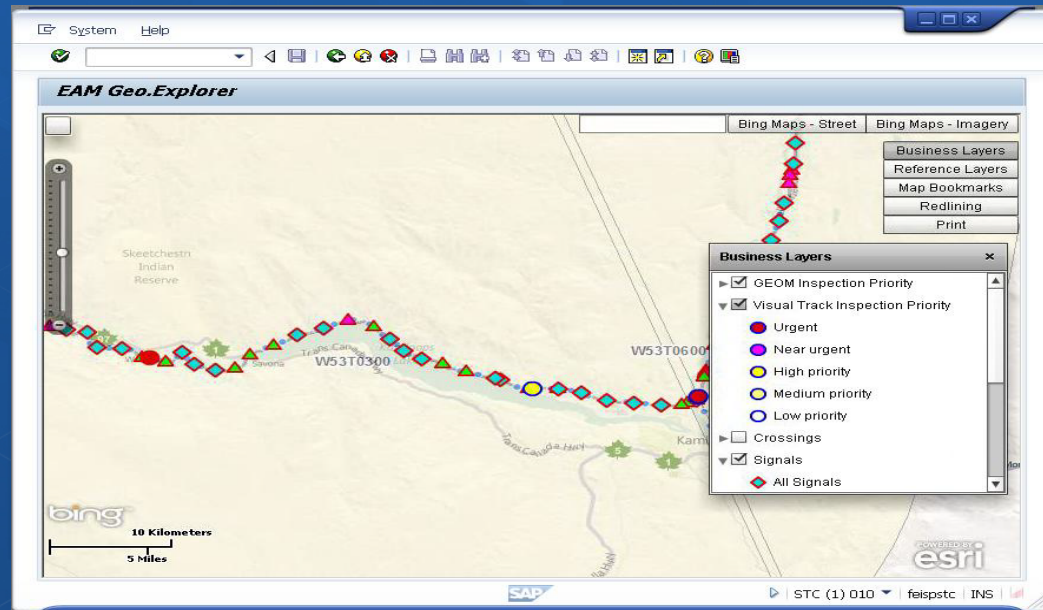




Esri Departments of Transportation Webinar Series
GIS and Transit State of Good Repair

GIS and Transit State of Good Repair



Terry Bills, Esri

Allen Ibaugh, Doug Lynch, Patrick Meenan, DTS

Asset Management in Public Transit

- **MAP-21: Mandates an Asset Management Plan which contains at minimum: inventory, condition assessment, and investment prioritization.**
- **A recognition that deferred maintenance has caused significant damage to our public transit infrastructure: New York, Washington DOT, San Francisco Bay Area as key examples.**
- **Public Transit agencies are often “late-comers” to Asset Management; it represents a change in culture, and in processes to be effective.**
- **Good Asset Management practice is designed to prolong the lifecycle of your assets, and to be significantly more cost effective over the life of the asset**

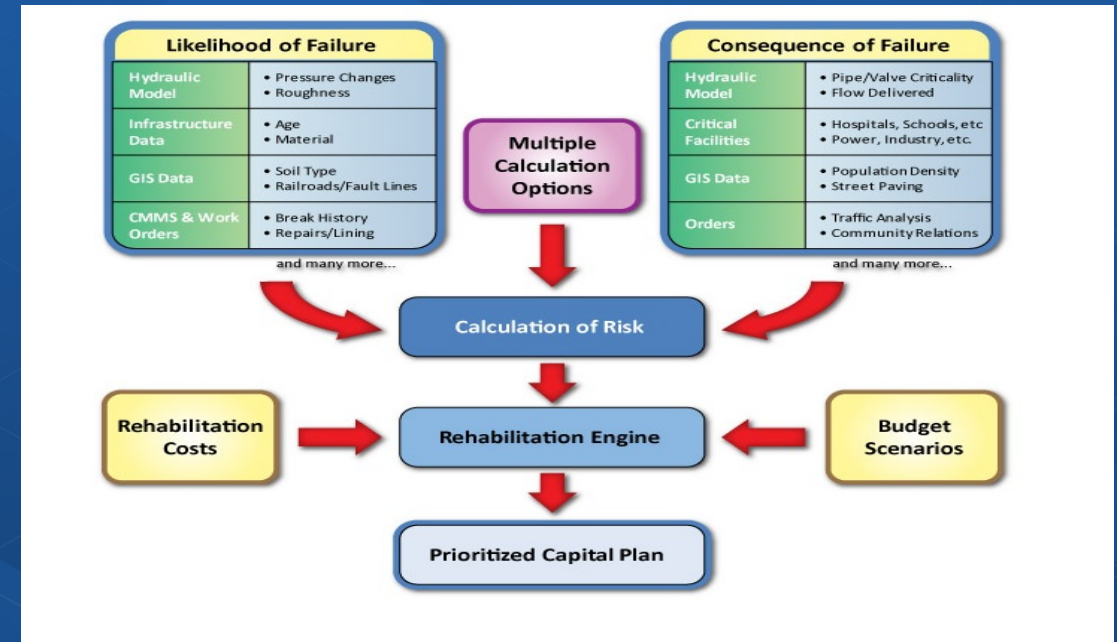
Best Practice in Asset Management

- A TAMP is designed to help agencies make the most strategic investments, “the right work, at the right time, to achieve the right level of service for the right cost.”
- The Goal is Moving From Reactive to Proactive, and Ultimately to Predictive Asset Management
- Part of the TAMP should include Life Cycle Costing and a Risk Management Analysis

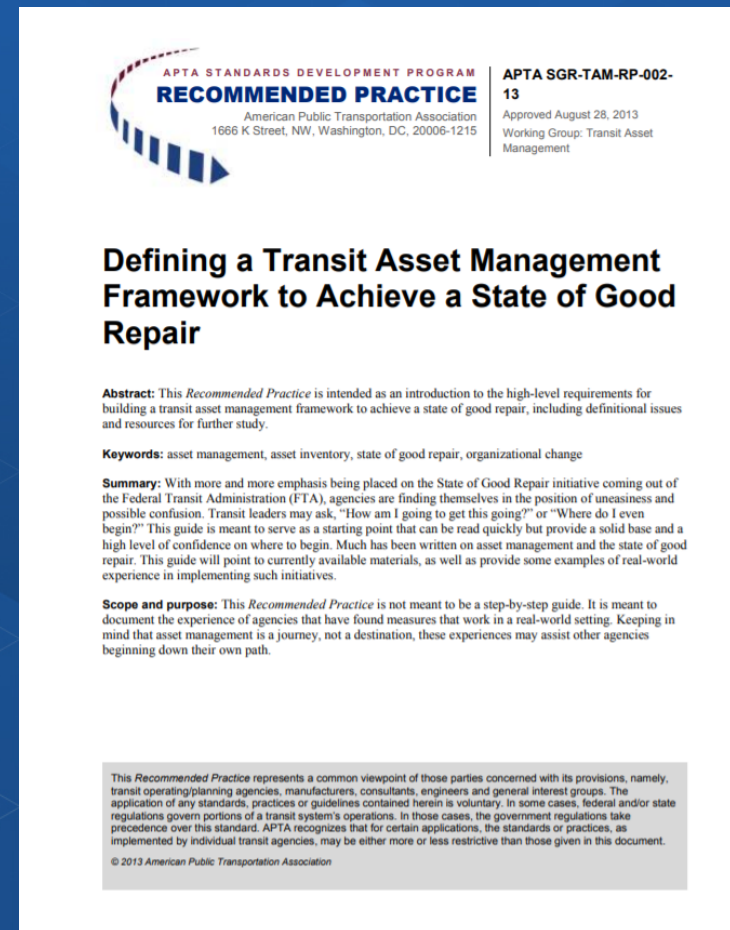
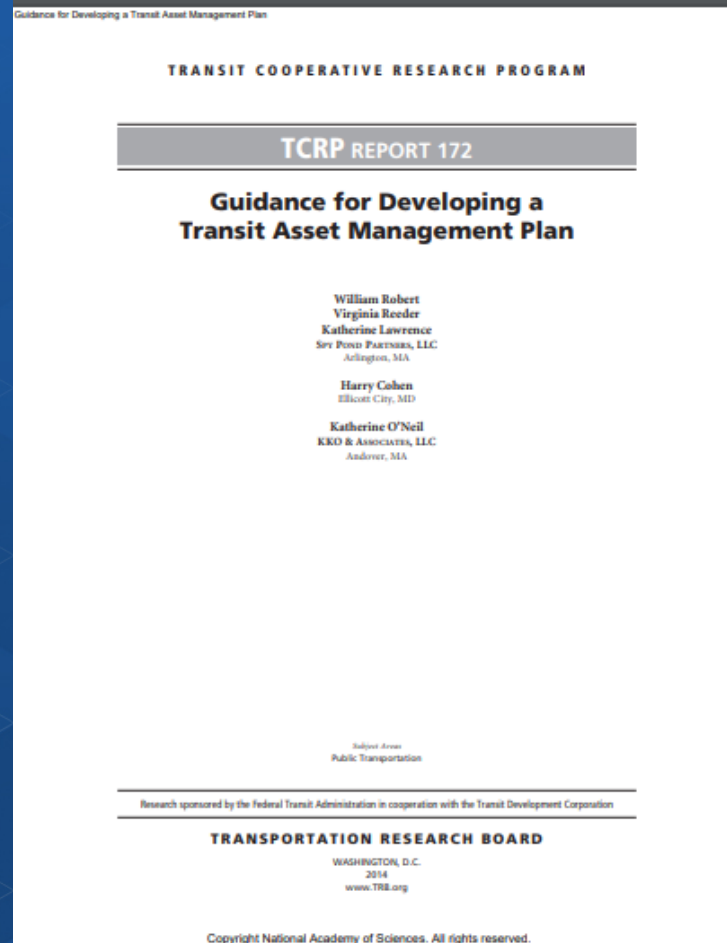


