



MATHE GROUP **PRESENTATION** SEPTEMBER 2025



PRIMARY OBJECTIVES



GPP

Support the use of recycled tyre material (RTM). Formulate GPP criteria.



RECYCLED CONTENT

Support the use of recycled content in new products and reduce reliance on virgin raw materials.



RESEARCH

Support research in tyre recycling and foster innovation in end-market applications for RTM.



HURDLES TO TYRE RECYCLING





FINANCIAL MODEL



WASTE TYRE LEVY
Environmental Levy ZAR 2.50 per kg on
tyres which is paid by tyre producers



MICRO COLLECTORS
Limit of 1000 tyres per collector



WASTE TYRE DEPOTS
Cost recovery basis



PROCESSOR
Fully subsidised



TRANSPORT
Primary: rate per tonne.
Secondary: compensated on travel
distance

SOUTH AFRICA

01

PROCESSING FEE

Processing fee or R0.31 per kg has remained the same since 2016

02

INFLATION ADJUSTMENT

> R0.45 per kg as at 01 February. However does not take into consideration escalation of many other costs

03

TECHNOLOGY

Processing costs vary by technology employed & degree of processing

04

CLARITY NEEDED

The current incentive does not distinguish between the level of investment & socio-economic value attained



WHAT DOES THE FUTURE HOLD?

Regulatory Certainty & Predictability - With the withdrawal of the IWTMP, there is uncertainty in the sector. A stable, predictable policy / regulatory environment will be crucial for investor confidence and long-term planning.

Financial Mechanisms / Funding Models - The future regulatory framework will need to include funding commitments—whether via levies, government subsidies, or private-sector contributions—to ensure recycling infrastructure and operations are viable.

Improved Data Collection & Transparency - One of the gaps identified in the withdrawn plan was unreliable or poor-quality data about tyre stockpiles, generation rates, collection, etc. Better data will be essential for regulation, planning, and monitoring.

Legally Binding Regulations & Enforcement - Strong, enforceable obligations are lacking. The future regulatory framework will likely need to strengthen legal enforceability and ensure regulatory compliance.

Innovation in Product Development

The involvement of academic institutions is paramount to creating innovation in the sector.

Circular Economy Alignment

Regulatory frameworks that promote green public procurement need to be actioned.





WASTE TYRES IN SOUTH AFRICA



DEALERSHIPS

Network of 1400 to 2000 dealerships across 9 provinces in S Africa.



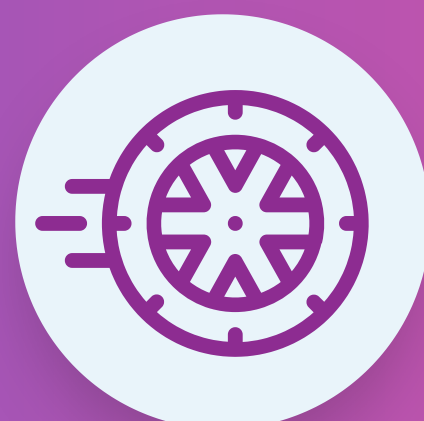
TYRES

13 Million tyres are sold on average per annum in S Africa.



CLASS

Passenger vehicle tyres incl. SUV/LTR = 89% and commercial vehicle (truck) tyres 11% excl OTR.



OTR

An estimated 20 000 T were added to the total estimated annual flow.



DEPOTS

26 Registered depots, 24 were more than 90% full.

Total annual flow of waste tyres ~ 300 000T

Energy Recovery: TDF 17 243T
Crumbing & Pyrolysis: 31 911T
Product Recycling (reuse): 5 306T

