

Implementing Digital Permitting and Safe Work Processes

Callum Brown, Sr. Functional Consultant

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Agenda

- Industry Guidance and Trends
- Common Causes of Incident
- Introduction to ePAS
- Digitalising the Process
- New Developments
- What's Next?

Industry Guidance and Trends

Industry Guidance and Trends

- HSE Guidance on Permit to Work Systems
<https://www.hse.gov.uk/pubns/priced/hsg250.pdf>
 - Clear visibility of ongoing / upcoming permits
 - Thorough training on processes
 - Ensuring one activity does not create danger for another
 - Clear roles and responsibilities throughout the process
 - Identification of hazards and controls

Most Common Causes of Incident

- Some of the most commonly cited causes of incident include:
 - Inadequate training
 - System roles, competencies
 - Inadequate communication
 - Integrated solutions
 - Poor working practices
 - Driven processes / no short-cuts
 - Rushed preparation
 - Templating

Introduction to ePAS

Introduction to ePAS

- All encompassing Health and Safety solution
- Integrated with the EAM
- Configurable workflows
- Mobile capabilities
- Intuitive and user friendly

The screenshot displays the 'Callum's Home Screen' of the ePAS system. The interface is divided into several sections:

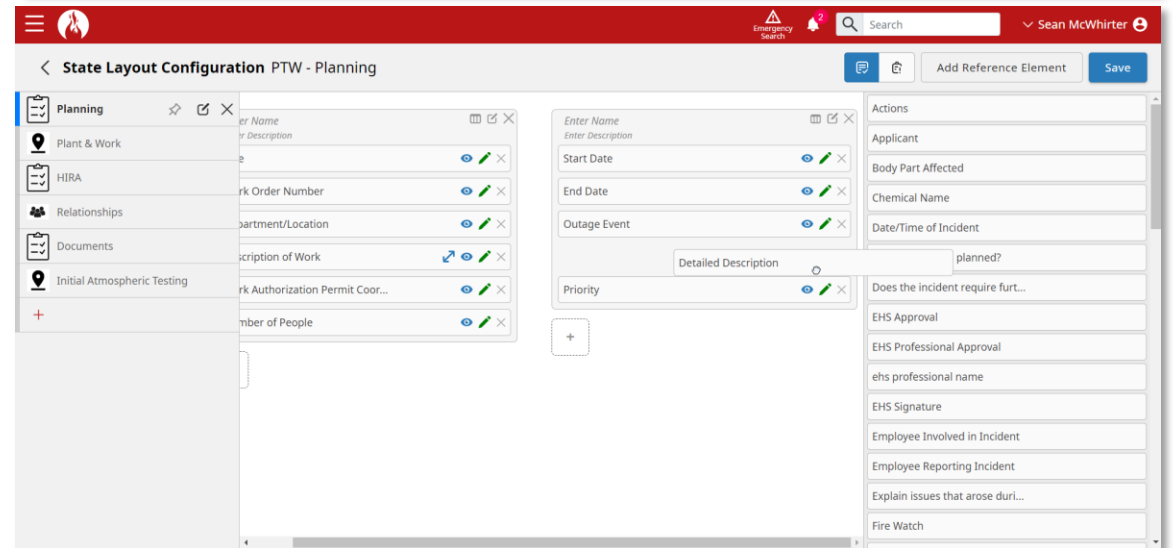
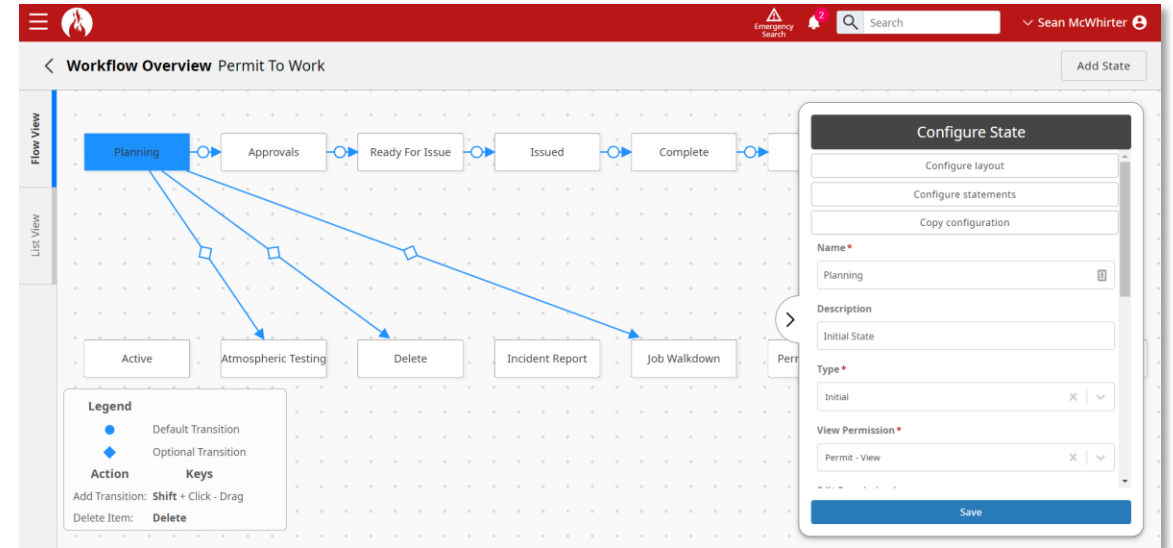
- Header:** Includes a search bar, a user profile for 'Callum Brown', and an 'Emergency Search' button.
- All Permits and Certificates:** A table listing various permits and certificates with columns for Permit Type, Workflow, Permit Number, Workflow State, and Title.
- Active Management of Change Requests:** A table listing change requests with columns for Permit Type, Workflow, Workflow State, Proposed Change, and Intended Outcome.
- Plotting Search:** A map view showing a facility layout with various points of interest and search filters.
- Creation Buttons:** Three buttons for creating new items: 'Create Permit / Certificate', 'Create Permit to Work', and 'Create Permit Request'.