Calculation of Risk in Asset Management

- **Good Asset Management Considers Risk in Asset Management Plans**
- **Risk is a function of Probability of Failure * Impact of Failure**
- **Impact of Failure Depends on the Criticality of the Asset, Which is a Function of Location (GIS)**



Additional Resources



dts
MAKERS OF **VUEWorks**®



Transit Asset Management and the State of Good Repair: A LYNX Case Study



Allen Ibaugh,
AICP, GISP
—
CEO



Doug Lynch,
GISP
—
Sr. Project Manager



Patrick Meenan
—
Western Regional
Manager

Asset Management Data Collection



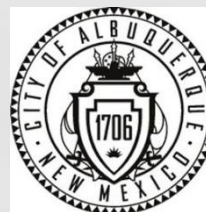
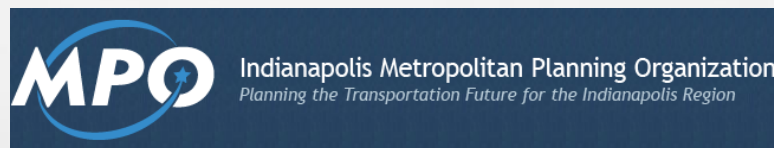
Enterprise Geospatial Portals



Performance-Based Enterprise Asset Management Systems



What does DTS do?



Sample Clients

The Moving Ahead for Progress in the 21st Century Act (MAP-21) required the Secretary to develop rules to establish a system to monitor and manage public transportation assets to improve safety and increase reliability and performance, and to establish performance measures, and the Fixing America's Surface Transportation (FAST) Act reaffirmed this requirement. On July 26, 2016, FTA published the Transit Asset Management (TAM) Final Rule.

The purpose of the Final Rule is to help achieve and maintain a state of good repair (SGR) for the nation's public transportation assets. Transit asset management is a business model that uses transit asset condition to guide the optimal prioritization of funding. Currently, there is an estimated \$85.9 billion transit SGR backlog.

The regulations apply to all Transit Providers that are recipients or sub recipients of Federal financial assistance under 49 U.S.C. Chapter 53 and own, operate, or manage transit capital assets used in the provision of public transportation.

State of Good Repair

The condition in which a capital asset is able to operate at a full level of performance. A capital asset is in a state of good repair when that asset:

1. Is able to perform its designed function,
2. Does not pose a known unacceptable safety risk, and
3. Its lifecycle investments must have been met or recovered.

Tier I

Operates rail

OR

≥ 101 vehicles across all
fixed route modes

OR

≥ 100 vehicles in one non-
fixed route mode

Tier II

Subrecipient of 5311 funds

OR

American Indian Tribe

OR

≤ 100 vehicles across all fixed
route modes

OR

≤ 100 vehicles in one non-fixed
route mode



Subpart C—Transit Asset Management Plans TAM Plans - Tier I
vs. Tier II Applicability

It is expected that all assets used in the provision of public transit will be included in the TAM Plan asset inventory. This includes (with the exception of equipment) assets that are owned by a third party or shared resources. The inventory must include all service vehicles, and any other owned equipment assets over \$50,000 in acquisition value. Agencies only need to include condition assessment for assets for which they have direct capital responsibility.

- | | |
|----------------------------------|------------------------|
| 1. Inventory of Capital Assets | |
| 2. Condition Assessment | <u>Tier I & II</u> |
| 3. Decision Support Tools | |
| 4. Investment Prioritization | |
| 5. TAM and SGR Policy | |
| 6. Implementation Strategy | <u>Tier I Only</u> |
| 7. List of Key Annual Activities | |
| 8. Identification of Resources | |
| 9. Evaluation Plan | |

Asset performance is measured by asset class, which means a subgroup of capital assets within an asset category. The following table shows the distinction between what assets must be included in asset inventories and the assets for which transit providers must measure performance.

Useful Life Benchmark

The expected lifecycle of a capital asset for a particular Transit Provider's operating environment, or the acceptable period of use in service for a particular Transit Provider's operating environment

Assets: <i>Only those for which agency has direct capital responsibility</i>	Performance Measure
Equipment Non-revenue support-service and maintenance vehicles	Percentage of vehicles met or exceeded Useful Life Benchmark
Rolling Stock Revenue vehicles by mode	Percentage of vehicles met or exceeded Useful Life Benchmark
Infrastructure Only rail fixed-guideway, track, signals and systems	Percentage of assets in a State of Good Repair
Facilities Maintenance and administrative facilities; and passenger stations (buildings) and parking facilities	Percentage of assets with condition rating below 3.0 on FTA TERM Scale

Assets	TAM Plan Inventory	TAM Plan Condition Assessment	NTD Inventory & Condition Submittal	SGR Targets
Revenue Vehicles				
Owned	yes	yes	yes	yes
Direct Capital Responsibility	yes	yes	yes	yes
3 rd Party Owned (Direct Capital Responsibility)	yes	yes	yes	yes
3 rd Party Owned (NO Direct Capital Responsibility)	yes	no	yes*	no
Equipment: Non-revenue Vehicles (regardless of cost)				
Owned	yes	yes	yes	yes
Direct Capital Responsibility	yes	yes	yes	yes
3 rd Party Owned	no	no	no	no
Equipment: Over \$50,000 in Acquisition Value				
Owned	yes	yes	no	no
Direct Capital Responsibility	yes	yes	no	no
3 rd Party Owned	no	no	no	no
Equipment				
Under \$50,000 in Acquisition Value	no	no	no	no
Facilities:				
Owned	yes	yes	yes	yes
Direct Capital Responsibility	yes	yes	yes	yes
3 rd Party Owned (Direct Capital Responsibility)	yes	yes	yes	yes
3 rd Party Owned (NO Direct Capital Responsibility)	yes	no	yes**	no
Infrastructure: Non Rail Fixed Guideway				
Owned	yes	yes	no	no
Direct Capital Responsibility	yes	yes	no	no
3 rd Party Owned (Direct Capital Responsibility)	yes	yes	no	no
3 rd Party Owned (NO Direct Capital Responsibility)	yes	no	no	no
Infrastructure: Rail Fixed Guideway				
Owned	yes	yes	yes	yes
Direct Capital Responsibility	yes	yes	yes	yes
3 rd Party Owned (Direct Capital Responsibility)	yes	yes	yes	yes
3 rd Party Owned (NO Direct Capital Responsibility)	yes	no	yes	no

