

# Enhancing Safe Work Management Processes With ePAS

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# Agenda

- Safe Work Process Before ePAS
- How Apex Clean Energy Uses ePAS:
  - Incident Reporting
  - Safety Observations
  - Management of Change
  - Internal KPI Reporting
  - ROCC e-Log Workflow
  - Tiered approach
  - Front-End User Experience
- Expected Results From ePAS



# Safe Work Process Before ePAS

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## Previous State

- **Disjointed Parallel processes for different audiences that are not clearly understood across APEX**
- **Unnecessary, unsustainable duplicative work**
- **No comprehensive strategy on how events are tracked, worked on, and closed**
- **Not all information gathered is able to be pushed into Snowflake for dashboarding and reporting**

## Risk to Business

- **Not properly balancing: pressure to execute, change management needs, and timing of implementation**
- **Inconsistent presentation of information through reporting tools**
- **Incomplete gathering of evidence for regulatory audits**



# Configurability of ePAS

# Incident Reporting

- Incident reporting
  - Basic event details (date, location, type of event, etc.)
    - With maps to identify location of event
  - Including investigation tab
    - Involvement (who did investigation)
    - Status of investigation (along with start and close dates)
    - Findings, recommendations, corrective actions (with ability to assign and track to closure)
  - Including Environmental events
    - Material release (track release and recover, contact Environmental team)
    - Wildlife events (type of event, status of wildlife, contact Environmental team)
  - Relationships and Attachments

The screenshot displays the 'Incident Reporting Main Information' form in the Apex system. The form is divided into several sections:

- Incident Reporting Main Information:** Includes fields for Name, Date/Time, Business Line, Location at Asset, Incident Type (with checkboxes for Near-Miss, First Aid, Recordable, LTI/Lost-time injury, Occupational Illness, Fatality, Environmental Event, Equipment/Property Damage, and Notification), Who was involved? (with checkboxes for Apex Employee, Apex Contractor, Primary Contractor, Sub-Contractor, and Third Tier Contractor), Incident Details (Incident Description and Immediate Action Taken), Weather Conditions, and Investigation Required?.
- Investigation Team:** A list of five team members (Team Member 1 through Team Member 5) with input fields for each.
- Investigation Data:** Includes Start Date, Investigation Status (set to Open), Investigation Findings, and Investigation Recommendations.
- Action Items:** A table with columns for Action Item Description, Due Date, Person Responsible, and Action Item Completed?. The table currently shows 'No Rows To Show'.

# Safety Observations

- Safety Observations
  - Track and Trend data input
    - Safe Act, Unsafe Act, Unsafe Condition, Unsafe Equipment
    - Energy Sources
    - Observation Categories (Body Mechanics, Tools/Equipment, Energy Isolation, etc. )
    - Onsite corrections made or a follow-up action required
    - Plotting maps
    - Lesson Learned
  - Create Relationships as needed
  - Attachments (images, diagrams, etc. )

Apex | DEVELOPMENT

SOC CAM-SOC-230327-35

CREATE SUBMITTED

Cameron Wind Change Location

Safety Observation Information

Name \*

Date/Time \*

Weather Conditions \*

Location at Asset

Safety Observation Categories \*

What energy sources apply to the observation?

Observation Category

Observation \*

Did you stop work? \*

Were onsite corrections made?

