

## Green Logistics Strategy

### LEADING THE GREEN LOGISTICS EVOLUTION

**“We need to have a shared commitment to developing an eco supply chain. We need to continuously reduce emissions.”** Marius Swanepoel, IMPERIAL Logistics CEO

Moving business and industry through innovation, inspiration and foresight, IMPERIAL Logistics is leading the green logistics evolution in end-to-end supply chain management by applying practical, ‘green’ processes and technologies.

For us, sustainability is an important part of being a responsible corporate citizen. From Africa, Europe, the Far East and USA to India, we implement award winning initiatives that reduce both our customers’ and our own carbon footprint. We set the best practice benchmark in sustainability, optimising business case driven logistics services – from transportation solutions to warehousing and distribution.

Our green skills are implemented from the inside, out. We operate using an advanced oil management system that extends oil changes to six months, resulting in 83% less oil going off site. We use bio-degradable fuels, and pursue product and water recycling.

What benefits can your business gain from getting into ‘green logistics’?

- Reduction in CO<sub>2</sub> emissions
- Unlocking significant cost savings
- Heightened supply chain optimisation
- Boosted business performance

#### **Forward thinking is thinking green**

By following a three-step process, we move supply chains to ‘greener pastures’. This involves:

- Becoming educated
- Measuring the company’s carbon footprint and identifying change levers
- Embarking on business case supported initiatives

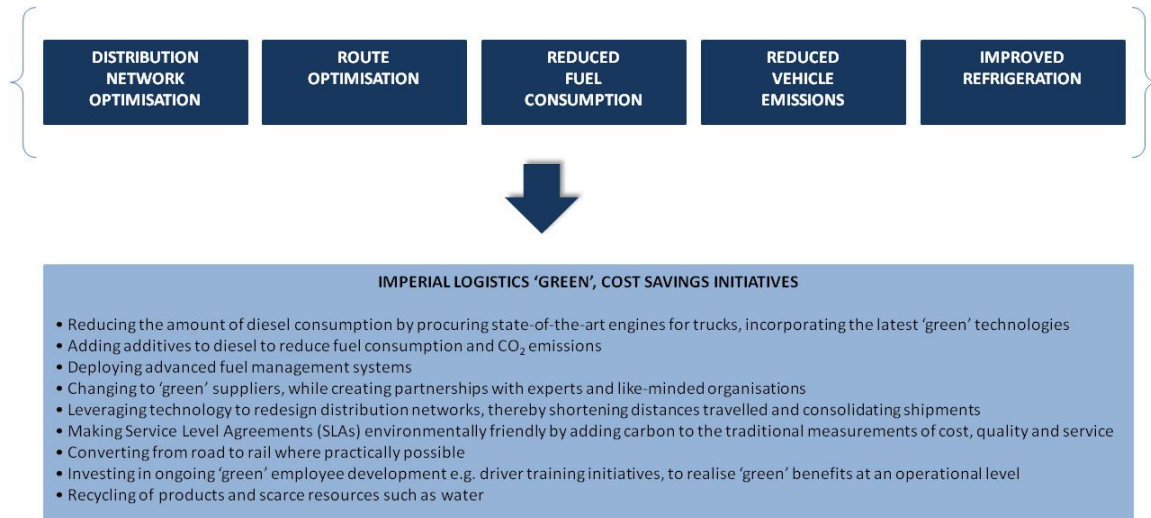
Green initiatives should clear three hurdles. They must be acceptable financially, environmentally and socially. IMPERIAL Logistics has implemented various best practice processes and systems. To date, we have delivered results that enable reduction in CO<sub>2</sub> emissions, while unlocking significant cost savings.

For example, we have invested in ‘green’ assets, including South Africa’s first vehicles equipped to Euro V emission standards, three ecoFridge trailers and one rigid ecoFridge unit. The Euro V fleet runs on low sulphur diesel, with additives that further reduce toxic emissions, while the nitrogen powered ecoFridge is completely harmless to the environment, as well as being 30% less expensive to operate.

For IMPERIAL Logistics customer, Woolworths, a net saving of R3.6million per year, based on current volumes, is projected. It is anticipated that 596 tons of CO<sub>2</sub> per annum will be eliminated due to these investments, that fuel consumption will decrease up to 9%, and an 8.8% and 7.6% reduction will be seen in trips and kilometres travelled respectively. Combined, fuel and emission savings translate into the equivalent of 10 cars less on the road, per truck.

## Practical application of sustainability strategy

IMPERIAL Logistics' environmental strategy is built on the optimal deployment of all current resources (vehicles, drivers, systems) and continuous base-line reductions when new enabling technologies, fuels and systems propulsion become available. The diagram below outlines our five key 'green' focal areas, which are driving practical initiatives.



We shorten the distances travelled in transporting products and redesign products in collaboration with service providers, e.g. tyres and trucks to reduce energy consumption and waste throughout the product life cycle.