Permit Type	Workflow	Permit Number	Workflow State	Title
IC	Isolation Certificate	GLOBAL-IC-23-2716	Planning	Isolation of
PTW	Permit To Work	GLOBAL-PTW-23-2712	Planning	Remove pur
PTW	Permit To Work	GLOBAL-PTW-23-2709	Planning	Pull Fuses
PTW	Permit To Work	GLOBAL-PTW-23-2707	Planning	
PTW	Permit To Work	GLOBAL-PTW-23-2705	Planning	Replace pur
PTW	Permit To Work	GLOBAL-PTW-23-2704	Planning	Reinstate fu
PTW	Permit To Work	GLOBAL-PTW-23-2703	Planning	Refit pump
PTW	Permit To Work	GLOBAL-PTW-23-2701	Planning	Replace pur
PTW	Permit To Work	PG-PTW-21-2227	Planning	
PTW	Permit To Work	GLOBAL-PTW-23-2645	Planning	
PTW	Permit To Work	PG-PTW-22-2466 rev 1	Planning	Compressor
PTW	Permit To Work	PG-PTW-21-2126	Planning	Replace pur
PTW	Permit To Work	GLOBAL-PTW-22-2498	Planning	
PTW	Permit To Work	PG-PTW-22-2460	Approvals	Repair Brok

Permit Type	Workflow	Workflow State	Proposed Change	Intended Outcome
MOC	Management of Change	Registration	Deploy Permitting solution	Greater effi
MOC	Management of Change	Implementation	Fan Change 456	New Fan
MOC	Management of Change	Completed	New Fan Unit 4A8	New Fan to
MOC	Management of Change	Registration		
MOC	Management of Change	Completed	New Fan Drawings	New drawin

