



# EXECUTIVE SUMMARY

## Overview

Many companies in the Oil and Gas industry are determinate to face towards a renewable energy future along with new technologies. The last couple of years ECOPETROL has been investing large amounts of resources in technology to explore new possibilities and be ahead in the latest technology tendencies. This is critical in every aspect of the company in pursuit of more reliable and ever cleaner energy that fuels progress.

As part of the global move toward clean energy, Ecopetrol seeks to become a net-zero emissions company by 2050. In the looking to meet the demands for greener, more sustainable energy operations, ECOPETROL decided to move its eight group companies and 78 organizational entities on-premise systems to the cloud.

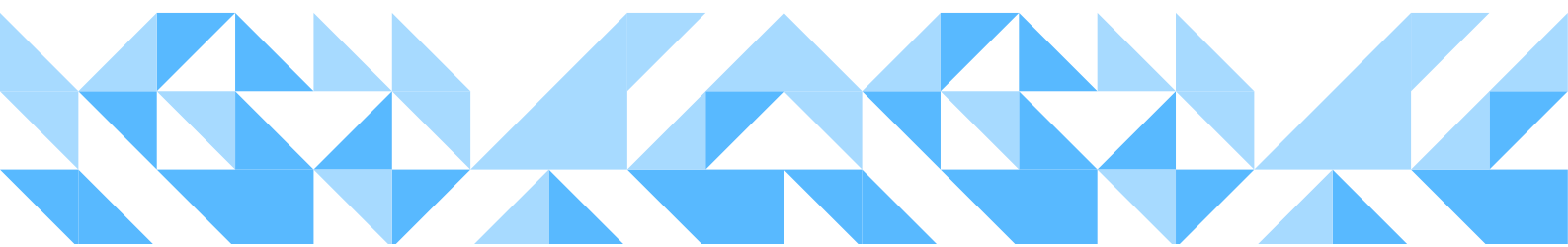


**James**

**Business Process  
Consultant**

## Industry Trends relevant to this project

1. **Big Data analytics:** Oil and gas industry generates massive amounts of data from their operations. And within this data from their operations, they can use it to solve a variety of engineering, business, and safety problems. Companies can now utilize this data and advanced analytics to innovate exploration, safety, and optimize production at both a plant and supply chain level.
2. **Moving to the cloud:** As oil and gas companies leverage data to improve operations, more are also moving this data to the cloud. Furthermore, the fact that data stored in the cloud can be accessed anywhere at any time. By doing so, oil and gas companies achieve cost savings and improvement in security.
3. **Automation and Robotics:** Oil and gas operators are turning to automation and electronic monitoring systems for harmful or mundane tasks to reduce the likelihood of injury and improve productivity.
4. **Cloud-Based ERP Solutions:** Becoming increasingly popular where the software, databases, and associated data are delivered through the internet and can be accessed on any device with a web browser allowing members to access the software from any location.
5. **Field logistics SAP Cloud Solution:** The solution builds on standard SAP components and manages the end-to-end process from receiving from suppliers, outbound logistics and tracking, receiving at the remote location, and returns. Equipment and material can be owned or rented, including direct purchases of non-stock items with or without a material master.





## Key Challenges-Business Goals

1. Ecopetrol seeks to become a net-zero emissions company by 2050
2. Seeks to consolidate the systems onto a unified, secure, and robust technology platform, all this depending on moving the core systems to the cloud.
3. Ecopetrol must become a more agile and dynamic organization that can adapt quickly to the changes facing the energy sector and thrive in this competitive market.

Our team will successfully conduct an analysis and design a tailored solution that fits the requirement of ECOPETROL pursuing the following goals:

1. Ensure a smooth and successful transition to cloud services
2. Faster system response time, reduction on ERP database, faster financial closing cycle.
3. Ecopetrol, as a leader company sees mandatory to be part of the global move towards clean energy.

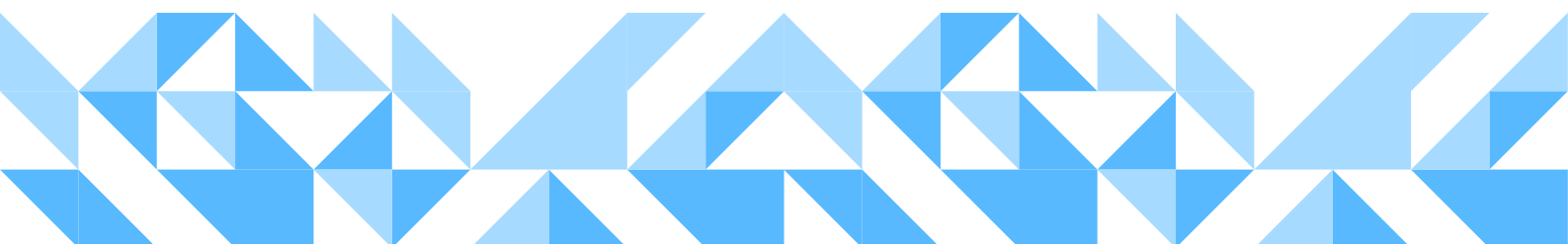
## Analysis Approach

To understand more about the customer's business goals, our team will perform a **SWOT** and **PESTLE** analysis that will help us to understand the environment where Ecopetrol operates and how prepared Ecopetrol is or needs to be to succeed in their environment.

SWOT analysis gives us information about ECOPETROL competitive advantage and the relationship to its environment; with this, we will understand if the solution we are proposing can help ECOPETROL alleviate problems and seize new opportunities. We ask ECOPETROL to join us in this task to identify which of the issues in the SWOT are the most relevant for them.

## Project Team Members

1. **Project Manager Manuel Rivera:** Responsible for building a business case for the project, setting up the work schedule, and helping to develop the overall project plan. As a PM expert, we will rely on his advice on which of the different development methodologies we should use in this plan, such as waterfall, Agile, DevOps and cloud base.
2. **Coby Bergman, technical consultant:** Who has functional experience in analytics, software knowledge, and vast experience in the oil and gas industry; if possible, he will share with the team other implementations experiences of cloud project.
3. **Rob Mausser, A technical consultant:** who has experience with designing and implementing cloud solutions, in this case for SAP HANA Enterprise Cloud.
4. **James, Business Process Consultant:** He will work with the ECOPETROL team to understand how on-premises systems are working, will perform some BPA to realize how the different processes are currently working, and he will guide us or tell us if something needs to be improved or changed. This could involve designing new processes or coming up with new solutions.





## Final Thoughts and Next Steps

Among the several cloud technologies available in the SAP applications, we propose ECOPETROL use The SAP Enterprise Cloud Services portfolio for the cloud migration project, with the SAP HANA Enterprise Cloud service supporting the technology deployments and the SAP Cloud Application Services organization supporting the functional enablement.

SAP HANA and SAP HANA Enterprise Cloud will provide the speed, capabilities, and data compression Ecopetrol needs and SAP Cloud Application Services offers the greatest benefits in terms of project integrity and ongoing performance optimization.

We estimate that these solutions will lead a 50% faster system response times, ERP database downsizing from 8 TB to 1 TB, and financial closing time compressing from 10 days to 6 days. Plus, with enhanced analytics and anytime, anywhere reporting, Ecopetrol has the insight it needs – right when it needs it. Finally, mobile access means employees can review, approve, and access the information and workflows they need wherever they are and whenever they need to – increasing user satisfaction and improving process execution.

**50%**

faster system response time.

**87.5%**

reduction in ERP database size (from 8 TB to 1 TB).

**40%**

faster financial closing cycle (from 10 days to 6 days).

