

A photograph of the Seattle skyline, featuring the Space Needle prominently in the center. The city is viewed from an elevated position, with a wooden deck in the foreground. The sky is a mix of blue and white clouds.

Puget Sound Energy's Journey Implementing an Integrated Work Management Solution

ASUG

Seattle Chapter

About the Speakers

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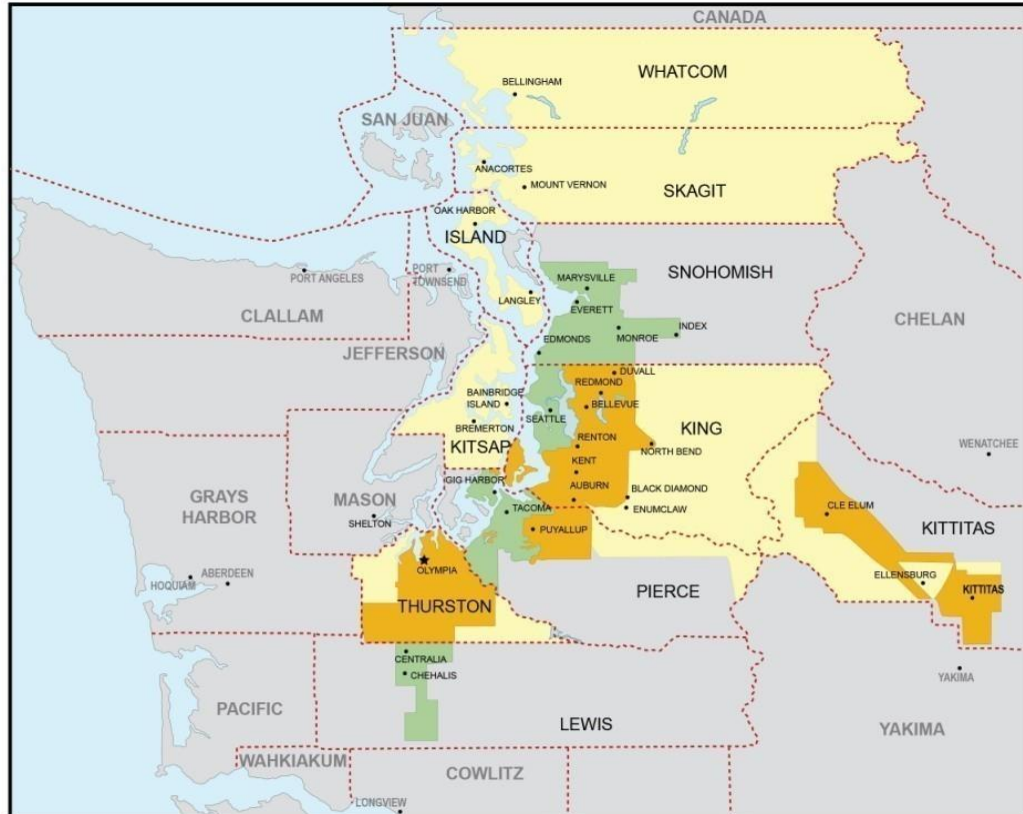
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About Puget Sound Energy



- Combined electric and natural gas service
- Electric service
- Natural gas service

Headquarters: Bellevue, WA

- 3,000 employees

Service Area

- 6,000-square-mile service territory
- 10 Washington state counties

Customers

- 1.2 million electric customers
- 800,000 natural gas customers

IT: PSE's Trusted Technology Provider

- FUEL the DIGITAL UTILITY

Customer Focus @ PSE – Get To Zero

Guiding Principles

PSE makes and acts on commitments to its customers with confidence.

PSE knows who I am and anticipates my needs.

I can easily locate the answers to my questions and resolve issues myself.

I get the same accurate information no matter how I contact PSE and I know what to expect at every interaction.

PSE will proactively inform me of things I care about through my preferred communication channel.



I W M

INTEGRATED WORK MANAGEMENT

MO

MNS

Gas Operations

Electric Operations



Drivers for Change

Better Customer Experience Customer Interface

- Enables self service (app, web, IVR, etc.)
- Allows for tighter appointment booking
- Provides visibility into status of requests
- Enables proactive notifications to customers about work status

Simplified Work Management Notifications & Work Orders

- Streamlines work orders, with tasks for different teams on a single order
- Increases visibility into status of jobs
- Move to a digital platform

Improved Scheduling ClickSchedule

- Assigns Work Orders to available and capable personnel
- Optimizes scheduling based on factors such as priority, location, skills
- Sends dispatched work to mobile device and SAP

Mobility in the Field SAP Work Manager

- Syncs scheduled work for field worker daily to mobile device
- Allows for easier, quicker time allocation at work order completion
- Provides visibility into real-time status of work orders



Credit to System Integrator

- Accenture Team was a critical partner in implementing the IWM Project.

The Accenture logo, featuring the word "accenture" in a bold, lowercase, sans-serif font. A small purple chevron symbol is positioned above the letter 't'.

- Many great people from Accenture helped us through all 4 releases of IWM.

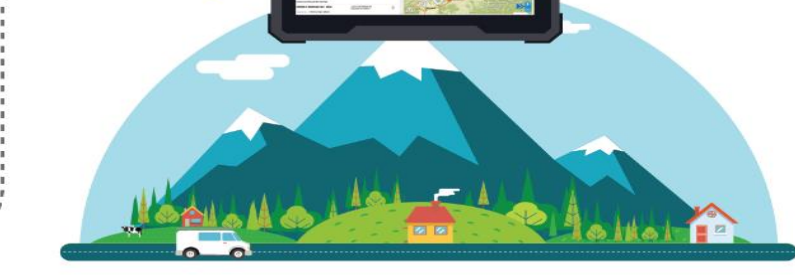
Laying the operational foundation



Optimizing work scheduling through automation based on defined business rules and priorities.