~ 53 333T*
*2023/2024



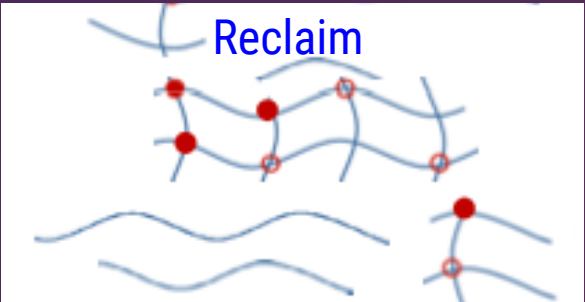


TECHNOLOGY READINESS



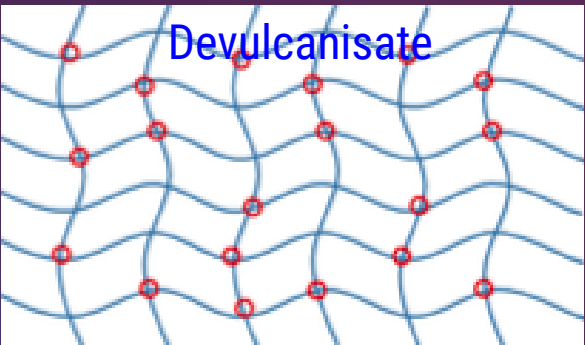
Grinding

Technology Readiness Level (TRL): 9
Technology available, also for very fine powder
No further quality improvements possible
Limited application in virgin compounds
Costs increase exponentially with fineness



Reclaim

Technology Readiness Level (TRL): 9
Technology available for different types of tire rubber
Quality improvement by additives or a lower degree of polymer scission
Application in tires in small concentrations



Devulcanisate

Technology Readiness Level (TRL):
• Passenger care tire rubber: TRL 5-6
• Truck tire rubber: TRL up to 9
Concentration of devulcanisate in tire compounds: a multitude of current concentrations (depending on compound type)



Carbon Black

Technology Readiness Level (TRL): 8-9
• No significant development potential of conventional technologies (batch, long residence time, high temperatures)
• Improvements by after treatment
Large scale application in tires only possible with significant quality improvements



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PRIMARY & SECONDARY PROCESSING



