

## **Kordsa Investor Presentation**

Sep, 2021

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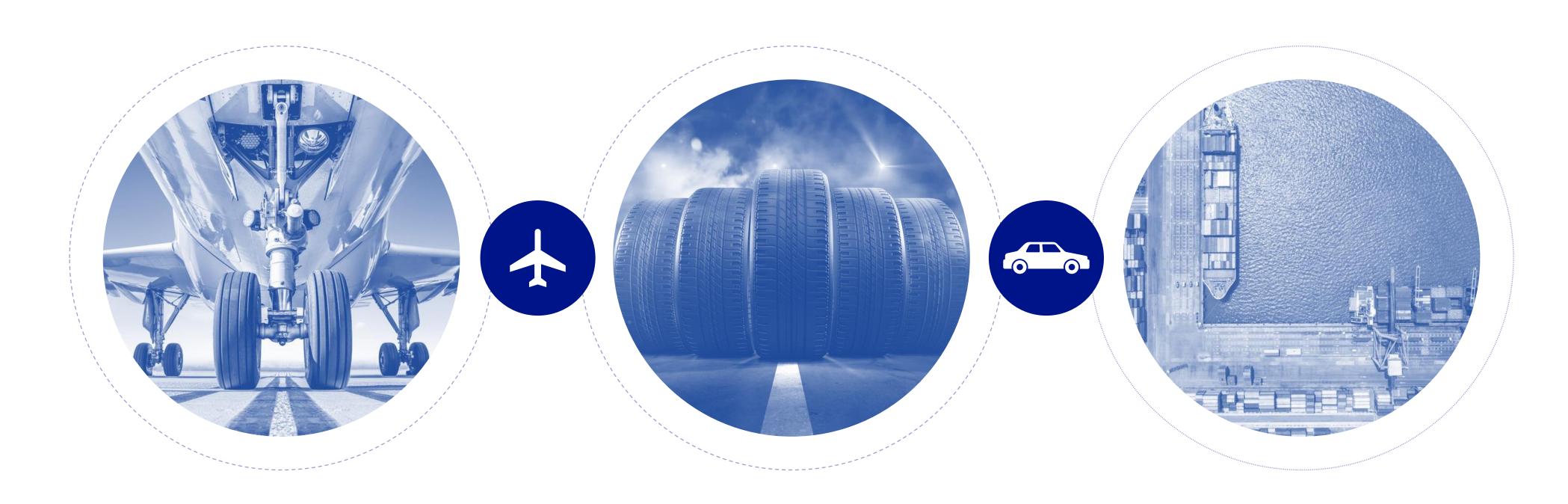


