

# Enhancing Operational Efficiency in Refinery Analytical Systems

## Case Study



A case study showing the impact of collaborative work between refinery operators and solution providers in enhancing efficiency and achieving sustainable growth. The ABB solution set the stage for more innovation and success in the refining industry.

Measurement made easy

### Introduction

A big refinery east of Houston, with 18 old CEMS analyzers and Syscon boards, needs to upgrade its analytical infrastructure and follow corporate rules. This white paper examines the problems the refinery faced and how working with ABB led to new solutions, improving operational efficiency and creating a good partnership.

### Challenge

The refinery, operating under a corporate initiative to avoid suppliers aligned with a “green” strategy for future business, encountered difficulties in procuring replacements for its obsolete CEMS analyzers. Despite this challenge, the refinery maintained a strategic position in its market, receiving crude oil via rail, marine docks, and pipelines, and distributing finished products through pipelines and refinery docks into ships and barges.

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## The Solution

In response to these challenges, ABB conducted a comprehensive Life Cycle Assessment (LCA) Site Survey in July 2022, leveraging the collected data to offer tailored upgrades for the obsolete CEMS analyzers. Through collaborative efforts with the channel, ABB proposed individual Continuous Gas Analyzer (CGA) modules as an alternative to full system replacements, a solution accepted by the customer. This strategic approach not only addressed the immediate need for upgrades but also aligned with the refinery's corporate directives.

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## Conclusion

The implementation of targeted service offerings based on data collected from the LCA site survey yielded several benefits for the refinery:

1. **Cost Effective Solutions:** ABB offered individual CGA modules instead of full system replacements, saving money for the refinery and meeting their unique needs, using resources efficiently and reducing downtime.
2. **Quick Delivery and Installation:** ABB's factory and service team worked together to finish all deliveries and installations early, keeping the refinery running smoothly and showing ABB's dedication to pleasing customers.
3. **Improved Operational Performance:** The improved Syscon boards and onsite training from ABB helped to improve operational performance, giving refinery staff the skills and resources they needed to optimize the output of their analytical systems.
4. **Positive Customer Experience:** The refinery praised ABB's support, noting the success of the teamwork and wanting to use similar solutions at other US sites.

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## Conclusion

The case study illustrates the powerful impact of joint work between refinery operators and solution providers in solving operational problems and enhancing efficiency. By using data-based insights and providing customized solutions, ABB enabled the smooth update of the refinery's analytical infrastructure, surpassing expectations and creating the basis for ongoing partnership and success. This strategic cooperation highlights the importance of flexible solutions in achieving sustainable growth and operational excellence in the refining industry, setting the stage for more innovation and success.

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