Recycling

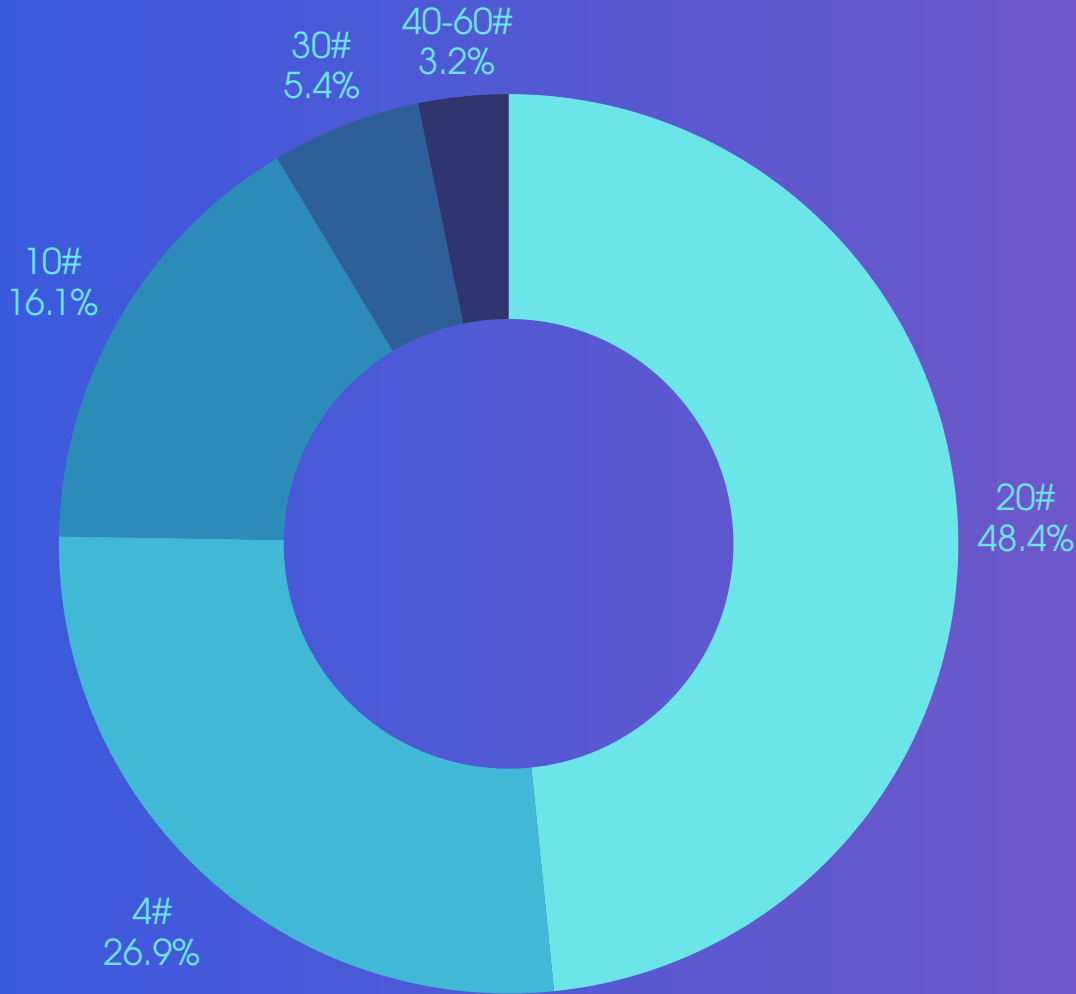


Moulding