## **Global Footprint**

4 continents 12 facilities ~4,500 employees

2 R&D centers

937 patent applications 204 patents

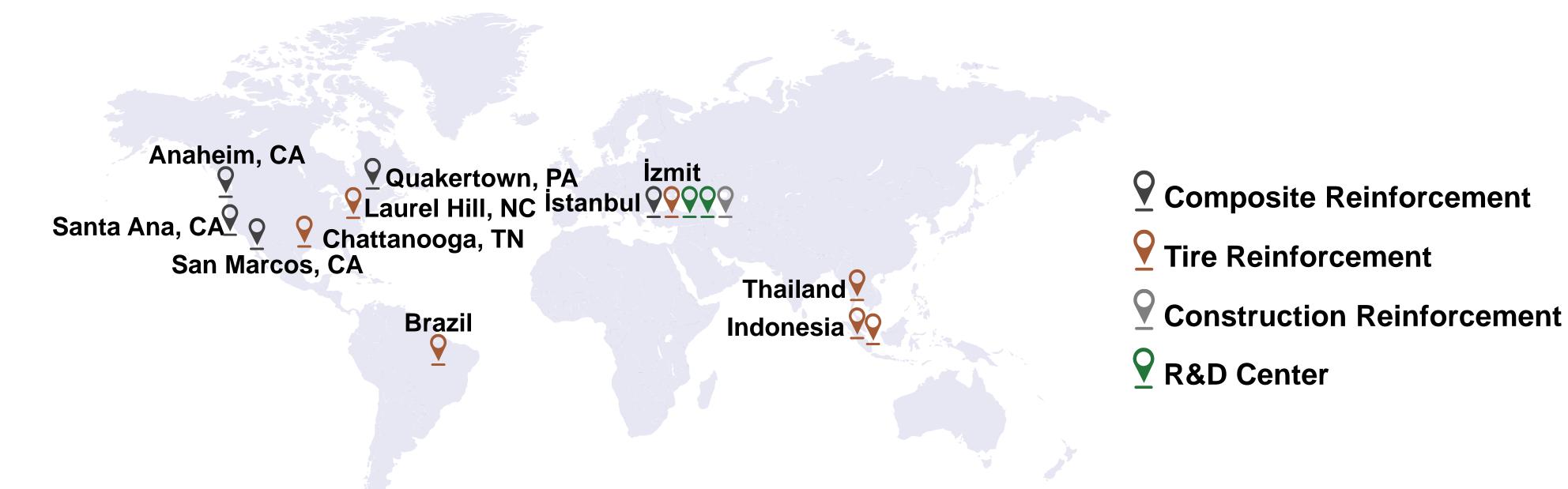


## WE REINFORCE LIFE



## **Global Footprint**





Kordsa Market Position

**EMEA** 

#1 NY TCF producer

#1 PET TCF producer

NA

#1 NY TCF
Producer in US

SA
The only
PET yarn, TCF and
SEC producer in LATAM

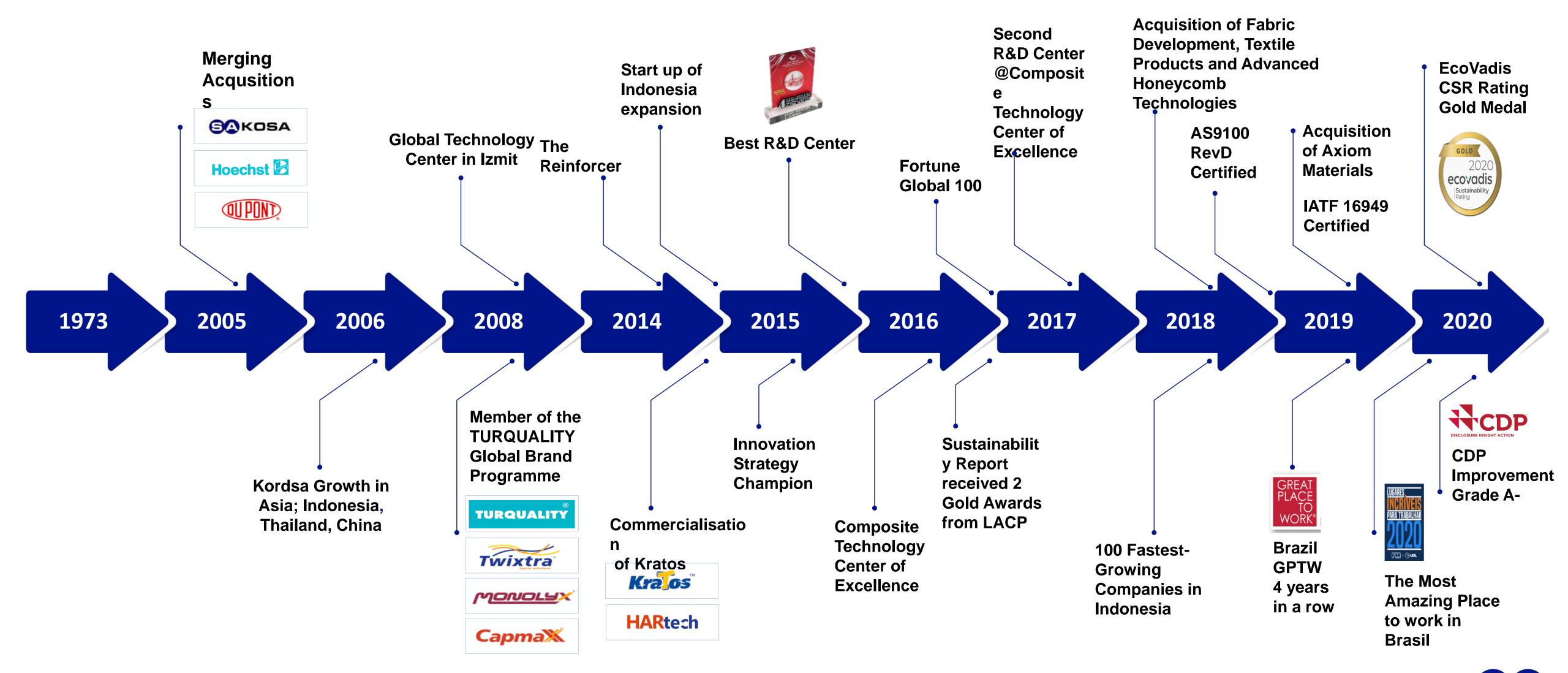
**APAC** 

#2 NY TCF producer

#2 PET TCF producer

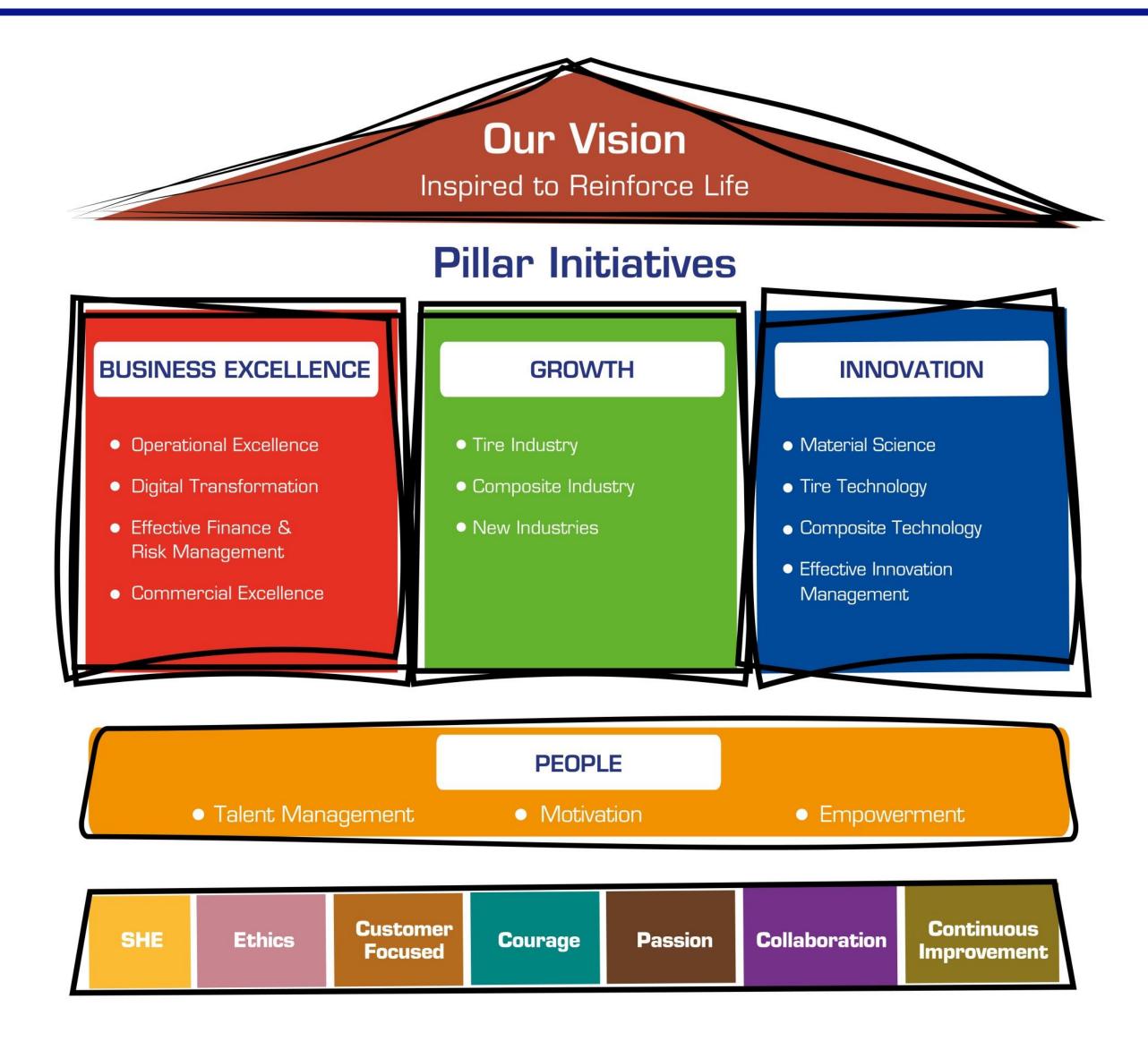


## Milestones



THE REINFORCER

## **Strategy House**





## Kordsa in Brief



#### **Tire Cord Fabrics** ("TCF")

- ✓ Strategic supplier of leading tire manufacturers in the industry
- ✓ Product design and supply for tire needs of aircraft, racing, passenger cars, trucks, agriculture, mining, motorcycles, bicycles and other vehicles.

#### **Next Generation Fabrics**

- ✓ Textile reinforcement materials for green tires
- ✓ High performance Monofilaments
- ✓ Green Products with Resorcinol Formaldehyde Free Dipping
- ✓ Highly engineered hybrid cords with superior properties

#### Composite

- ✓ Pioneer of open innovation : Composite Technologies Center of Excellence
- ✓ Carbon fiber, aramid, hybrid, prepregs, honeycomb core and sandwich panel production
- ✓ Among the strategic suppliers of civil aviation industry

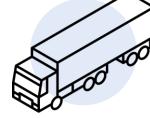
#### Construction

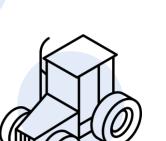
✓ High performance polymer-based monofilament macro and micro synthetic fiber reinforcements that provide effective crack control by increasing the concrete's bearing capacity against structural loads in concreate

































































## Kordsa Investment Highlights

- 1 Market leadership based on longstanding strategic partner status with all global tire players
  - 2 Global footprint with large presence at growing regions
    - 3 Technology leadership at the cutting edge of reinforcement



- Growth in composite reinforcement market
- Growth opportunities from new businesses such as thin film and flexible electronics
- Strong cash generation and dividend payout
- 7 Experienced management team with proven track record



## **Must Win Battles**



- ✓ Operational Excellence : Safe and reliable operations, competitive cost
- ✓ **Digital Transformation:** Data analytics and Artificial Intelligence, Robotics and Automations, Cybersecurity
- ✓ Effective Finance & Risk Management
- **✓ Commercial Excellence**



- ✓ Growth in Tire Industry: Improve approved product base
- ✓ Growth in Composite Industry: Realization of growth business plan for composites, increase market penetration speed via acquisitions
- ✓ Growth in New Industries



- ✓ Innovation in Material Science
- ✓ Innovation in Tire Technology
- ✓ Innovation in Composite Technology
- ✓ Effective Innovation Management



## Overview of The Tire Cord Fabric Value Chain

#### **RAW MATERIALS**



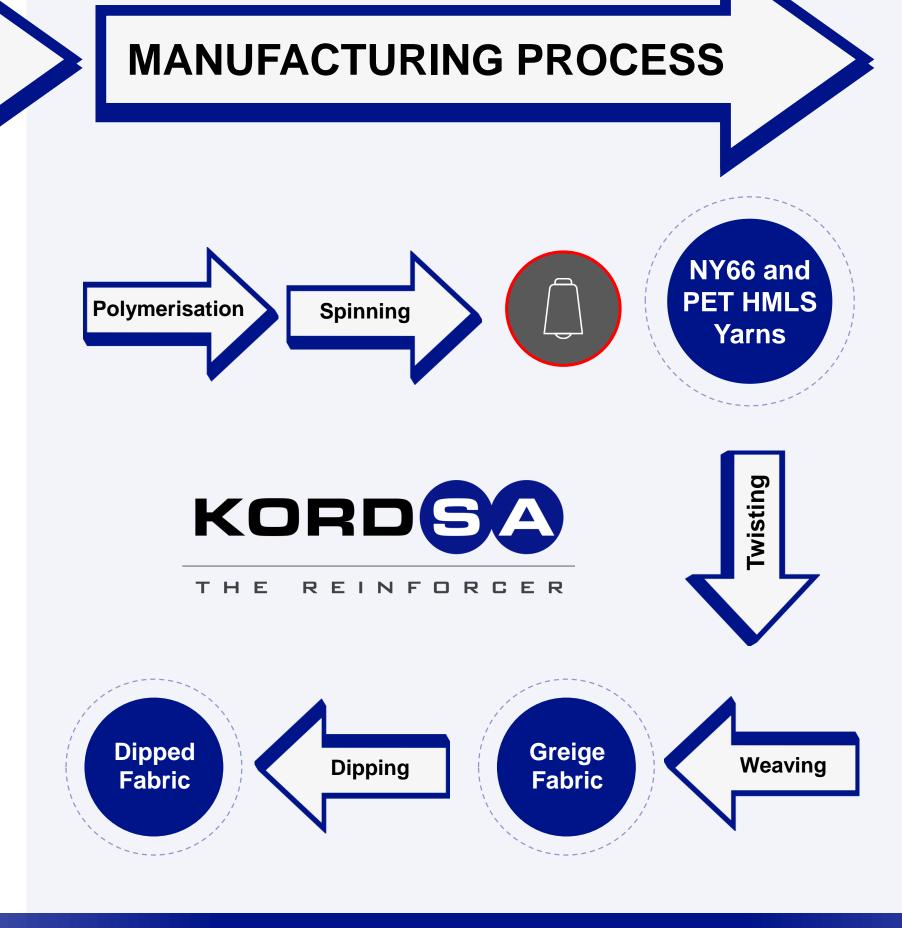
#### **Oil Derivative Ingredients**

#### For NY66 yarns:

- Hexamethylenediamine (HMD)
- Adipic Acid
- NY66 Salt
- NY66 Flake

#### For Polyester HMLS yarns:

PET Chip



#### **PRODUCTS**



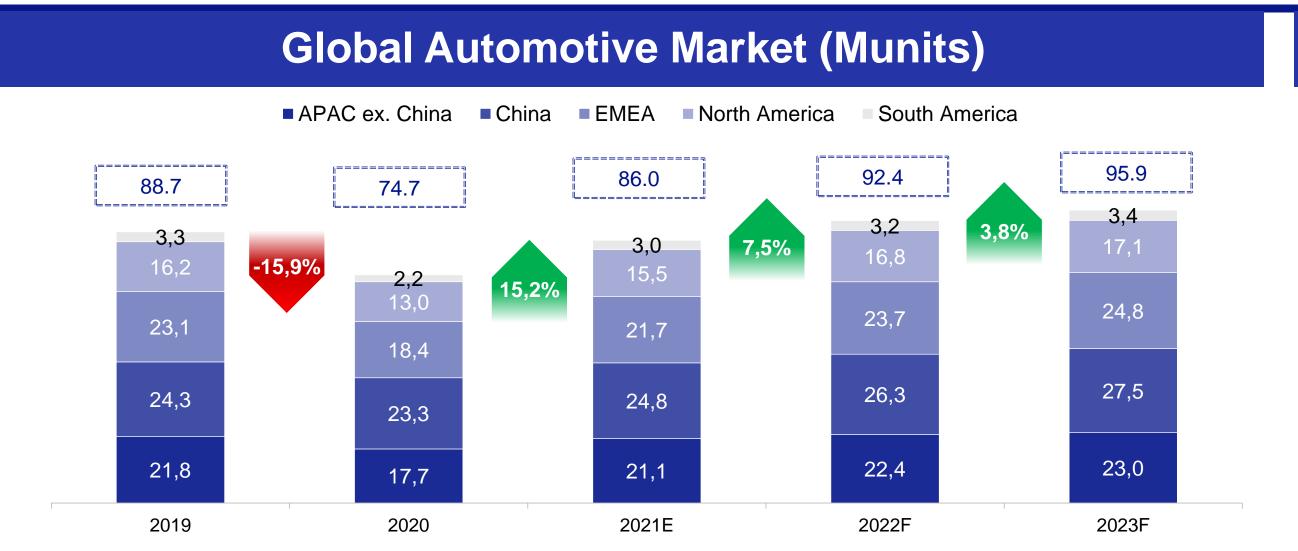


- A tire is a highly complex composite with approx. 40 components working under dynamic conditions
- NY66 typically used in cap plies
- PET typically used in radial plies
- Approx 7-10% cost of a tire is Tire Cord Fabric

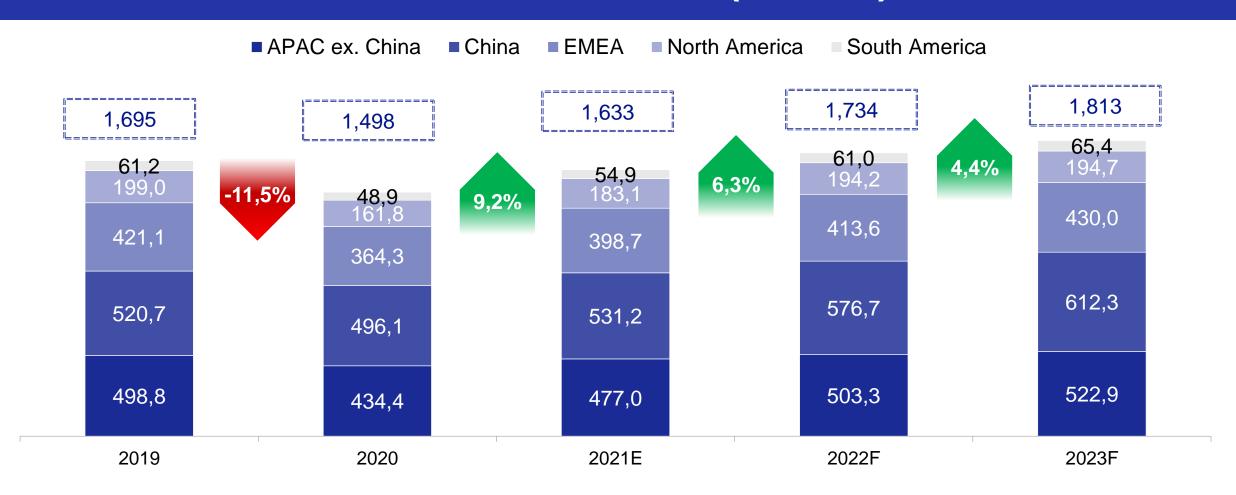
Kordsa fabrics are developed for specific requirements and are custom made



