



Better Storm Damage Assessment

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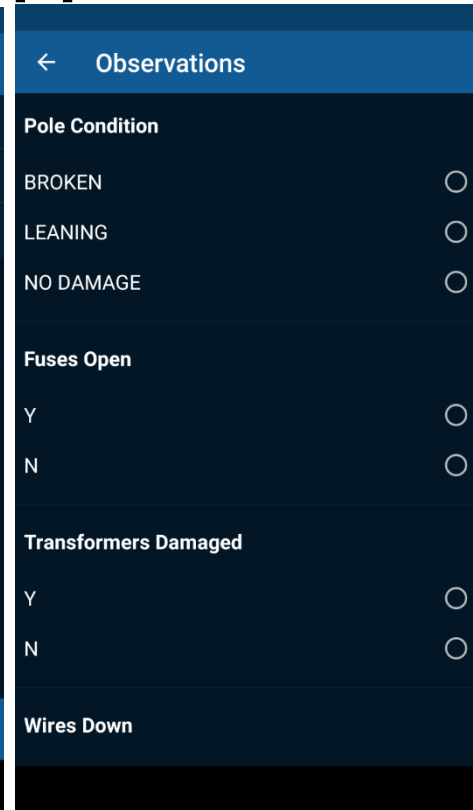
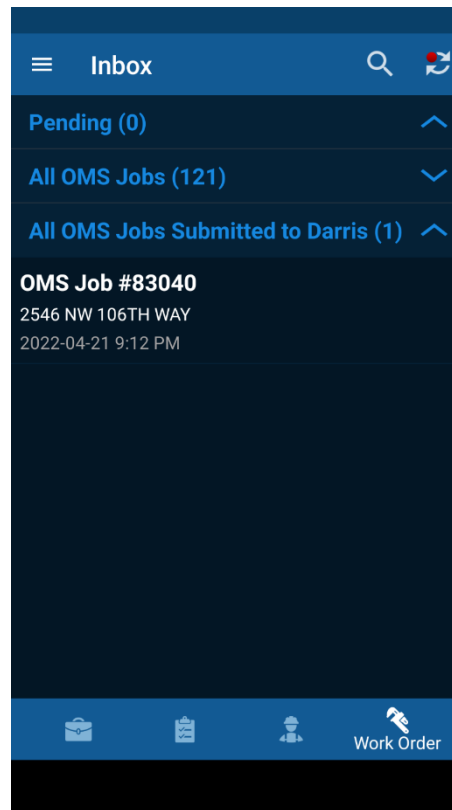
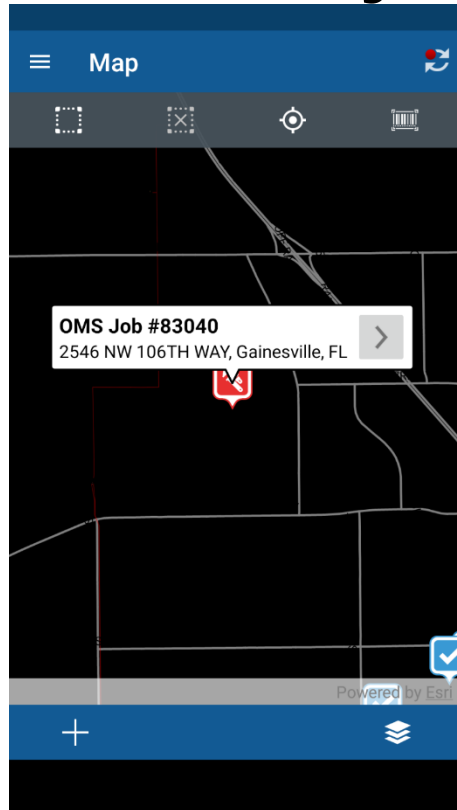
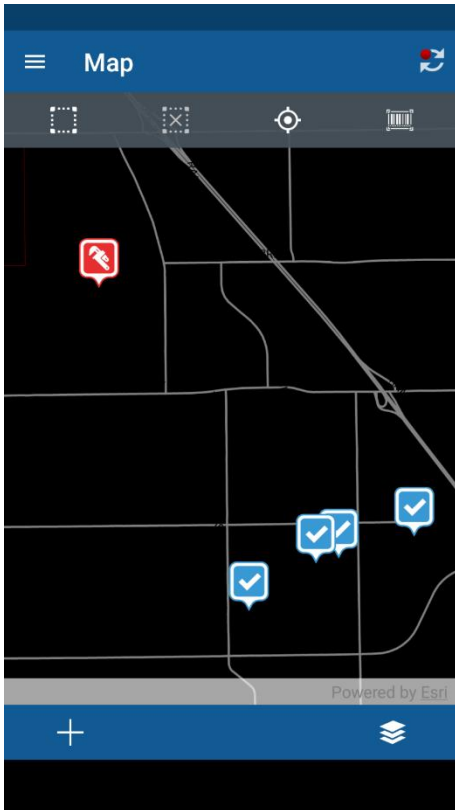
History and Challenges

- **Prior to 2016**
 - Custom built in-house in 2004
 - Esri ArcReader-based
 - Obsolete programming language, Microsoft support ended in 2010
 - Only worked on Windows XP, required storage of 50 old Panasonic CF30s
 - IT Department prohibited network access, required manual transfer of GIS extracts using external HD
 - The employee that created the custom application retired in 2015
- **2016 to 2021**
 - Purchased third-party application built on Esri ArcGIS Runtime
 - Early version had limited functionality
 - Didn't support group layer
 - Didn't support our custom map symbol library
 - Required use of separate sync application which was cumbersome for end-users
 - Later versions required customizations to satisfy user needs
 - Low user acceptance overall
 - Five Year Software contract ended in 2021

Vision

- Leverage existing software
 - Budget cuts, no new software
- Maximize out of the box capability
- Configuration preferred, minimal customizations
- Near real-time Dashboard
- Offline capability
- Same work flow in blue-sky or gray-sky activity
- Same application and user-interface in blue-sky or gray-sky activity
- Eliminate paper forms
- “Standardize” on mobile device
 - 2016 to 2021 different laptops model, manufacturer, capabilities
 - hotspot, cellular data on laptop, camera, GPS, transfer photos into application
 - use iOS and Android phones for assessments
- Scalable and maintainable
 - expand use for other work flows
 - no impact when any systems’ version are upgraded
 - systems can upgrade independently

