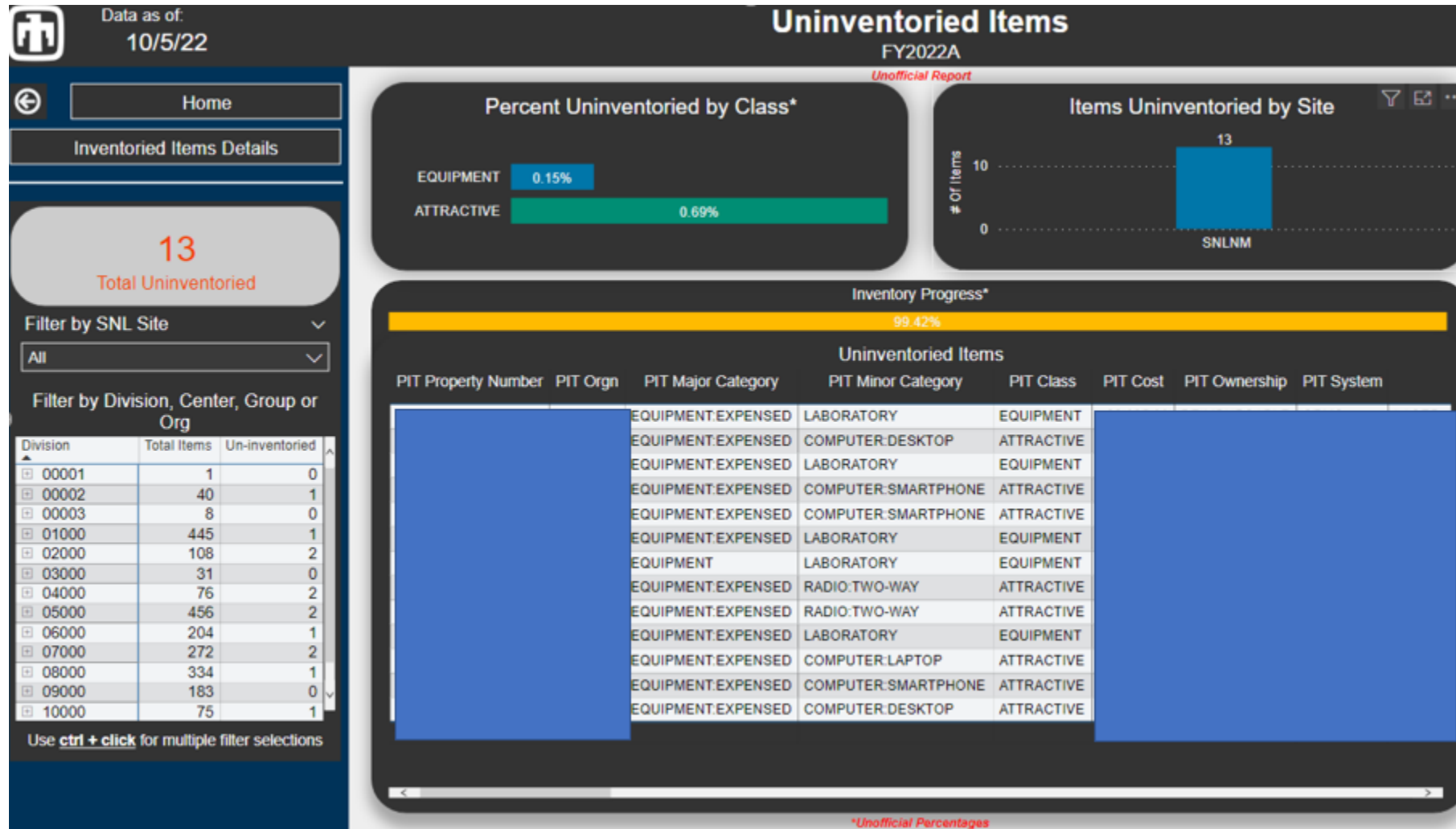
- Canned Oracle Reports
 - Non-Interactive
 - Slow Run-Times

[illegible]

New Power BI Reports



New Power BI Reports



Other Modernizations to the Oracle Assets Module

Oracle Rest Data Services - ORDS



- Built 13 REST services since 2019

Resource Templates		
<input type="text" value="Q"/>	<input type="text" value="Go"/>	<input type="text" value="Actions"/>
URI Template	Priority	ETag Type
ws-approved-gfp/	0	HASH
webshipper-fa	0	HASH
nwis-trans	0	HASH
reapp-loc	0	HASH
reapp-pickup	0	HASH
reapp-reapply	0	HASH
ws-po-data/	0	HASH
reapp-retire	0	HASH
ws-po-data/{po}	0	HASH
ws-approved-gfp/{po}	0	HASH
wsUpdateFaGfp	0	HASH
ws-gfp-update/{id}	0	HASH
transfer-trans	0	HASH

Transition to Modern Applications



Getting users away from outdated software or manual processes.