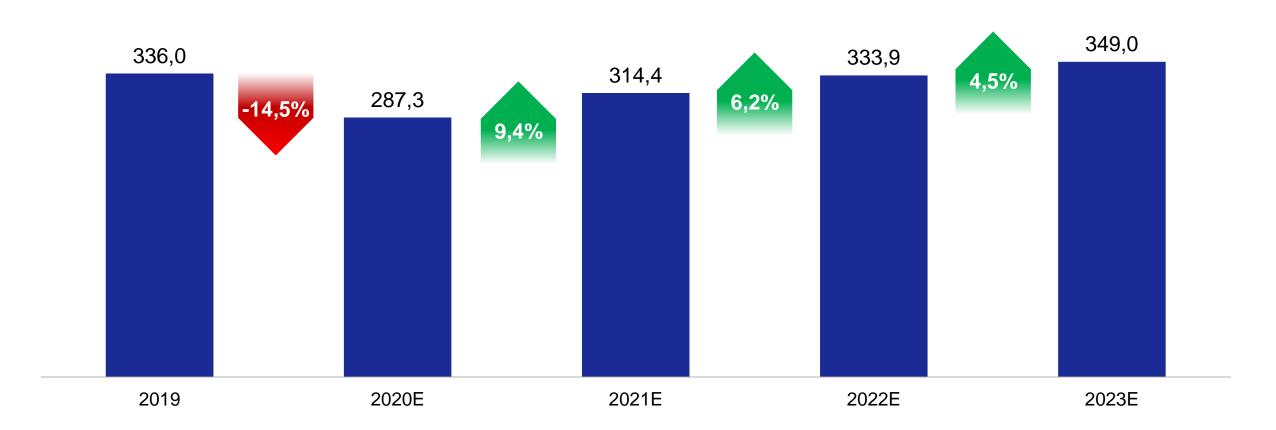
## Market Dynamics - Tire



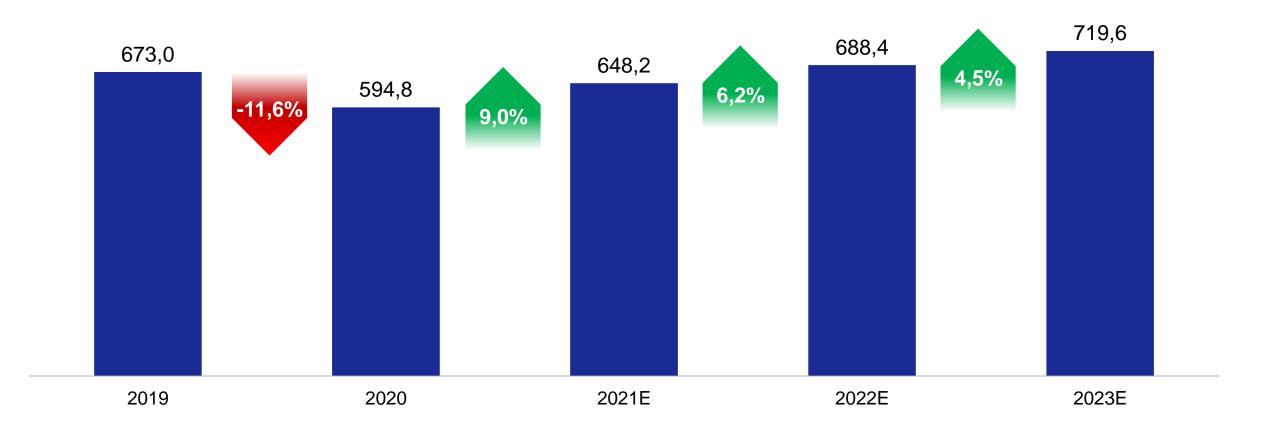
### **Global Tire Market (Munits)**



## **Tire Reinforcement Market (NY6.6-ktons)**



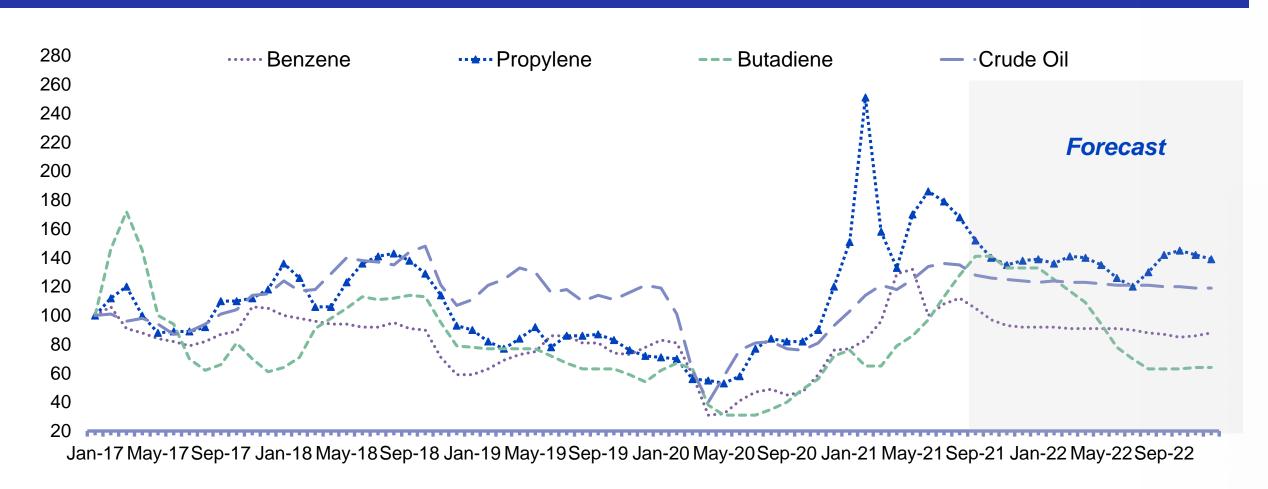
## **Tire Reinforcement Market (PET-ktons)**





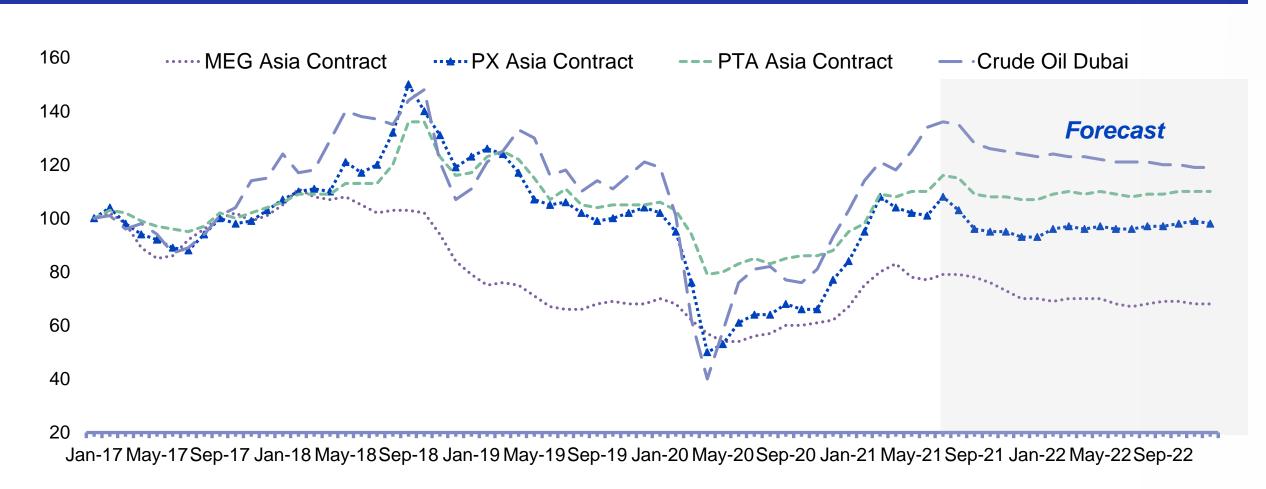
## RM Price Drivers - Tire

## Global Automotive Market (Munits)



- There have been both supply issues and strong demand in early in the first half of 2021 for Nylon66, this is to be continue towards the end of the year due to major producers are still under Force Majeure.
- Not only HMD but also adipic acid supply is tight due to overhauls, production upsets and there is strong demand for polymer and PU productions.

## Tire Reinforcement Market (NY6.6-ktons)



- All feedstocks deep dived in Apr'20 due to Covid.
- Then as of Aug'20, including crude oil, all feedstocks moved up a bit till Texas winter storm in mid-Feb where we have seen a huge hike, especially in MEG.
- Currently, Europe is still feeling PTA shortage impacts due to BP's production issues & PKN Orlen's unexpected long maintenance in 2nd quarter of 2021.
- For 2nd half of 2021, feedstock price expectations appears to be less volatile.