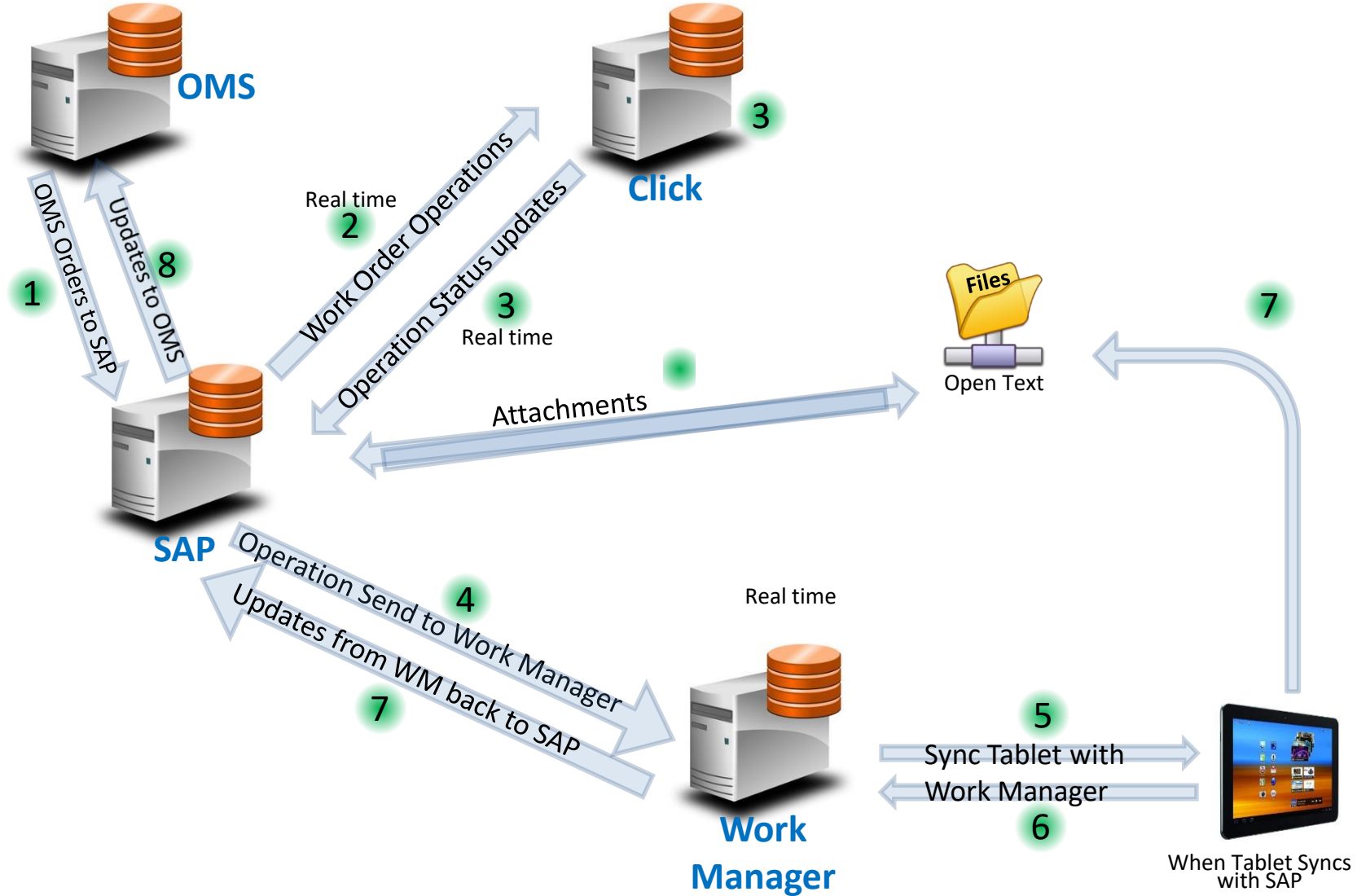


Streamlining the work lifecycle
with a simplified, proactive process for managing work, better ability to track costs, and real-time visibility into field operations

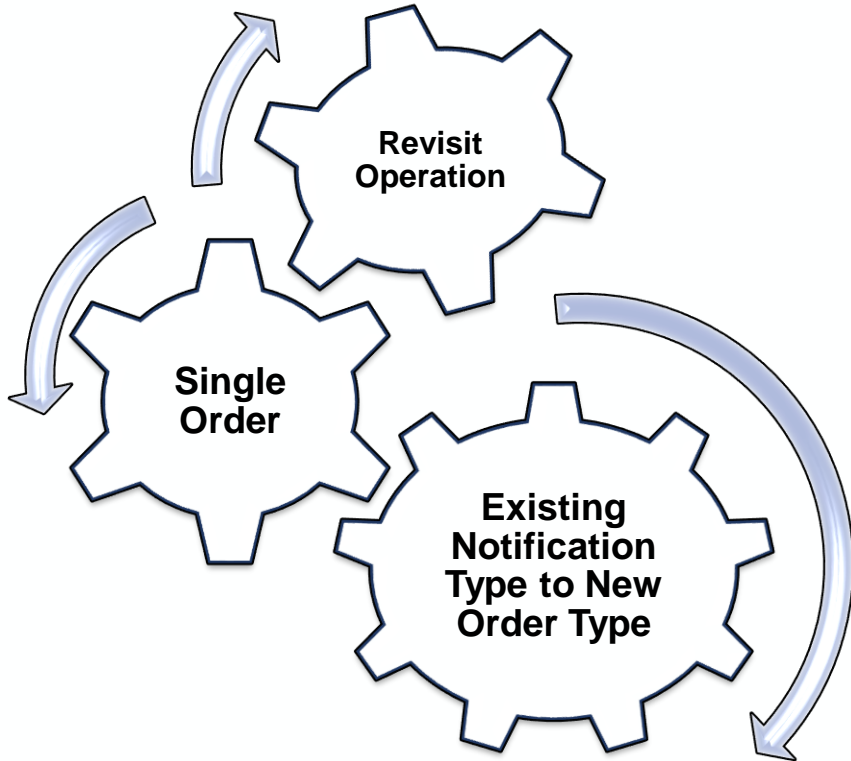


Creating a mobile workforce
through state-of-the-art rugged tablets and ability to receive, record, and complete work from the field

SAP to Click and Work Manager Interface Overview



Innovations – SAP



Notification is created in SAP



Work order automatically created and routed to appropriate group



Work order updated in SAP

Operations completed in the field from mobile device

Work for multiple teams is tied to a single work order through operations



Operations routed through Click and released to field

Innovations – Click Schedule

Create Follow up work from Click

- Ability to Sys operators/Dispatchers to create follow up work without getting into SAP
- Task information is used to auto determine notification type and other info to create the notification
- Auto create work order for relevant scenarios

New Work Order:

Legacy #: Grid #:

*Circuit: Incident #:

Meter #:

Predicted Device:

Street:

City: Zipcode:

*Task:

Notification Type:

Early Start: Due Date:

Assign Resource:

*Instructions:

Innovations – ClickSchedule

Add and edit attachments on jobs

- Technical info critical for field are on documents and are specific for each job
- These documents needed to be attached in click when follow up work is created

Status: Field Complete

Scheduler Notes:

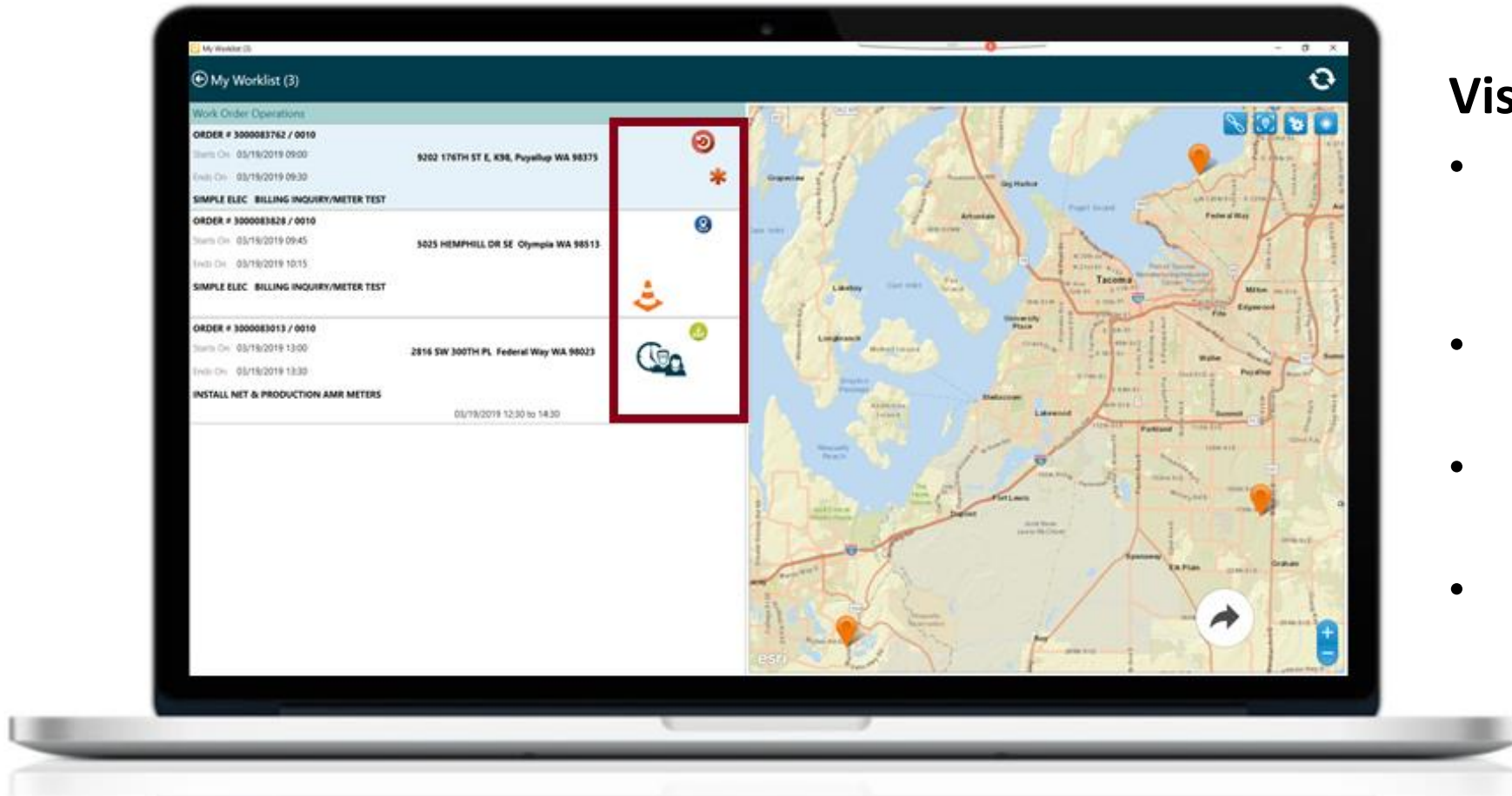
Attachments:

Display Name	File Name	File Size	File Type	Time Attached	Uploaded By	Comment	Attached in SAP	Errors	
No items found.									