Sandia Oracle Financial and Manufacturing Apps - OAPR1 (Prod) - ACGRIFF- SID/Serial# 1433/11353

File Edit View Folder Tools Window Help

Find Assets

By Asset Detail

Property Number Description

Prior Property # Category

Serial Number Asset Key

Warranty Number Asset Type

Status

By Book

Book Group Asset

Dates in Service - ☐ Show Disabled Groups

By Assignment

Assigned To Name Assigned To Id

Depreciation Acct Location

By Source Line

Supplier Name Supplier Number

Invoice Number Line Number

Acquisition PO # Source Batch

Acquisition Project # Acquisition Task #

By Lease

Lease Number Lessor

Description

SF 6432-PJU (7-2019) Supersedes (7-2016) Issue



Government Furnished Property Request Form

Section 1: Questions About the Procurement ALL FIELDS REQUIRED (Ask your subcontracting professional if you are unsure of the answers)

Procurement Type: ☐ PO ☒ CPA ☐ PAA ☐ Other: _____ Stage: ☐ RFQ ☐ PR ☒ PO

RFQ/PR/PO#: Subcontracting Professional: Shaina Saint-Lot SDR Name: Julie Smith

Period of Performance End Date: 10/31/2021 Subcontractor Company Name

Section 2: Questions About the Furnishment (Check how property will be provided and answer all questions)

☒ Sandia will send property to the subcontractor. ☐ Sandia will authorize subcontractor acquisitions. ☐ Some or all GFP will be transferred from an existing subcontract. PO#:

In the box below, describe the work that will be done using the property. ☐ Assembly Work? ☐ R&D Work?

Explain the complexity or requirement(s) of the work that necessitates the use of Sandia/Government property.

Section 3: Property Information (Check the types of property you will provide and respond to required explanation for why Sandia must provide the property)

Did you check for excess property in Reapplication? No, using property available to my organization

☐ Raw materials (Residuals to be returned) ☐ Specialized tools or equipment¹ (Return to SNL Required)

☐ Raw materials (No expected residuals) ☒ Commercial-off-the-shelf (COTS) equipment (Return to SNL Required)

☐ These raw materials are from Product Store, or another Production Value Stream (PVS)

PVSs have inherent measurable benefits of time/cost avoidances. Please indicate which in section 5 and enter an estimated amount of avoidance.

☐ The property is not practically available² from the marketplace. Explain why in the box below.

Click or tab here to enter explanation for why this is not practically available.

Required for all COTS equipment. Explain in the box below why the subcontractor should not be expected to provide this property for itself. See [Note 1](#) (Please identify COTS equipment (not material) in section 4 and provide individual justifications when different below).

APEX Applications - ACP



Administratively Controlled Property (ACP)

Griffith, Aaron ChristopherFeedback

Add ACP Item(s)

DV2! This is a test environment!

SNL data and reports are for official business only and shall be protected from unauthorized use or disclosure. [More](#)

Please review the items assigned to you on the home page before adding more items to avoid duplication!

ACP Form

Assigned to Person

* = Required fields

* Assigned to Person

Select a Person

☐ Add multiple items for this person

ACP Items

NOTE: Do not add trackable property (S,R, or E numbered) to this application. Contact your property coordinator for assistance.

NOTE: DO NOT enter Items such as headsets, mice, keyboards, docking stations, speakers, footrests, monitor raisers. They are considered smaller peripheral items which are associated with larger items.

ACP Item 1: *

Qty:

Description:

Manufacturer Name:

Model Number:

Serial Number (Not S#):

Select a Property Item

1

Additional info about the item

E.g. HP, Dell, Xerox, Canon

E.g. Z34c 34-inch (Monitor)

Manufacturer Serial Number

Back

Save Items

≡ Reuse Report



Donations Gifting



You are working in OADV2! This is a test environment!

Reuse Report Form

SNL Site *

Select SNL Site



Fiscal Year *

- Select -



Month *

- Select -



Donations & Gifting

Donations & Gifting Type *

- Select -



Back



Submit & Home



Submit & New

APEX Applications – GFP Tracker



Government Furnished Property (GFP) Tracker

Griffith, Aaron ChristopherFeedback

GFP Request \

Draft GFP Request Id 231 create

You are working in OADV2! This is a test environment!