Solution - Cityworks Native App



Solution – ArcGIS Real-Time Dashboard

7

Last update: a minute ago

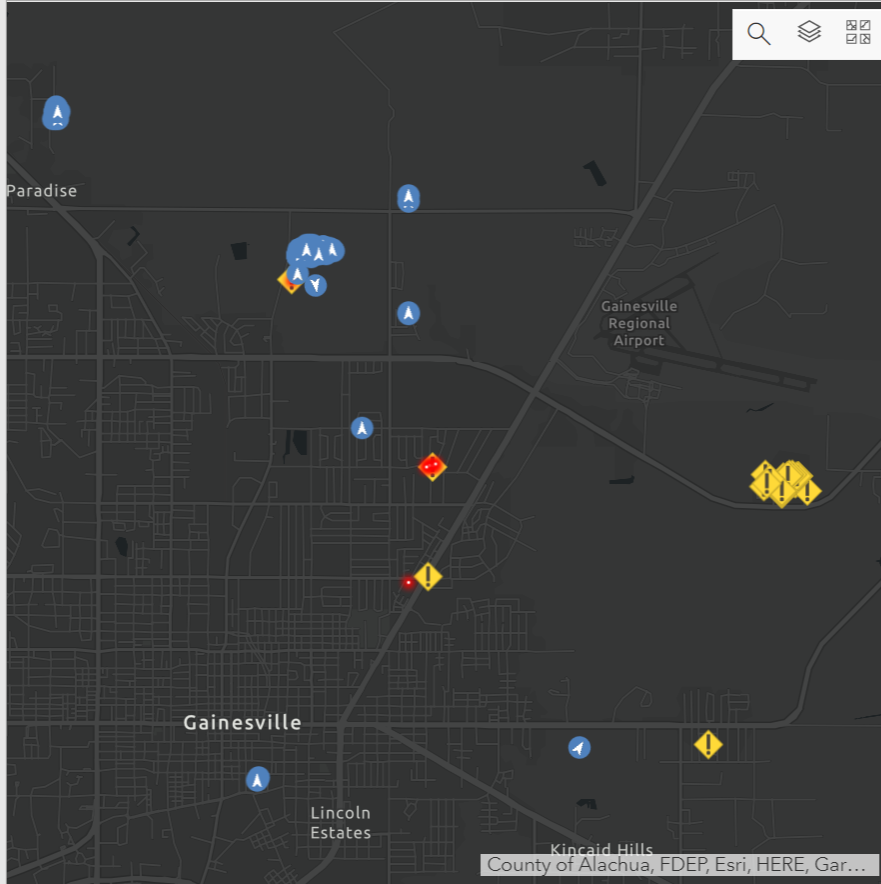
Poles Broken

Fuses Open

13

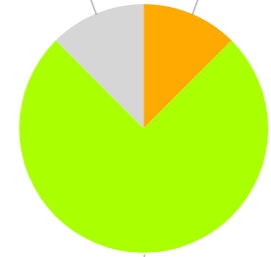
Previous 13

Last update: a few seconds ago



Current Effected By Feeder

FDR-435: 12.50% FDR-1432: 12.50%



Last update: a minute ago

Lead Callers

Current Effected By Feeder

Details

List

OMS Jobs

67

Previous 67

Last update: a minute ago

Customers Out

8

Previous 8

Last update: a minute ago

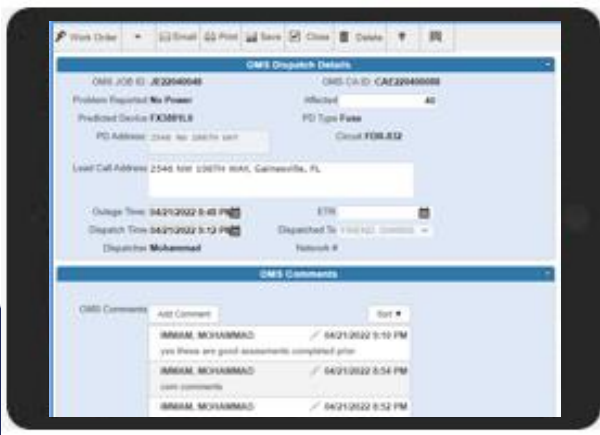


Workshops and Knowledge Transfer

Sarah Parrish
Jones Edmunds

Stakeholder Requirements

- **Paperless** – Fillable forms are Cityworks Inspections.
- **Consistent** – Field Crews remain in one software. Call takers remain in OMS.
- **Real-Time** – OMS to Cityworks Work Order data push at creation, at update, and Cityworks to OMS at field completion.
- **Simple** – Log-In, Interface/Data Entry, Photo Attachment
Cityworks Native Mobile App - Assessors
- **Defined Workflows** – Areas of responsibility b/w Assessors and Repair Crews clearly separated (Inspection & Work Order)



OMS & Cityworks Field Mapping Workshops

1. OMS Job Created				
Create WO & Push OMS fields to CW WO <i>(not sure what the tables and names of these fields are in OMS)</i>	Cityworks WO Field Label <i>(The customized interface - field labels/not the actual table names)</i>	Cityworks Table <i>(Name of Cityworks Table that stores information)</i>	TableField <i>(Database field name)</i>	Notes
	Work Order Id	WORKORDER	WORKORDERID	Next available WO# (pull from PWS) SID table?. Need WORKORD
OMS Job #	OMS Job #	WORKORDER	TEXT2	Read Only/ Free-form entry field
Address	WO Address	WORKORDER	WOADDRESS	Text 100 field
Dispatch To	Dispatch To	WORKORDER	SUBMITTO	Also push DATESUBMITTO & SUBMITTOSID
Outage Start	Outage Start	WORKORDER	PROJSTARTDATE	Read Only Date Field Note - ProjFinishDate will auto-populate to
Outage Start	Actual Start	WORKORDER	ACTUALSTARTDATE	
X	X	WORKORDER	X	
Y	Y	WORKORDER	Y	
Field Remarks	Comments	WORKORDERCOMMENTS	Insert New Row	See ExampleTableScreenshots
Dispatch Initials	Dispatch Initials	WOCUSTFIELD	Insert New Row	Read Only/ Free-form entry field
Problem Reported	Problem Reported	WOCUSTFIELD	Insert New Row	See ExampleTableScreenshots
Protective Device Id	Protective Device Id	WOCUSTFIELD	Insert New Row	Read Only/ Free-form entry field
Circuit	Circuit	WOCUSTFIELD	Insert New Row	Read Only/ Free-form entry field
2. Cityworks Completed/Closed				
Push OMS fields to Cityworks WO fields:	Cityworks WO Field Label	Cityworks Table	TableField	Notes
Outage End	Outage End	WORKORDER	PROJFINISHDATE	Read Only Date Field
Push Cityworks field data Back to OMS:	Cityworks WO Field Label	Cityworks Table	TableField	Notes
Response Activities Performed	Response Activities Performed	WORKORDER	INSTRUCTIONS	Append to Field Remarks
Network #	Network #	WORKORDER	TEXT1	
Cause of Outage	Cause of Outage	WORKORDER	TEXT3	See CauseOfOutageCodes
Actual Finish	Actual Finish	WORKORDER	ACTUALFINISHDATE	