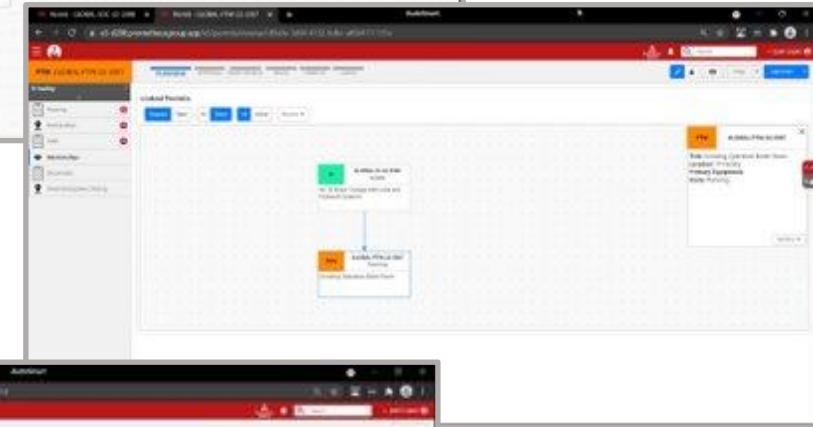
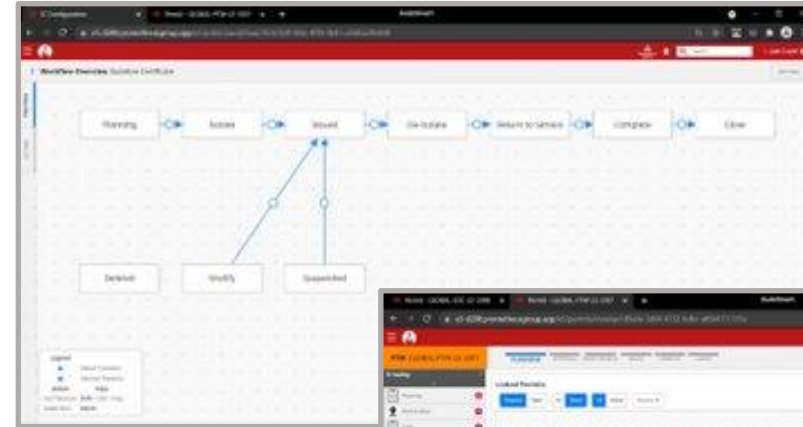
Does the observation require a follow-up action?

Plotting Map

Lessons Learned?

# Management of Change (MOC)

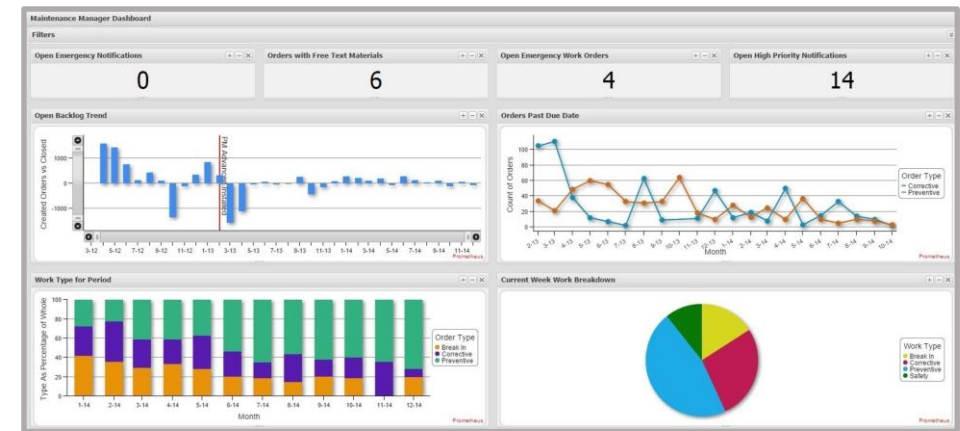
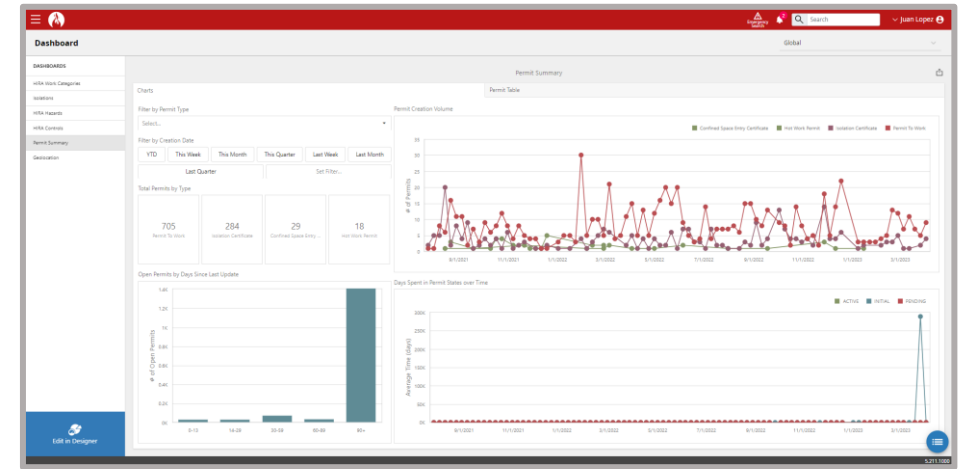
- Digital Workflow for Change Management
  - Previously managed by a change management document and numerous emails
- Ability to create relationships as needed
  - Events, incidents, observations, etc.
- Ability to track to closure within system
  - Reviews
  - Comments
  - Approvals