Draft

Submitted

Approved

Accepted

Completed

Created on 05-OCT-22 by Griffith, Aaron Christopher

GFP Request Form - Id: 231 Requestor: Griffith, Aaron Christopher

Section 1 - Procurement

Help ?

Procurement Type: *

☐ PO ☐ CPA ☐ PAA ☐ Task Order

Stage: *

☐ RFQ ☐ PR ☐ PO

SP/Buyer *

Last Name, First Name

SDR *

Last Name, First Name

POP End Date *

DD-MON-YYYY

Vendor Name *

Vendor Name

Section 2 - Furnishment

Help ?

How Will The GFP Be Provided? (Select All That Apply) *

☐ Sandia Will Authorize Subcontractor Acquisitions

☐ Sandia Will Send GFP to the Subcontractor

☐ Some or All GFP Will Be Transferred From an Existing PO

APEX Applications – Lost and Stolen Property



Lost and Stolen PropertyGriffith, Aaron Christo

Home \ **Lost and Stolen Request Form**
You are logged in as Griffith, Aaron Christopher! Last Clone Date: 04/17/2022

Status Tracker

Draft

Created on 05-OCT-22 by Griffith, Aaron Christopher

Submitted

Accepted

Acknowledged

Lost/Stolen Request Id: 114 Requestor: Griffith, Aaron Christopher

Date of Request
05-OCT-22

Are you submitting this request form for someone else? *
☐ Yes
☐ No

Property Number (S,R,E): *