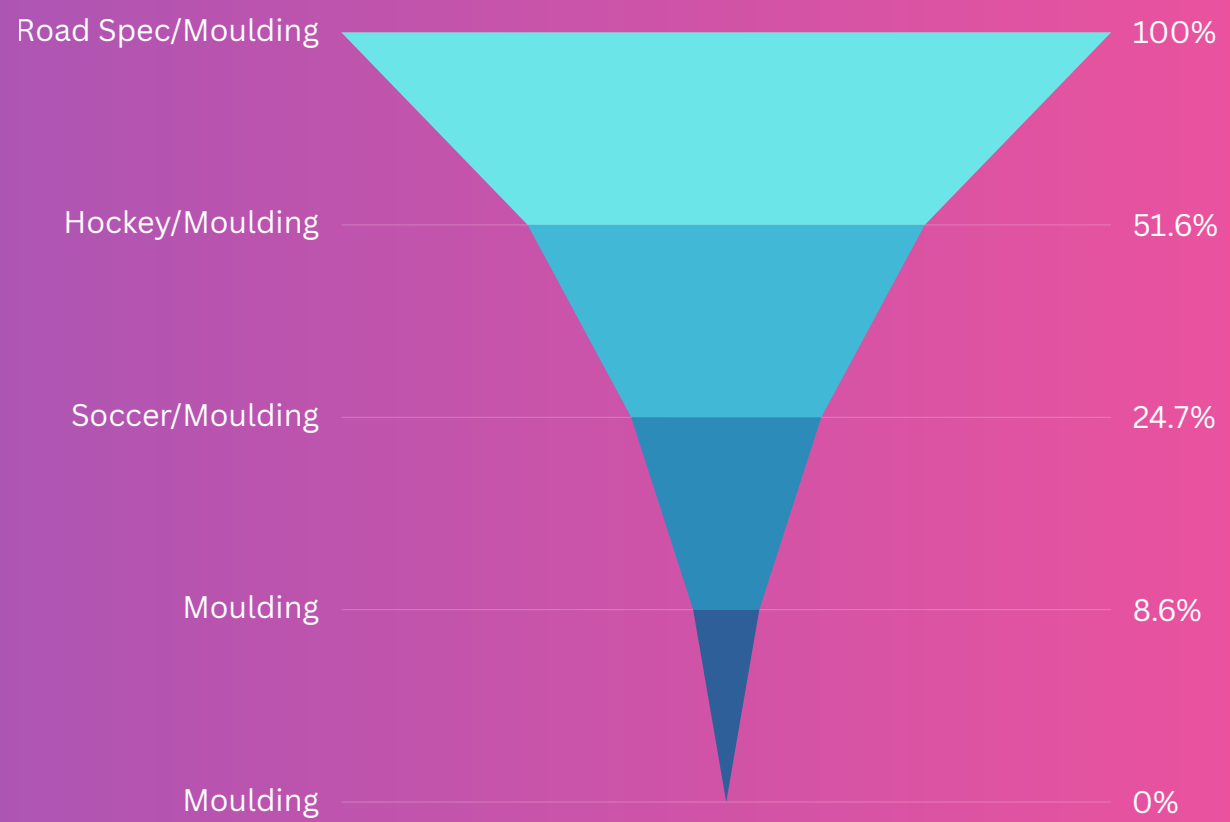
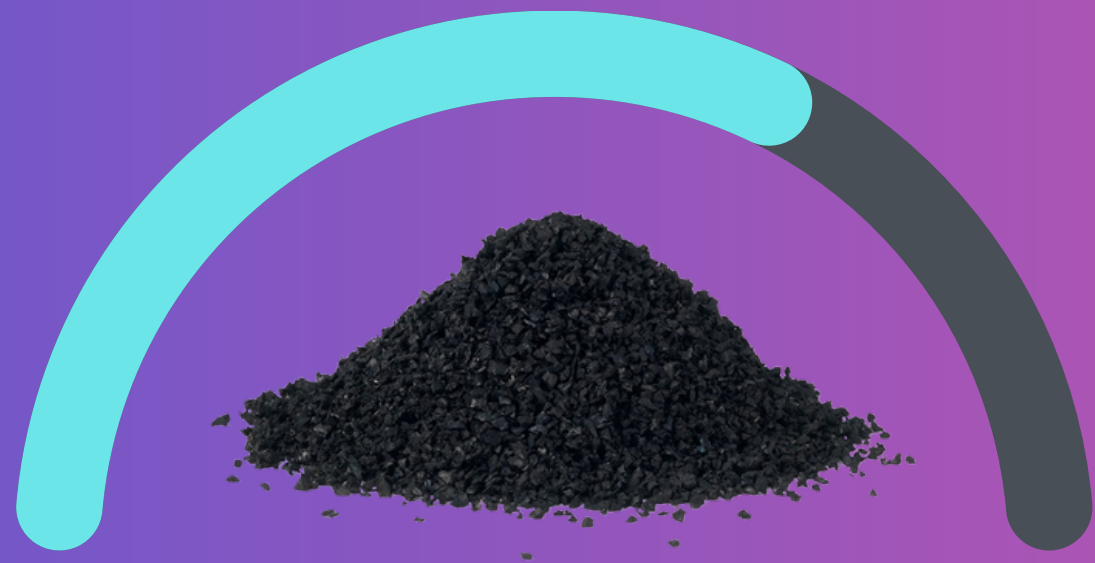
NCRTTM