OMS to Cityworks Workshops

Work Order
Email
Print
Save
Close
Delete

JE22030001
START
CANCEL

Information

Job Type: **No Power**

Outage Type: **Outage**

Momentary

Priority: **Low** 57

Priority Customers: 0

Current Affected: 34

Lead Call Address: 8122 SW 16TH PL

Location Address (If Required)

Lead Call Name: DEAL LISA

Lead Call Phone Number: 352-332-5877

Lead Call Preferred Contact Info

Lead Call Description: Customer reports there is no power on her house. She notified the lights flickered for about 10 minutes before a complete outage.

Device Name: FX3881L0

Feeder Name: FDR-1034

Phases: B

Outage Start Time: 03/01/22 16:11

Outage Restore Time

Details

Status: **New**

Energyization Status: **Predicted**

Locked: **Yes**

GRU Wire Down Found

Notes: The meter at customer's residence shows an outage from AMI.

Network Number: 1005489

Internal ETR: 03/01/22 18:23

ETR Status: **Automatic**

Cause: **Weather High/Low Temperature**

Cause Preventable?: **No**

Lead Assignment ID: CAE220300001

Lead Assignment Crew Name: 216-GARY SUTTON

Lead Assignment Notes: By 216 SUTTON, GARY 3/1/2022 4:51:01 PM: The outage appears to be from the distribution switch misconfiguration. The ticket needs to be rolled up. By 216 SUTTON, GARY 3/1/2022 4:56:56 PM: The equipment has been fixed. There was no major damages in the switch. Temperature caused it to operate and close the line. Situation is safe and GRU is leaving site.

Follow Up?

Follow Up Notes

QA Sign-Off

Outage Steps

OSE220300001

Predicted

03/01/22 16:11:01

46 minutes, 39 seconds (Not Yet)

Total SAIDI: 0.0170

Total SAIFI: 0.0004

Total CAIDI: 47

Affected Customers: 34

Job Hazards

Crew Assignments

CAE220300001

216-GARY SUTTON

Work Type: **Trouble**

Status: **Completed**

Call Observations

Attachments

OMS Dispatch Details

OMS JOB ID: JE22040048 OMS CA ID: CAE220400088

Problem Reported: **No Power** Affected: **40**

Predicted Device: **FX3881L0** PD Type: **Fuse**

PD Address: 2546 NW 106TH WAY Circuit: **FDR-832**

Lead Call Address: 2546 NW 106TH WAY, Gainesville, FL

Outage Time: **04/21/2022 8:48 PM** ETR: **04/21/2022 8:52 PM**

Dispatch Time: **04/21/2022 9:12 PM** Dispatched To: **FRIEND, DARRIS E**

Dispatcher: **Mohammad** Network #

OMS Comments

OMS Comments: Add Comment Sort ▼

- IMMAM, MOHAMMAD 04/21/2022 9:10 PM
yes these are good assesments completed prior
- IMMAM, MOHAMMAD 04/21/2022 8:54 PM
com comments
- IMMAM, MOHAMMAD 04/21/2022 8:52 PM
Dispatcher is now completing field remarks

T1 Details

Work Order Id: 83040

Cause of Outage: **Non-Outage Custor** Preventable?: 0

Pole #: Loop/Radial:

Instructions: **SPECIAL INSTRUCTIONS: You gotta watch the breaker and its recloser first**

DISPATCHER NOTES: Dispatcher added notes

LEAD CALLER NOTES: A no power job in the neighborhood

Completed By: Status: **Active** **COMPLETE**

Additional Information

- Equipment Changed Out? **Equipment Changed Out**
- Billable Damages? **No Billable Damages**
- UG or OH? **UG**

Configurable Layout – Draft 1

Work Order | Email | Print | Save | Close | Delete

General

Asset Type: INSPECTION Change Asset Type

WO Desc: OMS Job

Work Order Id: 91500 OMS Job #: JE21090016

WBS: Network #:

WO Address: 2120 NW 2ND ST

Location Details: 2120 NW 2ND ST

Status: Current Priority: Emergency

Requested By: Supervisor: ADMINISTRATOR, ELI

Dispatched To: 216 SUTTON, GARY Dispatch Date: 09/30/2021 2:10 PM

Outage Start: 09/30/2021 2:08 PM Outage End: 09/30/2021 2:08 PM

Actual Start: Actual Finish:

Completed By: Cause of Outage:

Equipment Changed Out? Billable Damages?

Comments: Sort ▲

no comments

Response Activities
Performed:

Additional WO Data

Data Category: OMS Information

Dispatch Initials: SCC

Problem Reported:

Protective Device Id: NONE4831

Circuit:

Loop:

Direct Buried:

Assets

Asset Count: 1

Asset Type	Asset Id	Entity Uid	Location	Work
INSPECTION	0	0		<input type="checkbox"/>

Related Work Activities

Inspections

Link to Insp Id:

Work Orders

Link to WO Id:

Attachments

Drag and drop files here to attach them.

Details

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Configurable Layout - Draft 2

Work Order | Email | Print | Save | Close | Delete

OMS Dispatch Details

OMS Job #:
Problem Reported: # Affected:
WO Address:
Location Details:
Outage Start: 06/27/2021 8:18 AM Outage End: 06/29/2021 8:18 AM
Dispatch Time: 06/27/2021 8:18 AM Dispatched To: 210 JAMES, GLEN
Dispatcher: Network #:

Attach Assets

Asset Type	Asset Id	Entity Uid	Location	W
[Empty Table]				

[Icons: Add, Edit, Delete, etc.]

Additional WO Data

Data Category: OMS Information
Dispatch Initials:
Problem Reported:
Predicted Device Id:
Circuit:
Loop:

T1 Details

WO Desc: OMS Job
Work Order Id: 91352
Route #: Pole #:
Predicted Device Id:
Field Complete: Status: Completed
Completed By: Cause of Outage:
Equipment Changed? Billable Damages?