Included in TAM Plan

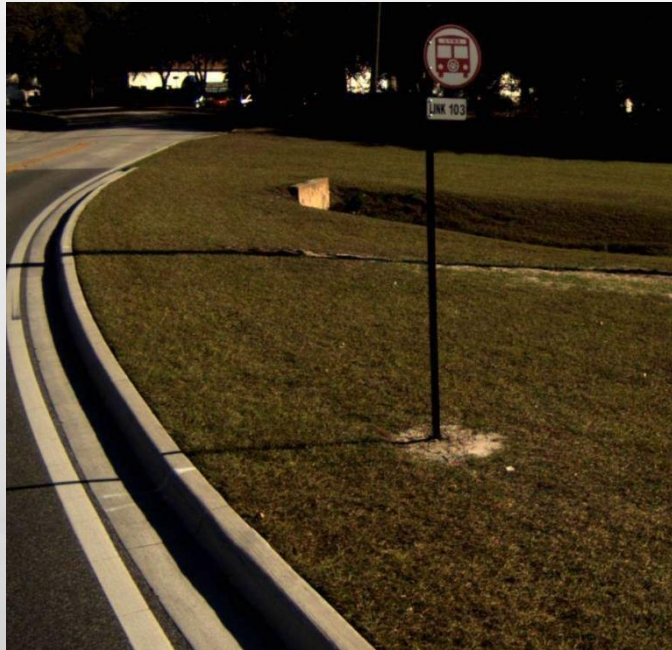
Reported to NTD



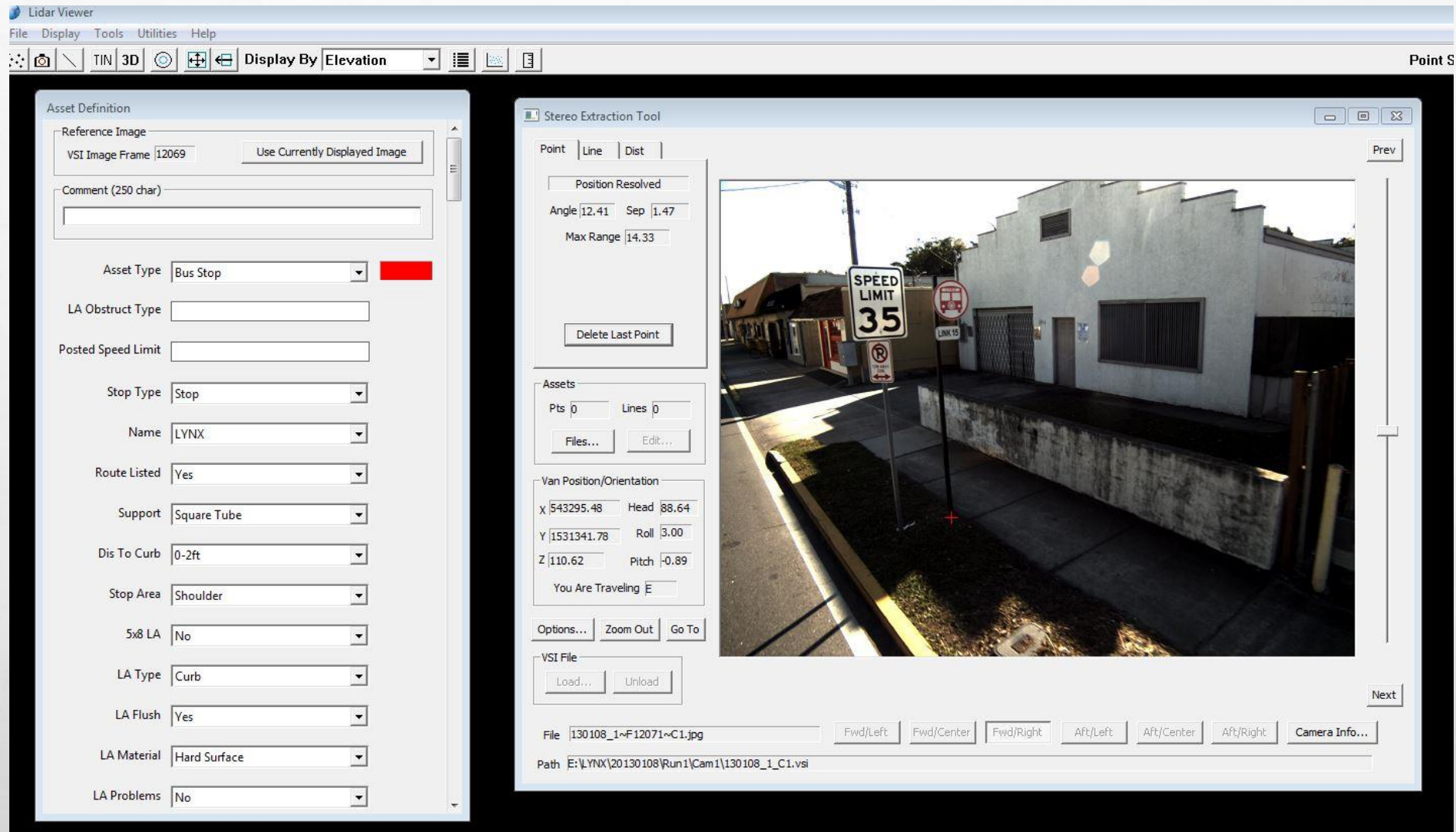
TAM / NTD Crosswalk



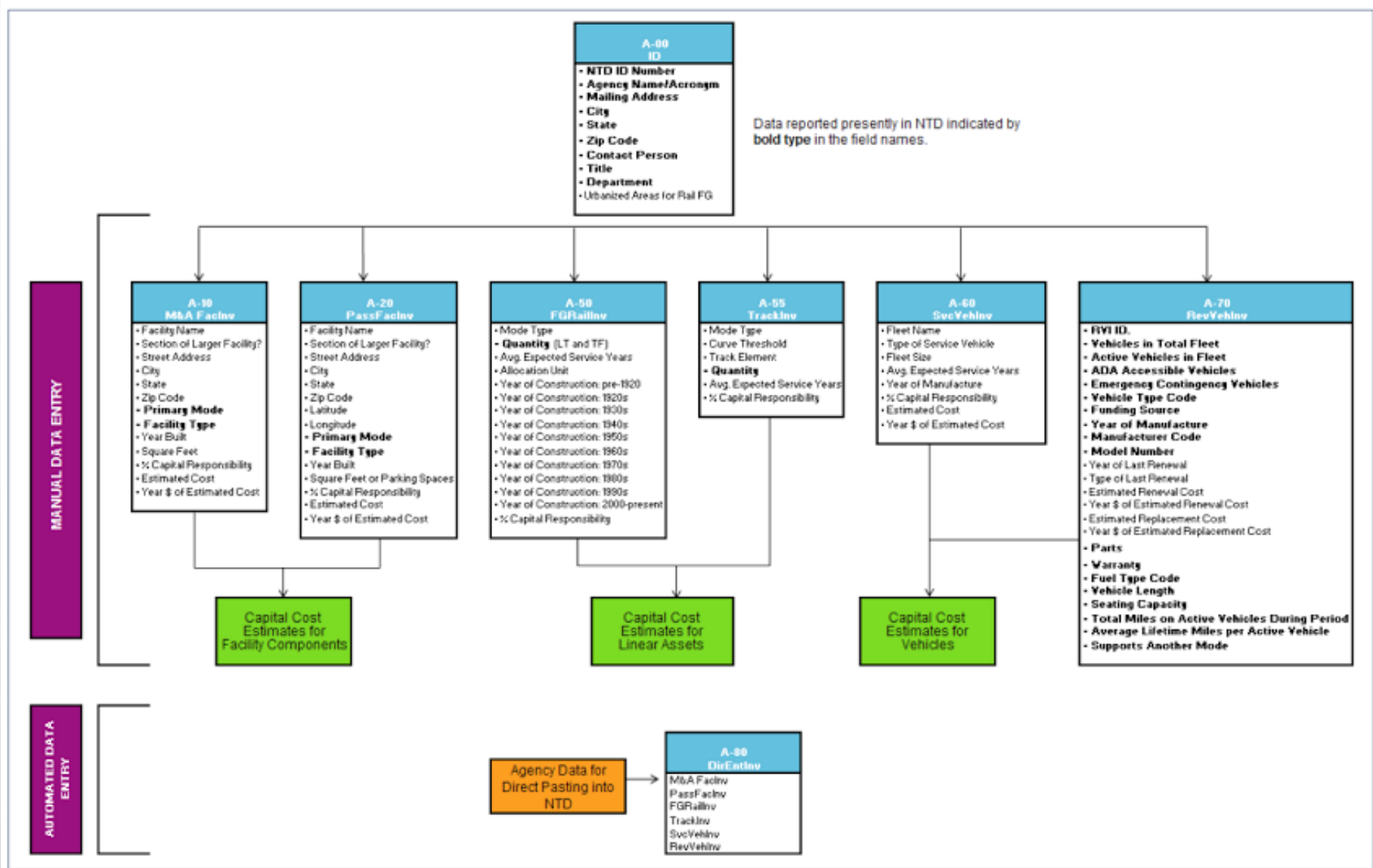
Asset Inventory (Bus Stops, Signs, etc.)



