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**PSE gets technical**

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# Agenda

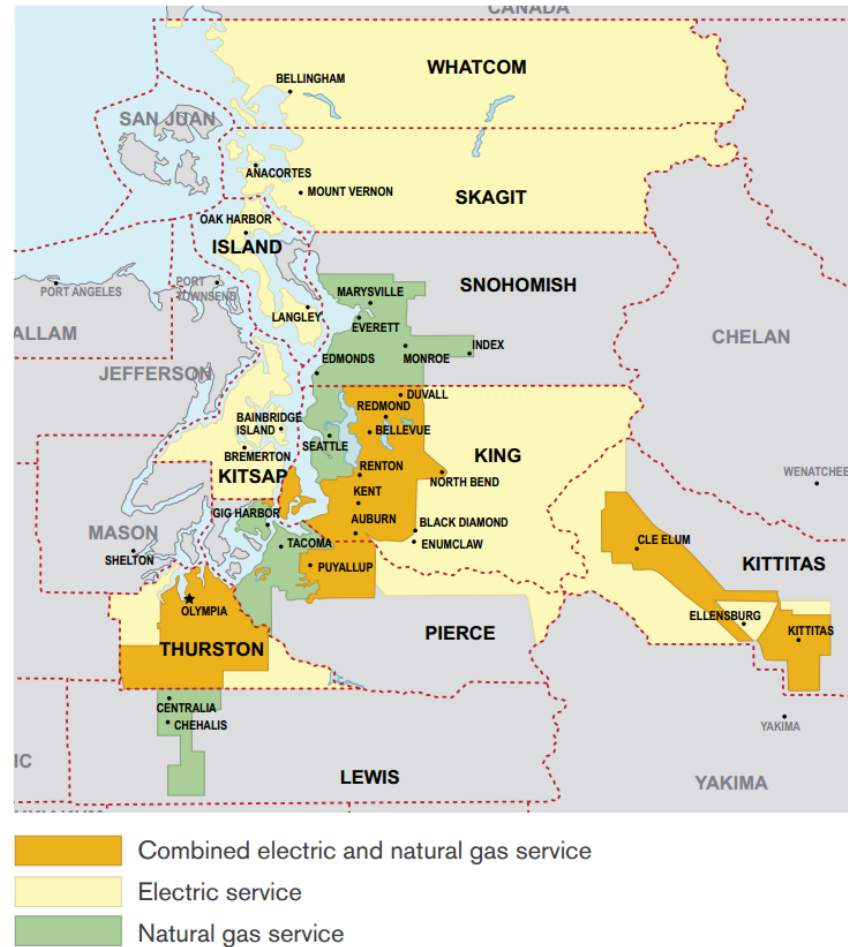
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- About PSE
- Why change?
- What did we change?
  - Go Live
  - Stabilization
- Where are we today?
- Where are we headed?



# About PSE

- Headquartered in Bellevue, WA
- 1.1 million electric customers
- 6,000 square miles in 10 counties
- 2597 transmission circuit miles
- 20,428 distribution circuit miles
- 428 transmission and distribution substations
- Diverse portfolio including wind, hydro, natural gas and coal



