

# Abstract

PIT Symposium 2021

Group 5



## Introduction

“Transitions themselves are not the issue, but how well you respond to their challenges.” – Author Jim George. Exxaro is committed to power a cleaner future in an effort to combat climate change and to remain relevant in the future. The company has stated in the climate change response strategy that their goal is to be carbon neutral by 2050, but we believe that Exxaro might be able to reach that goal even sooner.

Meet: “The JUST bunch”.



Figure 1: In order from left to right - Cherise Horn, Siyabonga Khumalo, Marubini Ndou, Edzani Muswede.

## Problem statement

How to maximize the chances of Exxaro having a successful transition into low carbon minerals and renewable energy, considering internal and external dynamics. The transition itself is proof of how Exxaro is growing, from the 4<sup>th</sup> to the 5<sup>th</sup> industrial revolution, which can only be truly successful if the transition is just.

## Background

The Paris agreement describes two possible scenarios, the 6°C future and the 2°C future. The 6°C scenario describes that if the world continues doing what it is doing today and makes no effort in reducing its green house gas (GHG) emissions, then there will be a global temperature rise of 6°C by 2050, leading to severe consequences like draughts, water shortages, loss in biodiversity, heat exhaustion, etc. On the other hand, if we start taking action immediately and we commit to being carbon neutral by 2050, then we can limit the global temperature rise to below 2°C.

To be carbon neutral means that for each amount of carbon dioxide that I emit into the atmosphere, I find a way to remove the same amount from the atmosphere. South Africa is

the 12<sup>th</sup> biggest GHG emitter in the world, with Eskom being the biggest emitter in the country. Coal adds up to +80% of the country's electricity generation, making it the biggest culprit today. In order to power a cleaner future, we need to start using more renewable energy generation methods. There is no point in driving an electric car or generating hydrogen for cleaner fuel cells, if the electricity used in the process comes from a coal fired power plant. The only way to say that we are truly "green" is if we use renewable energy to power the future.

Low carbon minerals refer to minerals that are needed in the construction of a low carbon future. It is the minerals needed to build solar panels, wind turbines, batteries, etc. Our current production of the "metals of the future" is not enough to sustain us in the future, production will need to ramp up to keep up. The problem is that these minerals and metals become increasingly scarce and difficult to mine, meaning that more energy needs to be put in. We need to find ways to power these operations in a green way but still keep the process costs low. Mining companies like Exxaro are being urged to find ways of making this possible.

## Research methodology

The group first decided to go on a journey of dissecting the topic and understanding what it means for Exxaro. Initial research only showed that Exxaro wanted to transition to low carbon minerals and renewable energy, with the goal of being carbon neutral by 2050. The group then went onto searching for the best options in the renewable energy and low carbon mineral sectors, soon to find out that Exxaro already knows which commodities it wants to venture in.

Not wanting to repeat any work that has already been done, the group decided to schedule meetings with as many people in the company as possible, to identify where in the strategy there may be a gap that we can fill. After consulting several senior leaders in Exxaro, the group realized that there was indeed a gap and that was the human factor. We could have focused on new carbon capture technology options or why Exxaro chose the low carbon minerals that they did, but the truth of the matter is that if your employees are not on board with you, even the best technology or strategy will fail. On a different note, if you have a group of innovative and excited employees willing to give their best for the company, then even the simplest strategy can be a huge success.

# Strategy

## 1. Move into the 5<sup>th</sup> industrial revolution

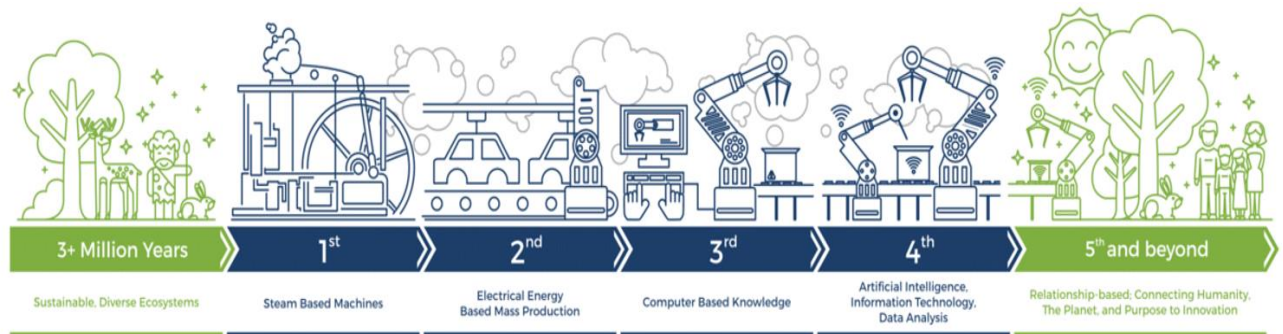


Figure 2: The 5<sup>th</sup> industrial revolution.

The 5<sup>th</sup> industrial revolution cycle describes how we as humans have evolved to reach a point where we can use artificial intelligence (AI) and robotics to do the menial jobs for us to allow people to focus on the work that they enjoy doing. The focus is on employee wellbeing and living meaningful and purposeful lives, while moving to a greener, low carbon future. In the 5<sup>th</sup> industrial revolution, people are more mindful of their own health and the health of our planet. Exxaro is already moving into industry 5.0 while other companies are still trying to get to industry 4.0, which gives us a major advantage.

## 2. Just transition

Moving from the 4<sup>th</sup> to the 5<sup>th</sup> industrial revolution will not be successful if the transition is not just. A just transition for Exxaro means to uplift communities, motivate our suppliers as well as our customers to go on the net-zero carbon journey with us, to take care of the environment by making our operations greener and to move into the renewable energy space, to take our employees with us on this journey and to power better lives for Africa and beyond.

## 3. Practical solutions

The group looked at practical solutions that Exxaro can start implementing today, starting at the BU level. The idea is to stress the issue of climate change and decarbonization as much as we did with the Covid-19 pandemic, to create awareness among our employees to realize the severity of the issue. Simple solutions include bonuses and incentives that are “green” and making climate change part of daily safety topics and “toolbox talks”.

## 4. Management evolution

Some of the most successful companies in the world use a system called reverse accountability where employees do performance reviews on their managers. The role and responsibilities of managers have evolved with the 5<sup>th</sup> industrial revolution. It is now believed that employees come first, not customers because if your employees are not happy, then they won't provide excellent service to your customers. Managers need to be more focused on sparking innovation in the workplace and less focused on getting employees to work harder

and longer hours. It has been proven to be a very successful management system. It is said that you either have a relationship or you have fear, therefore we should focus on building relationships with our employees and stakeholders to have long lasting partnerships.

## Conclusion

The only constant that can be observed, is change. Change is inevitable, but the outcome can be either positive or negative, depending on what you make it. We have the power to change our outcome, we have the power to ensure that by the year 2050 the global temperature rise is below 2°C. We have the power to make Exxaro carbon neutral and if we have a team of excited and innovative employees on our side, then we have the power to reach our goal sooner than what we expected. Our group's dream for Exxaro is that we will be the largest supplier of green energy in South Africa, by the year 2050. Beyond that, we will be a catalyst for companies around us to try and do the same.