E.g S1234567

Search

Clear

Lost or Stolen

Is The Property Lost or Stolen? *
☒ Lost
☐ Stolen

Lost

Date of Property Loss (DD-MON-YY) *
E.g 31-JAN-22

Where was the property last seen? *

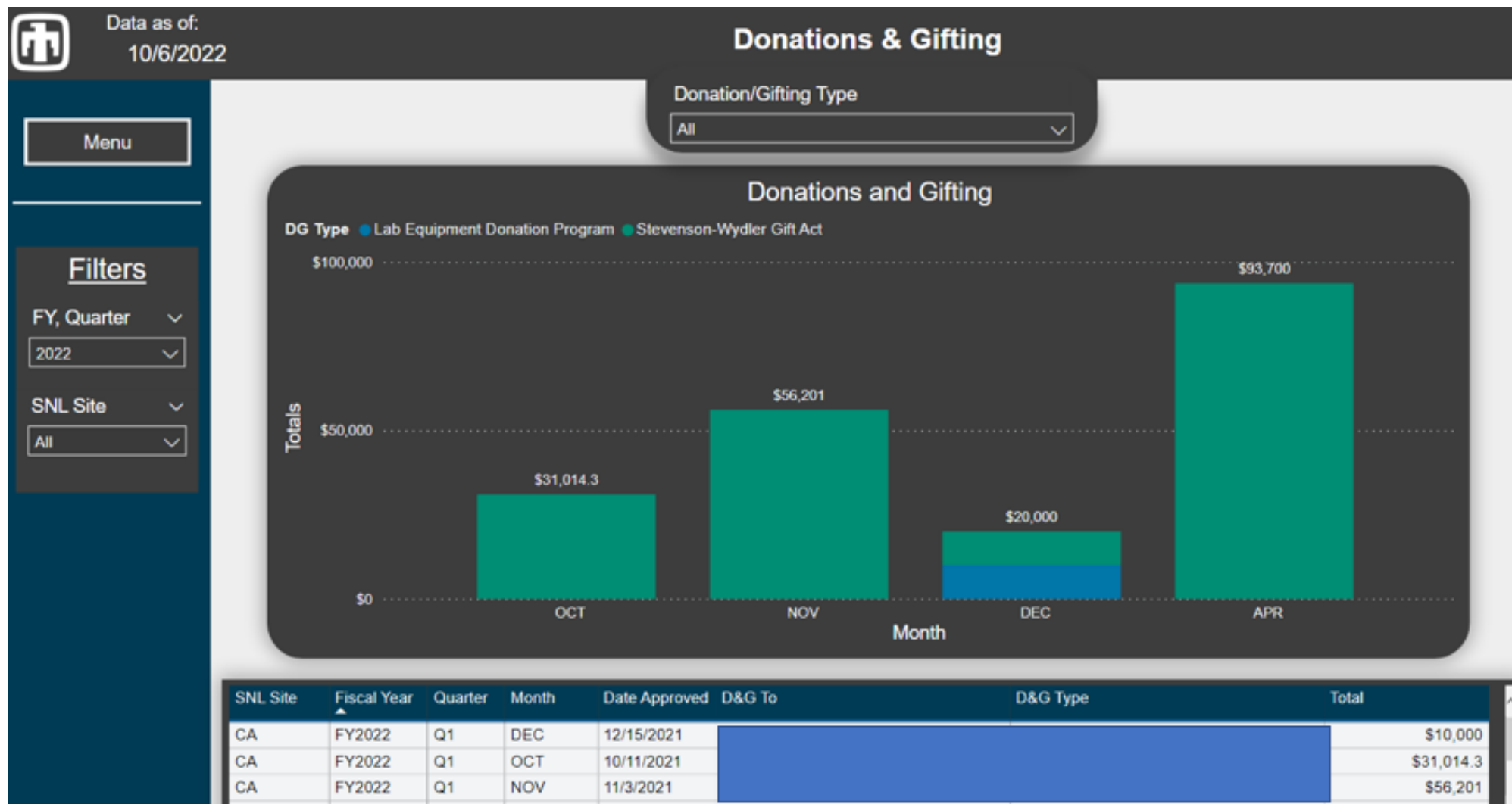
Location of Loss *

Who last saw the property? *

Steps taken to find the property *

Steps to prevent loss in the future *

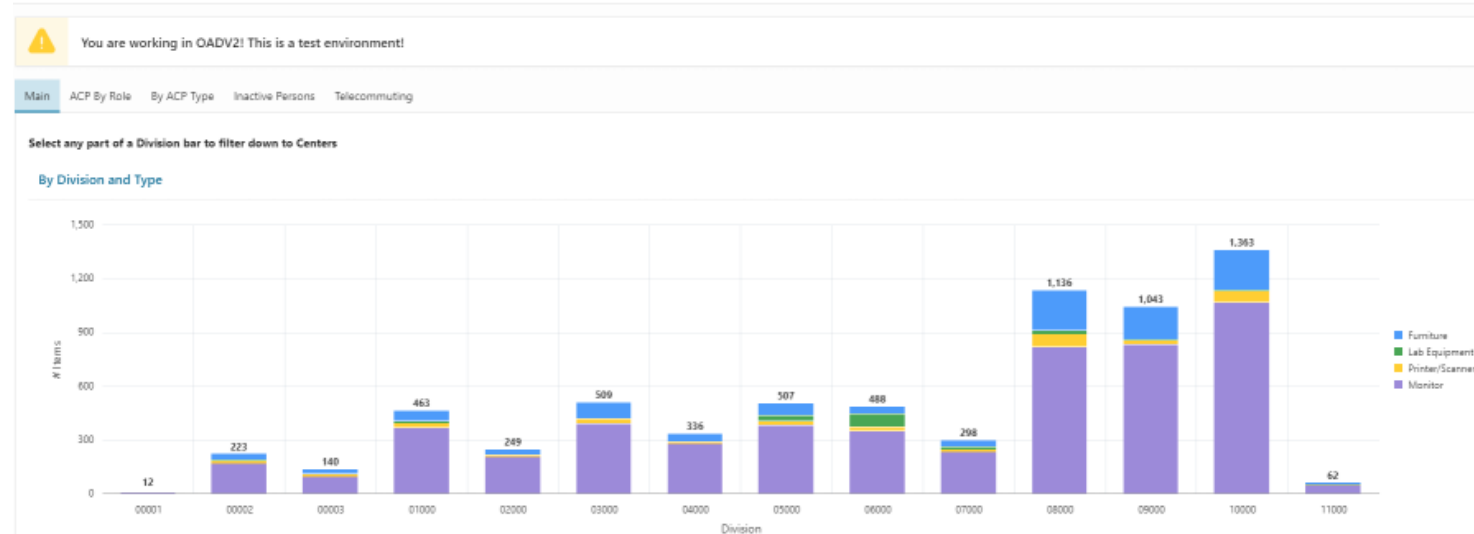
Modern Reporting – Power BI



Modern Reporting - APEX



Reporting



Telecommuting

These reports only look at active Sandians. Inactive Sandians with items, regardless of telecommuter status, will be in the Inactive Pe

Non-telecommuting employees with items

Search: All Text Columns Go Actions Reset

Org	Name ↑	Center	Division	Items	Relationship
00515		00500	00003	1	Employee
01984		01900	01000	1	Employee
07578		07500	07000	2	Employee
00515		00500	00003	4	Employee

Future of the Oracle Assets Module at SNL



- More APEX Applications
- Growth of API Portfolio
- Continuous Improvement of Reporting Solutions
- Robotic Process Automation
- Oracle Enterprise Command Center
- Move to Oracle Cloud Infrastructure
- Continue to Modernize!



Thank You!
Questions?