Details

Initiated By: FRIEND, DARRIS E
WO Closed By: Date Closed:
Account:
Map Page: Shop:
Tile No: District:
X Coord: Y Coord:

Crew Remarks/Work Description

Response Activities Performed:

Related Work Activities

[Empty List]

Photos/Attachments

+ Add attachment... [Remove all attachments]

Drag and drop files here to attach them.

OMS Comments

OMS Comments: Add Comment Sort

no comments

Final Layout

Work Order | Email | Print | Save | Close | Delete

OMS Dispatch Details

OMS JOB ID: JE22040048 OMS CA ID: CAE220400088

Problem Reported **No Power** Affected:

Predicted Device **FX3881L0** PD Type **Fuse**

PD Address: Circuit **FDR-832**

Lead Call Address

Outage Time: ETR:

Dispatch Time Dispatched To:

Dispatcher **Mohammad** Network #

OMS Comments

OMS Comments

IMMAM, MOHAMMAD

IMMAM, MOHAMMAD

IMMAM, MOHAMMAD

T1 Details

Work Order Id:

Cause of Outage: Preventable?:

Pole #: Loop/Radial:

Instructions:

Completed By: Status:

Additional Information

Equipment Changed Out? Equipment Changed Out

Billable Damages? No Billable Damages

UG or OH? UG

Quality Assurance Checklist

=== Pre Assignment ===

1. Pay attention to Predicted Device
2. Look at the map to learn the area (navigate there?)
3. Attach as many relevant pictures as possible

=== Post Assignment ===

1. Input pole # and Loop/Radial
2. Fill in all fields in Addition Information Section.
3. Select The Cause of Outage and if the outage is preventable
4. Add comments to provide a detailed field remark. (you may use your ipad's text to speech)
5. Only when all above step is completed, change the status to Completed and Save the work order.
(If you missed step before completion, or you completed your assignment by mistake, you need to radio communicate it to SCC operator on duty)

Attach Assets

<input type="checkbox"/>	Asset Type	Asset Id	Entity Uid	Location	Work Completed	FEEDERID	FEEDERID2	INSTALLATIONDATE
<input type="checkbox"/>	EFUSE	72213	FX3881L0	832	8/2/2012 8:00:00 PM	12.47 kV	Grounded Y	A 2 80 K NC

Related Work Activities


Inspections

Work Orders

Photos/Attachments

Drag and drop files here to attach them.

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GRUSM

More than Energy

Move to Paperless – Billable Damage Form



FACILITY DAMAGE FORM (Please print)

Date of Incident: ____/____/____ Approx. Time: _____

TYPE of INCIDENT

- Electric Gas GRU Com Water Wastewater
 Vehicle Accident Underground Facilities Damage Property Damage
 Other _____

Address of Incident: _____

Description of Damage: _____

DAMAGING PARTY INFORMATION

Name of Company or Person Causing Damage: _____

Billing Address (if different from above): _____

Contact Name: _____

Billing Phone Number: _____ Cell Phone Number: _____

Insurance Company: _____ Policy Number: _____

Damaging Party Accepts Responsibility: Yes No Signature: _____

EXCAVATION INFORMATION N/A

Type of Work being performed: _____

Equipment Involved: Backhoe Shovel Trencher Boring Machine Other _____

UNDERGROUND LINE LOCATION INFORMATION

Damaging Party Locate Ticket # _____ Valid Ticket No Ticket Expired Ticket

Damaging Party did not wait the required time for location before digging Marks visible Yes No

Have photos been taken by a GRU Representative? Yes No (Before, After, Explain Below)

Was the correct area located? Yes No Was the line location accurate? Yes No

Explain: _____

EMERGENCY RESPONSE

GRU Personnel Involved in Repair: _____

EMERGENCY RESPONDERS CONTACTED Yes No (check all that apply)

- Gainesville Police Dept Alachua County Sheriff Office Fla. Highway Patrol Univ. Police Dept.
 Fish and Wildlife Commission Gainesville Fire Rescue Alachua County Fire Rescue
 Other: _____ Police Report Case Number: _____

Officer Name: _____ Badge #: _____

Did Outage Occur? Yes No Length of Outage: _____ # of Customers affected: _____

GRU Safety Notified? Yes No Date: _____ Time: _____

Safety Coordinator: _____

Were photos taken by other Agencies at scene incident? Yes No Contact person: _____

Form completed by: _____ Date: _____

REVIEW

GRU Incident Coordinator at Scene: _____ Date: _____

Field Services Supervisor (if applicable): _____ Date: _____

GRU Central Line Location Supervisor: _____ Date: _____

DAMAGE RESPONSIBILITY (to be completed by Manager or his/her designee)

Damaging Party to be Billed: Yes No

Name of Manager or designee: _____ Date: _____

Date Forwarded to Legal Services: ____/____/____

ADDITIONAL INFORMATION

Names of Witnesses

Move to Paperless – Billable Damage Form

Inspection	Details
Inspection Type Billable Damage Report	
Inspection Id	11785
Location	507 NW 39th Rd, Gainesville, Florida, 32607
Status	Open
Submit To	Work Order, Center
Date Submitted	05/16/2022 3:14 PM
Inspected By	
<h3>Type Of Incident</h3>	
Date of Incident	
Approximate Time of Incident	Answer
Type of Incident	<input type="checkbox"/> Electric <input type="checkbox"/> Gas <input type="checkbox"/> GRUCom <input type="checkbox"/> Water <input type="checkbox"/> Wastewater <input type="checkbox"/> Vehicle Accident <input type="checkbox"/> UG Facilities Damage <input type="checkbox"/> Property Damage
Description of Damage	Answer
Contact Name	Answer
<h3>Damaging Party Information</h3>	
Person or Company Responsible for Damage	Answer
Billing Address (If different from 'Location')	Answer

<h3>Excavation Information</h3>	
Excavation Required?	
Type of Work Being Performed	Answer
Equipment Involved	
Other Equipment Description	Answer
<h3>Locate Ticket Information</h3>	
Damaging Party Locate Ticket #	Answer
Locate Ticket Info	
Locate Marks Visible?	
Was the Correct Area Located?	
Was the Line Location Accurate?	
Explanation:	Answer
Name of Line Locator Responding to Incident	Answer
Description of Attached Photos	Answer