# Why change?

- Initial driver – 2006 “Hanukkah Eve” storm

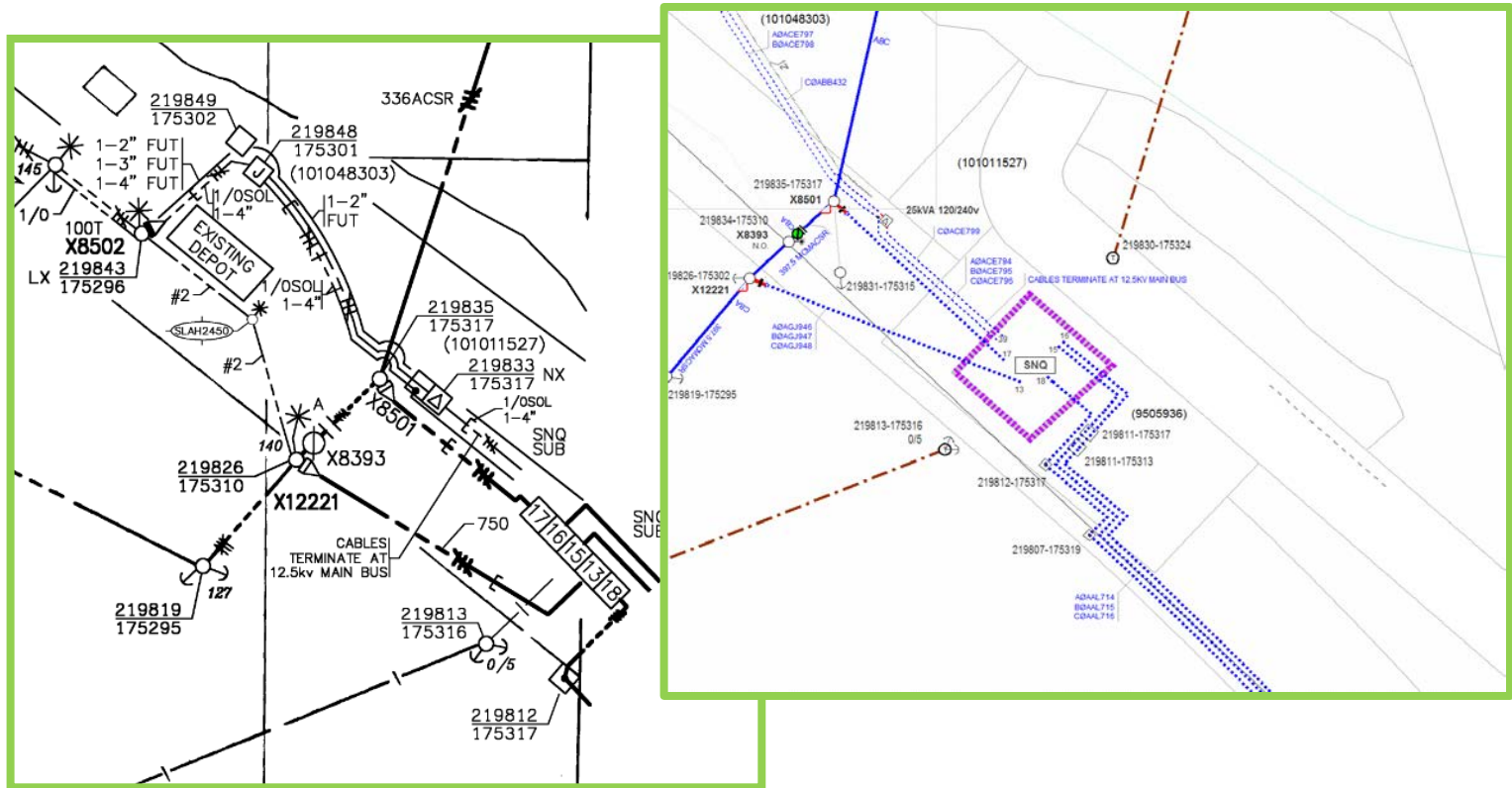


# Why change?

DAY	TIME	# DUTAGE EVENTS	# CUST. CALLS	ESTIMATED OUT	# EVENTS W/ TIME ESTIMATES
12/13	08:00	125	1392	16,580	(12/13-EOC OPeak)
	15:00	219	5,132	34,679	(PEAK #1)
12/14	00:00	79	1434	4026	(12/14 MIDNIGHT)
	12:00	43	426	1785	(12/14 NOON)
12/15	00:00	623	19,142	123,217	7
	12:00	924	37,115	609,142	16
	13:00	929 <sup>PEAK</sup>	37,820	633,981	14
	13:30	928	38,063	634,272 <sup>PEAK</sup>	13
12/16	00:00	907	40,868	585,971	10
	00:30	905	40,746	580,400	11
	01:00	897	40,645	576,429	12
	01:30	890	40,608	573,247	12
	02:00	885	40,523	571,088	12
	02:30	870	39,979	563,564	12
	03:00	864	39,331	558,182	12
	03:30	860	38,946	552,848	12
	04:00	858	38,852	546,764	12
	04:30	856	38,737	544,273	12
	05:00	859	38,730	541,069	12
	05:30	859	38,675	538,689	12
	06:00	856	38,679	538,953	13
	06:30	856	38,633	532,476	13
	07:00	862	38,731	532,266	13
	07:30	862	38,700	526,014	12
	08:00	871	38,986	523,742	12
	08:30	876	39,357	523,670	12
09:00	864	39,341	504,941	12	
09:30	863	39,683	497,673	14	
10:00	865	40,127	491,995	24	
10:30	863	39,978	485,896	23	
11:00	871	40,127	482,653	22	
11:30	875	40,479	480,801	21	