Inventory



Classification for Data Structure



VUEworks

Welcome, Tom Wesp

- Administration
- GIS Assets
- Document Link
- Service Requests
- Work Orders
- Resource Manager
- Electric
- Facilities
- Fleet
- Land
- Meters
- Natural Gas
- Parks
- Pavement
- Permitting
- Sewer

Centerlines: 10810

A Attributes

- A Attributes
- S Service Requests
- W Work Orders
- C Condition
- R Risk
- V Valuation
- B Budgets
- P Projects
- D Documents
- P Photos
- D Data Link
- F Facilities
- A Audit Log
- I ITree Link

InspectedBy

Map Scale: 1:36,111

Layers

On	Layer	Labels
<input checked="" type="checkbox"/>	Transportation	
<input type="checkbox"/>	Traffic Signs	
<input type="checkbox"/>	Bridge	
<input type="checkbox"/>	School Flasher Point	
<input type="checkbox"/>	Signal Features	
<input type="checkbox"/>	Signal Point	
<input type="checkbox"/>	Snow Ice Bridges	
<input checked="" type="checkbox"/>	Speed Monitoring Signs	
<input type="checkbox"/>	Traffic Calming Point	
<input checked="" type="checkbox"/>	Centerlines	
<input type="checkbox"/>	Fences	
<input checked="" type="checkbox"/>	Guardrail	
<input type="checkbox"/>	Snow Routes	
<input type="checkbox"/>	Centerlines test	
<input type="checkbox"/>	Centerlines VT	
<input checked="" type="checkbox"/>	Stormwater	
<input type="checkbox"/>	Storm Chase	
<input type="checkbox"/>	Storm FES In	
<input type="checkbox"/>	Storm FES Out	
<input type="checkbox"/>	Storm Grates	
<input type="checkbox"/>	Storm Inlets	
<input type="checkbox"/>	Storm Manholes	
<input type="checkbox"/>	Storm Mains	
<input type="checkbox"/>	Hydrology Polygon	
<input type="checkbox"/>	Storm_MainsTest	
<input checked="" type="checkbox"/>	Water	
<input type="checkbox"/>	Water ARVs	
<input type="checkbox"/>	Water Blowoffs	
<input type="checkbox"/>	Water Hydrants	
<input checked="" type="checkbox"/>	Water Manholes	
<input type="checkbox"/>	Water Meters	
<input type="checkbox"/>	Water Plugs	
<input type="checkbox"/>	Water PRVs	
<input type="checkbox"/>	Water Pump Stations	
<input type="checkbox"/>	Water Reducers	
<input type="checkbox"/>	Water Valves	
<input type="checkbox"/>	Water Mains	
<input type="checkbox"/>	Water Backflows	
<input checked="" type="checkbox"/>	Sewer	
<input type="checkbox"/>	Sewer Clean Outs	
<input type="checkbox"/>	Sewer Grease Traps	
<input type="checkbox"/>	Sewer Lift Stations	
<input type="checkbox"/>	Sewer Manholes	
<input type="checkbox"/>	Sewer Meters	
<input type="checkbox"/>	Sewer Metro Wastewater Connections	
<input type="checkbox"/>	Sewer Plugs	

Choose Basemap

- Imagery
- Imagery with Labels
- Streets
- Topographic
- Dark Gray Canvas
- Light Gray Canvas
- National Geographic
- Terrain with Labels
- Oceans
- OpenStreetMap
- USA Topo Maps
- USGS National Map

Map Scale: 1:36,111

0 0.2 0.4mi



Interoperable Framework – pulling everything together

demo.vueworks.com/vueworks/Main/Main.aspx#

Transit

Welcome, VUEWorks

Administration

Document Link

Service Requests

Work Orders

Resource Manage

Bus

Rail

Administer Facilities

Administer Facility

Manage Facilities

Condition

Risk

Projects

Budget Forecast

LYNX

Bus Route:

Route:

Name:

Bus Stop:

Stop ID:

Bus Shelter:

Shelter ID:

Locate Clear Help

Manage Facilities

Filter is OFF - 17 of 17 Facilities in Asset Class Rail

Facility Table Filter Reports

Views

Primary View View 1 View 2 View 3

Details

A Attributes GIS: SunRail Stations

Save Cancel

Field Name Value

LYNX Central Station

Utilities

Advertising

Exterior

Facility Type: Station

Map Scale: 1:1,128

Identified 12 Asset(s)

LYNX Bus Routes: 104

Name 104 - East Colonial Drive / UCF

Miles 27.8743

LYNX Bus Routes: 105

Name 105 - West Colonial Drive / Winter Garden

Miles 25.07460021

LYNX Bus Routes: 20

Name 20 - Malibu Street / Mercy Drive

Miles 13.41619968

LYNX Bus Routes: 21

Name 21 - Universal Studios

Miles 27.89109992

LYNX Bus Routes: 25

Name 25 - Mercy Drive / Shader Road

Miles 11.88619995

FacilityTabManager

Manage Facilities

Filter is OFF - 1 of 1 Facility in Asset Class TAM Inventory

FacilityTableFilterReports

Views

Primary ViewView 1View 2View 3

Inventory Sample

- Agency Identification (A-00)
 - Revenue Vehicle Inventory (A-70)
 - Service Vehicle Inventory (A-60)
 - Rail Fixed Guideway Inventory (A-50)
 - Track Inventory (A-55)
 - Passenger and Parking Facility Inventory (A-20)
 - Lynx Central SunRail Station
 - Administrative and Maintenance Facilities (A-10)

Facility Type: TAM Reporting

Delete FacilityNew FacilityClose

Details

W Work OrdersGIS: Not Linked

Link to GIS

Assign AllRemove AllOpen AllNewInclude

GIS Asset

ID	Date	
071918001	07/19/2018 08:00 AM	SGR Inspection

Manage Work Orders

Form ViewAssets

ID 071918001 Logged By Patrick Meenan 07/19/2018 05:52 PM

TypePreventative Maintenance

DepartmentTAM

GroupInventory Management

Activity DescriptionSGR Inspection

Location

Description

Assigned ToPatrick Meenan 07/19/2018 5:53 PM

Associate with...Project GroupProject

StatusOpenPriority 1

Begin Date07/19/2018Begin Time8:00 AMNow

End Date07/19/2018End Time9:00 AMNow

Send Email to Notification List on Save

Set Recurring

Manage Document Links

Document Details

DocumentCONDPhoto-20180719150733.jpg

Link Date07/19/2018

Linked ByPatrick Meenan

Path to Filehttp://demo.vueworks.com/vwdocs/Transit/

File NameCONDPhoto-20180719150733.jpg

Document TypePhotograph

LibraryPhotographs

Key Words

Image Document Preview

SaveDeleteClose

DetailsCostsTasksLaborEquipmentInventoryAssetsDocumentsWork OrdersComments

Inventory Sample: Lynx Central SunRail Station (369)

SaveCancel

Field NameValue

Asset ID369

Facility NameLynx Central SunRail Station

Section of a Larger FacilityAdministrative Office / Sales Office

Street Address101 W. Livingston St.