Move to Paperless – Billable Damage Form

Emergency Response	
Emergency Responders Contacted	<input type="text"/>
Other Agency Contacted (If applicable)	<input type="text"/>
Officer Name	<input type="text"/>
Badge Number	<input type="text"/>
Did Outage Occur?	<input type="text"/>
Length of Outage	<input type="text"/>
# of Customers Affected	<input type="text"/>
GRU Safety Notified?	<input type="text"/>
Date GRU Safety Notified	<input type="text"/>
Time of Notification	<input type="text"/>
Safety Coordinator Name	<input type="text"/>
Were photos taken by other Agencies at the scene of Incident?	<input type="text"/>
Contact Person	<input type="text"/>

Review	
Name of GRU Incident Coordinator at scene	<input type="text"/>
Date of GRU Incident Coordinator at scene	<input type="text"/>
Name of Field Services Supervisor (if applicable)	<input type="text"/>
Date Field Services Supervisor (if applicable)	<input type="text"/>
Name of GRU Central Line Locator Supervisor	<input type="text"/>
Date of GRU Central Line Locator Supervisor	<input type="text"/>
Damage Responsibility (to be completed by Manger or Designee)	
Damaging Party to be Billed	<input type="text"/>
Name of Manager or Designee	<input type="text"/>
Date of Manager or Designee	<input type="text"/>
Date forwarded to Legal Services	<input type="text"/>
Additional Information	
WITNESSES (Additional Witnesses can be added in the Comments below)	
Witness 1 Name & Phone	<input type="text"/>

Assessment Form as Cityworks Inspection

Inspection Details

Inspection Type SDADV09

Inspection Id 11734

Location 5290 NE 15TH ST, GAINESVILLE, Gainesville, FL

Status

Submit To Date Submitted

Inspected By FRIEND, DARRIS E Date Inspected 05/3/2022 9:08 AM

Observations

Pole Condition
BROKEN

Fuses Open
Y

Transformers Damaged
Y

Wires Down
Y

Trees Down
Y

Branch On Wire
Y

Truck Accessible
N

Attach The Photo!


Clear Observations

Comments

Comments

Attachments

+ Add attachment... Remove all attachments

 IMG_20220503_090820450.jpg 2.08 MB
Attached by FRIEND, DARRIS E 05/3/2022 9:09 AM



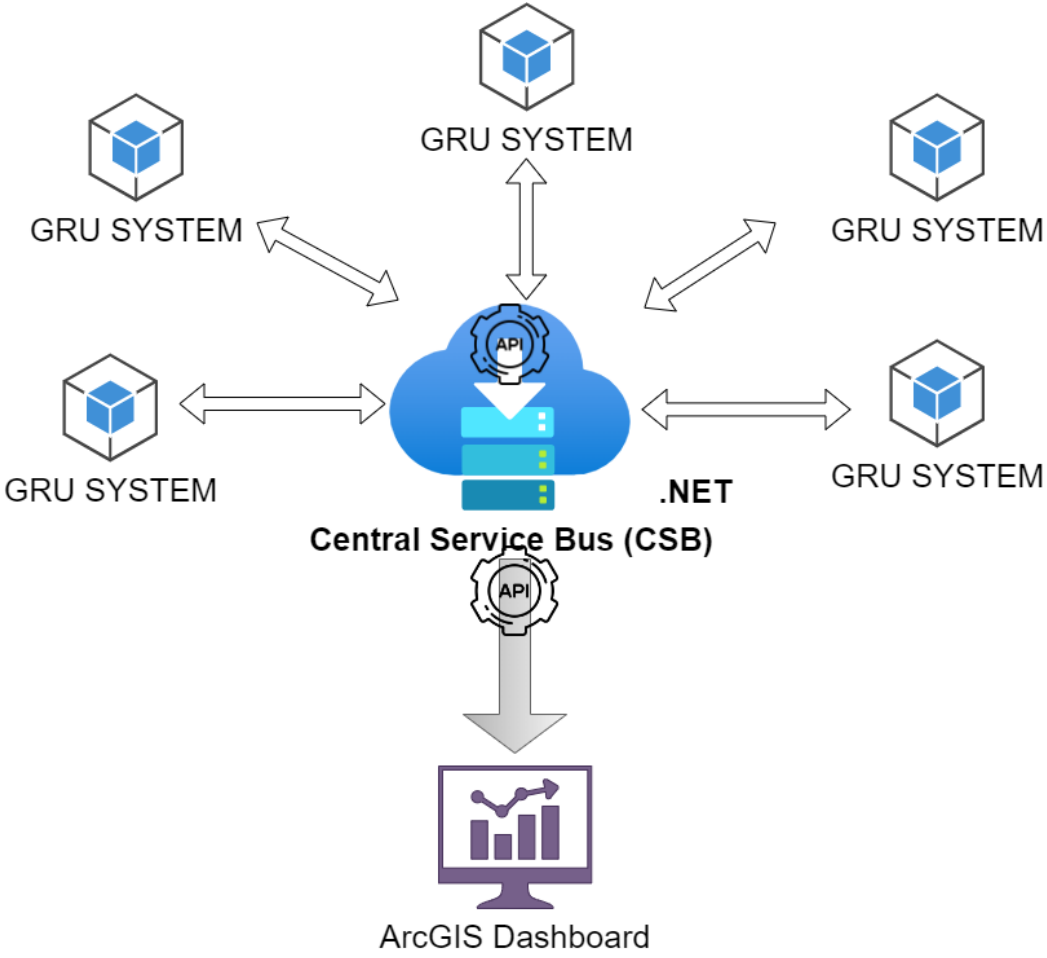
How We Did It

Mohammad Immam
GRU System Control

Enterprise Systems

- Electra (Outage Management System)
- Cityworks (Asset Management Platform)
- ArcGIS Enterprise (GIS)
- Verizon Network Fleet (Fleet Tracking)