# What did we change?

- New Geographic Information System (GIS)
  - Convert from CAD maps to GE's Smallworld



# What did we change?

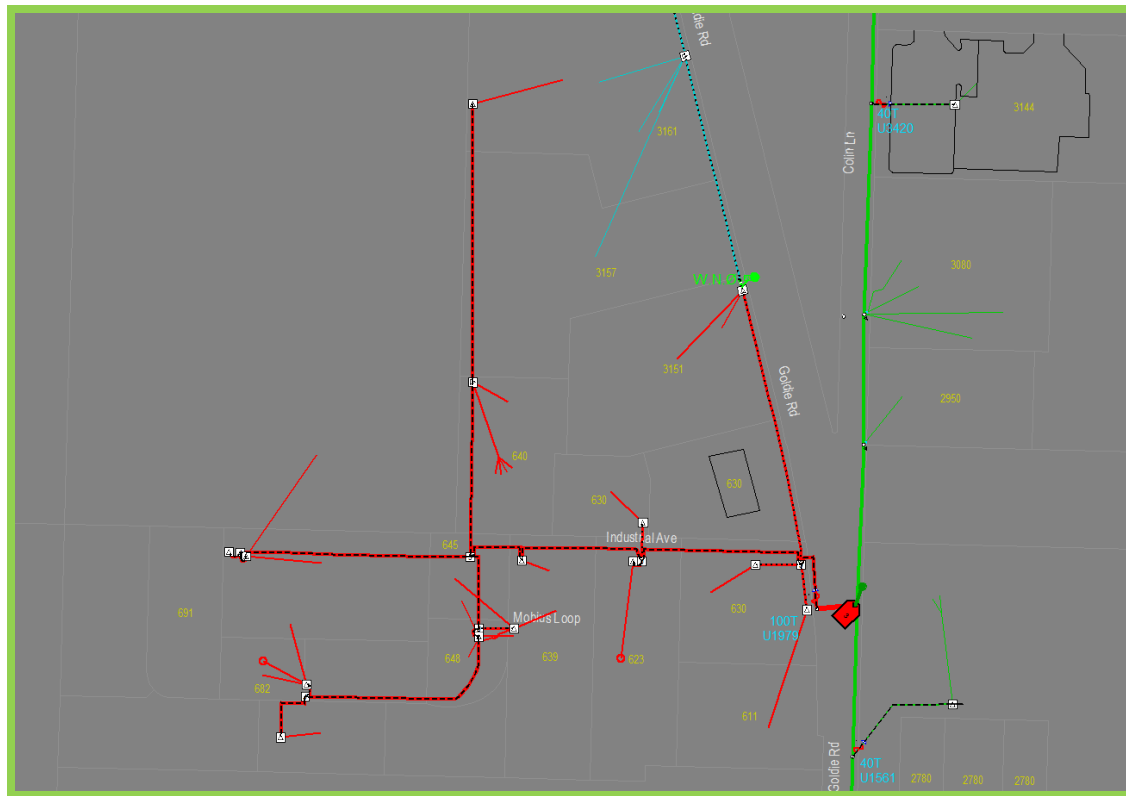
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- New Customer Information System (CIS)
  - Convert from legacy CLX product to SAP