Workflow Designer

- Permit to Work
- LOTO
- CSE
- Incident Reports
- MOCs



Conflict Management Slide

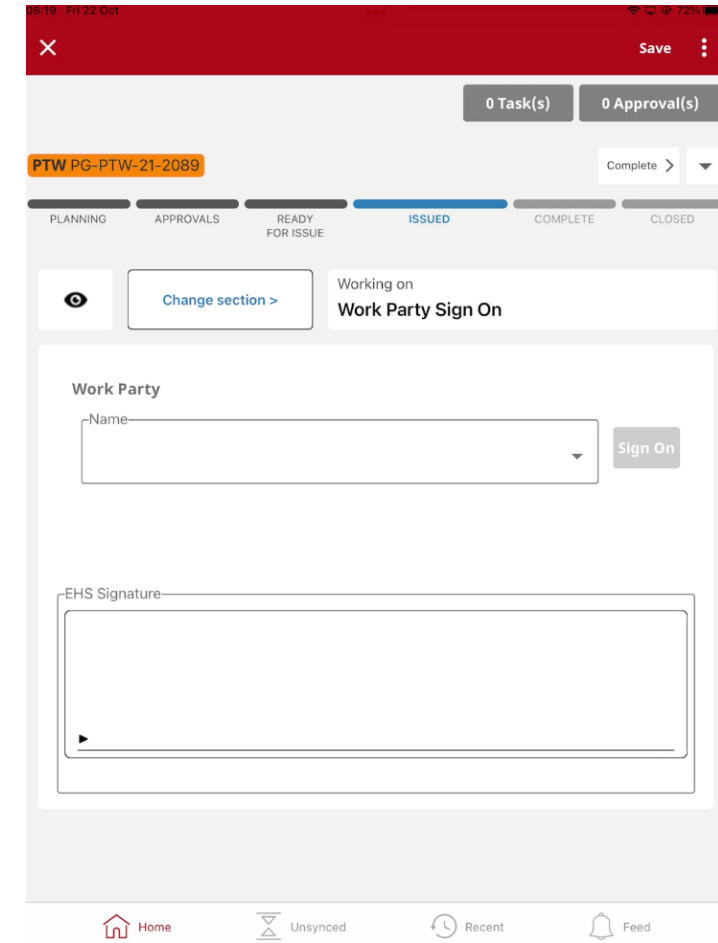
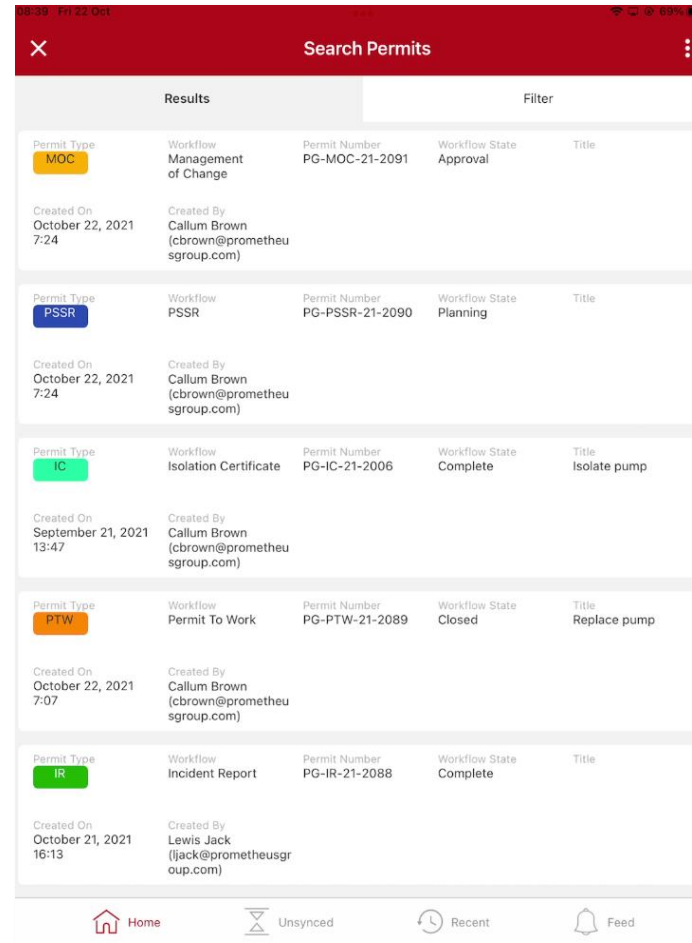
- Identify potential conflicts / simultaneous operations
- Works based on location, planned dates / times (as well as if issued now) and hazards
- Prevents the issuing of a permit if conflicts are found
- Less reliance on human beings and therefore less likely to encounter mistakes
 - Reduction of incidents