CityOrlando

StateFL

Zip Code32801

Latitude

Longitude

Primary ModeLR - Light Rail

Facility TypeBus Transfer Center

Condition Rating

Select Record7/19/2018NewView

RecordDocuments

Asset Condition

Asset ClassTAM Inventory

Asset TypePassenger and Parking Facility

FormPassenger Facility Condition Assessment Form

Passenger Facility:74

Roof75

Shell100

Interior75

Conveyance50

* Required & To Close

SaveDeletePrint...Close



Asset Registry - Hierarchical Asset Model

Manage Facilities

Filter is ON - 9 Items found

Facility

Table

Filter

Reports

Views

Primary View

View 1

View 2

View 3

Inventory Sample

Agency Identification (A-00)

Revenue Vehicle Inventory (A-70)

2002 Phantom

2010 BRT12HYBRID

2010 Turtle Top

2011 Turtle Top

2013 Chevrolet Motor Division GMC Traverse

Service Vehicle Inventory (A-60)

Rail Fixed Guideway Inventory (A-50)

Track Inventory (A-55)

Passenger and Parking Facility Inventory (A-20)

Lynx Central SunRail Station

Administrative and Maintenance Facilities (A-10)

Details

A Attributes

GIS: Not Linked


Link to GIS

Save

Cancel

Field Name	Value
Asset ID	371
RVI ID	1703
Number of Vehicles in Total Fleet	16
Number of Active Vehicles in Fleet	8
Number of Americans with Disabilities Act of 1990 (ADA) Accessible Vehicles	0
Number of Emergency Contingency Vehicles	0
Vehicle Type Code	BU - Bus
Funding Source	UA - Urbanized Area Formula Program
Estimated Service Years	15
Expected Service Years	15
Year of Manufacture	2002
Useful Life Remaining	0
Manufacturer Code	GIL - Gillig Corporation
Model Number	PHANTOM
Year of Last Renewal	2014
Type of Last Renewal	Life-Extending Overhaul
Fuel Type Code	BD - Bio-diesel
Vehicle Length	40

Facility Type: TAM Reporting

The logo for vueworks, featuring a stylized orange 'V' shape composed of three parallel lines, with the word 'vueworks.' in a sans-serif font below it.

Asset Registry - Hierarchical Asset Model

Manage Facilities

Filter is ON - 9 Items found

Facility Table Filter Reports

Views

Primary View View 1 View 2 View 3

Inventory Sample

- Agency Identification (A-00)
 - Revenue Vehicle Inventory (A-70)
 - 2002 Phantom
 - 2354
 - PHANTOM 1234
 - 2010 BRT12HYBRID
 - 2010 Turtle Top
 - 2011 Turtle Top
 - 2013 Chevrolet Motor Division GMC Traverse
 - Service Vehicle Inventory (A-60)
 - Rail Fixed Guideway Inventory (A-50)
 - Track Inventory (A-55)
 - Passenger and Parking Facility Inventory (A-20)
 - Lynx Central SunRail Station
 - Administrative and Maintenance Facilities (A-10)

Details

A Attributes GIS: Not Linked [Link to GIS](#)

Save Cancel

	Value
A Attributes	
C Condition	
R Risk	371
V Valuation	1703
P Pictures	16
S Service Calls	8
W Work Orders	0
Vehicles	0
Vehicle Type Code	BU - Bus
Funding Source	UA - Urbanized Area Formula Program
Estimated Service Years	15
Expected Service Years	15
Year of Manufacture	2002
Useful Life Remaining	0
Manufacturer Code	GIL - Gillig Corporation
Model Number	PHANTOM
Year of Last Renewal	2014
Type of Last Renewal	Life-Extending Overhaul
Fuel Type Code	BD - Bio-diesel
Vehicle Length	40

Facility Type: TAM Reporting

Facility

Table

Filter

Reports

Specify Filter Criteria

-- Select a Saved Filter --

Load

Load & Apply

Save

New

Manage

Asset Class

TAM Inventory

Facility Type

TAM Reporting

Facility Name

Inventory Sample

Container Name

Revenue Vehicle Inventory (A-70)

Asset Type

Asset Name

Field Filters:

Field

- Revenue Vehicle Inventory (A-70)
- Agency Identification (A-00)
- Passenger and Parking Facility Inventory (A-20)
- Rail Fixed Guideway Inventory (A-50)
- Revenue Vehicle Inventory (A-70)
- Service Vehicle Inventory (A-80)

- Document File...
- Adobe PDF File...
- Microsoft XPS File...
- Microsoft PowerPoint File...
- HTML File...
- Text File...
- Rich Text File...
- Microsoft Word File...
- OpenDocument Writer File...
- Microsoft Excel File...
- OpenDocument Calc File...
- Data File...
- Image File...

Form A70 Revenue Vehicle

Agency Code	Vehicle Type	Funding Source	Estimated Service Years	Expected Service Years	Year of Manufacture	Useful Life Remaining	Manufacturer Code	Model Number	Fuel Type Code	Year of Last Renewal	Type of Last Renewal	Vehicle Length	Seating Capacity	Standing Capacity	Total Miles Ave on Active Vehicles During Period	Life Mile Act Veh
4600	BU - Bus	OF - Other Federal funds	14	14	2010	7	TTT - Turtle Top	ODYSSEY	GA - Gasoline	2017	Mid-Life Power Train	23	12	0	1621733	166
4600	BU - Bus	OF - Other Federal funds	15	15	2011	9	TTT - Turtle Top	ODYSSEY	GA - Gasoline	N/A		23	12	0	1558377	109
1703	BU - Bus	UA - Urbanized Area Formula Program	15	15	2002	0	GIL - Gillig Corporation	PHANTOM	BD - Bio-diesel	2014	Life-Extending Overhaul	40	43	29	320104	653
4109	AB - Articulated bus	OF - Other Federal funds	20	20	2010	10	NAB - North American Bus Industries Inc.	BRT12HYBRID HD	Hybrid diesel			60	62	56	147779	179
56132	VN - Van	UA - Urbanized Area Formula Program	15	15	2013	10	CMD - Chevrolet Motor Division - GMC	Traverse	GA - Gasoline			17	8	0	97604	697



Easy Query and Report generation – we have the federal ones already

Transit

- Welcome, VUEWorks
- Administration
- Document Link
- Service Requests

Add New Service Request
Find / Manage / Report
Open My Service Requests
Archive / Restore / Undelete

LYNX Shelters: 2380_01

A
Attributes

BShDistCrb	6-8FT
BShDmgs	NO
BShYrInstl	
BShCmnts	
BShRecom	
PictFile	130122_DTS3_1
X	532502.373314
Y	1496886.99765
Z	100.65988
ToolkitNo	
Trapeze_St	2380
ConditionI	0
BShelterID*	2380_01
BShLat	28.45104058
BShLon	-81.38484222
DateLtChng	01/30/2013
BShActive	YES

1 of 1

Manage Service Requests

Filter is OFF - Current list contains 2 out of 2 Service Requests

Form View
Table View
Filter
Reports
Assets

ID: 0610161
Logged By: VUEWorks 06/10/2016 03:45 PM

Type * Quick Response

Department * Bus

Group Bus Shelter

Issue* Shelter damaged

Location:

Assigned To: Unassigned 06/10/2016 3:45 PM

Status Open
Date / Time Occurred 06/10/2016 3:45 PM
Date / Time Responded To

Details
Linked Calls
Documents
Work Orders

Add Assets
From Map
From Current Selection

	Location Asset	Asset ID	Layer or Facility
1		2380_01	LYNX Shelters

Export To Excel
Remove All

* Required Fields

Save
Delete
New

Map Scale: 1:18,055

Choose Basemap

Imagery
Imagery with Labels
Streets
Topographic
Dark Gray Canvas
Light Gray Canvas
National Geographic
Oceans
Terrain with Labels
OpenStreetMap
USA Topo Maps
USGS National Map

ServiceCallsTabManager

Transit

Welcome, VUEWorks

Administration

Document Link

Service Requests

Work Orders

Add New Work Order

Add Work Orders to Selected Assets

Find / Manage / Report

Open My Work Orders

Open Work Order Calendar

Archive / Restore / Undelete

Administer Settings

Import Manager

Resource Manager

Bus

LYNX Shelters: 3958_01

W Work Orders

ID	Date	
061016001	06/10/2016 08:00 AM	Shelter Maintenance

Map Scale: 1:4,513

Manage Work Orders

Filter is OFF - Current list contains 6 out of 6 Work Orders

Form View

Table View

Filter

Reports

Assets

ID 061016001

Logged By VUEWorks

06/10/2016 04:05 PM

Type Reactive Maintenance

Department Bus

Group Bus Shelter

Activity Description Shelter Maintenance

Location:

Description:

Assigned To: Unassigned

06/10/2016 4:05 PM

Project Group:

Project:

Associate with...

Details

Costs

Tasks

Labor

Equipment

Inventory

Assets

Documents

Work Orders

Comments

Estimated

Actual

Valuation

Estimated Costs (In Activity Year Dollars)

Item	\$ Cost	Hours	Roll Up Cost	R Hours
Labor	561.45	4.00	\$ 561.45	4.00
Inventory	162.72	0.00	\$ 162.72	0.00
Equipment	140.00	4.00	\$ 140.00	4.00
Vendor	0.00	0.00	\$ 0.00	0.00
Other	0.00	0.00	\$ 0.00	0.00

*Required To Close

Save

Delete

New Copy

New

Print...

Close

1 of 6

Manage Facilities

Filter is ON - 9 Items found

Facility

Table

Filter

Reports

Views

Primary View

View 1

View 2

View 3

Inventory Sample

Agency Identification (A-00)

Revenue Vehicle Inventory (A-70)

2002 Phantom

2354

PHANTOM 1234

2010 BRT12HYBRID

2010 Turtle Top

Bus 1

2011 Turtle Top

2013 Chevrolet Motor Division GMC Traverse

Service Vehicle Inventory (A-60)

Rail Fixed Guideway Inventory (A-50)

Track Inventory (A-55)

Passenger and Parking Facility Inventory (A-20)

Lynx Central SunRail Station

Administrative and Maintenance Facilities (A-10)

Details

C Condition

GIS: Not Linked

Link to GIS

Condition Rating

7/19/2018

3/22/2018

New

View

Record

Documents

Delete

Clear

Save

Asset Condition

Asset Class: TAM Inventory

Asset Type: Passenger and Parking Facility

Form: [Passenger Facility Condition Assessment Form](#)

Passenger Facility: 62

Roof

100

Shell

100

Interior

75

Conveyance

50

Plumbing

75

HVAC

75

Fire Protection

75

Electrical

75

Fare Collection

50

Site

25

Inspection

By Inspection

Assigned

Override

Record Date: 3/22/2018

Facility Type: TAM Reporting

LYNX Bus Stops: 4265

R Risk

Save Cancel Details

Risk Information

Asset Class: **Bus**
 Asset Type: **LYNX Bus Stops**
 Location:
 Risk Factor (1-10): **2.85**
 Consequence Factor (1-10): **6.00**
 Criticality Factor (1-10): **4.00**
 Failure Probability : **48%**
 Overall Confidence : **50%**
 Consequence Factor Confidence : **100%**
 Failure Probability Confidence : **50%**

Consequences

Consequence	Rating	Score
Pedestrian Injury*	Low	5.00
Vehicle Damage*	High	6.00
Public Perception*	Low	1.00

Failure Probabilities

Failure Mode	Value	Units	Failure Probability
% Life Left	50.00		48 %
Condition			

Budget Scenario Manager

Filter is OFF - Current list contains 1 out of 1 Scenarios

Form View

Table View

Filter

Reports

Scenario Name

Rail Station 2016

Asset Class(es): Rail

Asset Type(s): SunRail Stations

Scenario Type

Automatic

Analysis Period

10 Years (2025)

Notes

Summary

Job Details

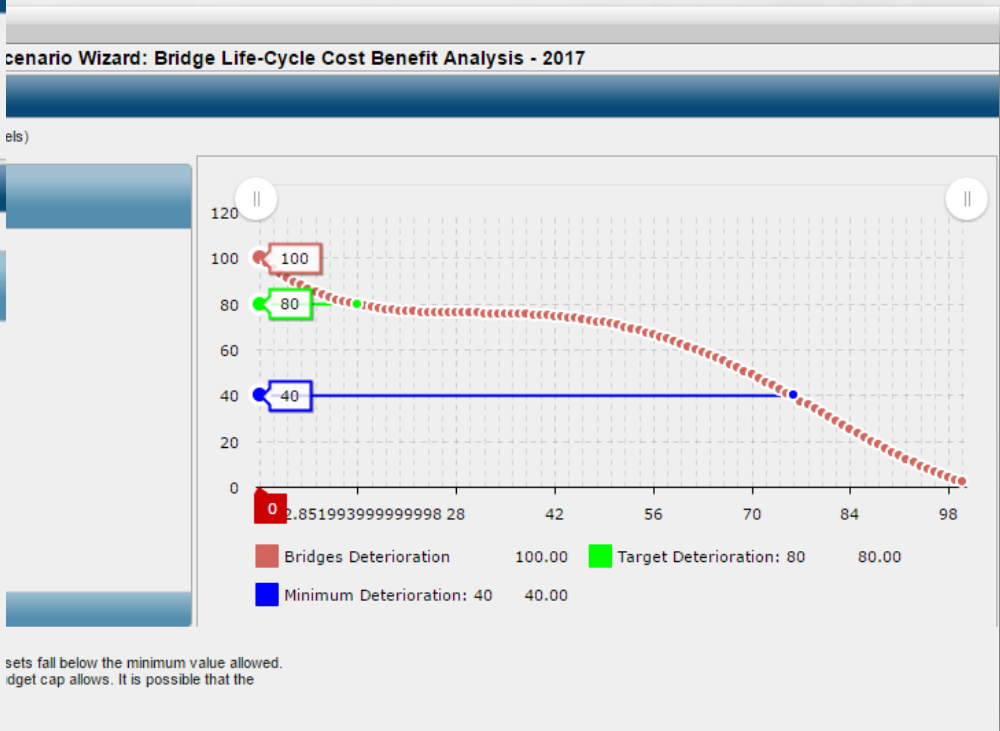
Audit

Budget

Documents

Scenario Time Span (years): 2016 - 2025

Year	Base Line			Forecast			Budget	
	Avg Deterioration	Avg Age	Avg % Life Used	Avg Deterioration	Avg Age	Avg % Life Used	Budget Required	Budget Cap
2016	69.71	2.0	56.55%	79.41	2.5	38.90%	\$75,000.00	\$100,000.00
2017	44.34	3.0	69.77%	79.76	3.0	31.68%	\$97,850.00	\$103,000.00
2018	26.55	4.0	82.99%	76.21	3.5	29.04%	\$95,481.00	\$106,090.00
2019	13.29	5.0	91.80%	79.82	3.9	33.78%	\$81,954.52	\$109,272.70
2020	6.32	6.0	96.20%	80.95	4.5	28.23%	\$84,413.16	\$112,550.88
2021	2.77	7.0	98.40%	75.49	4.9	34.44%	\$86,945.56	\$115,927.41
2022	0.00	8.0	1.00%	75.19	5.4	40.66%	\$89,553.92	\$119,405.23
2023	0.00	9.0	1.00%	76.53	5.8	46.87%	\$92,240.54	\$122,987.39
2024	0.00	10.0	1.00%	77.15	6.4	35.44%	\$95,007.76	\$126,677.01
2025	0.00	11.0	1.00%	71.18	6.8	41.65%	\$97,857.99	\$130,477.32