Source: IHS Markit

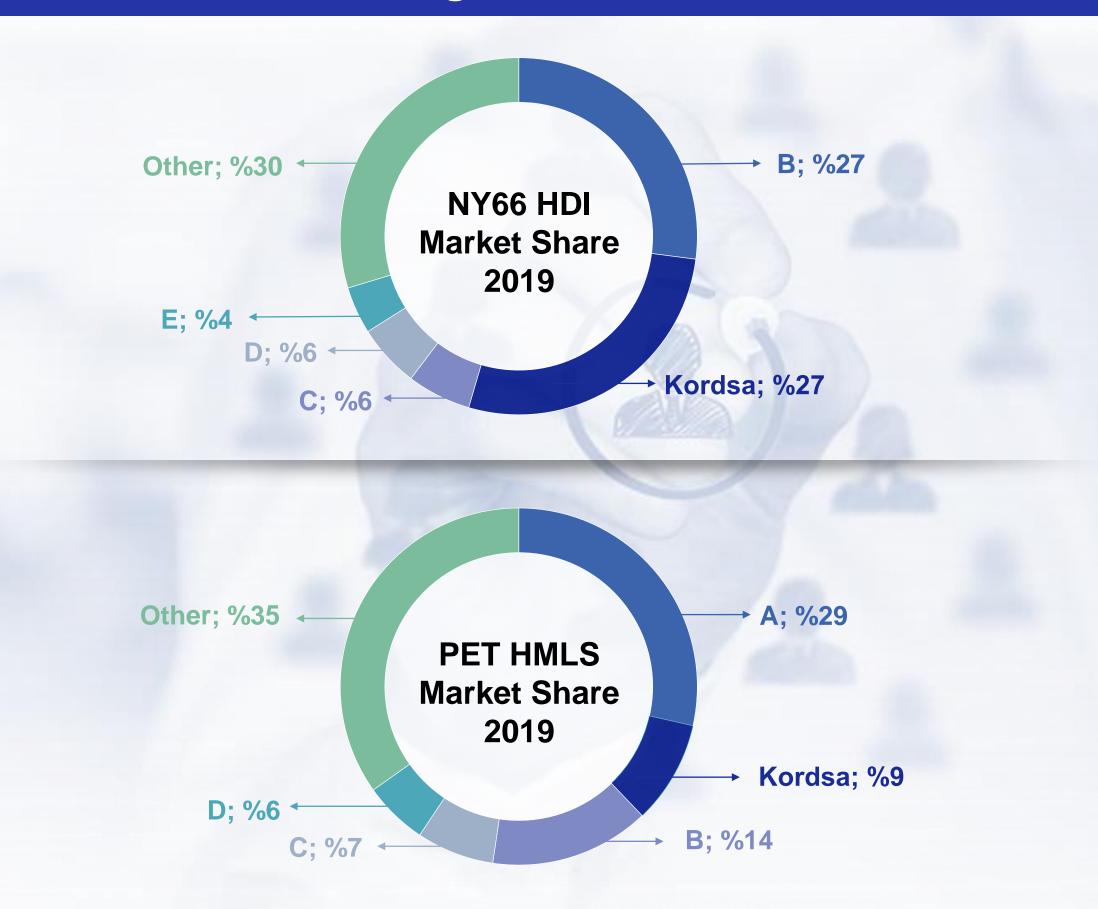
KORDS

# Market Leadership Based on Longstanding Strategic Partner Status with All Global Tire Players

## Nature of Customer Relationship as Key Barrier to Entry

	Length of Relationship	Typical Length of Approval Period <sup>(a)</sup>	Co-Development Projects
Global Tire Player 1	Since 1986	~ 5 years	<b>√</b>
Global Tire Player 2	Since 1995	~ 5 years	
Global Tire Player 3	Since 1973	~ 3 years	<b>√</b>
Global Tire Player 4	Since 1985	~ 2 years	<b>√</b>
Global Tire Player 5	Since 1973	~ 3 years	<b>√</b>
Global Tire Player 6	Since 1987	~ 2 years	



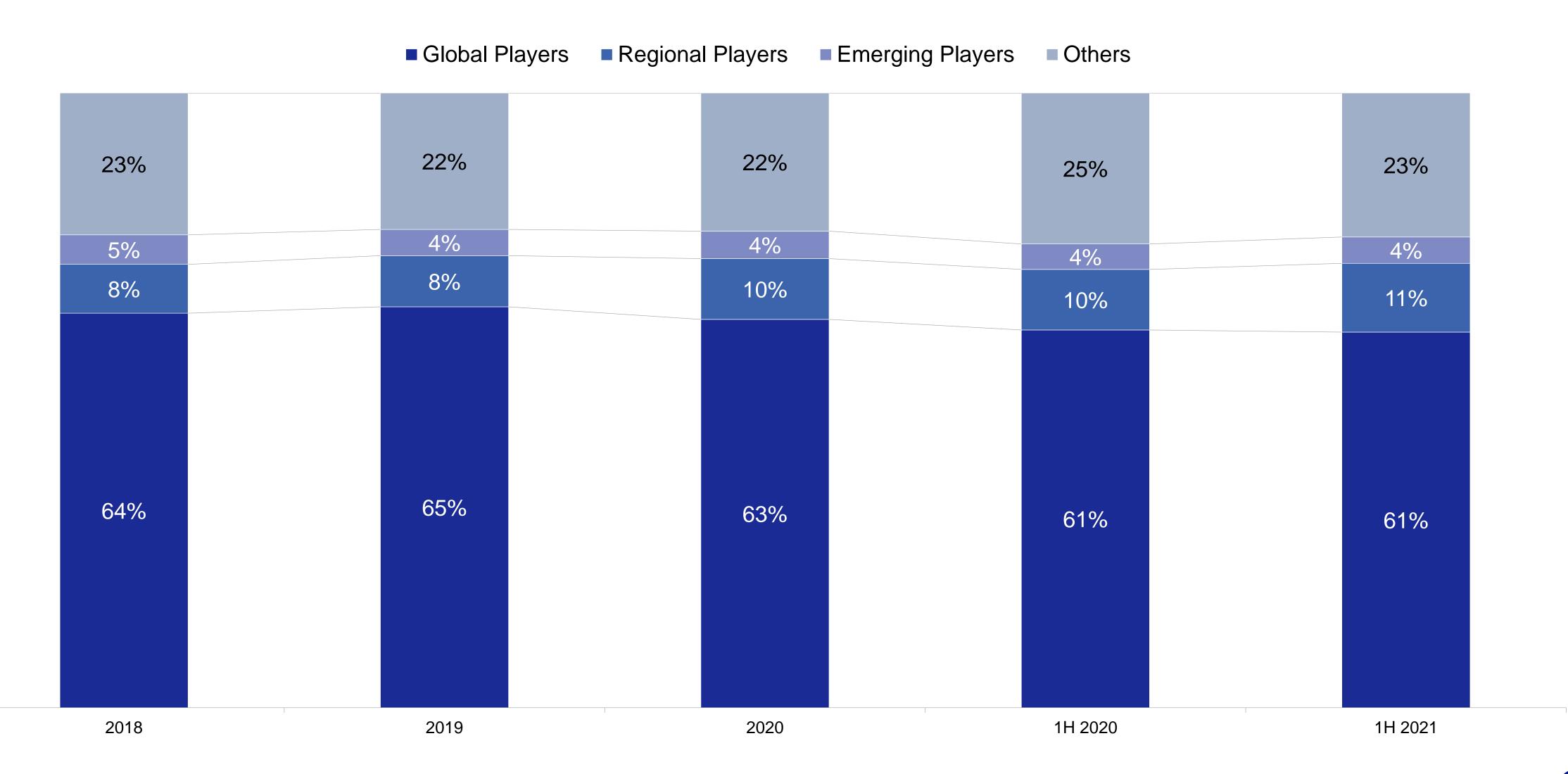


(a) For a new supplier

## Strong barriers to entry for new comers



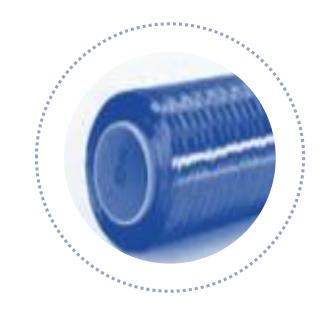
# Capitalize on Global Footprint and Entrenched Supplier Status with All Key Tire Manufacturers - Segmental Progress





## Overview of The Composites Value Chain

#### **RAW MATERIALS**



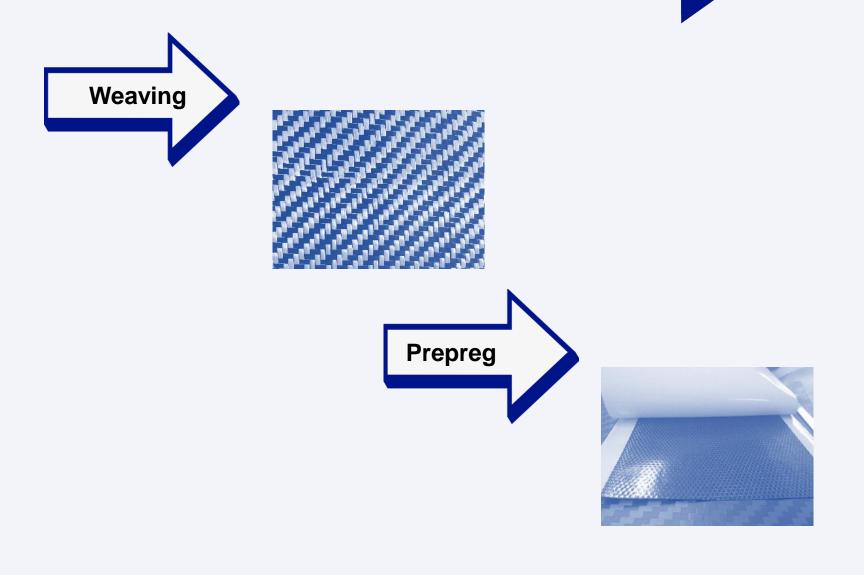
#### **Precursors & Fibers:**

- PAN Precursor
- Carbon Fiber
- Aramide
- Glass Fiber
- ..

#### For PP Fibers:

- Phenolic
- Epoxy
- Cyanate ester

#### **INTERMEDIATES**





#### **COMPOSITE PARTS**

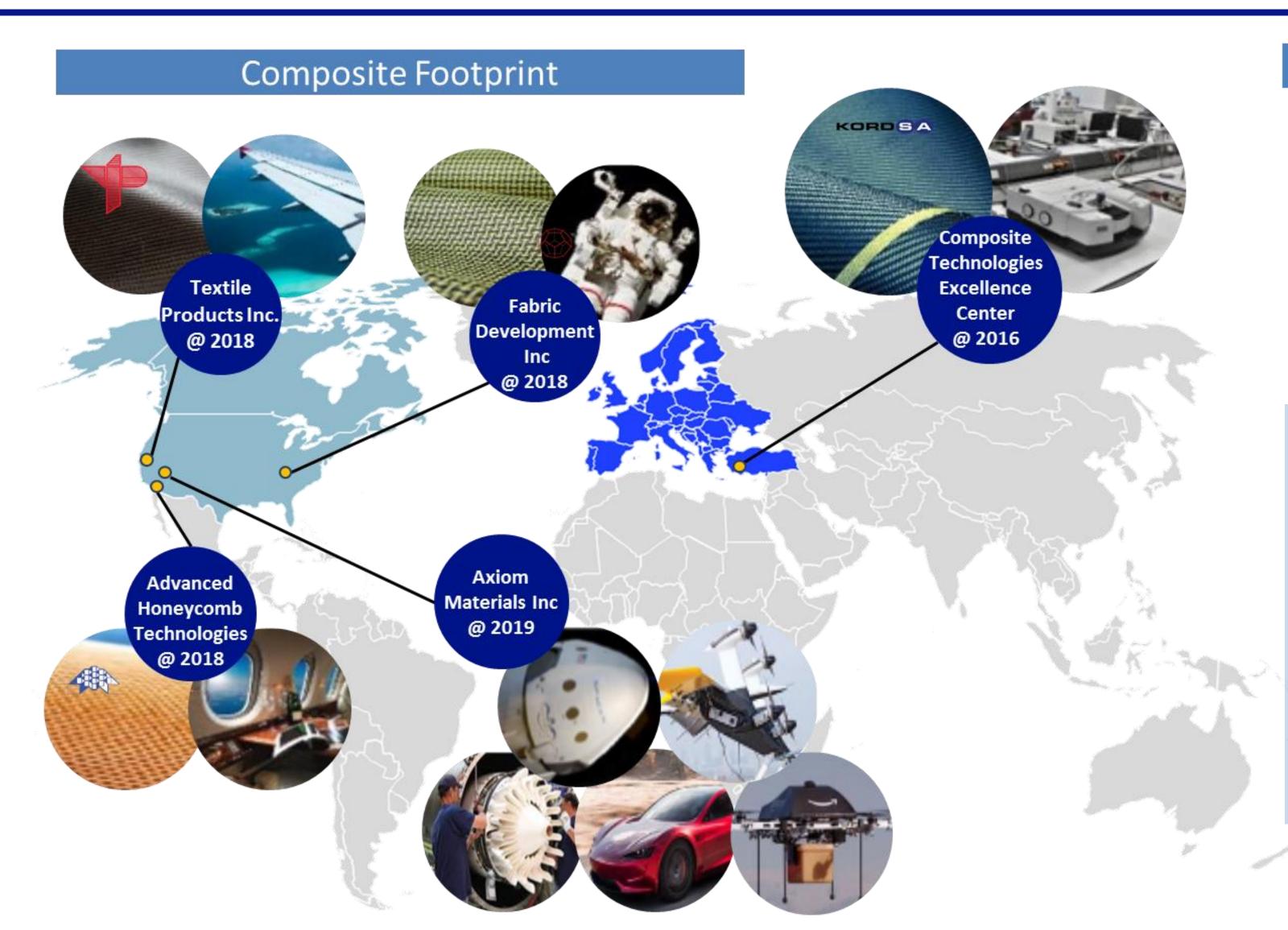


- Composites use in aerospace & automotive is increasing, due to improved material properties and weight savings over conventional materials
- «Lightweighting» is a major theme, driven by emission regulations as well as fuel-efficiency needs

