

# CarbonM

## From Waste to Premium Fuel Same Plant. Same Process.

Transforming existing facilities into  
premium fuel producers.



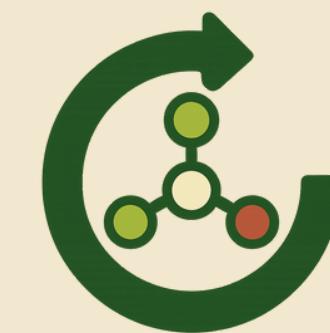
DPIIT

#startupindia



Pilani Innovation and  
Entrepreneurship  
Development Society

सत्यमेव जयते



# The Big Picture



**43kg**

Waste generated per Indian per year on average

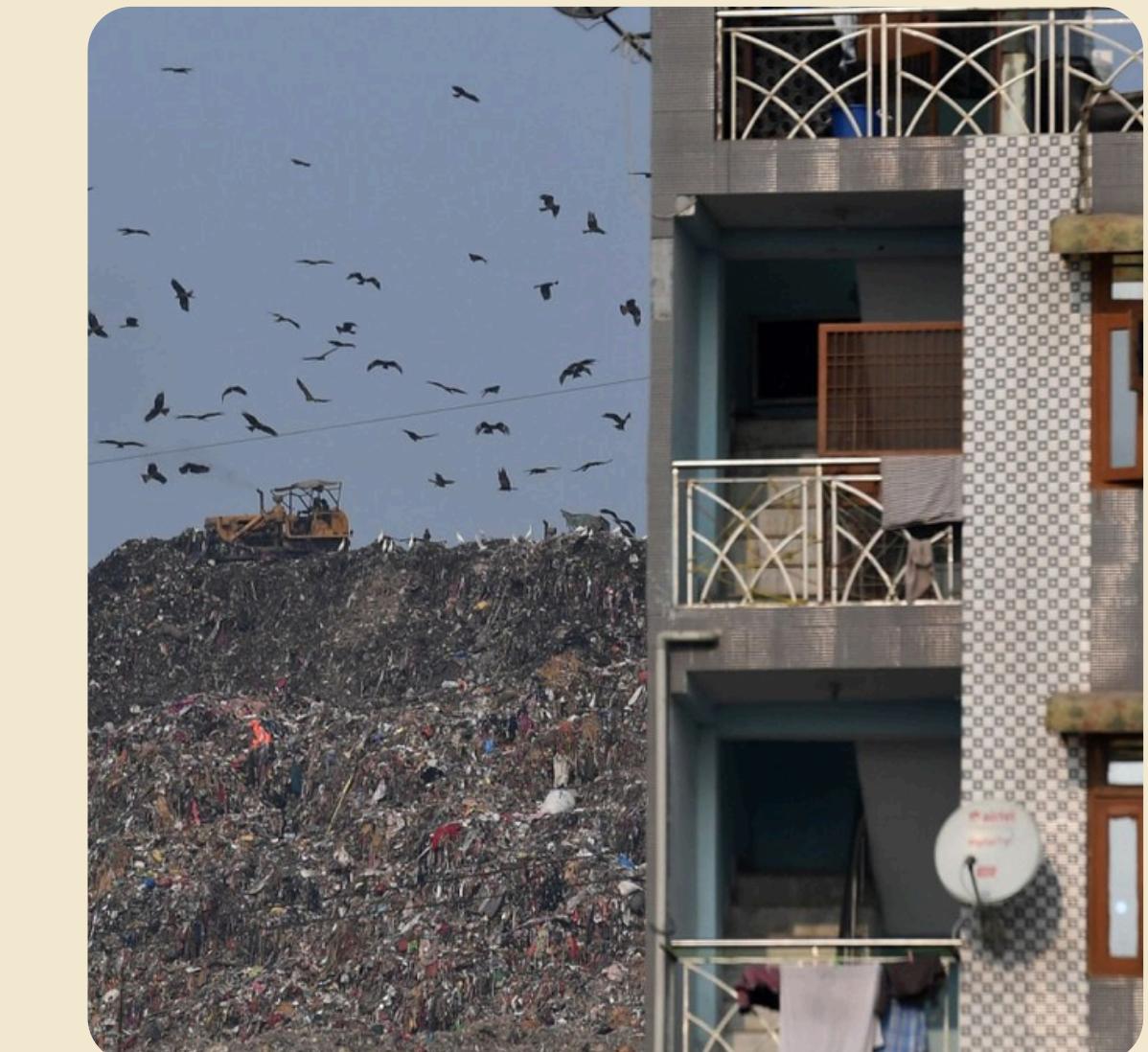
Source: et al. Joshua (Nature)



