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Delek US Case Study

How Delek US Enhanced Safety Culture & Efficiency With GOARC's Permit To Work Solution

The Company

Location

www.delekus.com

Industry

Chemical Industry

Products

Delek US is a diversified downstream energy company with assets in petroleum refining, logistics, asphalt, renewable fuels and convenience store retailing.

The Organization

- The company has close to 4,000 employees
- A downstream energy company with a passion for growth and a commitment to operating safely, reliably, and ethically
- Specializes in petroleum refining, with the ability to process 302,000 barrels per day of crude oil from our four U.S. refineries.

Delek US Painpoint:

Ensuring a safe working environment and reducing work incidents in high-risk operations with changing processes and risk levels during multiple types of maintenance jobs.

1 The Challenge

Ensuring a safe working environment and reducing work incidents in high-risk operations with changing processes and risk levels during multiple types of maintenance jobs.

> *The safety culture that has been created at Tyler through the permit system, is one that I have never seen.*
>
> - Keith Marble , Reliability Specialist at Delek US

2 The Requirements

- **An integrated, work permitting system**
  - An automated, connected, digital system to connect between all sites and parties involved
  - Real-time data communication and visualization from the field
  - Adaptable to changing conditions and risks, with full visibility to optimize the authorization process
  - To provide a reliable flow of information and notification across the internal chain of command to enhance communication
- **A connected worker solution for dynamic authorization**
  - Digitize and standardize safety processes and procedures
  - Real-time hazard identification and risk evaluation
  - Facilitate continuous worker, asset, and process safety
  - Improve accessibility of permits & identify real-time permit conflicts
  - Proper safety protocols

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> *I never would have thought having the Operations and Maintenance Supervisor as part of the actual permit would be good, but now with the new permit system, all parties are involved and knowledgeable.*
>
> Richard Smith, Safety Rep at Delek US

3 The Solution

- **Digital Transformation Towards The Refinery of the Future**

  Based on real-time data integration for cumulative risk evaluation the innovative software solution identifies overlapping permits, safety hazards, and risk levels for dynamic work reallocation. The system supports a connected environment with 24/7 communication to enable optimal risk level evaluation, decision-making and management across workers and assets.

- **Dynamic Risk Management**

  The dynamic solution identifies the best and most effective workflow and signature authorization in real time and identifies issues, such as hazardous work conflict and overlapping permits to enable more effective work reallocation. The system delivers updated personalized and specific safety guidelines and notifications to workers.

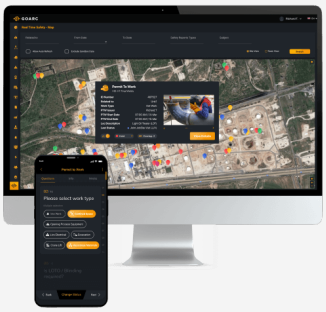
- **Transformational change: Integrating all processes and data sources**

  A single source provides full, interactive visibility of all site activities and is accessible to everyone. The control screen shows all existing work permits, identified hazards, reported changes, and real-time status of employees and tasks in the field. The integrated technology combines all processes and data sources to provide a comprehensive and continuously updated picture for situational awareness and effective, proactive risk management.

- **Risk Valuation**

  Risk visualization and real-time synchronized safety and process-related controls in a connected environment enable informed and rapid decision-making.

4 The Results - All-Access, All The Time



Accessibility of permits in a standard format, with **real-time identification of permit conflicts** and the ability to **effectively suspend work and resolve issues**, significantly reducing work incidents. It enables **efficiency capture** during controlled plant shutdowns, **maximizing safety performance** and **minimizing risk** while leading to **increasing production revenue**.

Post roll-out, the refinery achieved a record **1045 days without a single injury**. The new system went live in September 2020 in the Delek El Dorado refinery and was successfully stress tested during the January 2021 turnaround.

17.6 min. average time to issue a digital permit	4,200+ permits written, approved and closed in Tyler refinery	450+ employees and 2000+ contractors trained on new system	Contractor labor savings and operational costs

About GOARC

GOARC's predictive AI-powered digital safety solutions delivers a real-time view of a plant's operational reality with superior visualization and dynamic work activities and risk management. It connects people and aggregates disparate data from systems, sensors, and the human-derived activities – delivering meaningful, actionable insights across the organization.

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