IMPERIAL Logistics' Technical Department is proactively driving initiatives to reduce the amount of diesel consumed by the Group. Such initiatives include:

- Testing the impact of adding certain additives to the diesel to (a) reduce the consumption of diesel per kilometre and (b) reduce the CO<sub>2</sub> emission of the fuel being consumed.
- Due to the high volume of fuel consumed (> 200 000 000 litres of diesel per annum) and proportion of cost relating to fuel (ranging from 35 – 40% of total cost), advanced fuel management systems are deployed in our various operations. The slightest reduction in emissions will have a profound effect on CO<sub>2</sub> emission across the total fleet of > 5 500 vehicles in southern Africa and > 6 000 internationally.
- A Diesel Management Programme is in place to ensure that the 'best vehicle for the route' is deployed, based on CO<sub>2</sub> emissions per vehicle horsepower.

On our 'green' journey, includes initiatives such as the following:

- All fuel used in our Fast'nFresh operation contains 5% 'biodiesel'.
- Borehole water is used to wash the vehicles and all wash water is recycled. In addition, bio-degradable detergents are used in this process.
- Storm water is separated to ensure solid waste is removed before entering the water reticulation system.
- Used tyres and oils are disposed of in a responsible manner, using reputable agencies like 'Oilkol'.

These apply to virtually any industry that IMPERIAL Logistics is involved in from FMCG, Retail, Industrial and Construction to Petrochemical and Mining.

Furthermore, as part of our 'SA Incorporated' initiatives, IMPERIAL Logistics sponsors the annual State of Logistics™ survey, produced in collaboration with the CSIR and Stellenbosch University. Launched in 2004, the authoritative survey aims to provide a comprehensive picture of the state of logistics in South Africa, incorporating a micro and macro-economic view, as well as industry-level and market segment development perspective.

Through our partnership, researchers have been able to interact with and test hypotheses in a practical environment, investigating and covering all areas of logistics, including ocean freight, transportation, warehousing and inventory management, with sustainability being a critical agenda item.

## **Enabling greater supply chain certainty**

IMPERIAL Logistics, together with Cardiff University (UK) undertook a study in 2009, whereby extra distance travelled as a result of uncertainties in the supply chain was calculated. The initiative, undertaken in collaboration with Woolworths, resulted in the piloting of an award winning (2009 LAA Enviro Award) initiative that addressed unnecessary fuel consumption.

Introducing the concept of 'extra distance' as a measure of uncertainty within the supply chain, various elements, including network modelling, elimination of 'dead kilometres' and other initiatives to reduce fuel consumption and limit waste, were included in the study. In one case, it was found that of the 207 000 kms covered in one week, 13 143 kms were 'extra kilometres'. This would have amounted to an additional 1 071 200 kg of carbon released over a period of one year.

The study also found that > 6% of the transport distance actually run does not add value to the end customer, with both economic and environmental implications. Typical causes of these 'extra kilometres' included distribution centre failures (picking delays, queuing delays and other factors), short-notice volume increases, as well as errors in forecasting and transport planning. By identifying these supply chain uncertainties in a quantifiable manner, significant green (CO<sub>2</sub> reduction) and gold (cost savings) benefits were, and continue to be unlocked for Woolworths.

## **Equipment selection, design and optimisation**

IMPERIAL Logistics has been an early adopter of an approach of burning as little as possible fuel, and when we do, ensuring that it happens with the least amount of harmful emissions. A number of principles are non-negotiable in our vehicle procurement (CAPEX) process, irrespective of the initial costs involved.

Correct vehicle selection and specifications have the most important influence on fuel consumption, and with the wide variety of vehicles and models available, it becomes a fine art to select the most fuel efficient vehicle for the job. For this reason, IMPERIAL Logistics decided to purchase two identical vehicles to use on some of its more 'popular' routes, to undertake testing with different specifications in order to find the ultimate fuel efficient vehicle.

As a result of testing done over a period of two years and a distance of more than 400 000 kilometres, vehicle specifications that are 6% more fuel efficient were identified – which are now a standard for Group-wide new vehicle purchases. We also adhere to detailed vehicle maintenance policies and driver training programmes, to optimise vehicle capabilities.

## **Join us on our 'green' quest**

Logistics activities are one of the most difficult areas of the supply chain to make environmentally friendly. However, for IMPERIAL Logistics, when it comes to shaping a sustainable future through responsible business, doing nothing is not an option. In fact, there are many options to consider to 'green' just your transportation. These range from small process changes such as retraining drivers, to substantial capital investments including setting up green DCs.

To green the supply chains, corporate executives should consider taking several actions. First and foremost, they need to structure the supply chain with suppliers and customers who share similar views on sustainable practices, and are focused on initiatives that will minimise the impact of their transportation greenhouse gas emissions.

They should utilise transportation technology that reduces fuel and emissions. Another action that executives could take would be to optimise the supply chain's logistical network so that transportation distances are minimised. This can include sourcing locally when feasible, moving operations closer to suppliers or customers, or eliminating unnecessary moves such as those between DCs. Lastly, stakeholders and decision-makers should use knowledgeable personnel with skills in logistics and environmental sustainability, to develop and implement company and supply chain transportation and warehousing strategies amongst others.

In our experience, integrating sustainability practices throughout the supply chain can deliver tangible economical, environmental and social benefits. Most notably, these benefits have been magnified more than a hundred fold through effective collaboration.