**8M+**

People exposed to toxicity in 5km radius of Landfill in India

Source: et al. Kevin(PubMed)



**9.1MT+**

Waste in Indian Landfills per year, expected increase 166% by 2030

Source: The Energy and Resources Institute



# The Big Picture



## 1 Million Ton

LDO Consumption of India for 1 year

Source: Petroleum Planning & Analysis  
Cell (PPAC)



## 45%

Annual Growth Rate of LDO Consumption  
in India since 3 years

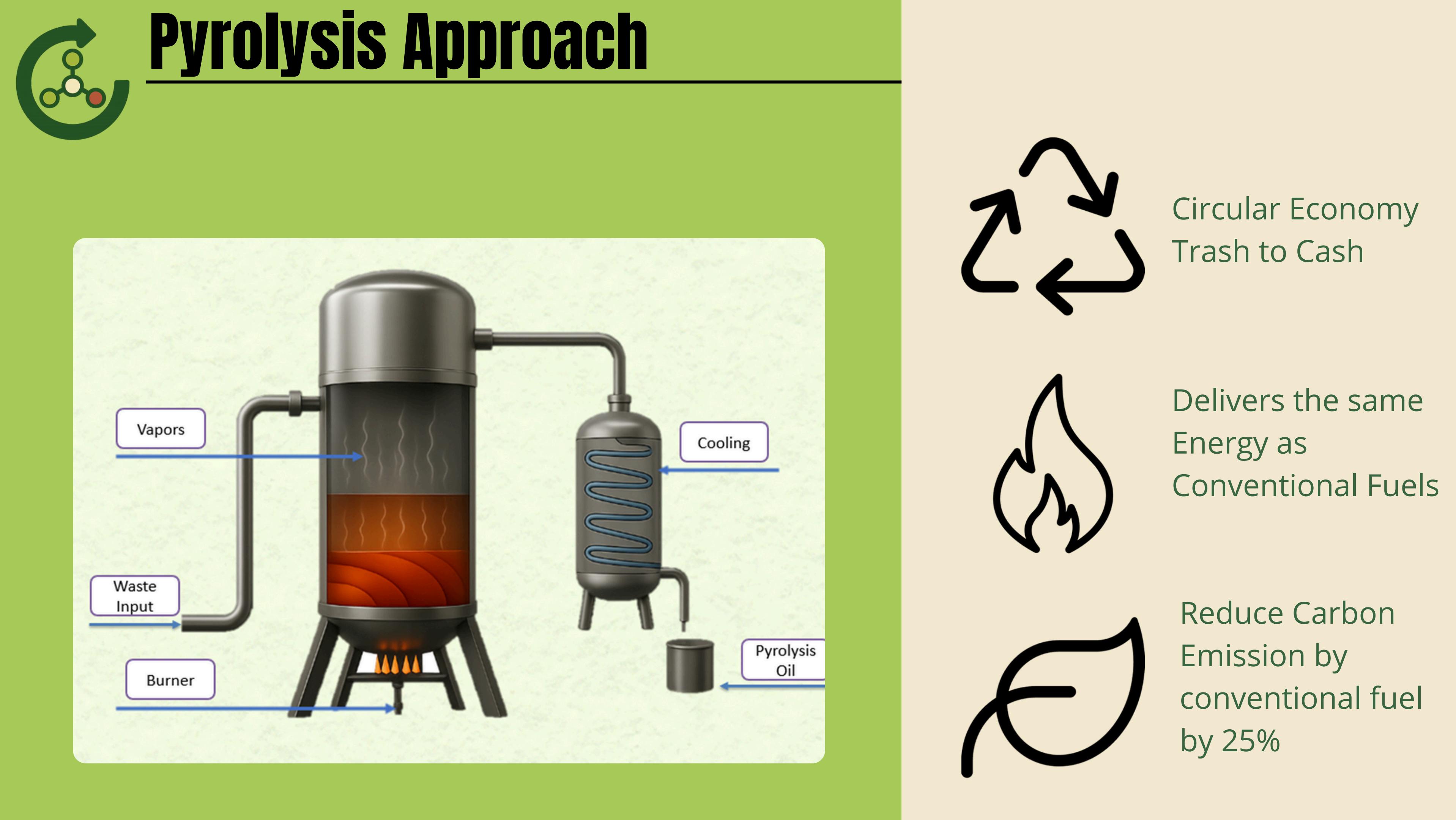
Source: Petroleum Planning & Analysis  
Cell (PPAC)