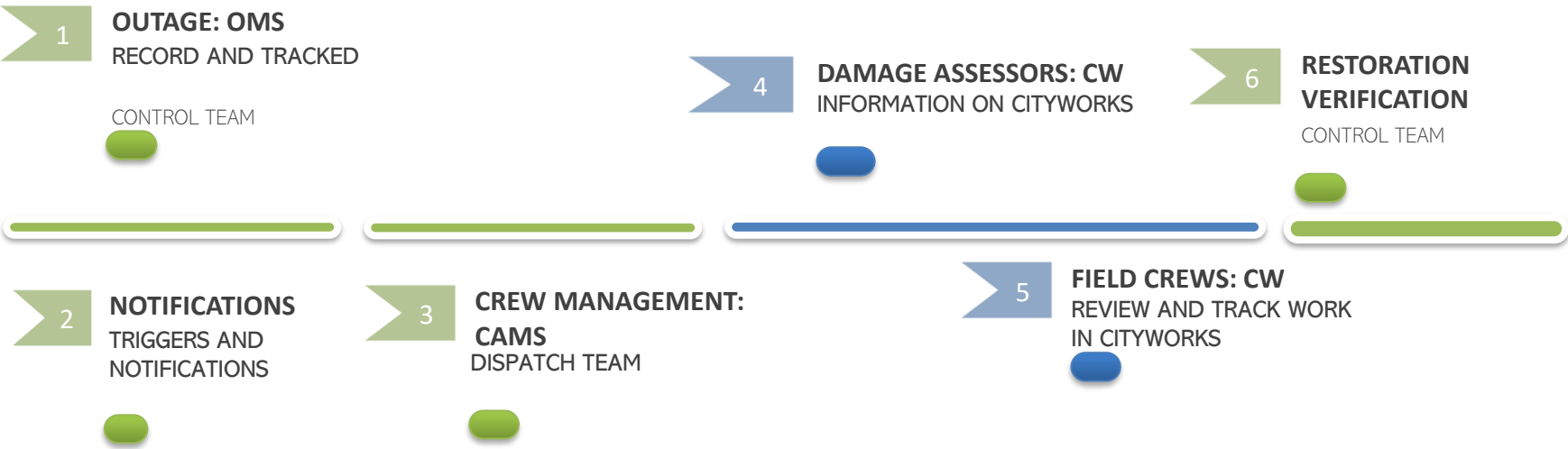
Infrastructure



Replicated for fail-safe

CSB in Action

OMS integration through CSB (ON APIs and TRIGGERS)



OMS – Outage Management System

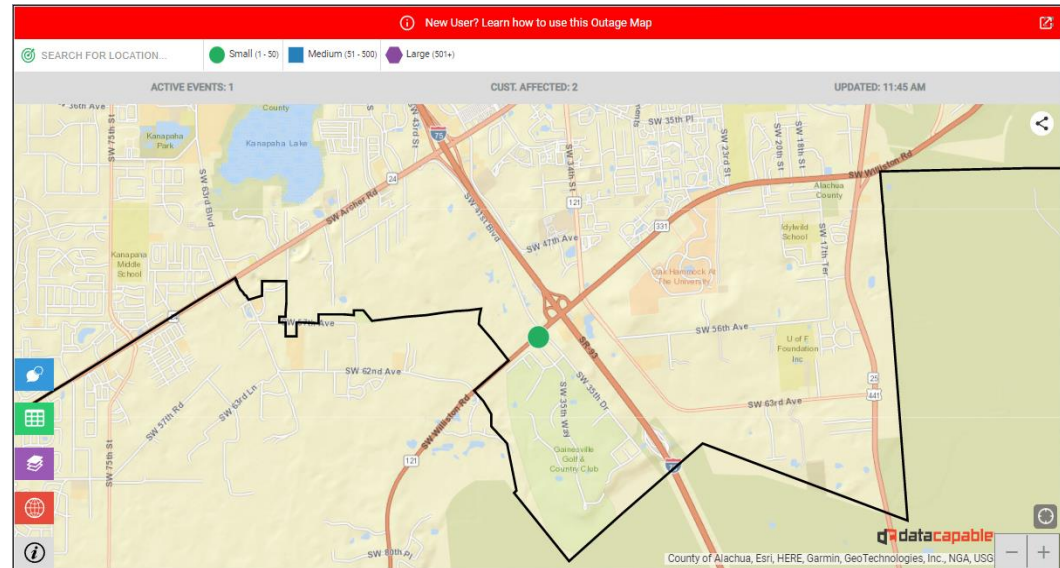
OSI Electra

- Primary System of Record
- Outage Operations
- Tracking Incidents
 - end-end
- Triggers
 - notify stakeholders
 - Summary to CSB

Created At	Job ID	Feeder Name	Job Type	Status	Lead Assignment	Lead Crew	Lead Assignment Status	Address	Device Name	Device Address	Wire Owner	Priority	Notes
05/16/22 16:35	J62208102	FDR-1233	No Power	New	Damage Assessment	413-SHMAN BAY	Assigned		NONE162782		GAINESVILLE	1	27
05/16/22 16:31	J62208100	FDR-838	No Power	New	Damage Assessment	414-LESLIE BROT	Assigned		395116	8821 SW 15TH AVE, GAI		1	25
05/16/22 16:30	J62208098	FDR-1029	Low Wire	In Progress	Damage Assessment	428-Thomas Kac	Assigned	923 SW 80TH I	97842	926 SW 80TH TER, GAIN		1	0
05/16/22 16:29	J62208099	FDR-1034	No Power	New	Damage Assessment	402-MICHAEL Cr	Assigned		381768	7713 SW 9TH PL, GAIN		1	31
05/16/22 15:48	J62208097	FDR-203	Tree On Wire	New	Damage Assessment	426-KRISTH WHIS	Assigned	2202 SE 46TH I	NONE183	2201 SE 46TH TER, GAIN		1	5
05/16/22 15:48	J62208096	FDR-203	Tree On Wire	New	Damage Assessment	22-JAMES ABRI	Assigned	2120 SE 46TH I	NONE183	2201 SE 46TH TER, GAIN		1	5
05/16/22 15:48	J62208095	FDR-203	Tree On Wire	New	Damage Assessment	421-Michelle Ho	Assigned	2116 SE 46TH I	NONE183	2201 SE 46TH TER, GAIN		1	5
05/16/22 15:48	J62208094	FDR-203	Tree On Wire	New	Damage Assessment	406-MILVIA HIDI	Assigned	2110 SE 46TH I	NONE183	2201 SE 46TH TER, GAIN		1	5
05/16/22 15:48	J62208093	FDR-203	Tree On Wire	New	Damage Assessment	426-Sandy Lars	Assigned	2106 SE 46TH I	NONE184	4699 SE HAWTHORNE R		1	5
05/16/22 15:48	J62208092	FDR-203	Tree On Wire	New	Damage Assessment	426-Sandy Lars	Assigned	2100 SE 46TH I	NONE184	4699 SE HAWTHORNE R		1	5
05/16/22 15:48	J62208091	FDR-203	Tree On Wire	New	Damage Assessment	401-KAT LARER	Assigned	6816 SE 14TH I	NONE231	6829 SE 14TH LN, GAIN		1	3
05/16/22 15:48	J62208090	FDR-207	Tree On Wire	New	Damage Assessment	417-Fernando M	Assigned	4608 SE 2ND P	NONE4939	4608 SE 2ND PL, GAIN		1	3