Buttons: Add, Update, Delete, View

Buttons: OK, Cancel

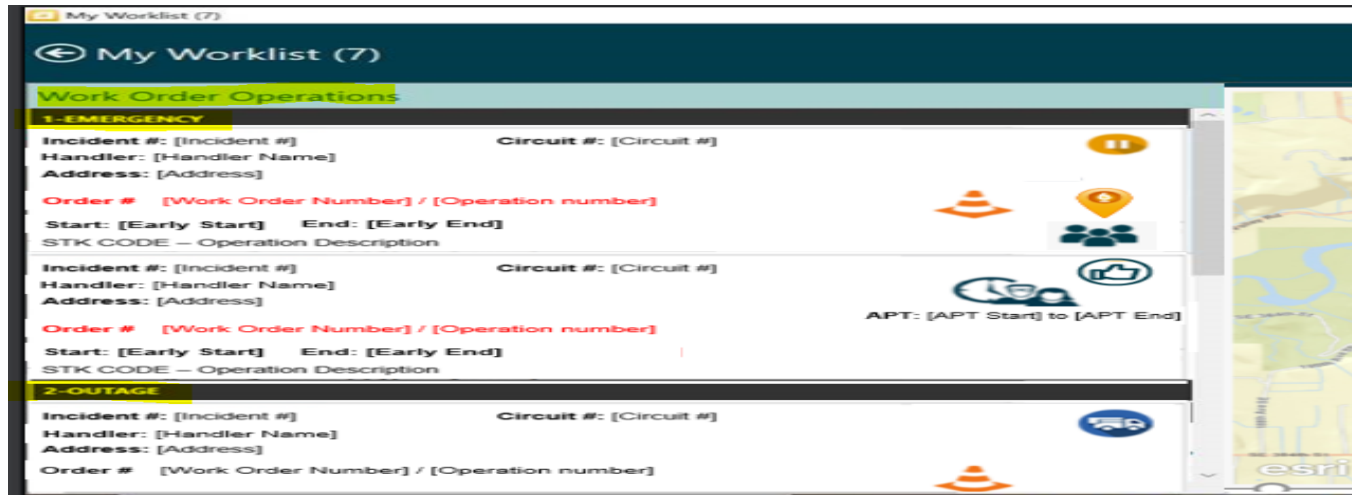
Innovations – Work Manager



Visual Indicators

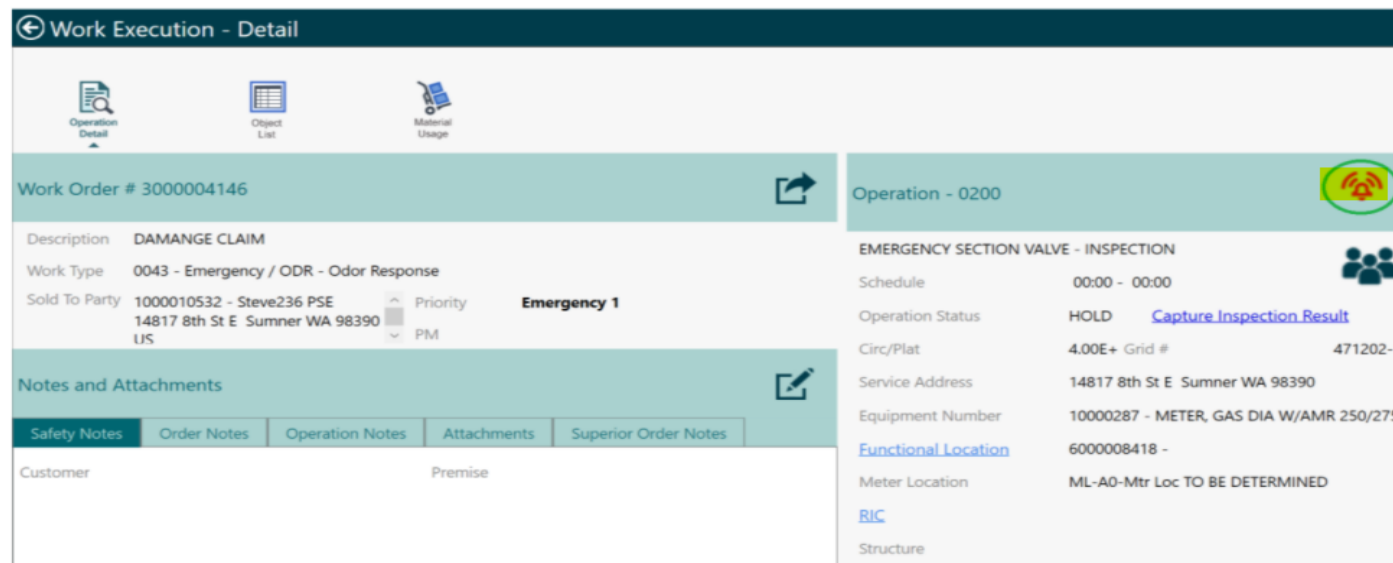
- Appointment with Date and Time of commitment to the customer
- Safety Notes maintained for the customer/premise
- Work Order Operation Status
- Local changes

Innovations – Work Manager



List Sorting

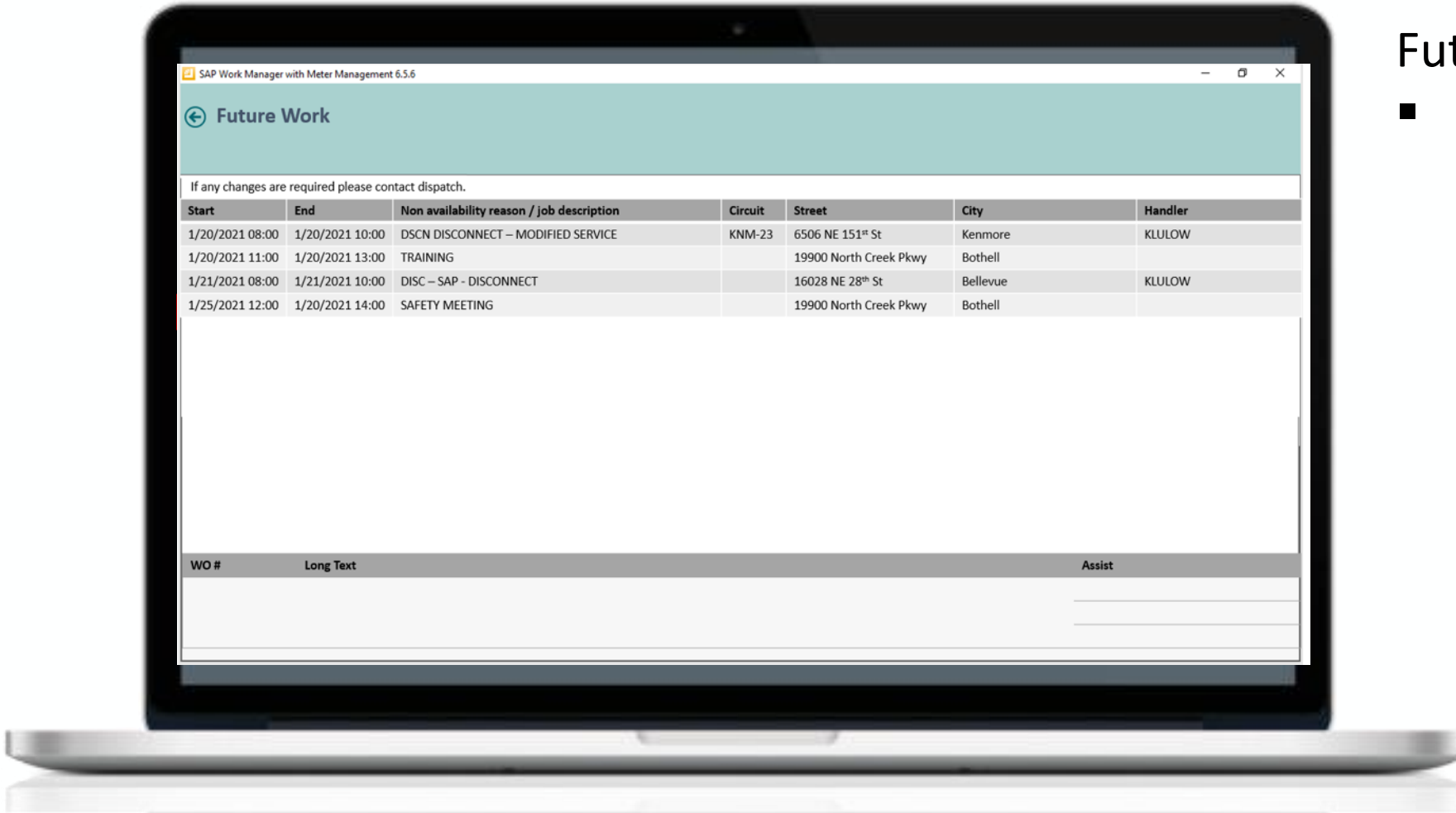
- Sort the work order list based on work category to better manage work load



Push Updates

- Emergency order create and update for certain fields are handled via push updates to inform the user