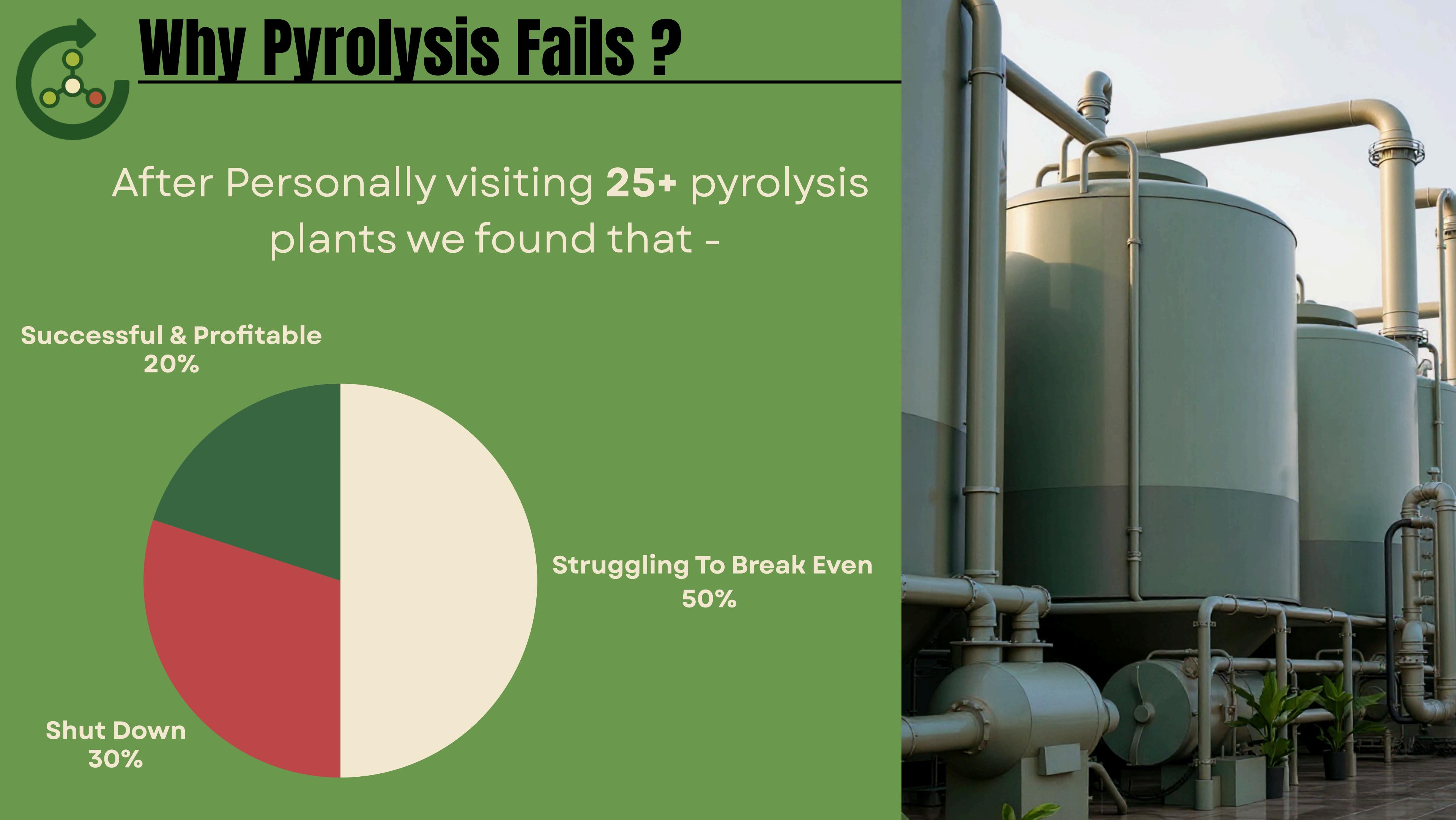


## 6 Million Ton

LDO can be produced by pyrolysis of  
waste plastic and rubber in India

Source: et al. Khan (Journal of  
Environmental and Public Health)







# Pyrolysis Oil Not Worthy ....?

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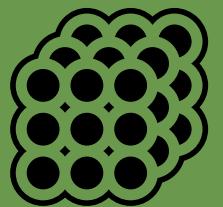
Why doesn't Pyrolysis Oil have high uptake in Industry?



