Gunvor Group Gains Turnaround Transparency with Roser Suite from Prometheus Group

COMPANY

| | Gunvor Group Ltd. | | HQ: Geneva, Switzerland | | Energy |

Challenges

- Historical data from previous turnarounds not easily available.

- Lack of transparency on how to challenge and refine scopes prior to execution.

- Not enough control over additional scopes added after scope freeze.

- Isolation management not integrated with turnaround solution.

Results

- All turnaround historical data now stored and accessible, making it easier to plan for the next turnaround.

- Customized risk matrices give clear insight into whether a scope should be included in the turnaround.

- All participants in a turnaround can now challenge scopes prior to execution.

- Isolation management now integrated into turnaround solution, offering increased health and safety safeguards.

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ABOUT GUNVOR GROUP

Headquartered in Switzerland, Gunvor Group is a global commodity trading company with trading offices and representatives around the world. Founded in 2000, Gunvor engages in the trade, transport, storage, and optimization of petroleum and other energy products. The company also has significant investments in oil terminals and port facilities. Gunvor Group is one of the largest crude oil traders in the world.

Gunvor owns and operates three refineries in Europe. The first two, located in Antwerp, Belgium, and Ingolstadt, Germany, were acquired in October 2012. A third refinery, located in Rotterdam, Amsterdam, was acquired by Gunvor in 2016. Gunvor Ingolstadt is an inland refinery located on a 128-hectare site with the capacity to refine approximately 110,000 barrels of oil per day under normal operating conditions.

Shutdowns, turnarounds, and outages (STO) are a fact of life for many industries. In an oil refinery, turnarounds are conducted to ensure production is optimized and not halted by an unexpected outage, that worker health and safety are safeguarded, and to satisfy regulatory requirements. Gunvor's Ingolstadt facility has a turnaround event approximately every three years. Involved staff members will typically spend two and a half years prior to the turnaround documenting equipment in need of repair of replacement in their upcoming event.

A successful turnaround for a refinery of this size requires extensive planning and multiple channels of communication. Gunvor Group wanted to improve their turnaround management work process by successfully achieving the following goals:

1. **Improved scope accuracy—**Ensuring that any work approved for the turnaround was necessary.

2. **Improved method of collecting historical data—**Information gathered during turnaround must remain available for future planning.

3. **Deeper visibility into isolation management practices—**Increasing worker safety with best practice lockout/tagout (LO/TO) solutions.

4. **Better data integrity—**Ensuring a single source of truth between the ERP and other solutions.

5. **Extended communication channels across teams and transparency—**The ability to review and challenge scopes prior to turnaround execution.

> To achieve this goal, they needed a solution that would solve three main challenges:
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> 1. Storage of historical data and execution times.
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> 2. Lack of transparency in preparing scopes prior to execution.
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> 3. Worker health and safety during the turnaround.

CHALLENGES

Lars Liefeldt joined the maintenance staff of the Ingolstadt refinery in the 1980s, long before the facility was acquired by Gunvor. Currently he serves Specialist Technical Information and Turnaround for Gunvor's Ingolstadt refinery. He has led the Ingolstadt facility through several turnaround events, mostly recently in March 2020. Gunvor Group has used elements of the Roser Suite, including Scope-IT, Systems-IT, and Blind-IT, to manage those turnarounds. The Roser Suite has helped Gunvor address the following challenges to its turnaround management process:

- Lack of historical data from previous turnarounds: Before implementing Roser's Scope-IT, Gunvor's Ingolstadt refinery did not have access to much of the data gathered during previous turnaround events. The previous system was able to store scopes; however, it was not integrated with the system used for scheduling. In addition, the system did not log how long scopes took to execute or challenges encountered along the way. Getting this information required going into the scheduling software and manually looking up execution times.

- Lack of transparency on how to challenge and refine scopes prior to execution: Scope creep is a well-known phenomenon in turnaround circles, as there is always work that could be added. However, the best practice is to limit turnarounds only to that work that must be done during the turnaround, either for production or safety reasons. Gunvor needed a way to ensure that everyone involved in the turnaround project could see scopes and either approve or disapprove them.