Innovations – Work Manager



Future Work Screen

- Additional screen build for showing future scheduled work such as upcoming appointments

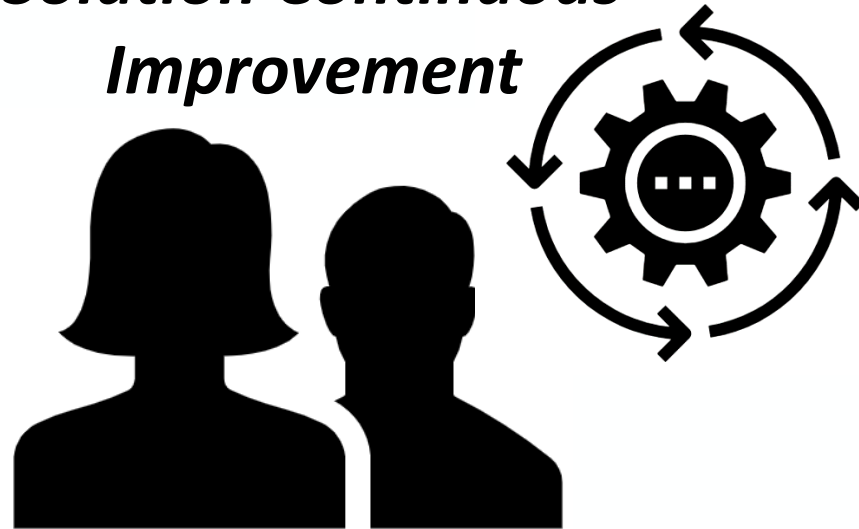
Innovations – Overall Processes

Improve overall usability based on feedback from the end user

Scenarios

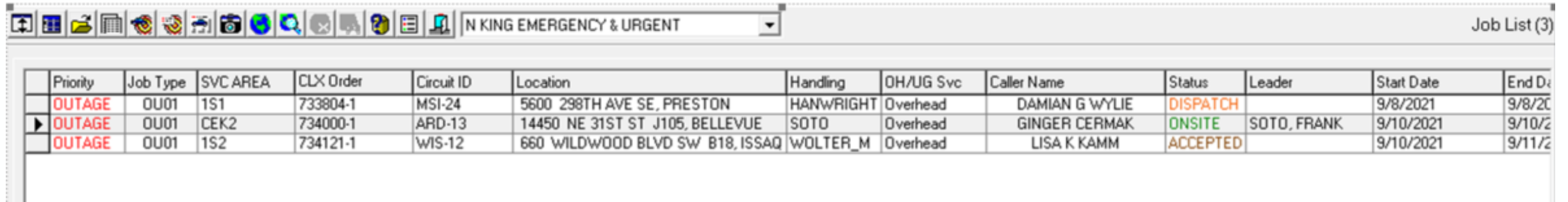
- Storm Scenario
- Awareness of safety critical Inter Department work nearby

*Solution Continuous
Improvement*



EFR REGULAR WORK AND STORM SCENARIO - BEFORE

Old EFR Scenario – Step 1



Job List (3)

Priority	Job Type	SVC AREA	CLX Order	Circuit ID	Location	Handling	OH/UG Svc	Caller Name	Status	Leader	Start Date	End Date
OUTAGE	OU01	1S1	733804-1	MSI-24	5600 298TH AVE SE, PRESTON	HANWRIGHT	Overhead	DAMIAN G WYLIE	DISPATCH		9/8/2021	9/8/2021
OUTAGE	OU01	CEK2	734000-1	ARD-13	14450 NE 31ST ST J105, BELLEVUE	SOTO	Overhead	GINGER CERMAK	ONSITE	SOTO, FRANK	9/10/2021	9/10/2021
OUTAGE	OU01	1S2	734121-1	WIS-12	660 WILDWOOD BLVD SW B18, ISSAQ	WOLTER_M	Overhead	LISA K KAMM	ACCEPTED		9/10/2021	9/11/2021

This is the old
PCAD screen.

Old EFR Scenario – Step 2

This is also the individual job PCAD screen.

ONSITE 9/10/2021 07:38 Job Order

CUSTOMER NAME	CONTACT NAME	JOB TYPE - Description	
GINGER CERMAK	GINGER CERMAK	OUTAGE FIELD INVEST	
SERVICE ADDRESS	CONTACT PHONE #	START DATE	END DATE
14450 NE 31ST ST J105	3603370430	9/10/2021	9/10/2021
CITY	Zip Code	PRIORITY	WHEN:
BELLEVUE	98007	OUTAGE	ANYT
CUSTOMER PHONE #	OMS or CIS ORDER #	NOTIFICATION & TASK#	SAP ECC ORDER #
	734000-1		

MISC INFO | SYS/METER INFO | JOB DETAIL | REMARKS | ELECTRIC | GAS |

OUTAGE FIELD INVESTIGATION

AMT Meter	Warranty End Date
YES	06/28/2021

SERVICEMAN'S INSTRUCTIONS

GINGER CERMAK360337043014450 NE 31ST ST J105

SYSTEM INFORMATION

CIRCUIT	UMAP	GRID	SECONDARY VOLTAGE
ARD-13	R2505E102	223560-167633	

Objects	Geobase	Haz Mat	Previous Jobs	External	C. A. D. Log	Person	Contingency Plan	Equipment
Comments	Medical	Contacts	S. O. P.	Crew/App Act	Relation	Tag	Add. Text	Job Activities

Old EFR Scenario– Step 3

Old Time Entry process. Servicemen used OMS numbers in the time sheet then the Dispatchers had to create orders for these numbers in SAP the next business day and add them to the time sheet for the servicemen.

INDIVIDUAL DAILY TIME REPORT-ELECTRIC FIRST RESPONSE



KEEP ON FILE 3 YEARS

EMPLOYEE NAME		PERSONNEL NUMBER	COST CENTER	TIME REPORTING DATE											
[REDACTED]		[REDACTED]	[REDACTED]	02-27-2019											
CIR# & I#	EVENT/CLX/NOTIF#	ADDRESS	WORK PERFORMED	SAP WORK ORDER	ACT	JIC	ML \$	TIME TYPE	HRS	FROM	TO	WIRE TYPE	WIRE SIZE	FOOTAGE USED	
MED-33	530853-1	9092 NE 39TH PL, YARROW PT	OUTAGE				\$	OT2	2.00	0:01	2:00				
		BELLEVUE LES SHWAB	NEW TIRES AND PIC UP CHAINS	58806373			\$	OT2	6.00	7:00	13:00				
			TOOL ROOM	58806371			\$	OT2	2.00	13:00	15:00				
DUV-12	531050-1	14907 275TH AVE NE, DUVALL	OVERHEAD OUTAGE					OT2	2.00	15:00	17:00				
DUV-12	531056-1	14903 275TH AVE NE, DUVALL	OVERHEAD OUTAGE				\$	OT2	2.00	17:00	19:00				
WAY-13	531079-1	9206 NE 180TH ST, BOTHELL	TREE IN THE LINE					OT2	2.00	19:00	21:00				
TOL-16	531082-1	4204 REGENCY PL, CARNATION	PART OUT W/ JEREMY JUA-02					OT2	3.00	21:00	23:59				