# Internal KPI Reports and Data Export

- Able to Build Internal KPI Dashboards from input by end users
  - Incident information
  - Safety Observations
  - Investigation Tracking (open vs. closed)
    - Open Action items tracked to closure
- Data can be exported to Snowflake “Data Lake”
  - Internal to Apex to generate own reports (Power BI)
  - Incidents, SOC’s, Man-hours, Training

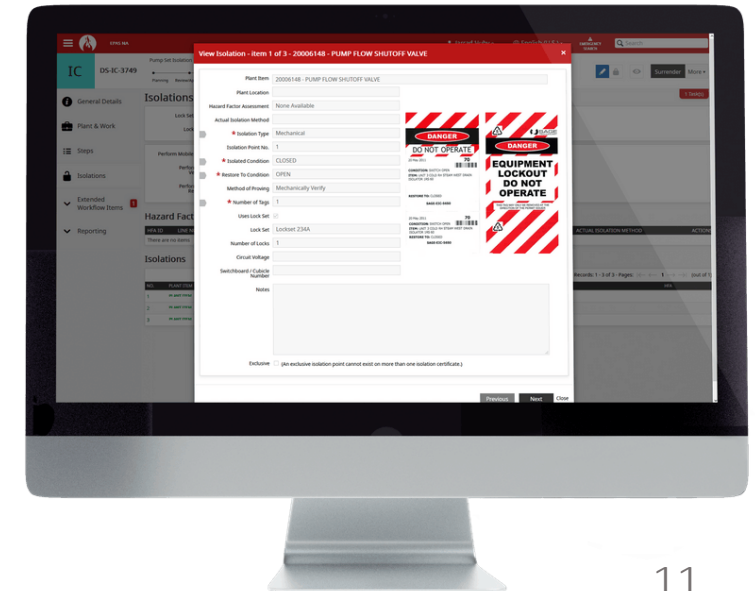
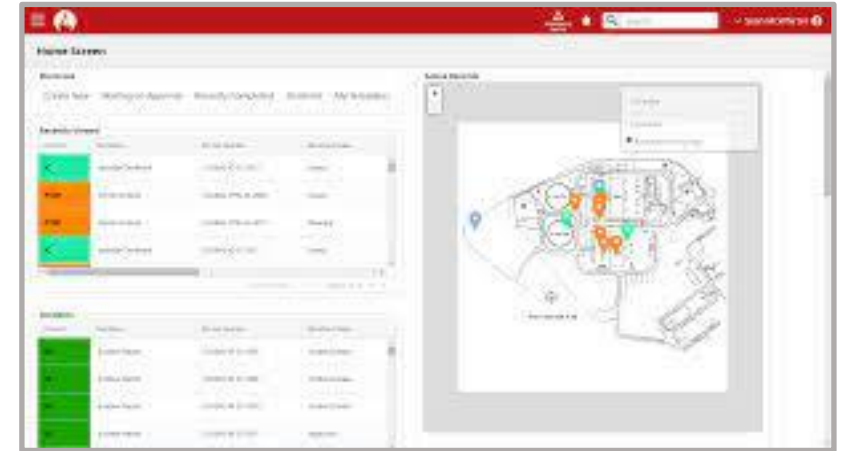


# Remote Operations Control Center e-Log Workflow

- Consolidation of 4 parallel and duplicate processes into 1 place
  - Create ease of input and consistent reporting
  - Tool used by operator to “prompt” actions within flow
    - Reducing inaccurate data input
    - Reducing likelihood of missed steps in reporting processes
    - Increasing the efficiency in getting message to other departments
    - Same message, same format, same timeframe
- Front-end user input (simple)
- Creating workflows that meet regulatory reporting requirements
- Capability to “connect” events with “relationships.”
  - Incidents
  - Safety events/observations
  - Equipment events