RUBBER CRUMB PRODUCTION

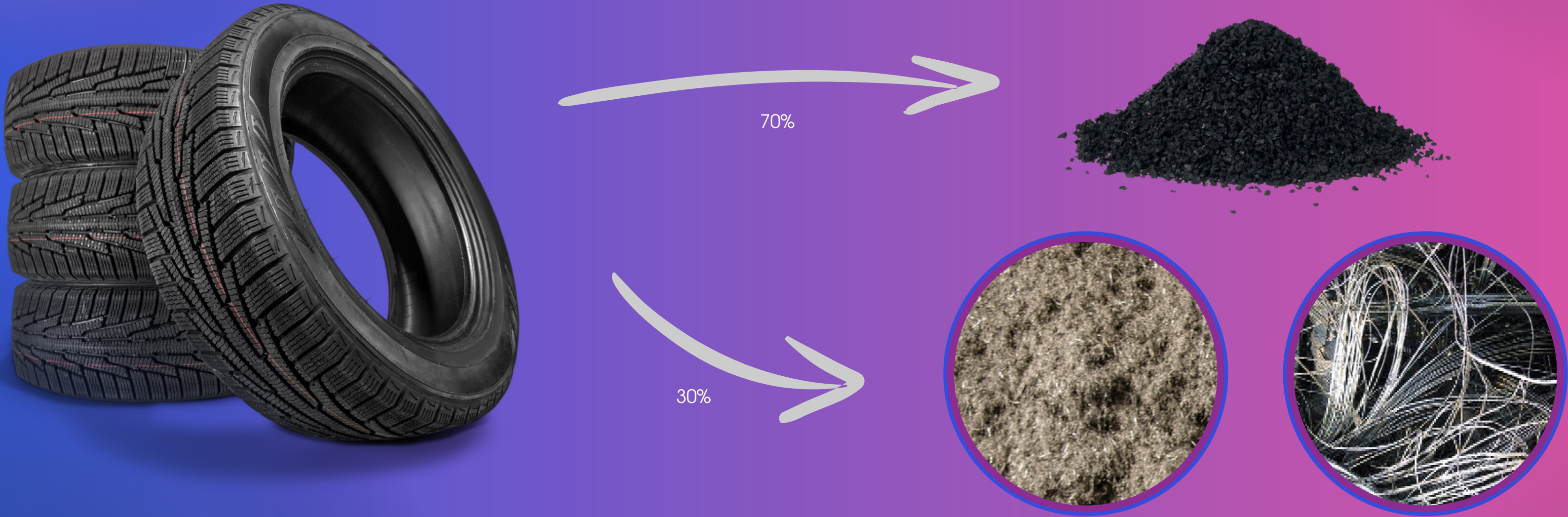


 Max Production Days: 245

 Production: 10 000 Tonnes



HI TENSILE STEEL PRODUCTION



ADVANTAGES OF BITUMEN RUBBER



RUBBER CRUMB MARKET

Sport



Elastic Layer for hockey schools driven by investment in private education.



Declining volume largely due to poor public funding in S Africa. SADC volumes exceed those in the local market. Legislation on microplastics is unknown.



Small but growing market in S Africa.

Niche



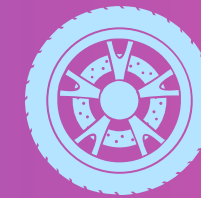
Brake Pads for commercial vehicles



Non-slip paints



Automotive moulded parts



New Tyres



Wet Pour

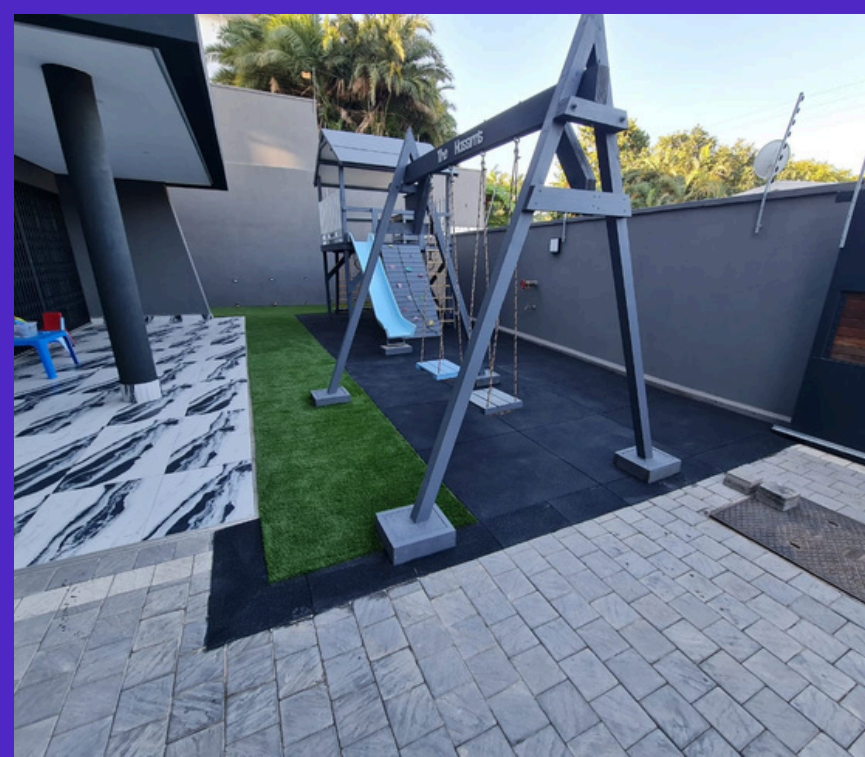


Ballistic Protection





Moulded Products





SOLAR ENERGY