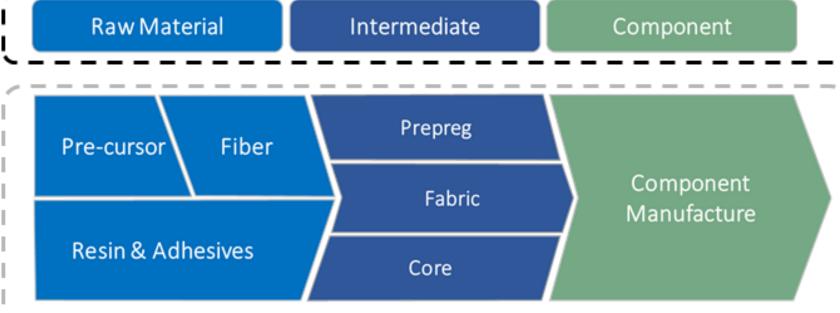
Kordsa fabrics and prepregs offer cutting edge solutions for aerospace & automotive markets



## Overview of The Composites Value Chain



## Composite Value Chain

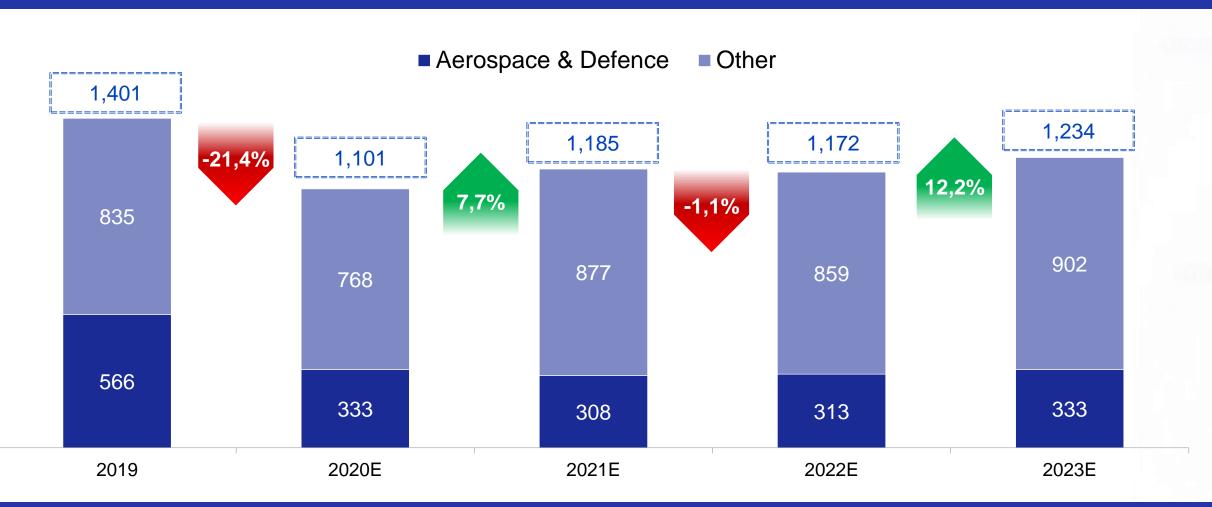


- ✓ Composite use in aerospace& automotive is increasing, due to improved material properties and weight savings over conventional materials.
- ✓ Total composite investment accounts approx. 310 M USA
- ✓ Potential M&A targets are always under consideration.
- ✓ Specialization areas:
  - Fabric Development Inc and Textile Products Inc: Fabric Production
  - Axiom Materials Inc: Prepreg Production
  - Advanced Honeycomb Technologies: Core Production

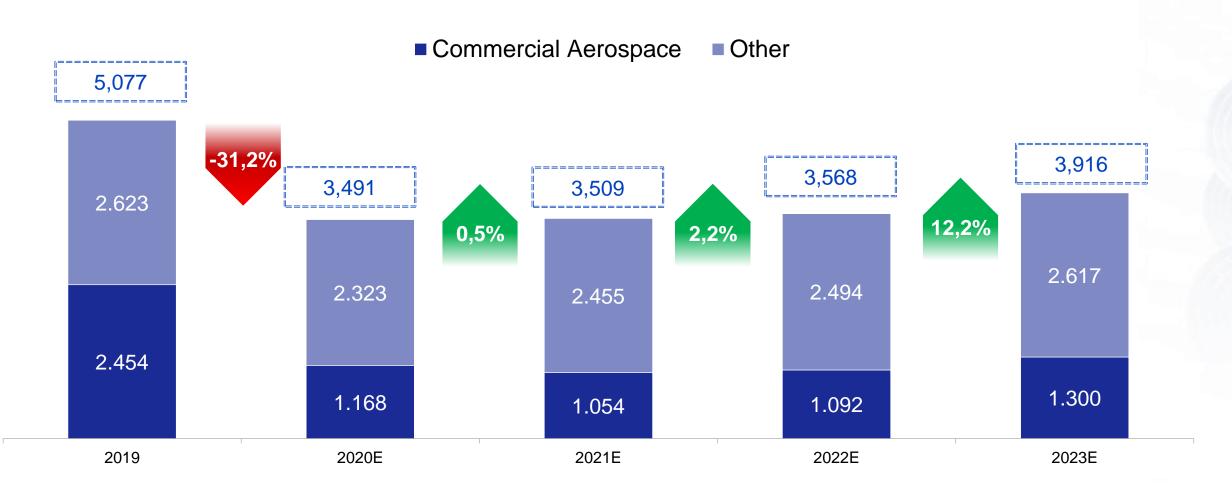


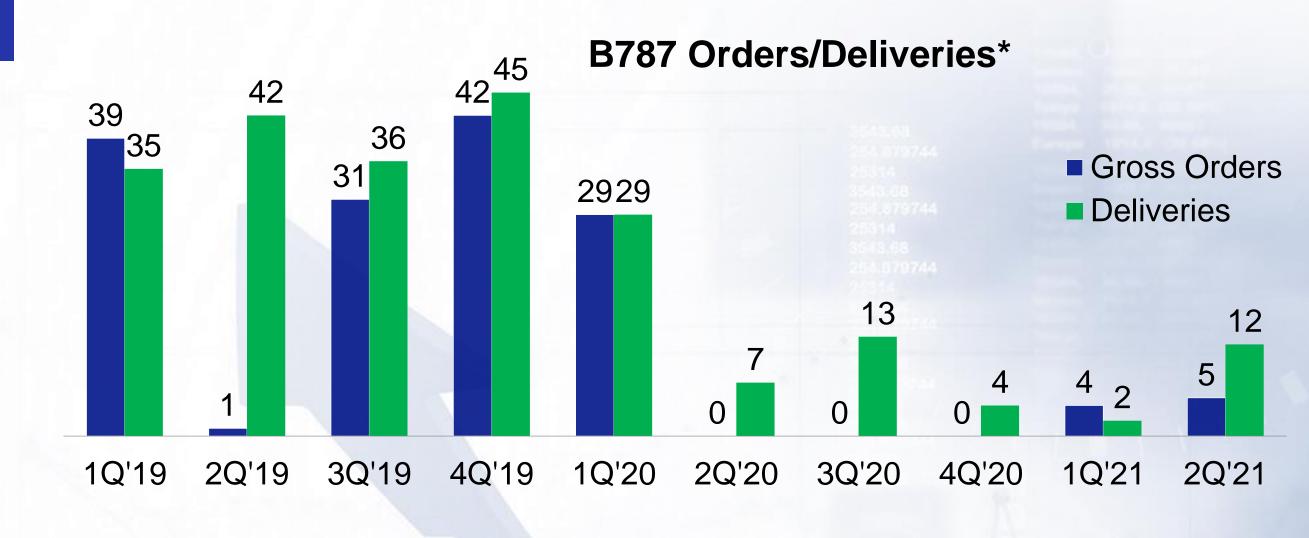
## RM Price Drivers - Tire

## Market Size (\$M) – Global Carbon Fiber



## Market Size (\$M) - Prepreg





## **Aerospace Industry**

- Backlog: 417 vs 488 for 4Q'20 vs 2Q'21
- For main project:
  - 14 shipsets/month in 4Q'19
  - 5 shipsets/month in 1H'21

<sup>\*</sup> Source:https://www.boeing.com/commercial/?cm\_re=March\_2015-\_-Roadblock-\_-Orders+%26+Deliveries/#/orders-deliveries