Old EFR Storm Scenario

This was a manual process. Each region would have several Standing Work orders created, and there would also be one company wide work order. The field workers would need to know what area they were working in and charge to the correct orders for that area. There are different orders for each type of work:

1. Distribution voltage work
2. Transmission line work at or under 115 KV
3. Transmission line work over 115 KV

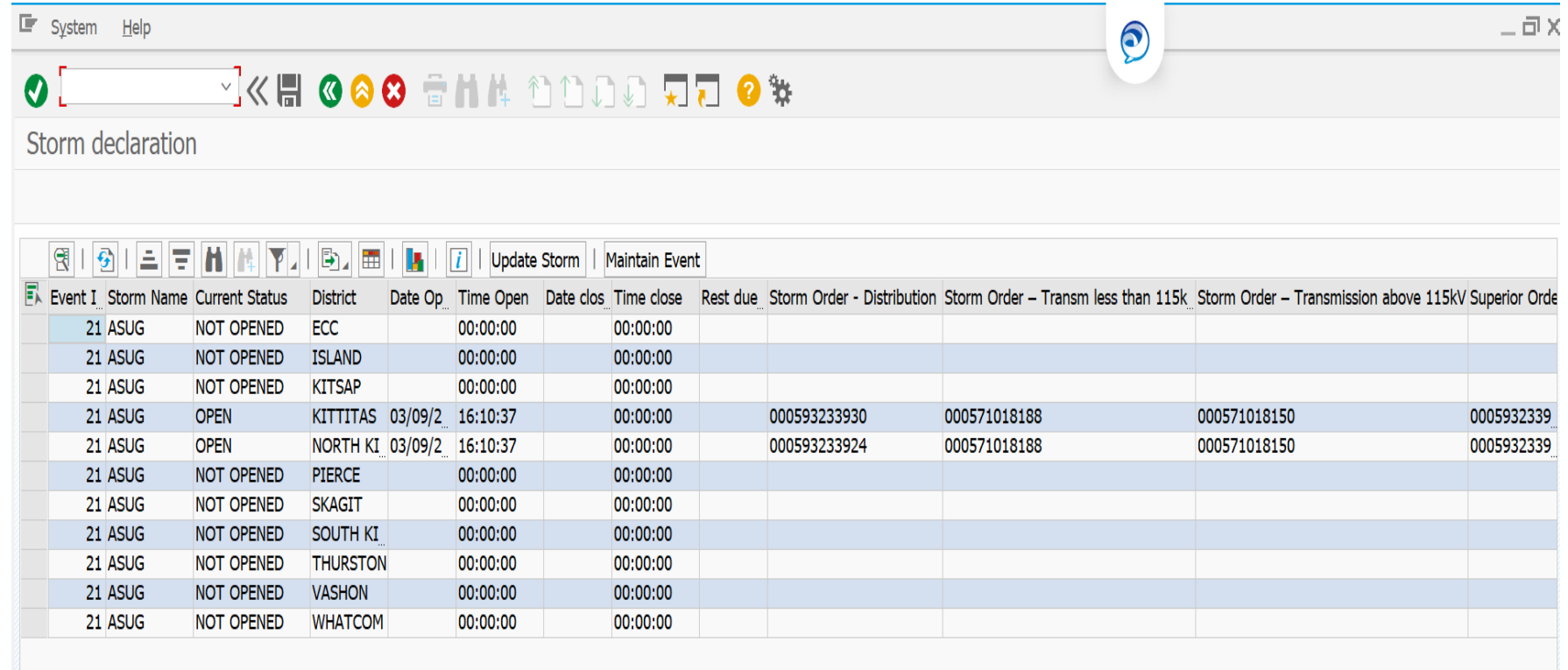
The EFR workers would charge their time on spreadsheets and the time admins would enter it into SAP.

STORM SCENARIO - AFTER

Storm Scenario – Initiate Storm Mode

Declare Storm in relevant districts in SAP

- Sets up standing orders for that storm event
- Interface triggered to Click to update districts with an active storm
- Click Further auto updates any existing jobs in that district with storm flag in SAP



The screenshot shows the SAP Storm declaration interface. At the top, there is a menu bar with 'System' and 'Help'. Below it is a toolbar with various icons, including a green checkmark, a dropdown menu, and several navigation and action icons. The main area is titled 'Storm declaration' and contains a table with the following columns: Event I, Storm Name, Current Status, District, Date Op, Time Open, Date clos, Time close, Rest due, Storm Order - Distribution, Storm Order - Transm less than 115k, Storm Order - Transmission above 115kV, and Superior Orde. The table contains 11 rows of data, with the 4th and 5th rows highlighted in blue. The 4th row shows '21 ASUG OPEN KITTITAS 03/09/2 16:10:37 00:00:00 00:00:00 000593233930 000571018188 000571018150 0005932339'. The 5th row shows '21 ASUG OPEN NORTH KI 03/09/2 16:10:37 00:00:00 00:00:00 000593233924 000571018188 000571018150 0005932339'.

Event I	Storm Name	Current Status	District	Date Op	Time Open	Date clos	Time close	Rest due	Storm Order - Distribution	Storm Order - Transm less than 115k	Storm Order - Transmission above 115kV	Superior Orde
21	ASUG	NOT OPENED	ECC		00:00:00		00:00:00					
21	ASUG	NOT OPENED	ISLAND		00:00:00		00:00:00					
21	ASUG	NOT OPENED	KITSAP		00:00:00		00:00:00					
21	ASUG	OPEN	KITTITAS	03/09/2	16:10:37		00:00:00		000593233930	000571018188	000571018150	0005932339
21	ASUG	OPEN	NORTH KI	03/09/2	16:10:37		00:00:00		000593233924	000571018188	000571018150	0005932339
21	ASUG	NOT OPENED	PIERCE		00:00:00		00:00:00					
21	ASUG	NOT OPENED	SKAGIT		00:00:00		00:00:00					
21	ASUG	NOT OPENED	SOUTH KI		00:00:00		00:00:00					
21	ASUG	NOT OPENED	THURSTON		00:00:00		00:00:00					
21	ASUG	NOT OPENED	VASHON		00:00:00		00:00:00					
21	ASUG	NOT OPENED	WHATCOM		00:00:00		00:00:00					