# What did we change?

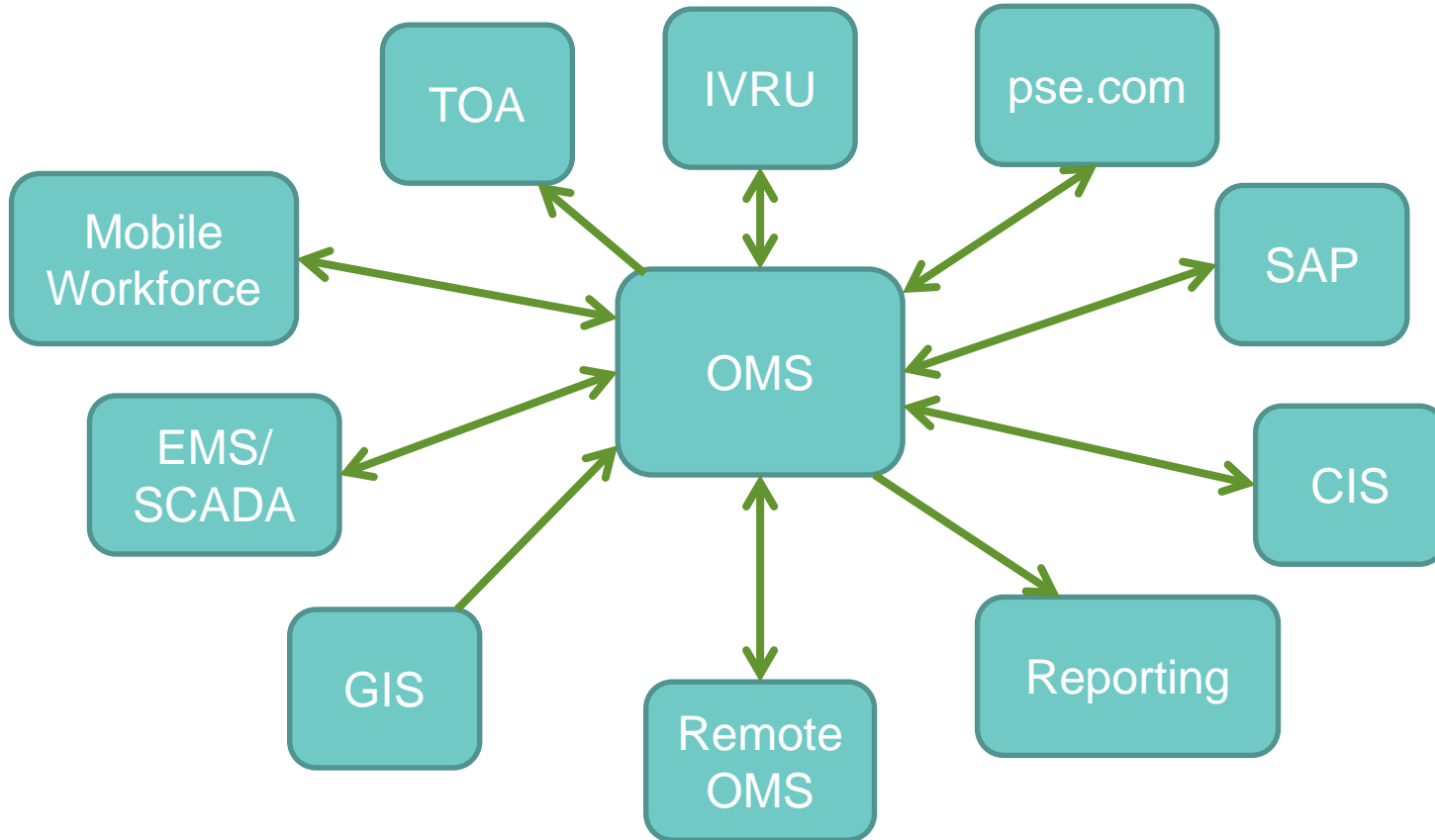
- New Outage Management System (OMS)
  - Convert from legacy CLX program to GE's PowerOn (v4.2.1)





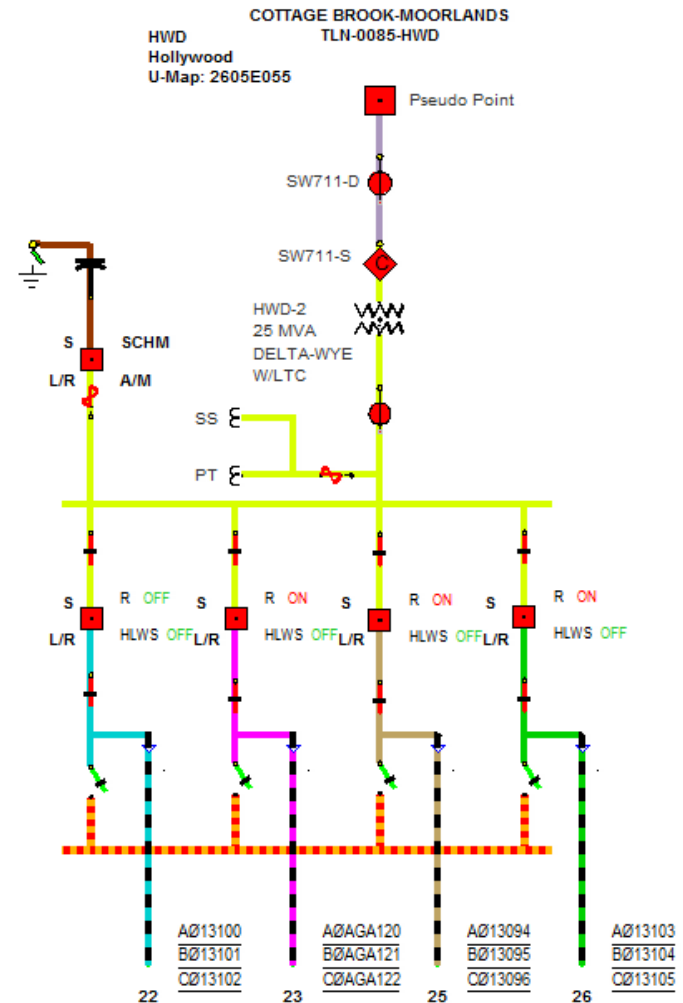
# What did we change?