## Overview of The Tire Cord Fabric Value Chain

#### **RAW MATERIALS**



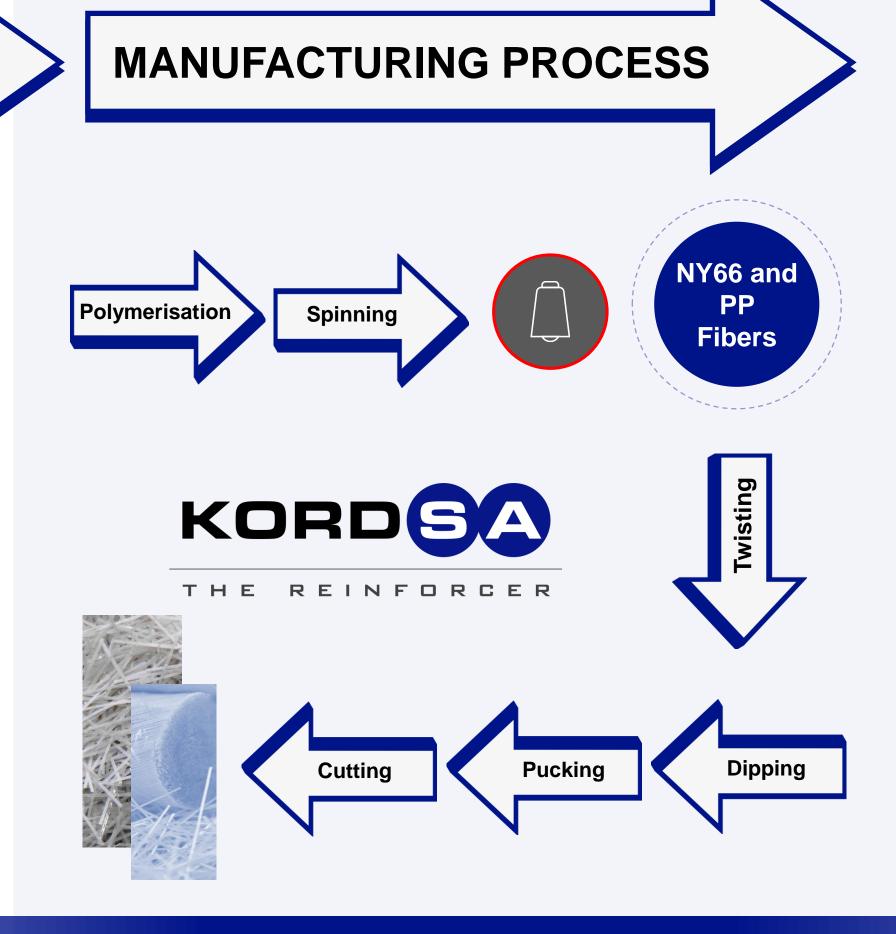
#### **Oil Derivative Ingredients**

#### For NY66 yarns:

- Hexamethylenediamine (HMD)
- Adipic Acid
- NY66 Salt
- NY66 Flake

#### For PP Fibers:

Polypropylene Chips



#### REINFORCED CONCRETE STRUCTURES





#### **Major Applications:**

- Tunneling
- Shotcrete
- Screed concrete
- Slab on ground concretes
- Concrete roads

Kordsa's Kratos Fiber Reinforcement are applied in Superstructure & Infrastructure Solutions



## Growth Opportunities: Construction

### **Application Areas**



- Railway Systems and Slab Track Concretes
- Funnel Linings and Shotcrete Applications
- Dams and Hydroelectric Power Plants
- Concrete Roads, Highway Pavements and Bridges
- Slab-on-ground Applications











#### **Current Status**

- The polypropylene monofilament macro synthetic reinforcement line invested in Turkey started production in June 2018.
- KraTos Macro and Micro synthetic fiber reinforcements have become the solution partner of many superstructure and infrastructure projects.
- The equipment and test competencies of the concrete laboratory in the R&D Center in Izmit were increased.
- While increasing its market share in Turkey, KraTos came with a significant market player in Brazil and Israel.
- Studies on the USA, Indonesia and Thailand markets continue.
- Kratos Structural Reinforcement product line has been launched

## Reference Projects

- Gayrettepe-New Airport Metro
- TCDD Yerköy-Sivas High Speed Railway Line
- Eti Bakır Siirt Mine
- Artvin Yusufeli Dam
- 3rd Bosphorus Bridge Toll Booths and **Electronic Pass Areas**
- Kocaeli City Hospital

- Tekirdağ City Hospital
- Kocaeli Light Railway Systems
- Samsun Light Railway Systems
- Trabzon DSİ Pressurized Water Line **Tunnel**

Aselsan Konya Campus

1915 Çanakkale Bridge – bridge deck storage area concreate slabs



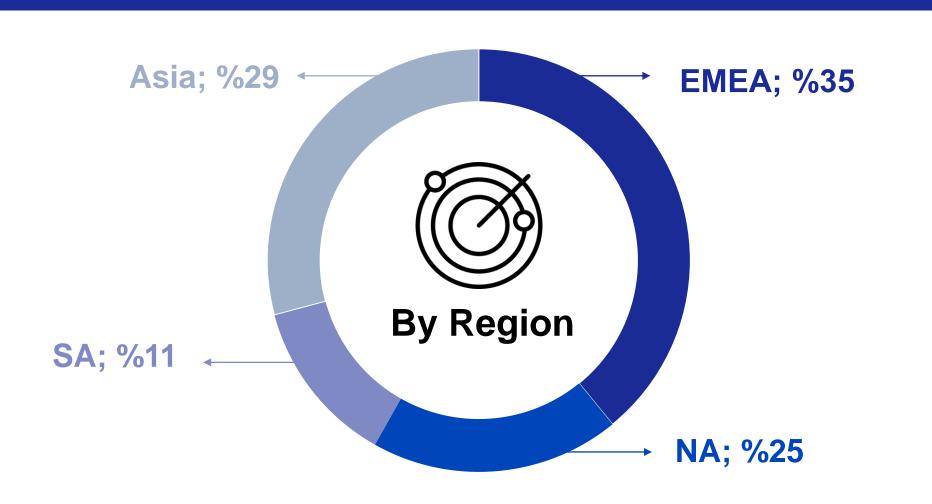
## Update on 1H 2021 Results

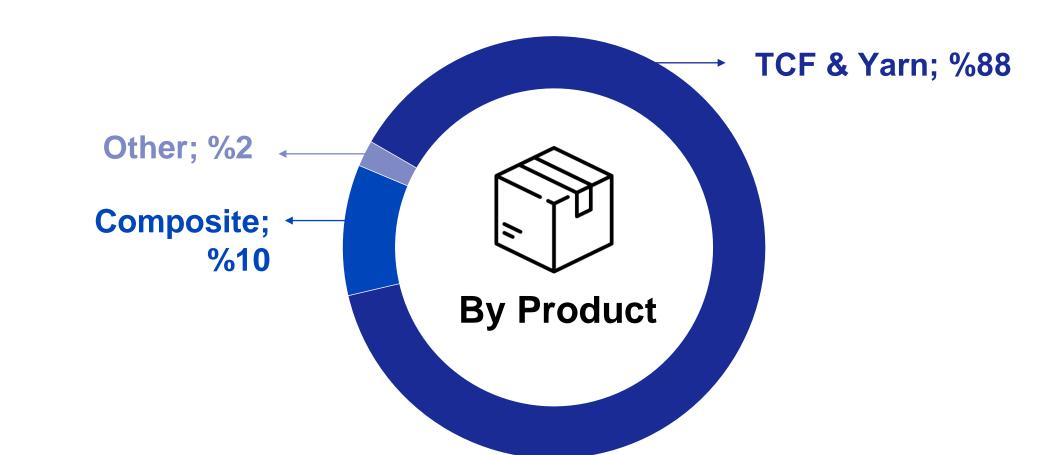
	TL	TL Financials (MTL)			USD Financials (MUS		
	1H 2020	1H 2021	Δ	1H 2020	1H 2021		
Sales	2.007	3.203	59,6%	311	407		
Gross Profit	362	738	103,8%	<b>56</b>	94		
Gross Margin (%)	18,0%	23,0%	5 pts'	18,0%	23,0%		
OPEX (%)	11,4%	10,6%	0 pts'	11,4%	10,6%		
Operating Profit	191	540	182,6%	30	69		
Operating Profit Margin (%)	9,5%	16,9%	7 pts'	9,5%	16,9%		
EBITDA*	267	553	106,7%	41	70		
EBITDA* Margin (%)	13,3%	17,3%	4 pts'	13,3%	17,3%		
Net Income**	<b>75</b>	393	423,2%	12	50		
Effective Tax Rate (%)	13,9%	10,8%	-3 pts'	13,9%	10,8%		
Net Income (%)	3,7%	12,3%	8 pts'	3,7%	12,3%		
EPS (TL/1,000 shares)	0,38	1,84	380,3%	0,06	0,23		