Variation in Energy Content



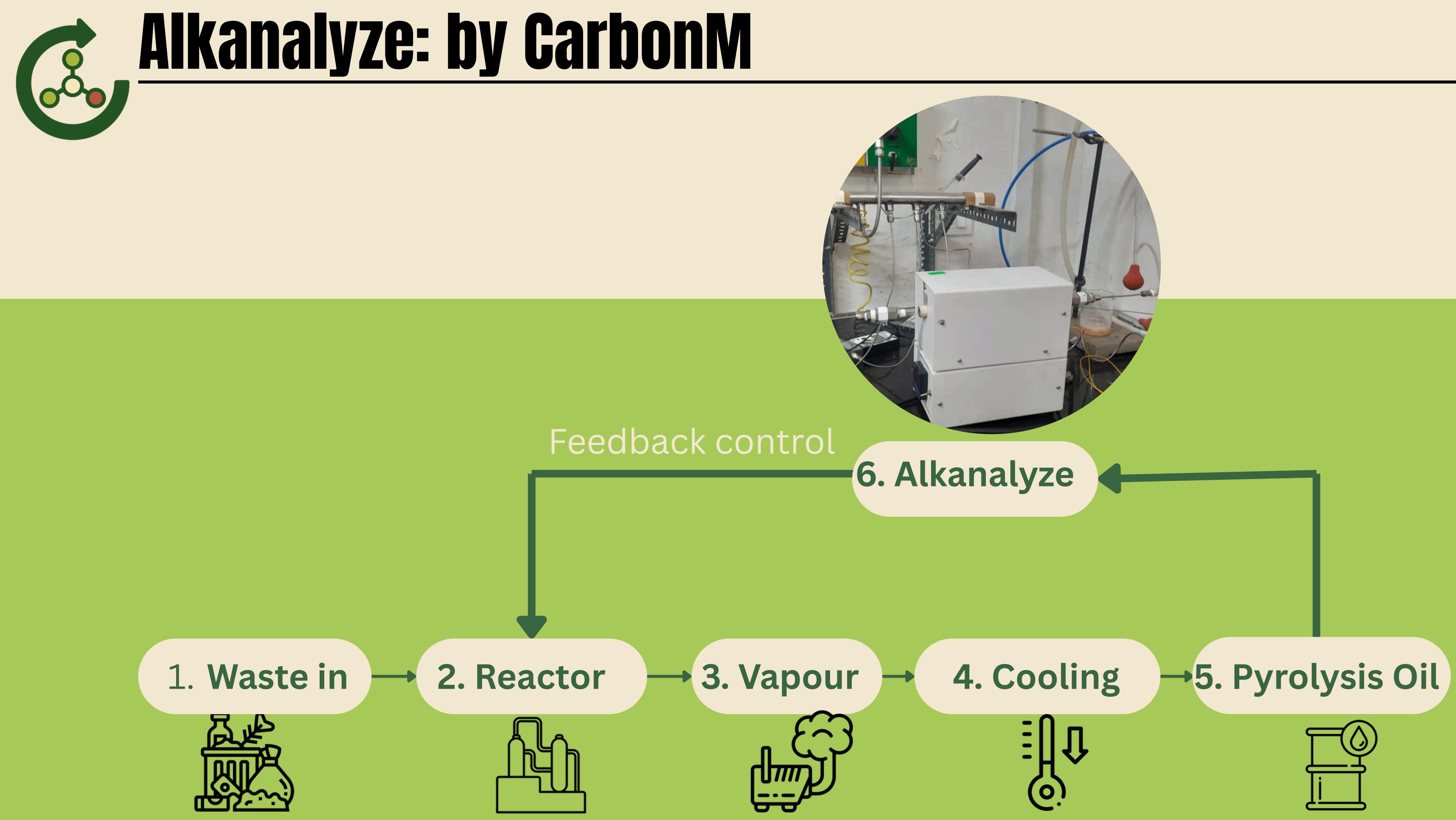
Variation in Carbon and Sulfur content



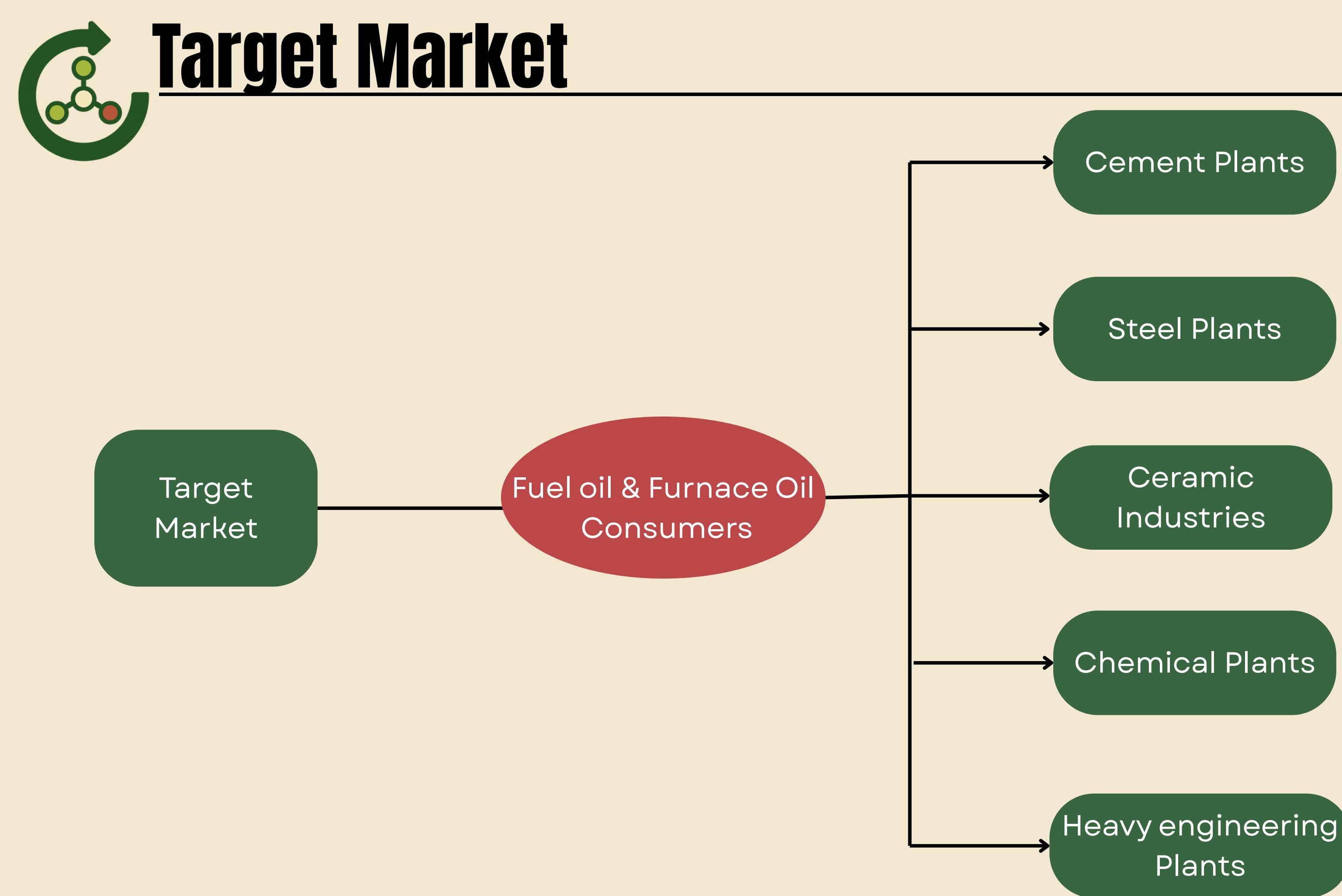
Variation in Density and Viscosity



Variation in Quality from same plant

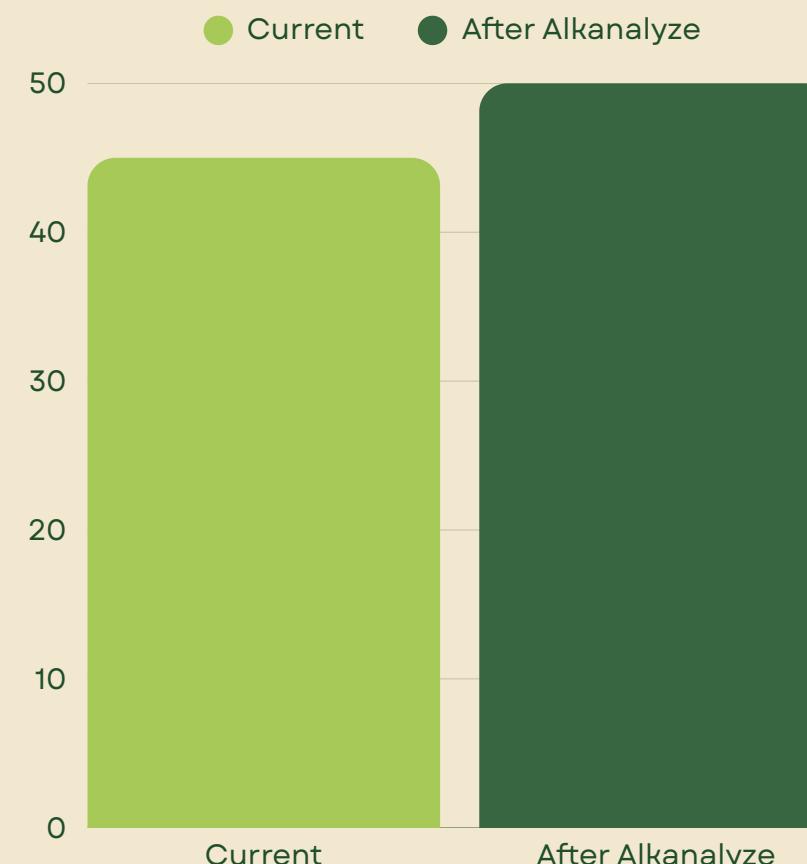
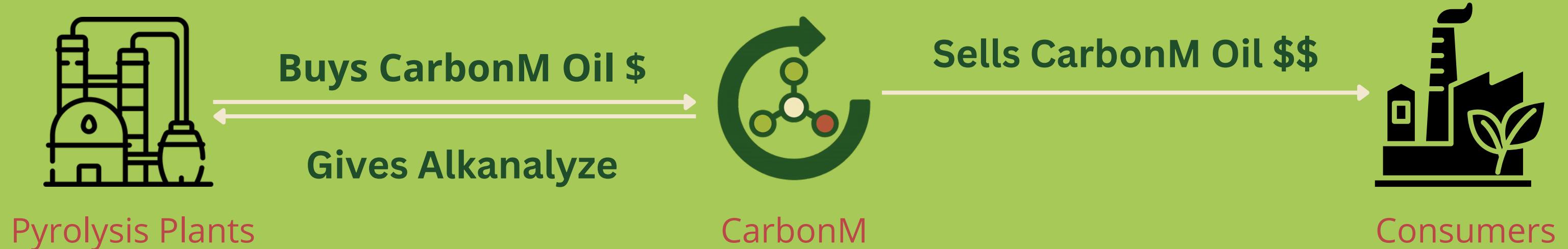


| Global Competitive Market |                                   |                             |                                   |                               |                               |
|---------------------------|-----------------------------------|-----------------------------|-----------------------------------|-------------------------------|-------------------------------|
| Company                   | Real-Time Quality Standardization | Closed-Loop Process Control | Universal Feedstock Compatibility | In-Process Waste Minimization | Cost-Effective Implementation |
| CarbonM                   | ✓                                 | ✓                           | ✓                                 | ✓                             | ✓                             |
| Pyrum                     | ✓                                 | ✓                           | ✗                                 | ✓                             | ✗                             |
| Brightmark                | ✗                                 | ✗                           | ✓                                 | ✗                             | ✗                             |
| Cyclyx                    | ✗                                 | ✓                           | ✓                                 | ✓                             | ✗                             |