Notes

Summary

Job Details

Audit

Budget

Documents

Scenario Time Span (years): 2015 - 2024

Filter by: All years ☐ All Assets

Apply Filter

	Year	Asset Type	Asset ID	Location	Label	Failure Type	Failure Probability	Job	Funding Source	D-Curve Before	D-Curve After	% Life Used Before	% Life A
1	2015	Centerlines	10460	152ND AVE - 7075	152ND AVE - 7075	Age	95.00%	Resurface	Capital Improvements	2.30	95.08	100.00%	
2	2015	Centerlines	10642	HOLLY ST - 5122	HOLLY ST - 5122	Age	85.83%	Milling	Capital Improvements	2.30	81.15	100.00%	
3	2015	Centerlines	1490	HURON ST - 7131	HURON ST - 7131	Distresses	57.00%	Resurface	Capital Improvements	2.30	100.00	100.00%	

Current list contains 3 out of 3 Jobs



Enterprise Level Budget Forecasting

cross asset analysis

Manage Data Links

Existing Data Links:

- Civeo_JDE_Location
- Civeo_Valuation
- Gasboy
- iTree Link
- MAP-21
- Pavement_2005
- Pavement_2008
- PeopleSoft**
- PumpRunDemo

Field Links:

Data link title:

Link to: ☐ GIS Layer ☒ Facility Asset Type

Facility Type: *Asset Type:

*Data Source:

*Data Table:

Database table field: Facility Field:

Link*: To*:

Description:

Data View Tab Settings

Display on tab:

SubTab label:

Label field: Sort Order: ☐ Ascending ☒ Descending

Bold indicates Data Links that are active

Transit

- Mobile Facility Assignments
- Manage Facilities
- Condition
- Risk
- Projects
- Budget Forecasting**
- Add Budget Scenario
- Find / Manage / Report
- Administer Settings
- Valuation

LYNX Bus Stops: 4143

Ridership

Year: 2016

AssetID	404
Ridership	606

Year: 2015

AssetID	404
Ridership	202

Select From:

☐ Add to selection

☒ Replace selection

☐ Remove from selection

☐ Keep

Click on map to select assets...

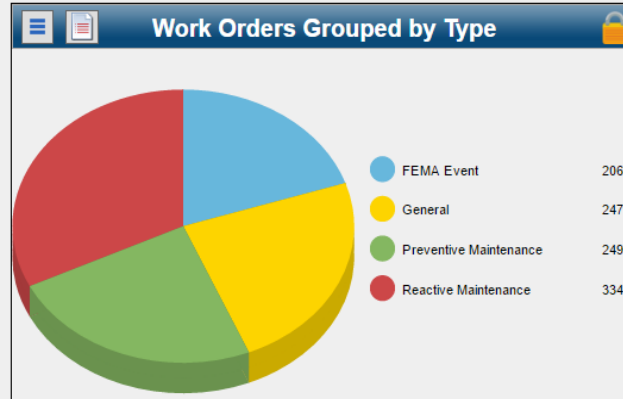
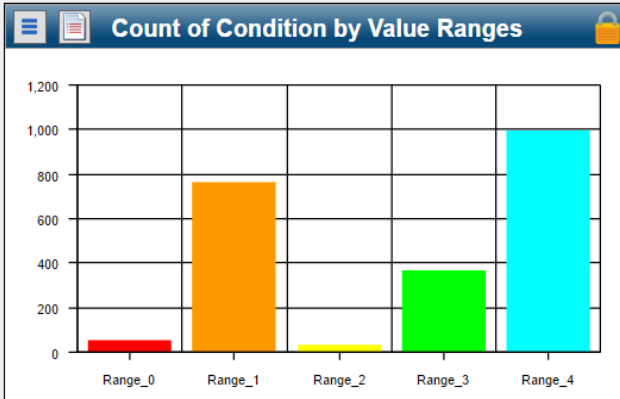


Enterprise Integration

Web Services, APIs, Data Connect, Import/Export



VUEWorks State of Good Repair Dashboard

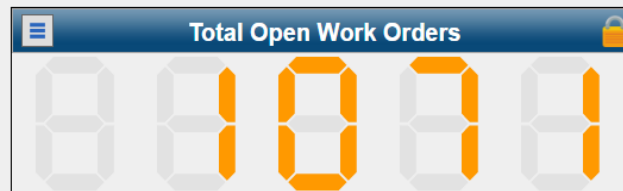
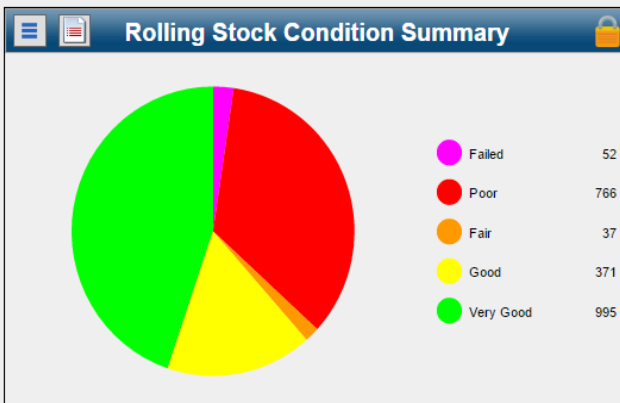


My Service Requests

ID	Issue Occurred	Issue	Location
476	01/03/2017 04:41 PM	Cracking on Road	
479	01/05/2017 01:02 PM	Pothole	112TH AVE - 10843
480	01/05/2017 01:07 PM	Potholes	41 Hutchins Drive, Portland, ME, United States
477	01/05/2017 08:32 AM	Cracking on Road	302

Showing 1 to 4 of 50 entries

Previous 1



My Work Orders

ID	Begin Date/Time	Activity	Location
012617-001	02/09/2017 11:12 AM	Pothole Filling	Orlando, FL, USA
040916-002	04/11/2016 02:35 PM	Pothole Filling	
120816-024	12/08/2016 08:00 AM	Inspections	On the west corner of Main Street

Showing 1 to 3 of 3 entries



Data Driven Dashboards

Manage Facilities

Filter is OFF - 1 of 1 Facility in Asset Class

Facility Table Filter Reports

Views

Primary View View 1 View 2 View 3

Inventory Sample

- Agency Identification (A-00)
 - Revenue Vehicle Inventory (A-70)
 - 2002 Phantom
 - 2354
 - PHANTOM 1234**
 - 2010 BRT12HYBRID
 - 2010 Turtle Top
 - 2011 Turtle Top
 - 2013 Chevrolet Motor Division C
 - Service Vehicle Inventory (A-60)
 - Rail Fixed Guideway Inventory (A-50)
 - Track Inventory (A-55)

Facility Type: TAM Reporting

Details

A Attributes GIS: Not Linked Link to GIS Save Cancel

Field Name	
Manufacture	GIL - Gillig Corporation
Model	PHANTOM
VIN	w5545dfe222
Engine	8.9 Liter Cummins Diesel Engine
Transmission	Allison 5 Speed Automatic
Fuel	BD - Bio-diesel
Odometer	128,324
Hubometer	39,400
ECM	655,595
GVWR	39,400 lbs