Storm Scenario – Execution in storm mode

SAP Work Manager with Meter Management 6.5.6

Electric Form

Grid #

Need engineering review Need vegetation investigation Need vegetation brush cleanup

Disconnect/reconnect

Outage information Outage Cause Sub cause

Set auto TRF Auto TRF CO ID # *Marked for locates Yes No

Additional forms

Was meter/service work performed Yes No What action was taken Install/modified Remove Replace

Were recordable materials used Yes No

Is a recording voltmeter recommended Yes No

Completion details *Distribution type *Equipment type *Work performed

Additional work performed Distribution type Equipment type Work performed

Crew materials list

*Serviceman's comments

Storm

Finish Cancel

Storm Scenario – Execution in storm mode

The screenshot shows the 'Edit Time' window in SAP Work Manager with Meter Management 6.5.6. The window title is 'Edit Time'. The main content area includes the following fields and controls:

- Date:** A date picker set to 1/19/2020.
- Work Order:** A dropdown menu with 'Pick' set to '-NONE-' and 'Or Standing Order' set to 'Storm - Distribution' (highlighted in yellow). There is also an 'Or Enter' text input field.
- Operation:** A dropdown menu set to 'Skagit'.
- Start Time:** Two dropdown menus for hours (08) and minutes (00).
- End Time:** Two dropdown menus for hours (09) and minutes (00).
- Hours/Minutes:** Two separate dropdown menus for 'Hours' (01) and 'Minutes' (00).
- Abs/Att Type:** A dropdown menu set to 'REG - Regular Attendance Hours'.
- Classification/Level:** A dropdown menu.
- Premium:** A dropdown menu.
- Sign Off:** A checkbox that is currently unchecked.

At the bottom right of the window, there are 'Finish' and 'Cancel' buttons.

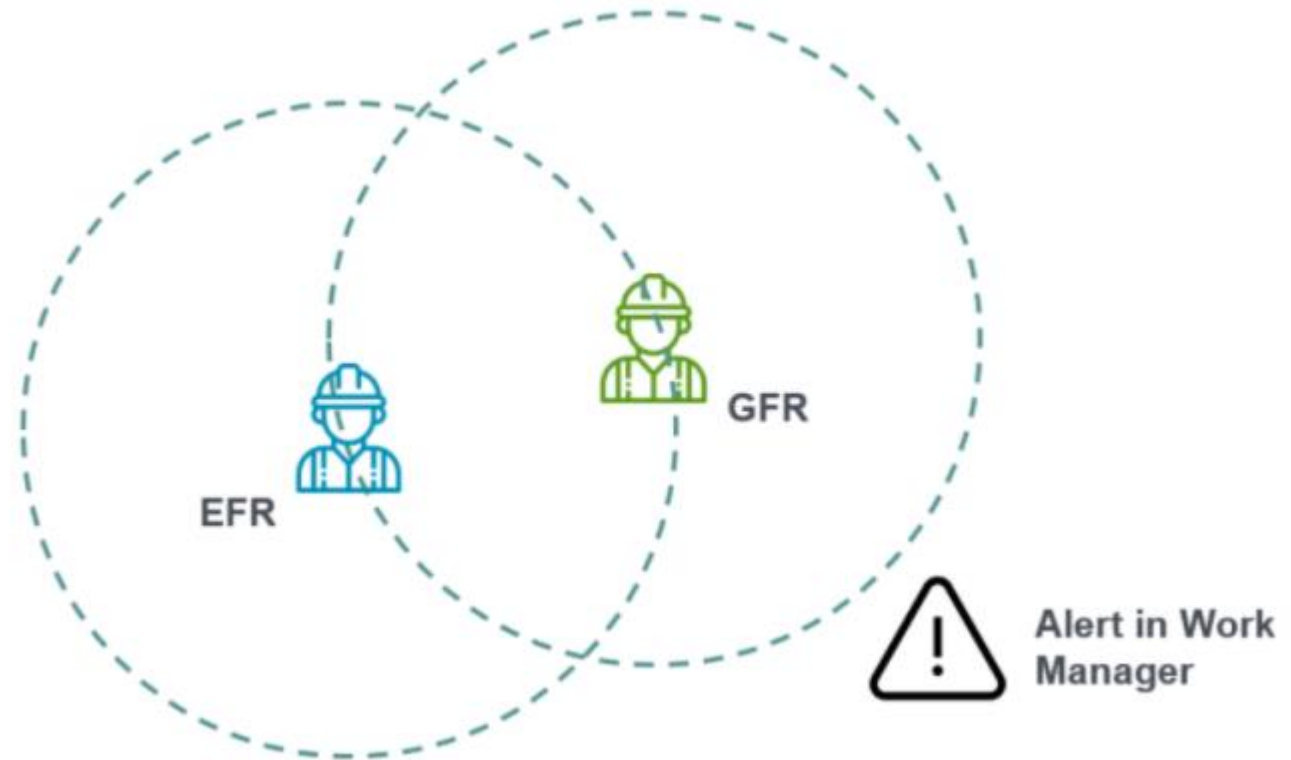
Figure 3 – Storm Selection on Add Time Entry Screen

AWARENESS OF SAFETY CRITICAL INTER DEPARTMENT WORK NEARBY

Awareness of Safety Critical Inter Department Work Nearby

Gas and Electric workers at times work close by without being aware. This posed a safety issue because of the nature of work.

Since our IWM solution was implemented for both teams their job information is in SAP and in Click