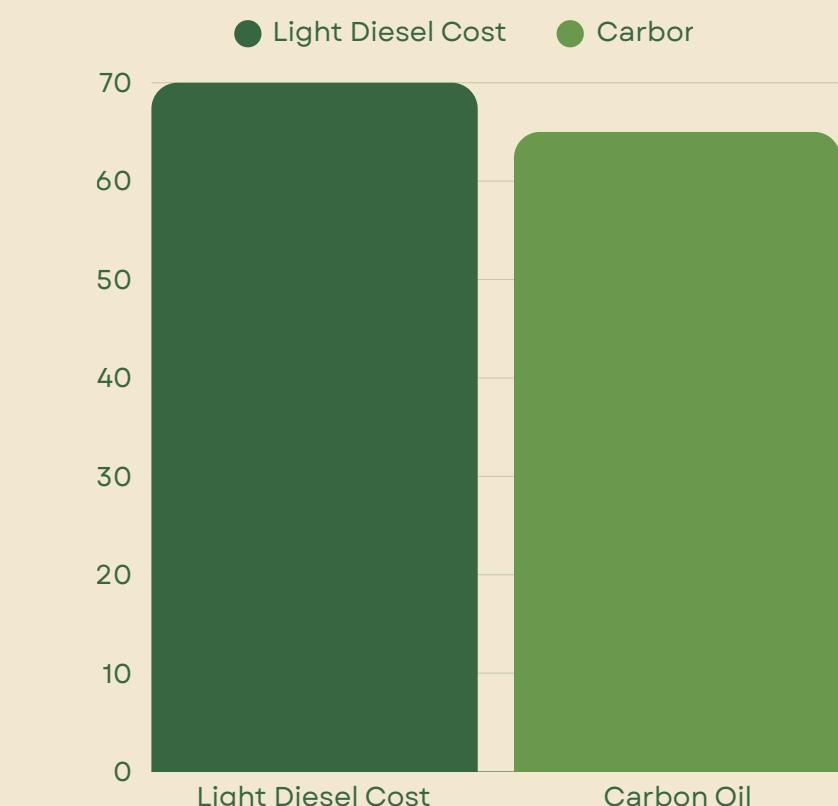
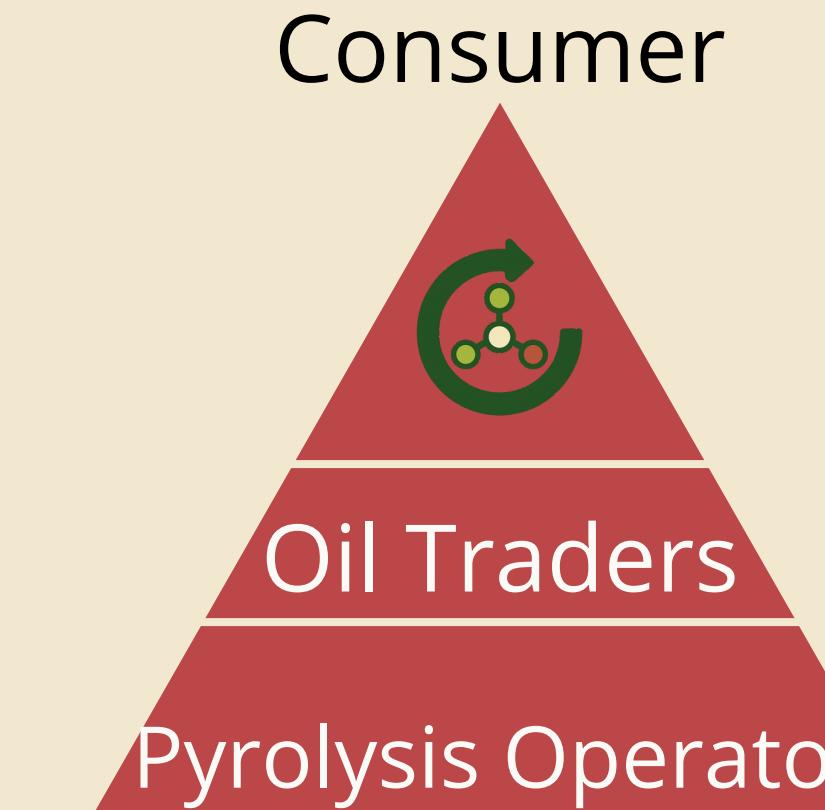


# Revenue Model



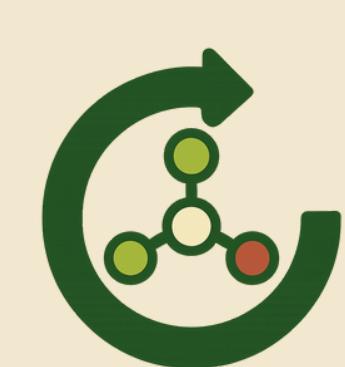
**Selling Price change for tyre pyrolysis oil**

Source: [Cost of Pyrolysis Oil](#)



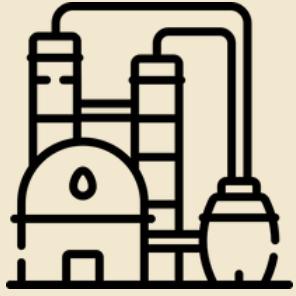
**Cost Price for Consumer**

Source: [Cost of LDO](#)

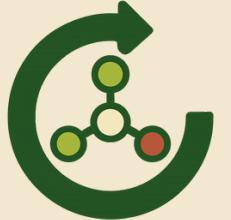


# Tyre Pyrolysis Factory Example

Annual profit from a single average 8-12 ton Tyre Pyrolysis Plant



Profit for Pyrolysis Factory= ₹90 lakh



Profit for CarbonM= ₹2.7 cr



Savings for Consumer= ₹90 lakh

This is just from 1 factory, considering our target of **500+** factories by 2036, our profit will balloon to ₹**1305 Cr**