System Maintenance Conflict Matrix

	Working at Height	Vibration	Vibration	Work / System Overpressure	Very High Risk	Unguarded Opening	Unguarded Opening	Tripping Hazards	Toxic Gas Fumes	Toxic Gas Fumes	test	Stored Electrical Charge	Static spark	Smoke	Slipping Hazard	Sharp Abrasive Objects	Severe / Adverse Weather	Severe / Adverse Weather	Rotating Machinery / tools	Release of trapped fluids	Energy Storage	Excavation or trenching and Gas Detection	Excavation or trenching or Process	Excavation or trenching to Control Process	Projectiles	Pressurised Hose Failure	Pinch point or trapping Hazards	Personnel near height or into open	Particles (Air / Water Borne)	Personnel near height or into open	Noise	
Activation of Pressure Source																																
Activation of Pressure Source (e...																																
Bad Visibility / Lighting																																
Chemical Agents																																
Chemical Agents																																
Cuts/Abrasions																																
Disruption of Electrical Supplies																																
Distance Restriction from Existi...																																
Dust / Hazardous Fumes																																
Dust / Hazardous Fumes																																
Electric Arc																																
Electric Spark																																
Electrical Cable Failure																																
Environmental Impact																																
Exposure to Hazardous Substan...																																
Extreme Risk																																
Failure of Communications																																
Flammable Substance																																
Flammable Substance																																
Gas Cylinder Failure																																
General Hazards																																
Heavy or Awkward Object																																
Heavy or Awkward Object																																
Height																																

Mobile Capabilities

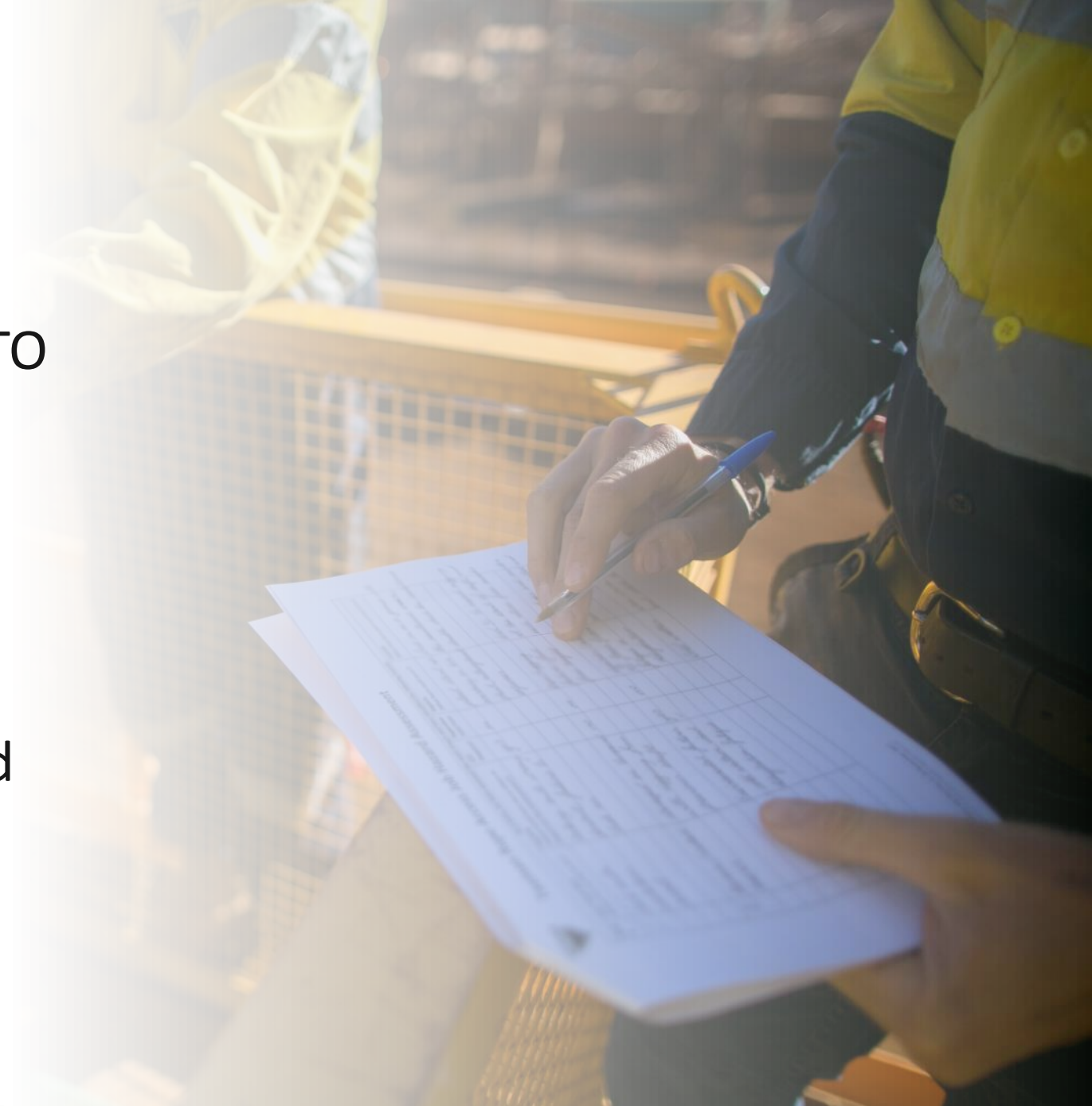
- Online / Offline
- Device Agnostic (iOS, Android, Windows)
- Follow the complete workflow through
- Simplified User Interface