- Lack of integration, particularly in isolation management: Gunvor wanted a more integrated solution to effectively manage turnarounds. A team can leverage the benefits gained from using integrated systems, including in areas that range from scope and materials management to inspection planning and execution. In addition to the planning and execution activities required to complete its outage, Gunvor also needed to ensure the safety of its team and facility by integrating an isolation management plan into their turnaround management strategy. This would increase the efficiency of the turnaround process while simultaneously helping to ensure the safety of all staff and contractors executing the turnaround.

SOLUTIONS

During a turnaround, significant funds are being expended and all production is halted. While the site remains offline, the company is not generating any revenue. Therefore, it's essential that turnaround events are completed on time and under budget. Gunvor Group knew the Ingolstadt refinery could benefit from an integrated turnaround solution that would allow for detailed planning, extensive scope management, and provide the ability to store historical data to improve the next turnaround event. They also knew they would need a turnaround management tool that would seamlessly integrate with Primavera, the company's turnaround scheduling tool.

Gunvor Group partnered with Roser ConSys to help configure Scope-IT, Systems-IT, and Blind-IT for its specific needs. All three solutions integrate with each other and with Gunvor's ERP, helping to ensure data integrity while retaining flexibility.

Scope-IT was used to analyze and assess work requests for the turnaround. The tool shows all aspects that may influence the decision and makes it easy for involved stakeholders to challenge and make necessary modifications to the scope.

The power of Systems-IT was demonstrated through the preparation and execution of work packages. Templates make it simple to prepare and estimated all planned activities, as well as greatly streamlining the materials selection process. Systems-IT also allows multiple disciplines to work in the same scope item at the same time, ensuring that the knowledge of every specialist is used optimally.

Blind-IT was used for lockout-tagout. This is a vital capability in any turnaround or shutdown, but it's especially important for the oil and gas industry. Blind-IT stores data in a central project-independent environment. This means the data can be used again when needed for a new project, without needing to enter the data again.

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> *"It's a comprehensive full circle system. You put data in, and it leads you through the loop. It guides you through the process so that at the end, you get the data you need. It's all in one system and calculating as it goes through the data. It's time saving for the scheduler too, to get all the information he needs."*
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> — Lars Liefeldt, Specialist Technical Information and Turnaround, Gunvor

Scope-IT, Systems-IT, and Blind-IT provided Gunvor Group with these advantages and features, plus much more:

- Fast, reliable digital approvals and status updates.
- Leverage needed data from ERP.
- Real-time progress updates collected in the field.
- Improved accountability for scope management.
- Increased alignment with turnaround schedule.

RESULTS

After implementing Roser's Scope-IT, Blind-IT, and Systems-IT, Gunvor Group's Ingolstadt refinery experienced several benefits, including:

- The ability of concerned stakeholders to challenge scopes.
- Real-time accessibility to data and information when planning scopes.
- Insight into possible jobs that may have "slipped through the cracks."
- Closer adherence to the turnaround schedule and improved schedule management.

- Faster identification of scheduling conflicts, eliminating "snowballing" issues.
- Improved communication between teams and departments during the planning and execution stages of the turnaround.
- Easier prioritization of tasks.
- Improved worker accountability and schedule ownership.
- Increased accuracy of work packages and materials lists prior to turnaround execution.

Lars noted that there was a selection process, but the flexibility of the Roser suite was an undeniable advantage.

> *"We also looked at other turnaround preparation solutions, but they weren't satisfying our management needs. The different modules are a big plus from Roser. You don't need to use additional solutions when you have these modules. One of the biggest advantages is the flexibility of the tool, being able to pick what you want and only what you need."*

About Prometheus Group

Prometheus Group is a leading global provider of comprehensive and intuitive enterprise asset management software solutions that work within ERP systems and span the full work management life cycle for both maintenance and operations. Developed jointly with end users, Prometheus software enhances the customer experience for planning, scheduling, and executing work for both routine maintenance and shutdowns and turnarounds, all while protecting the workforce with safety solutions and electronic permit to work. Our straight-forward functionality, graphical visualization, and simple processes enable customers to increase productivity, reduce costs, and improve reporting. For more information, please visit www.prometheusgroup.com.