# Sustainable Impact

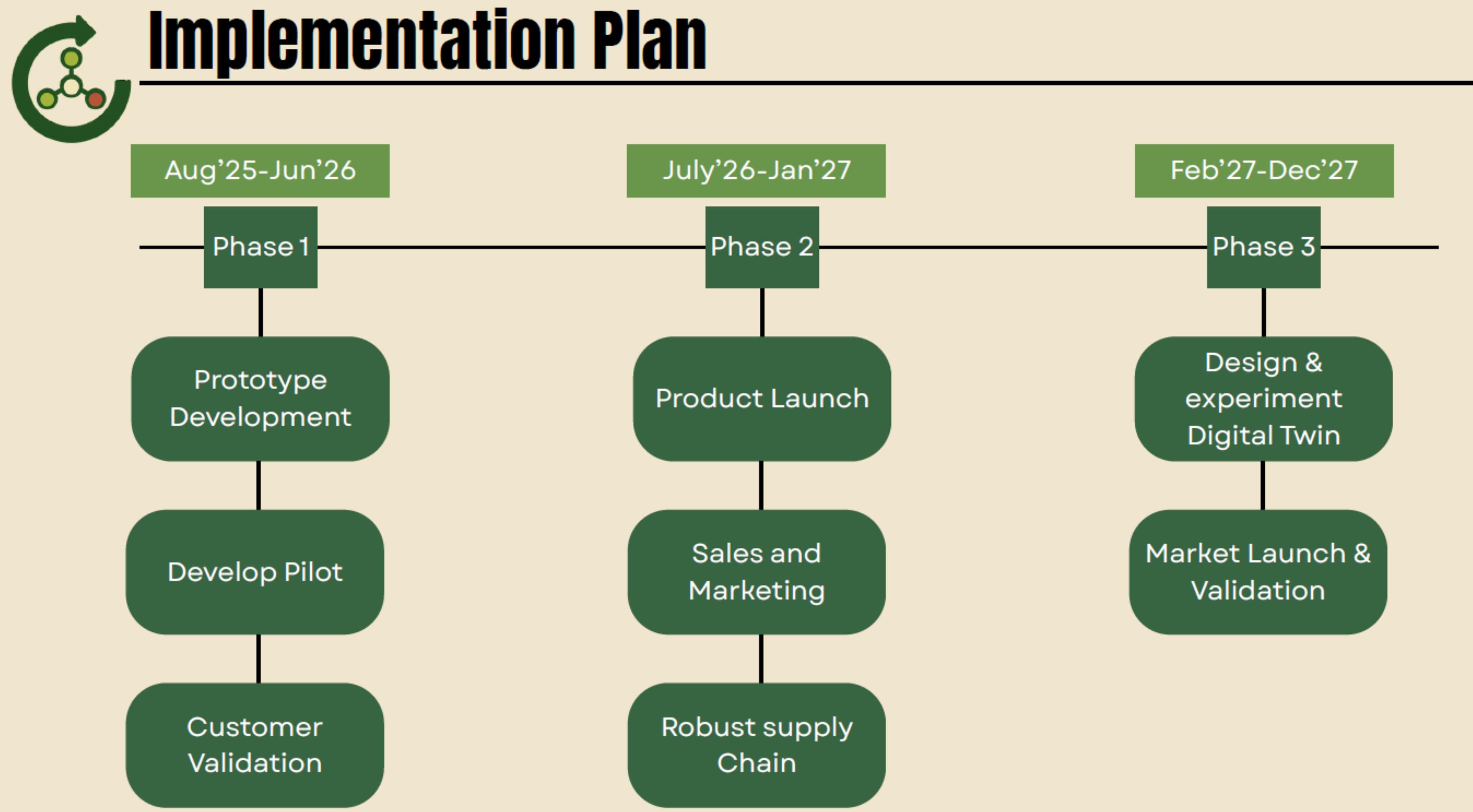
Due to Using CarbonM Oil instead of LDO

**40%**  
Lower CO<sub>2</sub> emission

**48%**  
Reduction in SO<sub>x</sub> emission

**2.4kg**  
Tires removed from landfill







# Team CarbonM

Chemical engineer with research experience in pyrolysis at Caltech and hands-on expertise in applying ML to industrial process control.



Caltech



Mihir Tomar, CoFounder

ML specialist with experience in Generative AI and data analytics across IT and manufacturing, including collaborations with Bosch on process diagnostics.



Shashwat Sharma, CoFounder

Industry veteran and consultant, formerly with Ultratech and GAIL, with decades of experience in setting up process control systems.



Prof. Satyapaul Singh, Advisor