Digitalising the Processes

Project Initiation

- Many new project types
 - Not just permit to work and LOTO
- Phased approach and change management
- Fit for purpose workflow application
 - Workflow designer and localized content



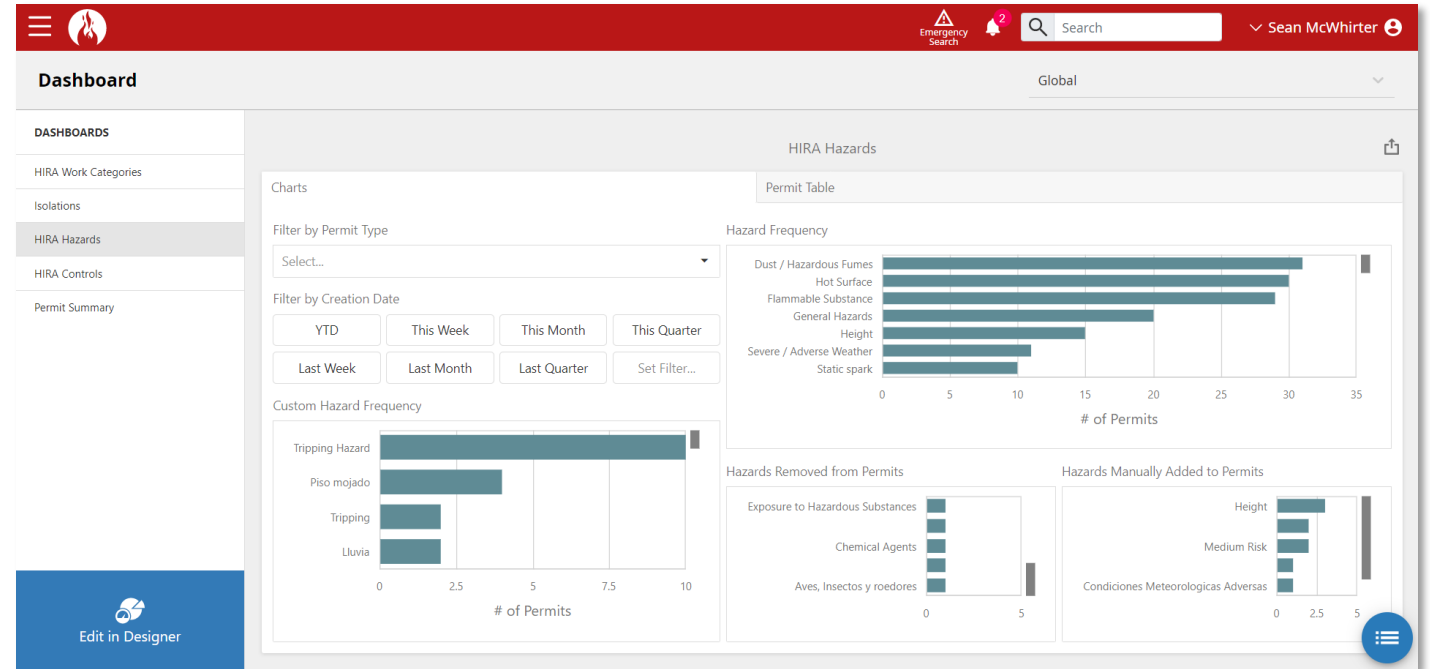
Considerations when moving to a ISSOW

- What are our biggest challenges that we want to address?
- Do we want to be mobile enabled?
 - Do we have network coverage across site?
- Do we need integration with our EAM and what should that look like?
- Who would need access to the system and what level of access?
- Which workflows do we want to digitalize?
 - PTW, LOTO, CSE, Incident Mgmt, MOC, etc.?
 - Do we want to start with all, or just some workflows and scale out?