# Tiered Approach To Add Other Workflows

- Personnel utilizing platform (gaining experience)
  - Incident Reporting, SOC, etc.
- Addition of workflows added
  - Work-hours (internal and contractor) for reporting and stats
- Add ePAS for permitting work
  - Connecting ROCC to Isolations and LOTO process digitally
- Explore Connection of ERP (Enterprise Resource Planning) tool to tasks/permits (SAP, Maximo, etc.)



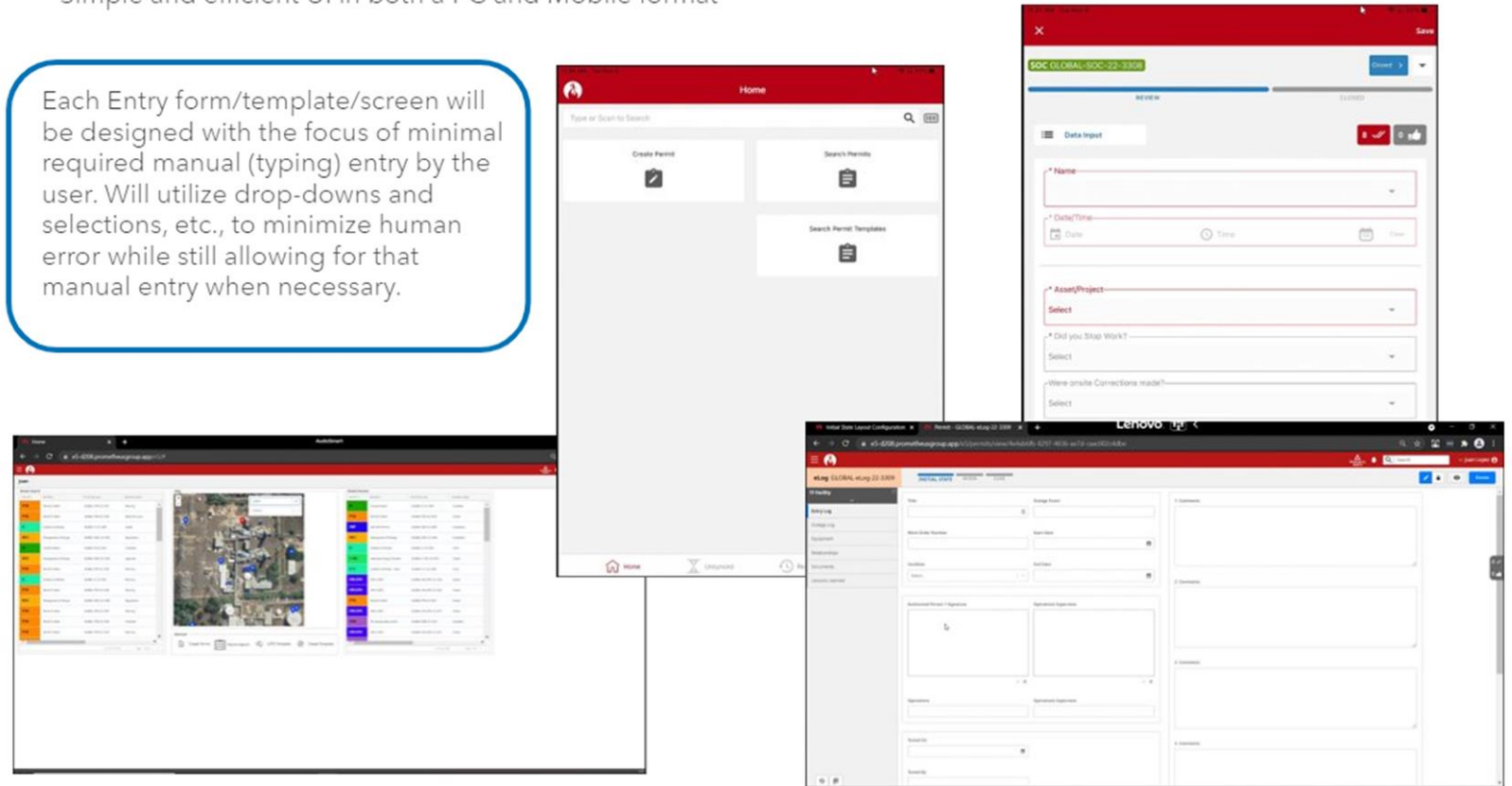


# The Front-end User Experience of the Platform

- Easy but effective workflows that capture needed information
- Anytime Access (desktop and mobile)
- Use in the field (with or without internet connection)

Simple and efficient UI in both a PC and Mobile format