Notifications

- ArcGIS Customer Facing Outage Map
 - Integrated with OMS
- Triggers
 - Email
 - Geofence Notifications
- Everbridge



CAMS

- Dispatch Team
- Tracks Crew Availability
- Custom Interface
- Seamless integration
- OMS as the backend
- Standby Shifts
- Callouts
- Seamless with OMS
- Summary to CSB

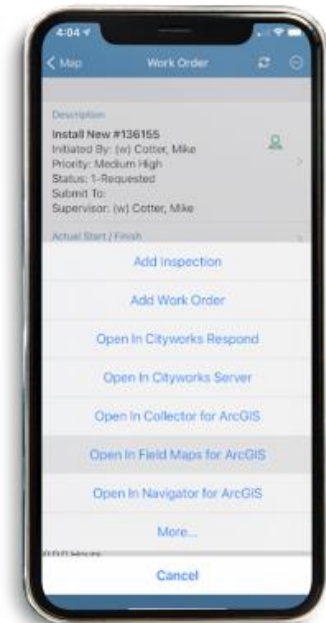
The screenshot displays the GRU CAMS interface. At the top, there's a navigation bar with 'GRU CAMS' and user roles 'Standby Admin'. A date range selector shows '05/12/2022 12:00 AM' to '05/19/2022 12:00 AM'. Below this is a menu with categories like 'Shop', 'Vegetation', 'Field Services', 'Substation', 'Line Locators', 'Managers', 'GRF Measure', 'Engineering', 'Electric T&D', 'Gas', 'Water', 'Water WW', 'Assessor', 'Communications', 'SC', and 'City Of Alachua'. The main area shows a calendar for 'May 2022' with a grid of days (Sun to Sat). Each day has a list of crew members and their shifts, color-coded by shift type. For example, on Sunday, there are shifts for '19-Jeff Garteiser', '12a-322-DAVID CARTER', '12a-357-DOUG MAXWELL', '12a David Wynn', '12a-362-BRIAN LABONTE', '12a-620-H. Fred Hill', '12a-641-WESLEY LESTER', '12a-307-BOB SMITH', '12a-188-CHRIS GALLUSO', '12a-216-GARY SUTTON', '12a-244-KEN BAKER', '12a-228-JUSTIN DICKERSON', '12a-296-HOUSTON MCKENZIE', '12a-122-Travis Hutchinson', '12a-138-JARED COPELAND (Supervisor)', '12a-167-KYLE WHEELER', '12a-98-Graham Bolesman', '12a-240-JAMES (BLUE) EARNHART', '12a-202-MICHAEL KENNEDY', '12a-180-BILL WOOD (GEN. FOREMAN)', and '12a-188-CHRIS GALLUSO'. On the right side, there's a sidebar showing details for selected shifts, including names like '195-Justin Wheaton', '362-BRIAN LABONTE', '344-Darryl King', and '21-KYLE WOODARD', along with their roles and contact information.

Cityworks in the Field

- Custom Interfaces (XML)
- Tablets and phones for field personnel
- CSB integrating OMS Incidents
- Assessments and Restoration Summary to CSB

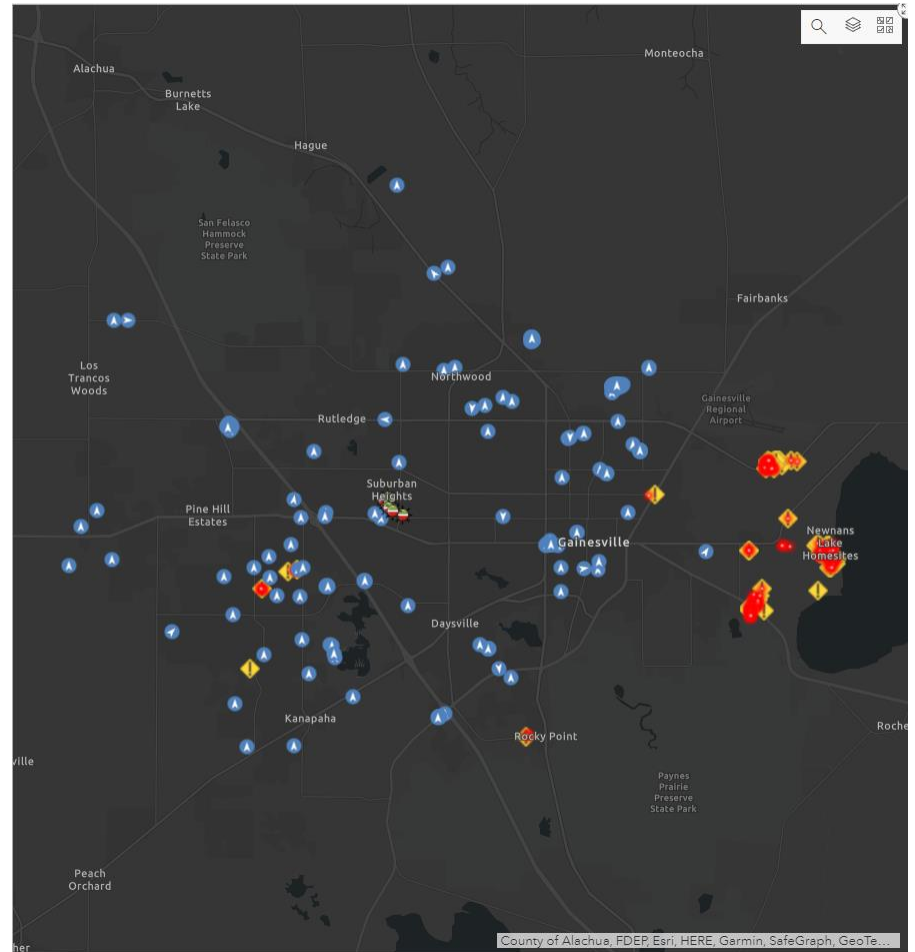
The screenshot shows a web-based interface for a Work Order. The top navigation bar includes 'Work Order', 'Email', 'Print', 'Save', 'Close', 'Delete', and a search icon. The main content is divided into several sections:

- OMS Dispatch Details:** OMS JOB ID: JE22040048, OMS CAID: CAE220400088. Problem Reported: No Power, Affected: 40. Predicted Device: FX3881L0, PD Type: Fuse. PD Address: 2546 NW 106TH WAY, Circuit: FDR-832. Lead Call Address: 2546 NW 106TH WAY, Gainesville, FL. Outage Time: 04/21/2022 8:48 PM, ETR: [calendar icon]. Dispatch Time: 04/21/2022 9:12 PM, Dispatched To: FRIEND, DARRIS, Dispatcher: Mohammad, Network #: [input field].
- Quality Assurance Checklist:** Pre-Assignment: 1. Pay attention to Predicted Device, 2. Look at the map to learn the area (navigate there?), 3. Attach as many relevant pictures as possible. Post-Assignment: 1. Input pole # and Loop/Radial, 2. Fill in all fields in Addition Information Section, 3. Select The Cause of Outage and if the outage is preventable, 4. Add comments to provide a detailed field remark, (you may use your ipad's text to speech), 5. Only when all above step is completed, change the status to Completed and Save the work order. (If you missed step before completion, or you completed your assignment by mistake, you need to radio communicate it to SCC operator on duty).
- Attach Assets:** Table with columns: Asset Type, Asset Id, Entity Uid, Location, Work Completed, FEEDERID, FEEDERID2, INSTALLATIONDATE. Row: EFUSE, 72213, FX3881L0, 832, 8/2/2012 8:00:00 PM, 12.47 kV Grounded Y, A, 2, 80 K, NC.
- Related Work Activities:** Inspections: Create Inspection. Work Orders: Create Child WO.
- Photos/Attachments:** Add attachment... Remove all attachments. Drag and drop files here to attach them.
- OMS Comments:** Add Comment. Comments: IMMAM, MOHAMMAD (04/21/2022 9:10 PM) yes these are good assesments completed prior; IMMAM, MOHAMMAD (04/21/2022 8:54 PM) com comments; IMMAM, MOHAMMAD (04/21/2022 8:52 PM) Dispatcher is now completing field remarks.
- T1 Details:** Work Order Id: 83040, Cause of Outage: Non-Outage Custo, Preventable?: 0, Pole #: [input field], Loop/Radial: [input field]. Instructions: SPECIAL INSTRUCTIONS: You gotta watch the breaker and its recloser first.



Safety

- Automated Vehicle Location (AVL)
 - Verizon Network Fleet

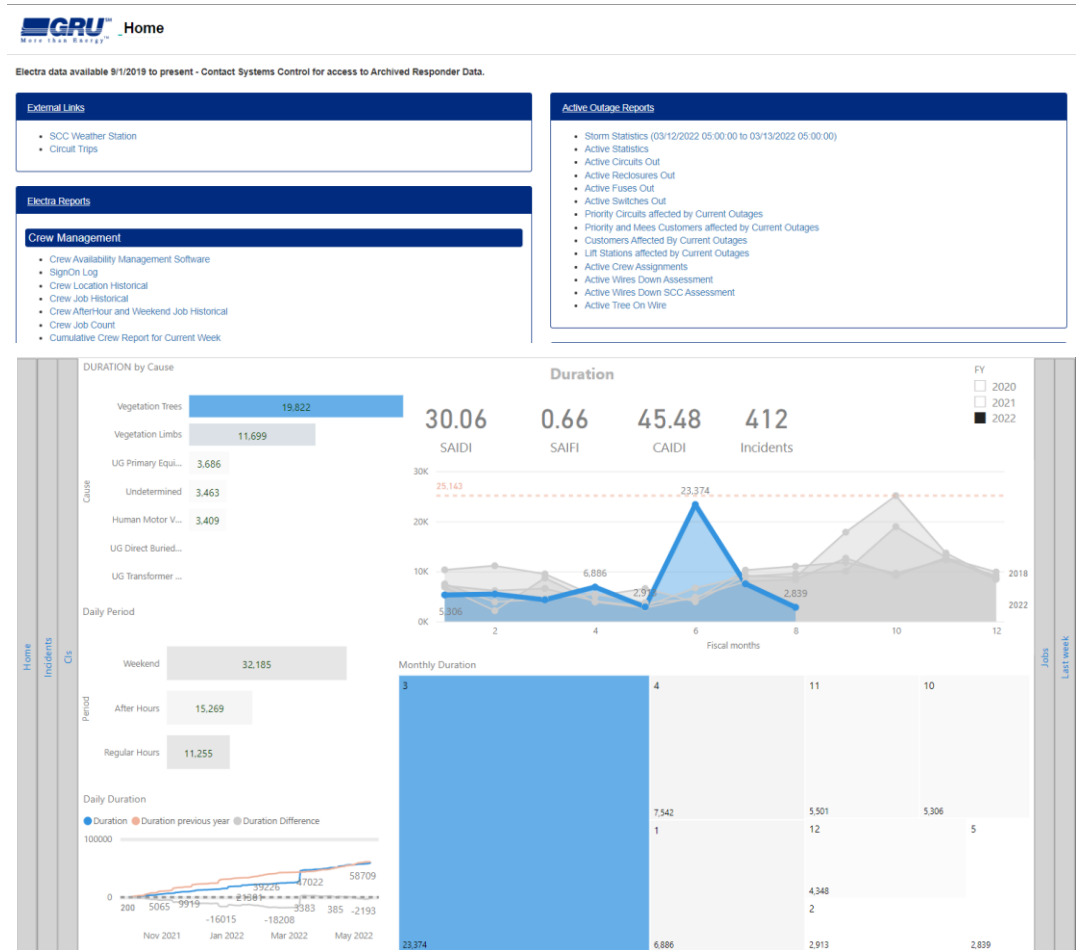


Aftermath Reporting

- Live Statistics on GRU Reports
 - OMS Data
 - Instant reporting
 - Available to departments

Power BI

- Calculate measures
- track goals and targets



Challenges

Central service bus

- Functional on backup site
 - Scalability
 - Data Integrity

OMS Cityworks

- Ease of Use
- Dataflow
- Network reliability (offline map cache)
 - Authentication and Security
 - Role-based Workflow
 - Hardware limitations
 - Communication

What's Next?

- Mobile Device Management (MDM)
 - Deploy Cityworks app with MDM
 - Configure app for training day using MDM
 - Manage app version with MDM

Questions?