New Development

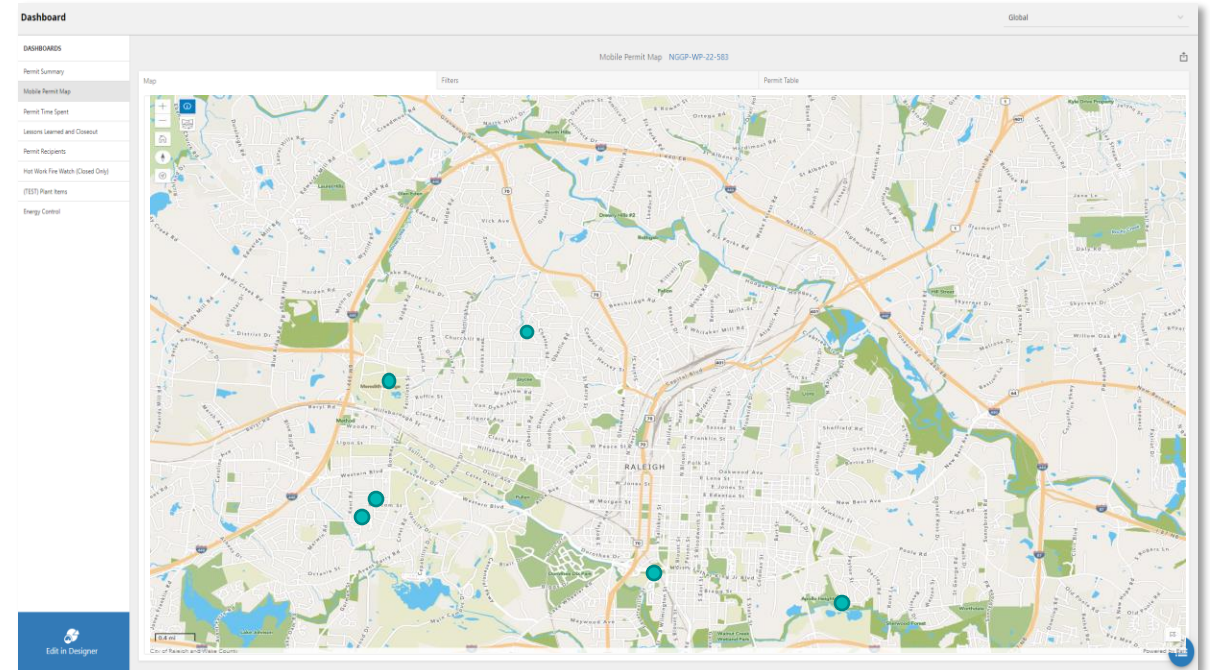
Embedded Reporting

- Dev Express Reports
 - No more crystal reports requirements
- In-app Analysis
- Map Extension
- Location and Role Dashboards



