



Digital Permit to Work system

Eni experience: e-WP (electronic-Work Permit)

e-WP: electronic - Work Permit

Objective

Design and implementation of an IT solution that supports the adoption of best practices in terms of managing work permits and authorizing workflow

Main benefits:

Work Permit process continuously targeting operational excellence:



improve process traceability



strengthen authorization workflow



reduce workload and paper management

Solution

e-WP (electronic-Work Permit)

E-WP - The Project

- Application developed and managed (support, maintenance, upgrades, etc) by IT Department;
- Web application hosted in Eni Green Data Center (HPC 5 Supercomputer);
- Most of routine SW administration activities available at site level (ICT skill not required).
- Different versions developed in order to meet different requirements of Upstream / Downstream as well for Italy / abroad applications.
- Digital signature applied.
- Responsive version available (Mobile devices).
- CMMS (SAP) Interface and GIS interface available.

E-WP - The Graphic interface (example)

The screenshot displays the E-WP web application interface. The main view is an aerial map with several colored overlays: pink, orange, yellow, green, and blue. A central popup window provides details for a specific work permit:

Permessi di Lavoro PW-MNT.2016.000167
Data inizio proposta: 20/04/2016 00:00
Data fine proposta: 10/05/2016 23:59
Data inizio: 25/04/2016 00:00
Data fine:
Stato: Pianificato
Tipologia lavoro: Altri lavori di lavoro con uso ponteggio
Ordine di Lavoro: 000000001
Richiedente: 0800949
Autorizzante: 77931047
Esecutore:
Normativa:
Larghezza: 45.14900
Lunghezza: 10.84000

On the right side, there is a 'Permessi di Lavoro' panel with search filters and a list of permits:

Permessi di Lavoro
Da: 02/05/2016 00:00
A: 09/05/2016 23:59
Luogo: MNT
Cerca

Filtri
Numero PDL: Tipologia lavoro
Richiedente: Autorizzante
Esecutore: Normativa
Trova Inseguo

Lista Permessi di Lavoro
Autorizzato (2)
Autorizzante (20)
PW.MNT.2016.000177
PW.MNT.2016.000174
PW.MNT.2016.000150
PW.MNT.2016.000148
PW.MNT.2016.000136
PW.MNT.2016.000128
PW.MNT.2016.000121
PW.MNT.2016.000109
Pianificato (0)
PW.MNT.2016.000167
PW.MNT.2016.000164
PW.MNT.2016.000163
PW.MNT.2016.000162
PW.MNT.2016.000161

The interface includes a top navigation bar, a toolbar with various icons, and a legend on the left side. The bottom left corner shows Google Maps coordinates: 45°08'58" N 10°50'21" E.

e-WP – The Tool

- A workflow manager is the core of e-WP.
- E-WP manages the full PtW workflow from issuing to closure;
- The workflow steps can be driven «on condititon»;
- PtWs are tracked, any access is recorded, any user is alerted about PtW waiting for action.
- Languages (up to date): Italian, English, French, English/Arabic (front text).
- Contractors Management System, Smart Safety and other System interfaces under development.

eWP – The deployment map

Key highlights (April 2020)



55 Sites
(16 outside Italy)



> 150.000 PtW issued
in 2019



10.000 Users
(75% from Third Parties)

Live sites

Planned 2020 (abroad)

< 2017	2017	2018	2019	2020
Refining – Sannazzaro.	Upstream – Petrobel Abu Rudeis	Upstream – DICS Pineto	Refining – Taranto	Upstream – Indonesia Handil (ORF)
Upstream – Trecate	Upstream – Pakistan Bhit	Refining – Pomezia, Palermo, Ravenna	Petrochem – Priolo/Ragusa	Upstream - Australia – Blacktip
Upstream – IEOC Port Said	Upstream – Congo Litchendjili	Upstream – NAOC Ob-Ob	Upstream – Indonesia Jangkrik (FPU)	Refining – Ortona, Porto Torres
Upstream – IEOC Cairo, Amreya	Upstream – DICS Fano	Upstream – DIME COVA	Refining - Calenzano	Reclamation – Assemini, Porto Torres
UPS – Enimed NUCE- TECE-CEPP	Upstream – DICS Falconara	Petrochem – BRINDISI	Refining - Fiorenzuola	Reclamation – Priolo, Gela
Powergen – Ferrera Erbognone	Upstream – Enimed Ragusa	Upstream – Enimed - Bronte, Gagliano	Upstream – DICS T. Tona	
Powergen – Mantova, Ferrara	Upstream – Iraq Hammar	Upstream– DICS Casalborsetti;	Upstream - Iraq Zubair LSC	
Upstream – DICS Ravenna Mare	Powergen – Brindisi	Refining – Venezia	Petrochen - ILCV Assemini	
Upstream – Tunisia Tazerka	Refining – Gaeta	Upstream – Tunisia Oued Zar	Refining - Genova Porto	
Powergen – Ravenna, Bolgiano	Refining – Genova Pegli	Upstream – NAOC Port Harcourt	Upstream - IEOC Damietta	
Refining – Volpiano	Refining – Sarroch	Upstream – Ghana Sanzule		
Upstream - DICS Rubicone	Refining – Rho	Upstream – Congo M’Boundi		



E-WP – The experience

- Continuous and fast application improvement & evolution as for business requirement and user acquainting.
- The PtW digitalization project provided the opportunity of a PtW procedures revision focused on sharing of best practices and addressed to more homogeneous procedures.
- Switching from a paper based PtW system to a digital PtW system is a significant change to be managed adequately through MoC procedure application.