Goal: Fully integrated systems



# Go Live on April Fools Day...

- Go live 4/1/13
  - (OMS, electric GIS, CIS)
- Data Issues
  - Used offshore resources to convert paper maps to electronic
  - Did field audit
  - Will be multi-year effort to stabilize
- System Issues
  - Integration
  - Performance
  - Defects
- Storm 5/13/13
  - 4 bases open ~ 24 hrs



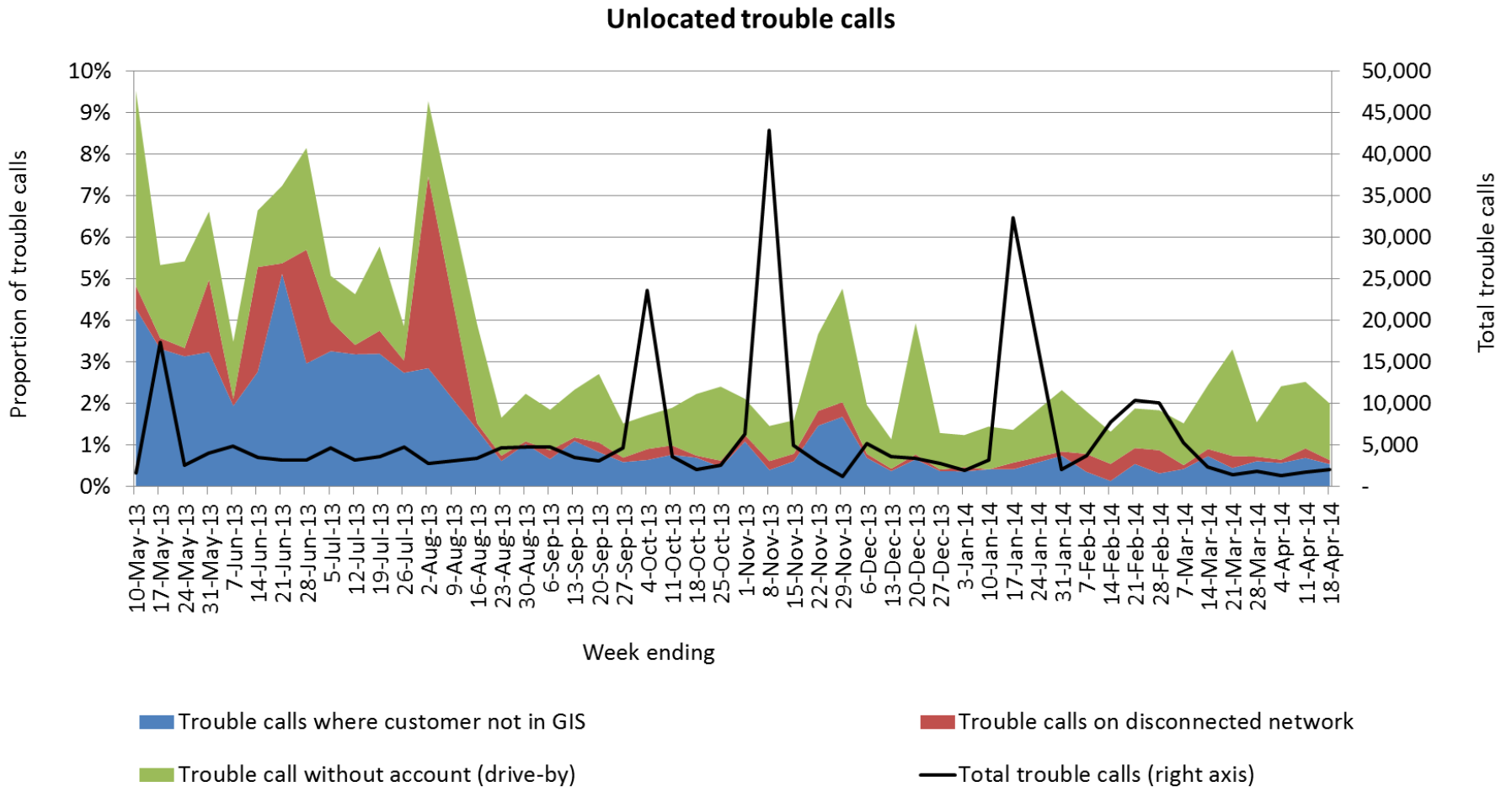
# Summer Stabilization

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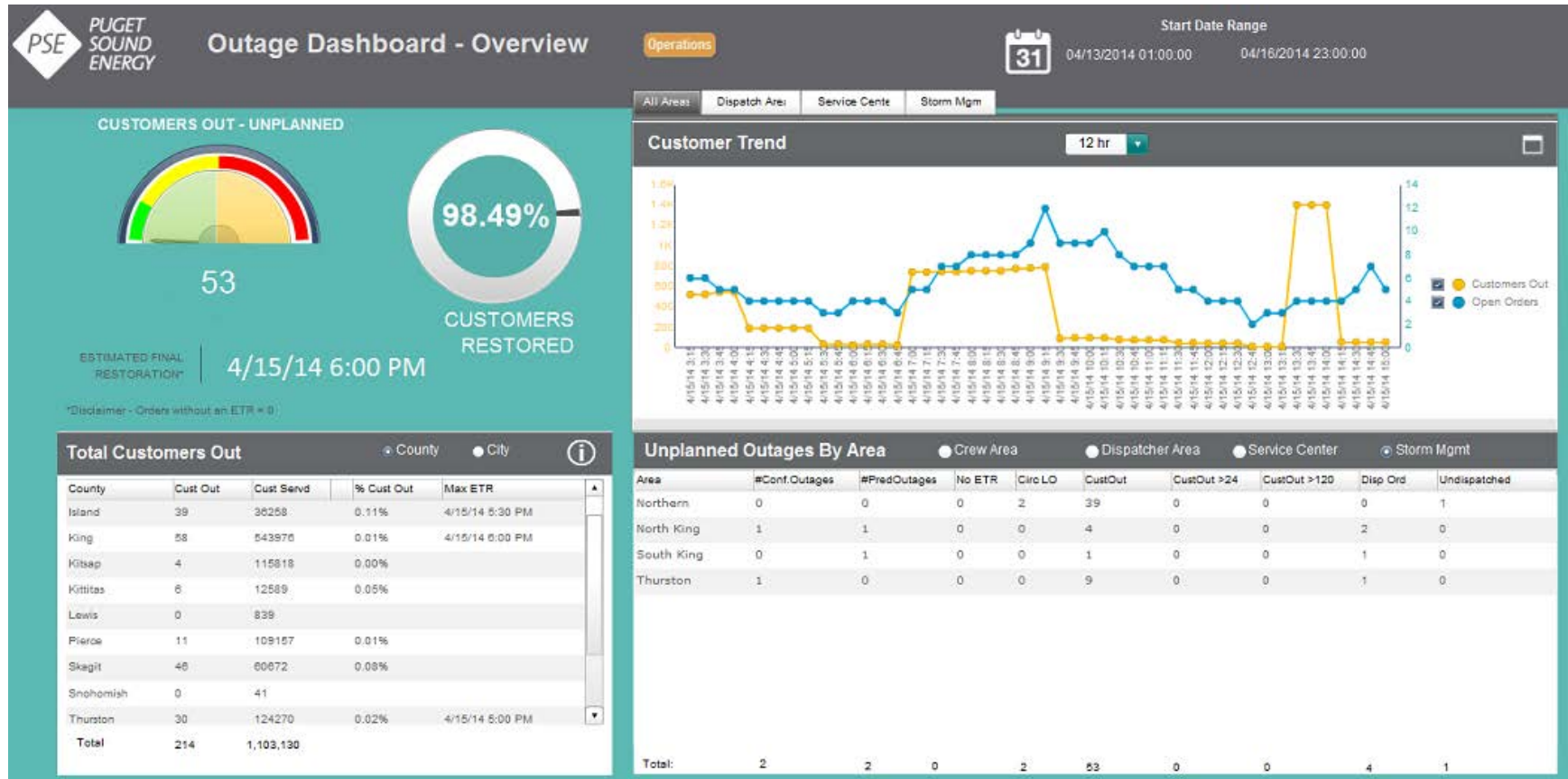
Huge Stabilization Effort began June 2013  
>10 “Tiger Teams”