Each Entry form/template/screen will be designed with the focus of minimal required manual (typing) entry by the user. Will utilize drop-downs and selections, etc., to minimize human error while still allowing for that manual entry when necessary.

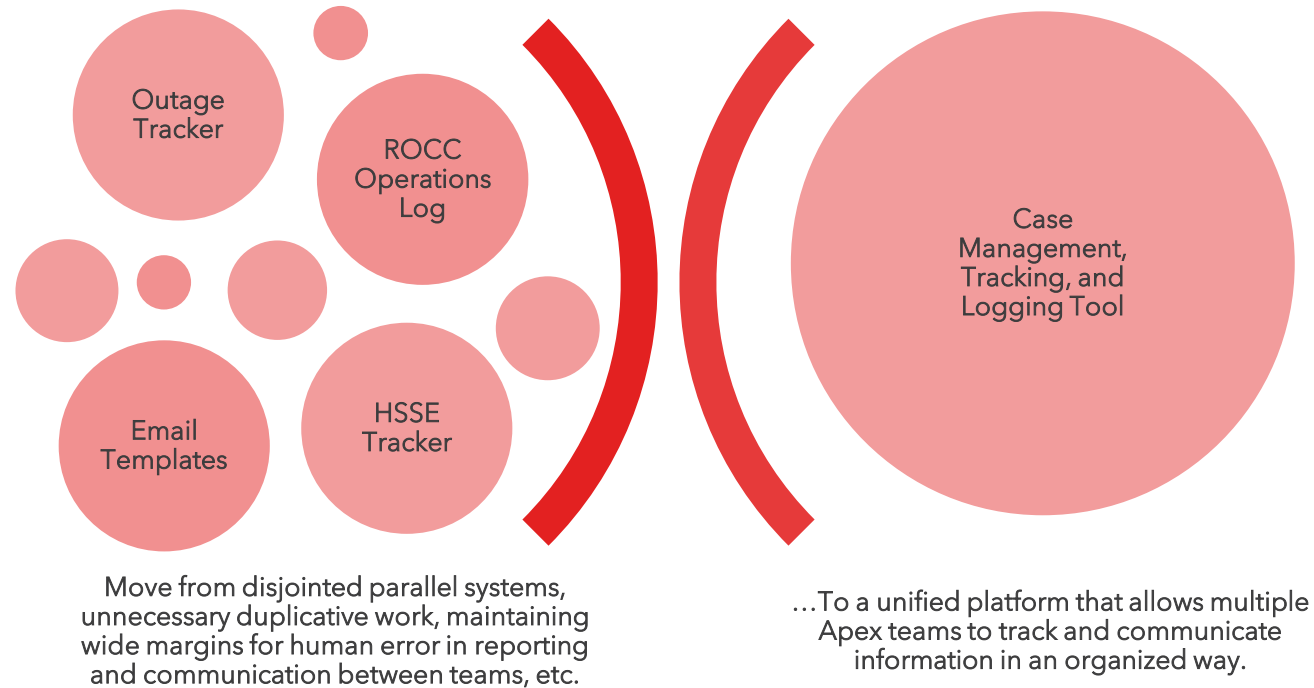


# Expected Results From ePAS

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## Desired State

- Well documented process maps of what events are tracked, what data is required, what actions are taken, and how impacts are measured
- Clear user map and expectations of process interactions and integration into day-day business
- Simple system that is easy to input/extract data with easy to execute dashboarding and historian functionality





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Thank you

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# Questions?