

# Case Study Assignment Template

## Ecopetrol moving to the cloud

### Task 1. Select a Case Study for your Assignment

Customer Story: **ECOPETROL, SUPPORTING A MORE SUSTAINABLE, INNOVATIVE ENERGY FUTURE BY MOVING TO THE CLOUD.**

Website: <https://www.ecopetrol.com.co/wps/portal/Home/en>

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| <b>Customer profile</b> <ul style="list-style-type: none"> <li>- Oil and gas industry</li> <li>- 2<sup>nd</sup> company with best reputation in Colombia</li> <li>- 15.632 employees</li> <li>- 91.881 trillion revenues</li> </ul> | <b>Digital transformation impacts</b> <ul style="list-style-type: none"> <li>- Looking to meet a greener and more sustainable energy operations.</li> <li>- Consolidate its 78 systems to the cloud ensuring a smooth and transition to SAP Cloud services.</li> <li>- Seeks to become a zero emissions company by 2050</li> </ul> |
| <b>SAP solution technology areas</b> <ul style="list-style-type: none"> <li>- SAP HANA Enterprise cloud</li> <li>- SAP Cloud Application Services</li> </ul>  | <b>Case study material includes</b> <ul style="list-style-type: none"> <li>- Information describing the SAP solution</li> <li>- Description of SAP solution</li> </ul>   |

### Task 2. Understand the customer and industry context

Activity 1: Identify Business or Technology Trends in the Industry

Oil and gas - Macro Trends:

1. **Big Data analytics:** Oil and gas industry generates massive amounts of data from their operations. And within this data is information they can use 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.

#### Sources:

Source 1: <https://www.restrata.com/blog/oil-gas-industry-technology-trends-oil-gas-trend/#pp-toc-60f7d826ec3d5-anchor-1>

Source 2: <https://www.randgroup.com/insights/industries/oil-gas/technology-trends-in-the-oil-gas-industry/>

Source 3: <https://blogs.sap.com/2022/12/09/sap-oil-gas-and-energy-highlights-2022/>

#### Activity 2: Identify Customer Motivations

In ECOPETROL customer story, the customer's motivations to go for moving to clouding are:

- Motivation 1: Ecopetrol seeks to become a net-zero emissions company by 2050.
- Motivation 2: Decided to consolidate the systems onto an unified, secure, and robust technology platform, all this depending on moving the core systems to the cloud.
- Motivation 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.

#### Activity 3: Identify the Customer's Business Goals

In ECOPETROL customer story, the customer's business goals are:

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

#### Activity 4: Identify Analysis Frameworks

- (a) To understand more about the customer's business goals in the ECOPETROL story, I have selected **SWOT** and **PESTLE** analysis that helps me understand the environment where ecopetrol operates and how prepared ecopetrol is or needs to be succeeded.
- (b) I chose **SWOT** analysis because gives me information about ECOPETROL competitive advantage and the relationship to its environment, and it might help both parties (me and the company) to understand if the solution my team are proposing can help ECOPETROL alleviate problems and seize new opportunities. I

will have to work along with the customer to analyze which of the issues identified in the SWOT are the most relevant for them.

### (c) SWOT Analysis

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| <p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>- Strong free cash flow: Counts with a healthy cash flow providing the opportunity to expand to new projects.</li> <li>- High skilled workforce with successful training, ecopetrol is investing large amount of resources in training and development.</li> <li>- Successful track record of developing new products- Product innovation.</li> </ul> | <p><b>Weaknesses</b></p> <ul style="list-style-type: none"> <li>- Development is below the fastest companies in the industry unable to compete.</li> <li>- Need more investment in new technologies.</li> <li>- Limited success outside core business.</li> </ul> |
| <p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>- New environmental policies in Colombia represents an opportunity to move to new tendencies.</li> <li>- Government green drive to help companies to access green technology to be ahead on this field</li> </ul>   | <p><b>Threats</b></p> <ul style="list-style-type: none"> <li>- Intense competition with large players in the industry having better technology</li> <li>- Oil Price fluctuations affecting the cash flow.</li> </ul>  |

## Task 3. Build your project team

### Activity 1: Identify your role on the project team and why you have chosen it

I will be a **Business Process Consultant** on the ECOPETROL project team. I will conduct an analysis of the processes taken on the on-premises systems; I will have to work this along with the customer in order to realize what is working well, what needs to be improved or changed and how to best to make those changes if required. I will perform a BPMN to visualize processes and help communicate changes to the customer.

I would gather relevant information to design and implement solutions that integrate the customer's operations and optimized processes, to fulfill the customer needs on moving the core systems to the cloud.

I have chosen this role because I want to use my skills in BPA analytics and data analysis to help successfully on this project.

## Activity 2: Describe the skills and expertise you'll bring

As a **Business Process Consultant**, I will work with the ECOPETROL team to understand how on-premises systems are working; I have to perform some BPA to realize how the different processes are currently working and if something needs to be improved or changed; this could involve designing new processes or coming up with new solutions.

The key skills I will bring to the project are:

- **Communication skills:** I will have to meet up with the customer and listen to him in an empathetic way, paying attention to the customer's feelings by putting myself in his shoes. I will explain possible solutions, and what SAP ecosystem might have to offer to his needs.
- **Strategic thinking:** to better understand the company by analyzing different variables and then evaluating the effect of changes in those variables. It might be necessary to use a mind map to show and organize information to rationally arrive to a solution if necessary.
- **Business acumen:** I will have to collect and analyze the business information to understand how customers business work. I will conduct primary and secondary research to achieve this purpose.
- **Teamwork:** I will build effective relationships with my colleagues, the customer, and stakeholders. By doing this, I think we have to share audacious goals that everyone can understand; those goals have to be inspiring and opens up possibilities to the company. In my team, I will be competent, reliable, consistent and caring of my responsibilities.

## Activity 3: Identify the skill and expertise mix needed for the project

To deliver the ECOPETROL Cloud SAP implementation, the ideal project team would include the following roles and mix of expertise/skills:

- **A project manager (PMs):** 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 of which of the different development methodologies we should use on this plan, such as: waterfall, Agile, DevOps and cloud base.
- **A technical consultant:** Must have functional experience in analytics and software skills. To perform well on this project is mandatory that they have experience in oil and gas industry and share with the team this experience, if possible, other experiences in implementation of cloud projects in other companies.
- **A technical consultant:** who has experience with designing and implementing cloud solutions, in this case for SAP HANA Enterprise Cloud.

## Activity 4: How the team will collaborate

The team will collaborate to deliver the SAP Cloud implementation by:

- The team will perform an initial meeting or workshop to perform brainstorm and exchange ideas in order to set clear what are the goals of this project; what are the needs or requirements to carry out this project successfully.
- Set clear or clarify which activities need to be done and in which order.
- Identify if some of the activities are dependent on other activities.
- Identify if some tasks run the risk of being unachievable or becoming more expensive.

- The team will have to prioritize the tasks using the Eisenhower Matrix.
- Set goals, roles and responsibilities for each individual.
- When organizing the different tasks, the Project manager will create a WBS in which the work will be broken down into a hierarchy of manageable parts, including the deliverables.
- Explain possible solutions and approaches to the customer.
- The team will not work siloed; instead, they will perform the work collaboratively on cross-functional teams.