GIS Improvements

- Audit trail coordinates
- Mobile integration
- Enforce walk-down processes



Maintain P&IDs

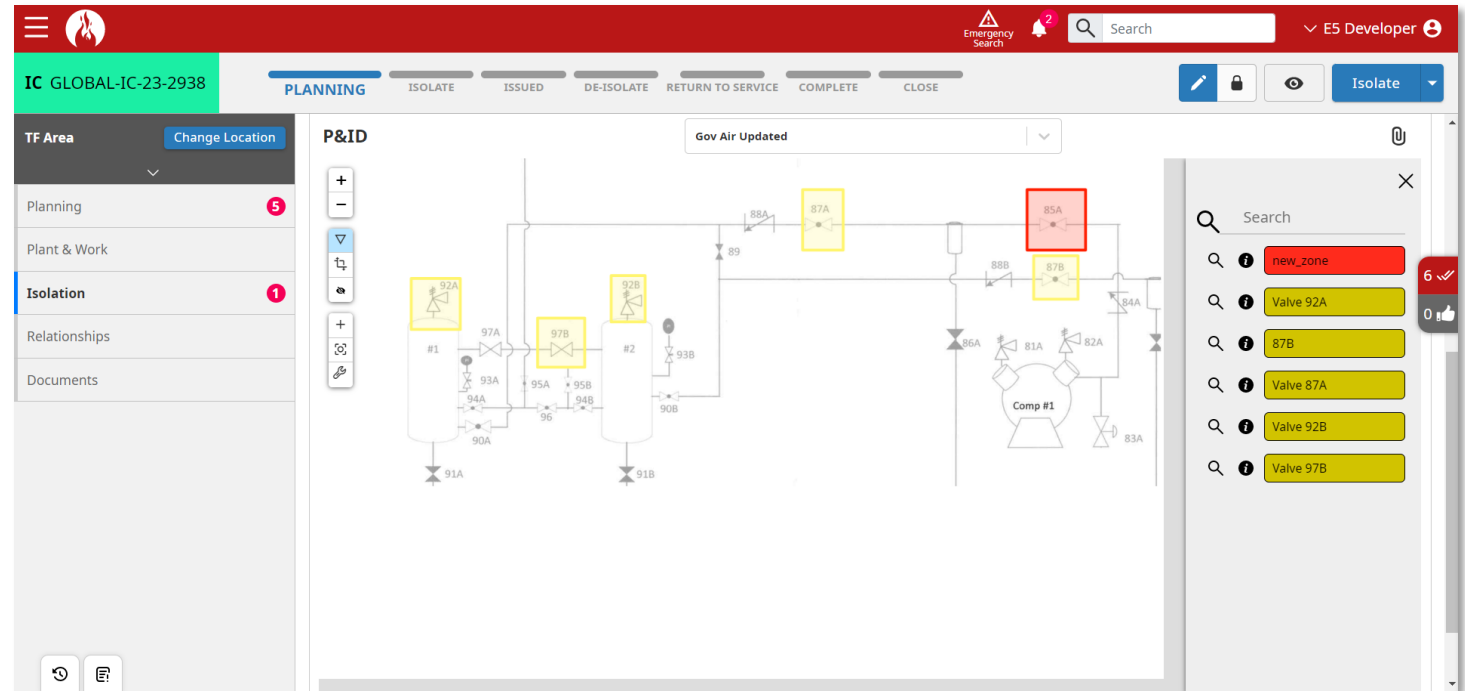
- Manage Drawings
- Pre-save Isolation Points
- View records

The screenshot displays a software interface for maintaining P&IDs. The interface is divided into several sections:

- Header:** Includes a search bar, a user profile for "E5 Developer", and a notification icon.
- Left Panel:** A table titled "p_and_ids" with columns for "Name" and "Location". The table contains two entries: "Cooling Water" (Global) and "Gov Air Updated" (Prometh).
- Central Area:** A P&ID diagram showing two receiver tanks (#1 and #2) and a compressor (Comp #1). Various valves and transducers are labeled with IDs such as 91A, 91B, 92A, 92B, 93A, 93B, 94A, 94B, 95A, 95B, 96, 97A, 97B, 87A, 87B, 88A, 88B, 89, 85A, 86A, 81A, 82A, 83A, 84A, and 90A. Some valves (92A, 92B, 87A, 87B) are highlighted in yellow.
- Right Panel:** A search panel with a search bar and a list of search results. The results include "Valve 92A", "87B", "Valve 87A", and "Valve 92B". Below the search results is a section titled "related_permits" with a list of toggle switches for various permit IDs, such as "GLOBAL-IC-23-2937", "GLOBAL-IC-23-2934", "GLOBAL-IC-23-2933", "GLOBAL-IC-23-2925", "GLOBAL-IC-23-2932", "GLOBAL-IC-23-2938", "GLOBAL-IC-23-2931", and "GLOBAL-IC-23-2929".

Apply P&IDs in Isolation Certificates

- Use pre-drawn points
- Add temporary points
- Automatically create isolations



What's Next?

Upcoming

- Plotting Zones
- Automated plot points
 - Based off GIS coordinates / ArcGIS
- Broader Mobile PM Integration
- Integration with RiskPoynt
- Notification Extensions



Questions?

Thank you