Delete Facility New Facility Close

10:30 11:02

< Back PHANTOM < FacilityVUE Sync

Name PHANTOM STATUS

Asset ID: 381 Ve

Last Sync: 8/21/2018 1:56 PM

SYNC NOW

Sync completed successfully >

PENDING UPLOAD Detail

Assets 1 Edit

RVIID

Year

Manufacture

Model

VIN

Engine

Transmission

Fuel

Odometer

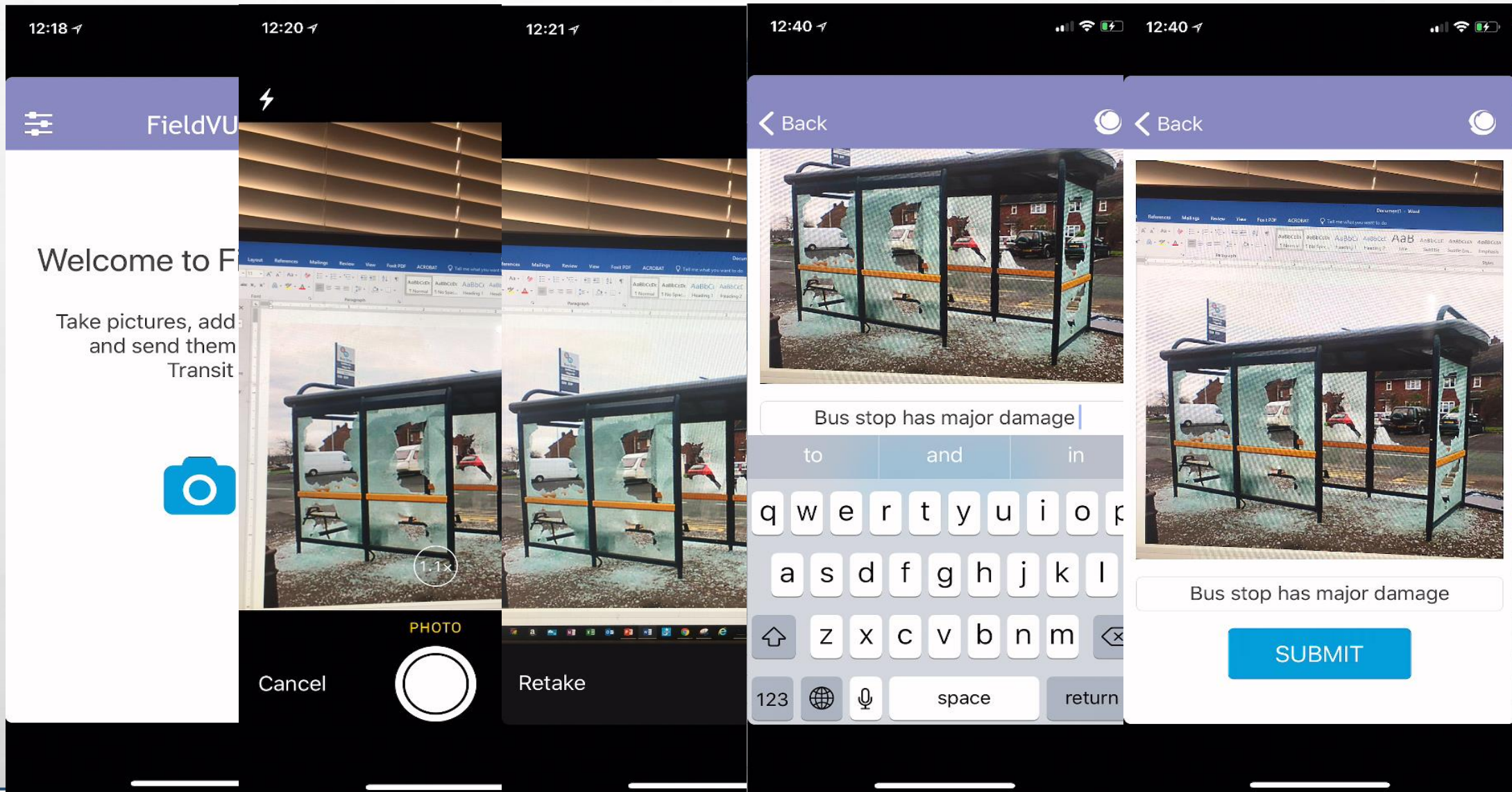
Hubometer

ECM

GVWR



Mobile Condition Inspection: FacilityVUE



Manage Service Requests

Filter is OFF - Current list contains 7 out of 7 Service Requests

-- Select Field --

Apply Filter

Form View Table View Filter Reports Assets

ID: 0821183 Logged By: Patrick Meenan 08/21/2018 03:50 PM

Type * General

Department * Bus

Group Bus Shelter

Issue* Shelter damaged

Location:

Assigned To: Unassigned 08/21/2018 3:50 PM

Status: Open Date / Time Occurred: 08/21/2018 3:50 PM

Date / Time Responded To: Now

Details Linked Calls Documents Work Orders Assets Comments

Add Assets

	Location Asset	Asset ID	Layer or Facility	GIS Location
1		3286_01	LYNX Shelters	

Export To Excel Remove All

* Required Fields

1 assets added from map selection

Save Delete New Print... Close


1 of 7

Patrick

d64f23c0-9f45-4b8a-a929-60839213a99a_4.jpg

Secure | https://demo.vueworks.com/vwdocs/Transit/d64f23c0-9f45-4b8a-a929-60839213a99a_4.jpg

Apps 4H Film VUEWorks https://sso.ultramart VUEWorks® 10.2 Login VUEWorks Inspirational Quotes Other bookmarks



FieldVUE and VUEWorks Work Seamless Together

Manage Work Orders

Filter is OFF - Current list contains 15 out of 15 Work Orders

Form View

Table View

Filter

Reports

Assets

ID Unassigned

Logged By Patrick

Ref: 0821183

Activity Description

Shelter Maintenance

Location:

Description

Assigned To:

Assoc

Details

Costs

Tasks

Estimated

Actual

Value

Estimated Costs (In Activity Year)

Item	\$ Cost
Labor	102.00
Inventory	980.00
Equipment	125.00
Vendor	0.00
Other	0.00
Total	1207.00

Estimated Cost Description:

* Required ‡ To Close

1:14

MobileVUE

Amigos Ave

Elm Dr

Arch St

Kipling Dr

Pinedale Ave

Kensington Dr

Sun State Ford

W. Arlington St

W. Concord Ave

Deleon Ave

Orlando Science Elementary Charter School

McDonald's

Checkers

Orang Sh Office

Parkwood Plaza

2,297 mi

Directions

Address

Parkwood Plaza

3161-3251 W Colonial Dr

Orlando, FL 32808

United States

1:18

MobileVUE

← Back

082118001-Shelter Maintenance

General

Details

Assets

Photos

Documents

Tasks

Labor

Equipment

Comments

+ Header Info

ID

082118001

Location

3161 W Colonial Dr

Description

Replace broken glass

Save

Delete

New Copy

New

Print...

Close

1:18

MobileVUE

← Back

LYNX Shelters-3286_01

Attributes

Condition

Photos

Documents

#	Name	Value
1	OBJECTID	1009
2	BSheltType	COMMERCIAL BLACK
3	BSheltOwnr	LYNX
4	BShWhChAcc	YES
5	BShWhChCom	YES
6	BShDistCrb	6-8FT
7	BShDmgs	NO
8	BShYrInstl	12/30/1899 12:00:00 AM

Basemap

Topographic

Imagery

Layers

LYNX Shelters

LYNX Bus Stops

LYNX Bus Routes

1:25

MobileVUE

← Back

1 of 15

MobileVUE – Work Orders

The image displays the VueWorks Transit Advertising management system across multiple devices. The desktop browser window shows the 'Manage Work Orders' form, which includes fields for ID (082118003), Logged By (Patrick Meenan), Type (General), Department (Bus), Group (Bus Shelter), Activity Description (Advertising Update), Location, Description (Update Ad Panel), and Assigned To. A sidebar titled 'Manage Document Links' provides document details such as Document (DTS Ad PNG), Link Date (08/21/2018), Linked By (Patrick Meenan), Path to File, File Name, Document Type, Library, Key Words, and Comments. The mobile screens show the 'MobileVUE' app interface for the same work order, featuring a 'Back' button, document title, tabs for Details, Assets, Photos, Documents, Tasks, Labor, Equipment, and Comments, and buttons for Camera and Browse. The background of the mobile screens shows a blurred image of a bus shelter.



Managing Transit Advertising



questions?





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