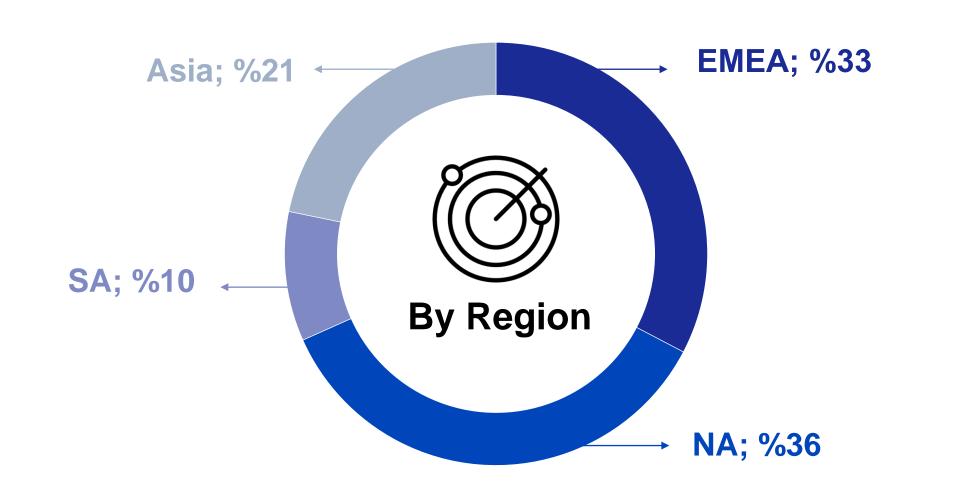
## Segment Reporting

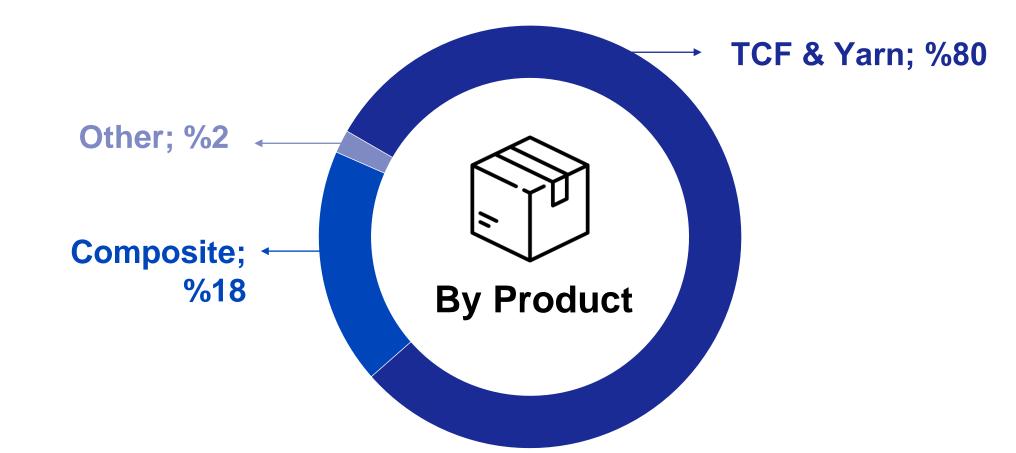
## Jun'21 Revenue Split





## Jun'20 Revenue Split





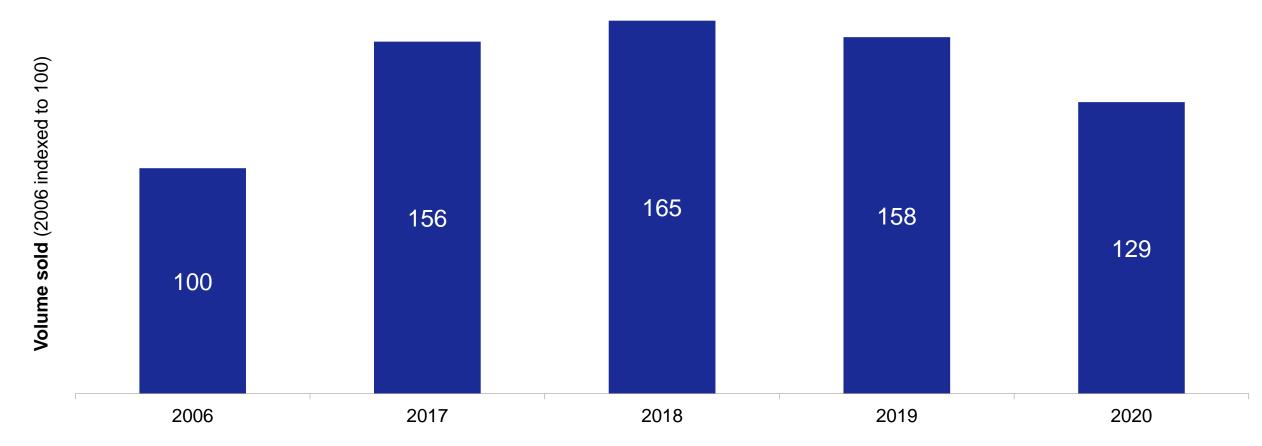


## Well – Positioned to Enable Volume Growth

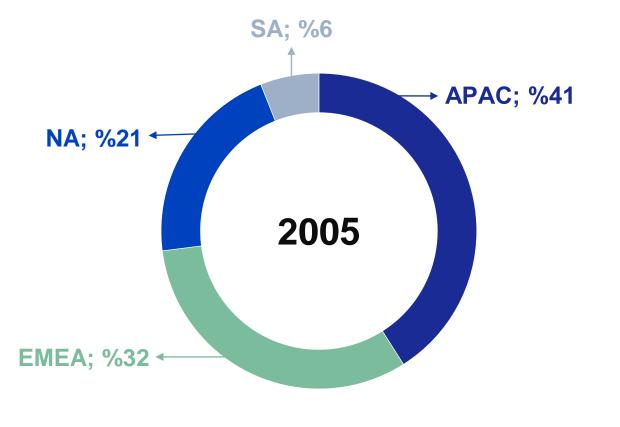
#### Comments

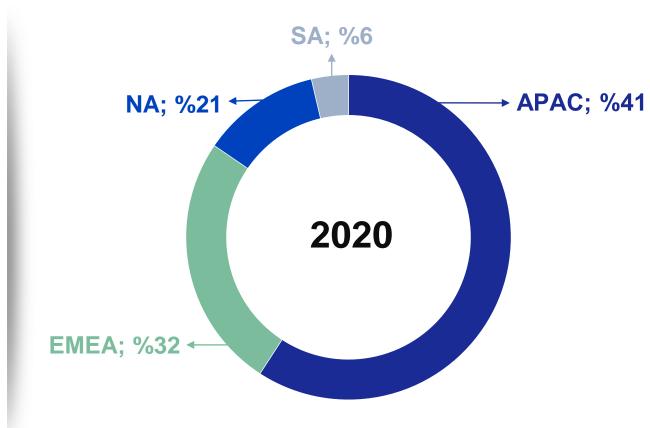
- ✓ Fabric form contributes the highest value add
- ✓ Disciplined approach to optimizing footprint
- ✓ 2015 investment in Indonesia has increased polyester tire cord fabric capacity
  by 18 ktons
- Enables regional growth in technology-advantaged PET segment with global and emerging customers
- ✓ Further investment in PET HMLS for new generation yarns
  - In TR for 6-6.5 ktons completed in 1H 2019.
  - In Indo for 6,5 ktons completed in Jan-2018.

## Kordsa Volume Development(a)

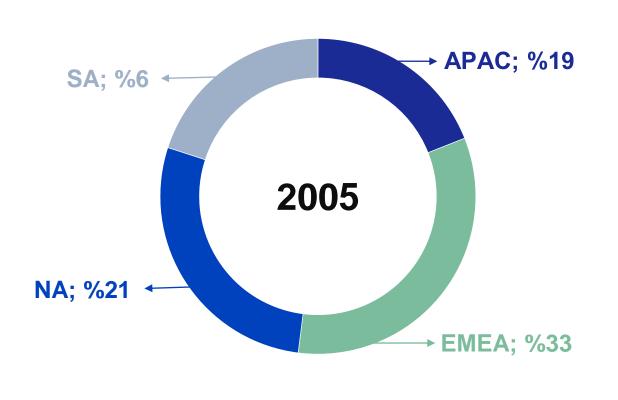


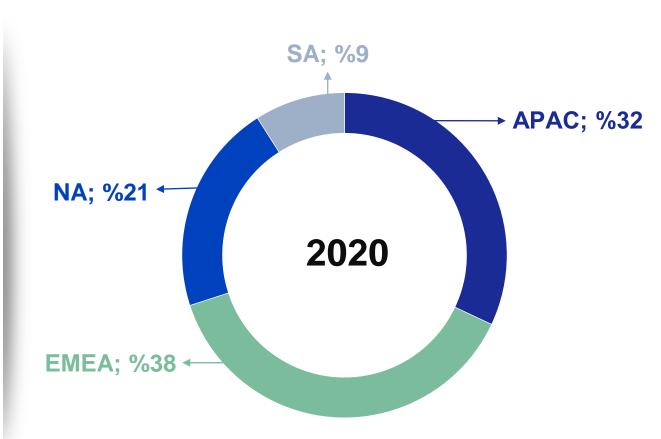
## **Light Vehicle Tire Manufacturing Market**





## **Kordsa Regional Capacity Development**



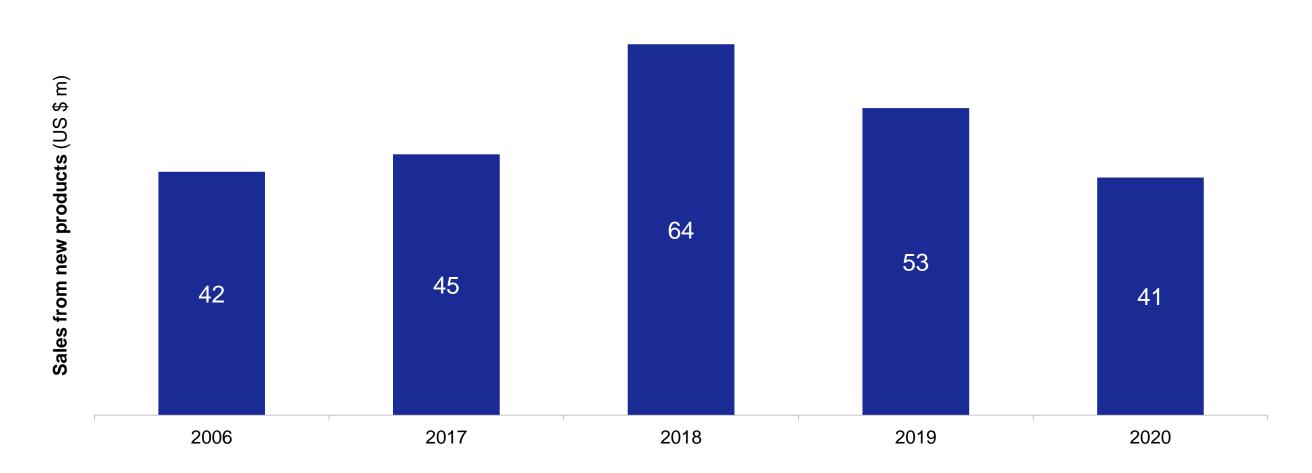




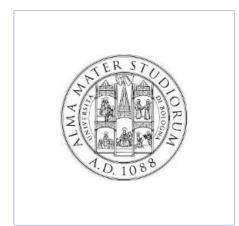
(a) Volume development adjusted for divested volumes

## Technology Leadership at The Cutting Edge of Reinforcement

## **Strong Focus on R&D**



## Selected Collaborations(a)





















(a) includes both, universities as well as individual academics from the names institutions

## **Cutting Edge New Products**



✓ Rolling resistance improvements through higher modulus for high performance tires



✓ Protection layer for truck & bus tires; reduces tire weight

**T802** 

√ 7% higher tenacity and better fatigue performance for aircraft tires (bias)

**4G PET** 

√ 10% higher dimensional stability for better tire performance (improved labeling)

## **Leadership in Innovation and Technology**

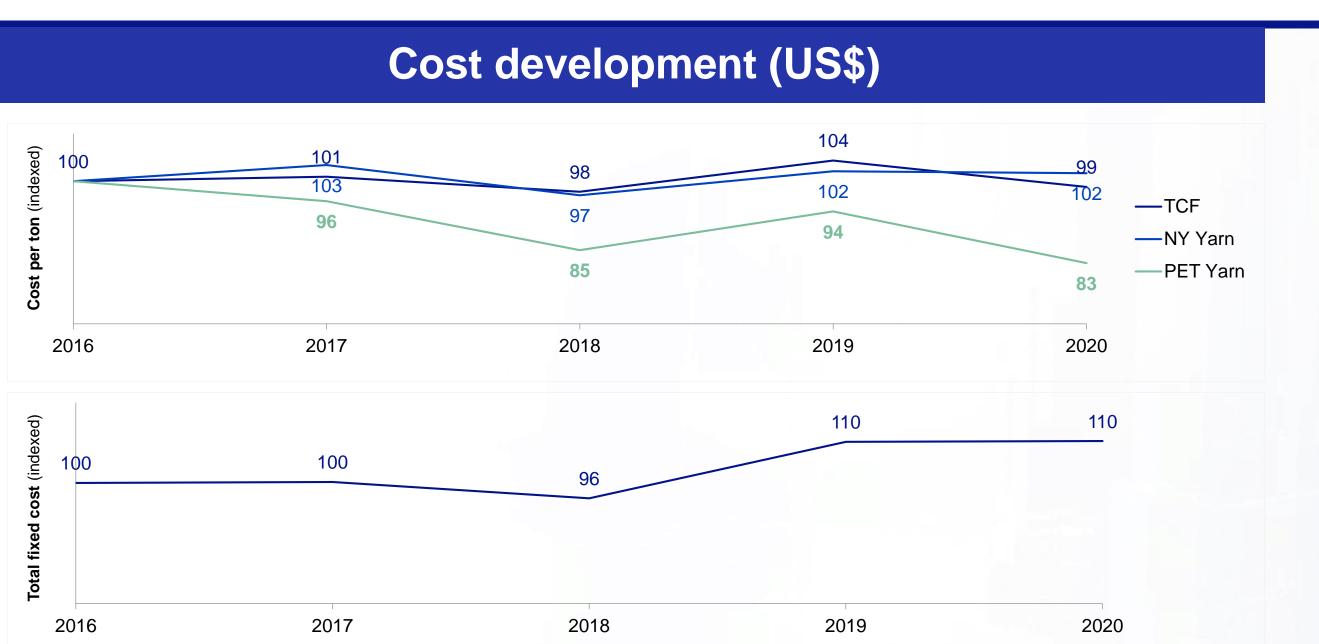


- ✓ Best R&D Center award in textile sector ( 3 years in a row)
- ✓ Best R&D Center in All Sectors Ministry of Science, Industry and Technology