- Defects
- Performance
- Data
- Storm Preparedness
- Dashboard
- Map Viewer
- Training
- 911 Processes
- Communications/Change Management
- Work Practices

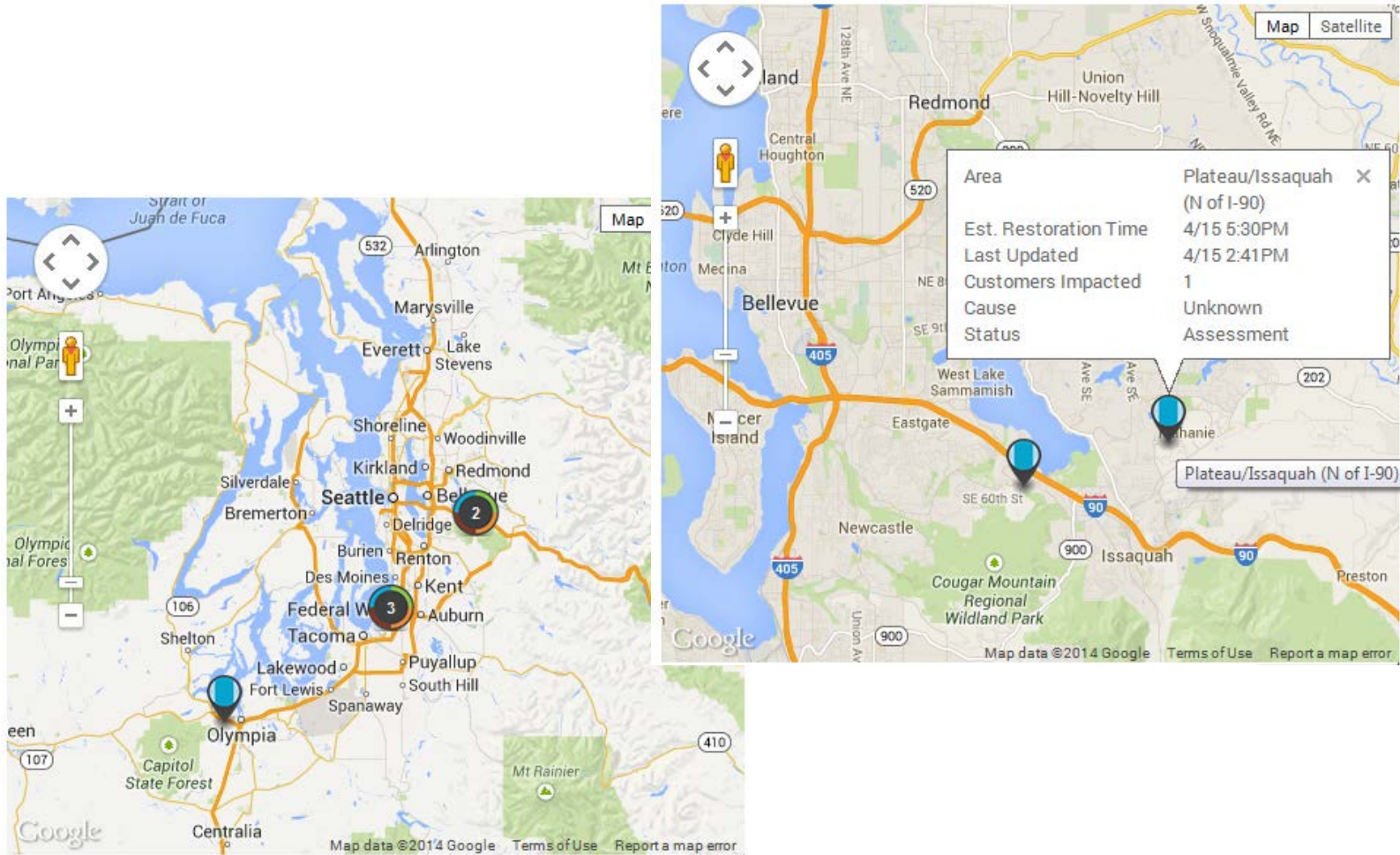
# Summer Stabilization



# Summer Stabilization



# Summer Stabilization



# Where are we today?

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- OMS
  - Still in stabilization mode, but fully operational!
  - Monthly patch schedule
- Storm Procedures
  - Practiced and validated in 2013/14 season
  - Training for new “best practice” procedures 2014/15
  - 2014/15 Exercises
- Training
  - New operator training curriculum complete 5/2014
  - Providing summer refresher training with updated SOP's

# What's better?

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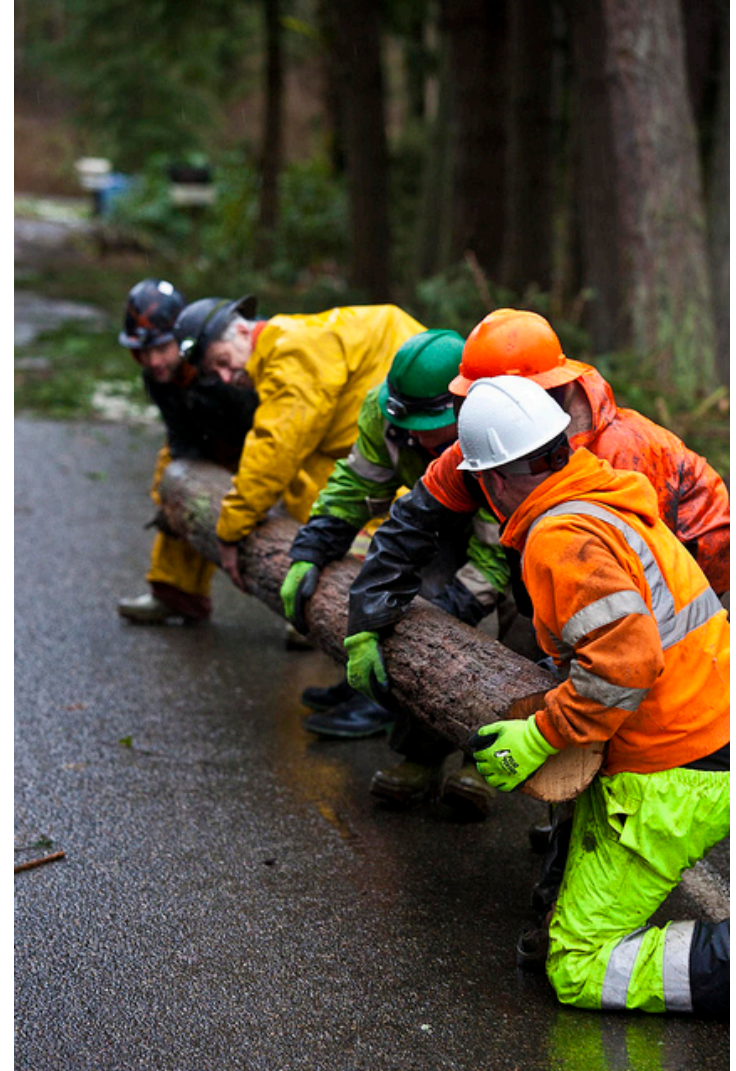
- Accessible real time status
- Report on individual outages
- Keep track of nested outages
- One system of record for equipment and outage data
- Ability to accurately report to dashboard and outage map





# What's different?

- New system requires more information!
  - Things we did quickly before now take more time
- Added efficiencies do not equal less personnel!
  - OMS maintenance
    - Administration
    - Patches/upgrades
    - Testing
    - IT Support
  - Outage integrity
  - Training/SME's



# Where are we headed?

- Reach out to our customers based on set preferences
  - Planned & unplanned outages – text, email, phone call
  - Mobile app
- Continue to enhance Dashboard
- Continue to enhance OMS usability