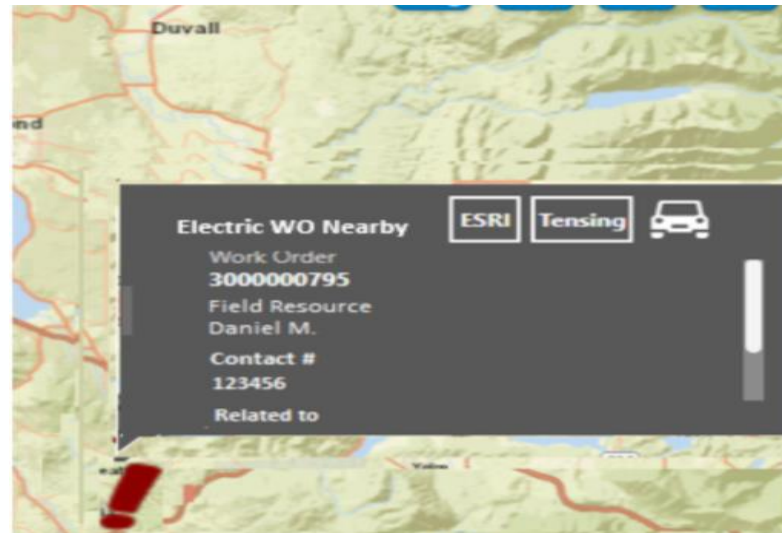


Awareness of Safety Critical Inter Department Work Nearby

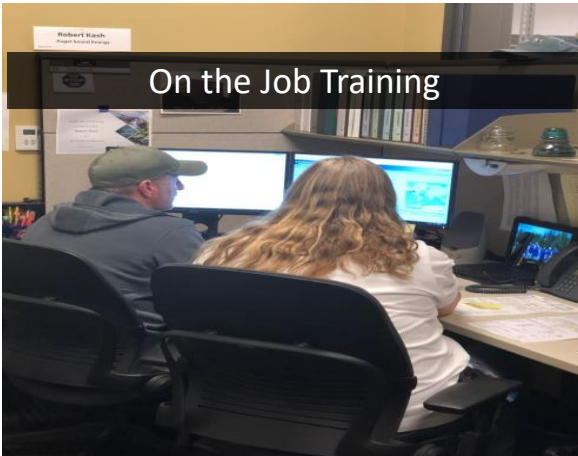
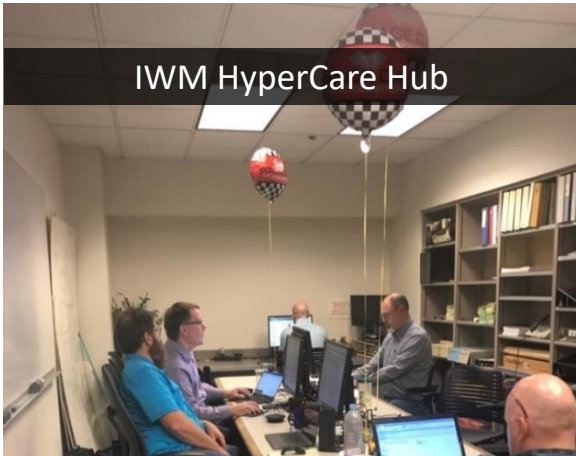
Enhancement in click helped use geo spatial information and job codes to identify safety critical for different department upon dispatch. This info was sent to SAP and then to work manager highlighting critical work, person on the job and their contact info on the map



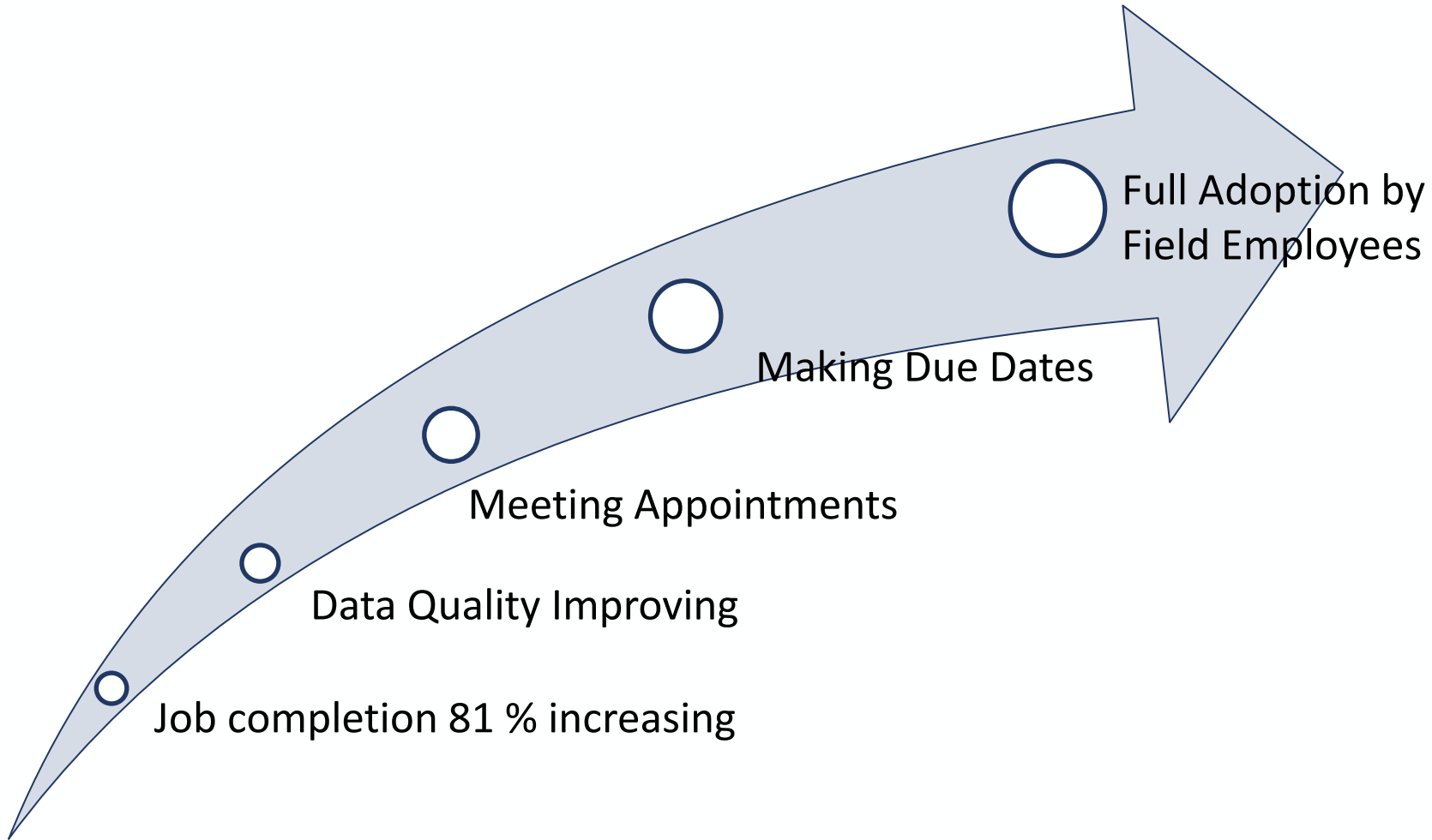
Figure 4: Worklist Icon



Lessons Learned



Summary



If Domino's can do it to deliver your pizza, so can we.

I believe this is the right way for PSE to go.

Q&A

For questions after this session, contact us.

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