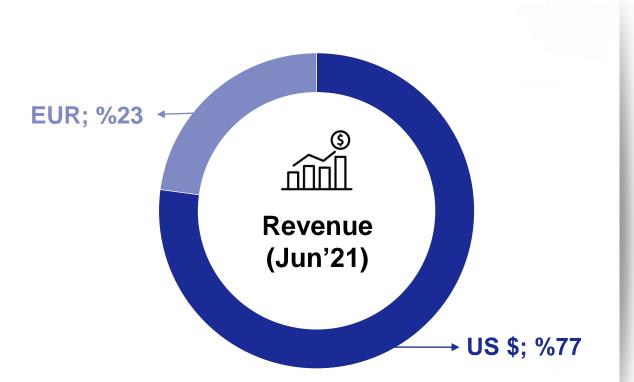


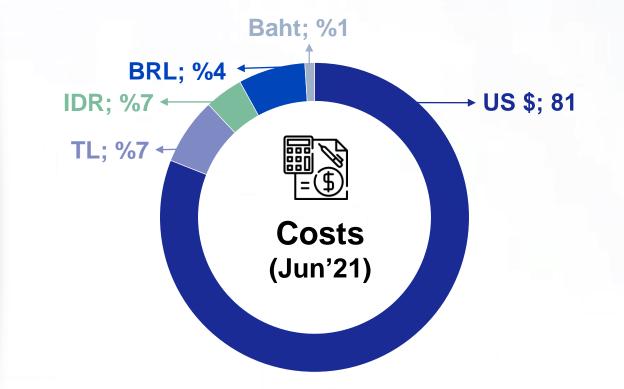
- ✓ Innovation Strategy Champion Inovalig / Turkish Exporters Assembly
- ✓ 2019 Innovation Resources Category 2nd Place Inovalig Turkish Exporters Assembly
- ✓ 29th Biggest Company according to 2020 R&D Expenditures R&D 250. The companies engaged in R&D spending Turkey most/Turkishtime

## Well-Positioned for Strong Cash Generation and Dividends

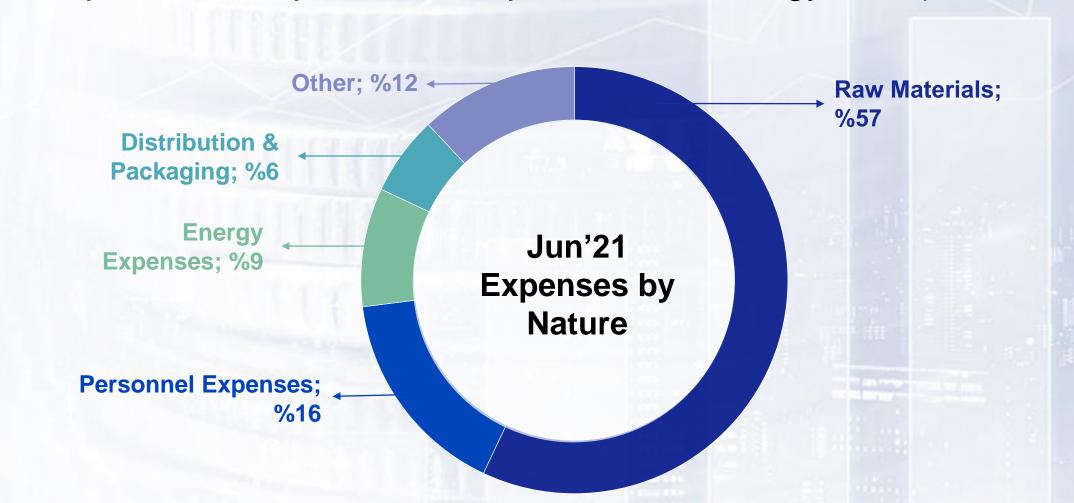


#### **FX** exposure





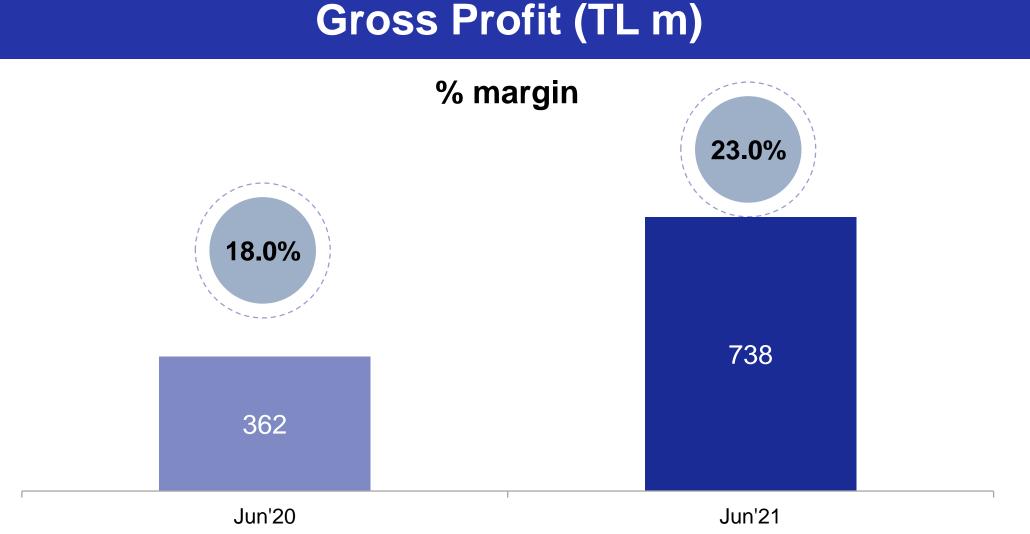
- Demonstrates value-based pricing model
- Ability to pass through raw material price volatility:
   (Revenue raw material costs) tracked as a KPI by sales team
- Conversion costs as a key metric for management KPIs (main components are personnel expenses and energy costs)



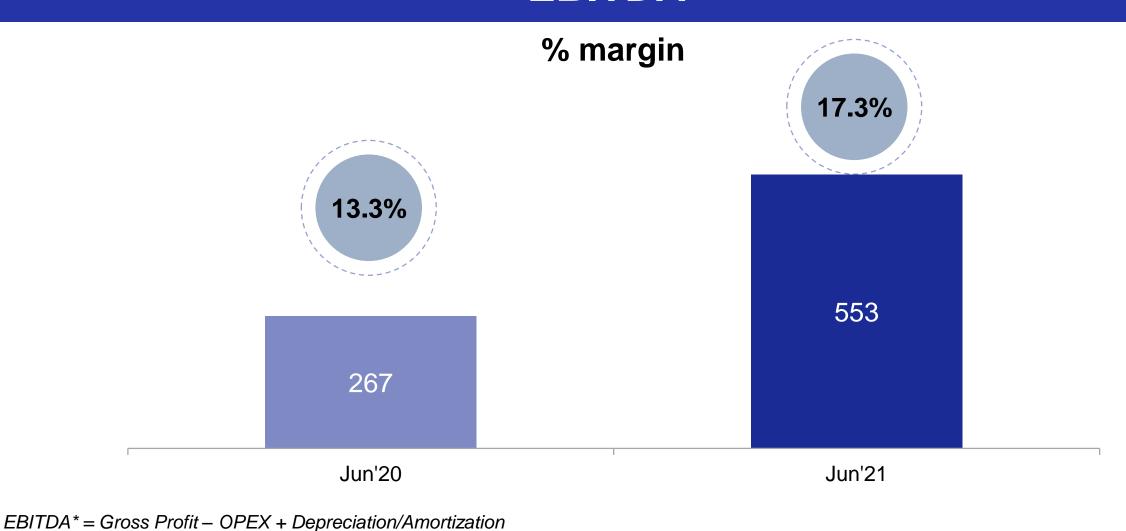
- Hard currency revenues
- FX exposure on costs → EM footprint on local costs + hard currency priced raw materials
- Benefit from US\$ appreciation vs. TL, IDR and BRL



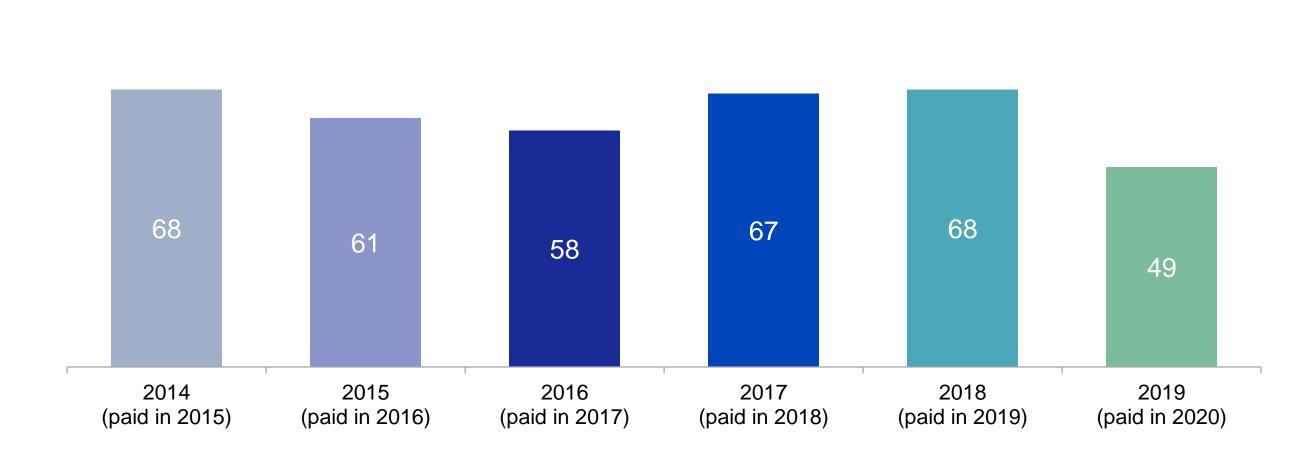
## Well-Positioned for Strong Cash Generation and Dividends



# EBITDA\* % margin 17.3%



#### **Dividend Distribution**



#### **Comments**

- ✓ Price is a function of
  - Value Proposal of Product including services offered
  - Product type (nylon vs polyester or fabric vs yarn)
  - Raw Material Price Movement (formula based pricing with adjustment on raw material indexes)
- √ 10 yrs avg EBITDA margin 12,0%
- ✓ Target is progressive improvement in EBITDA margins over the medium term
  - Focus on value
  - Improved Total and per kg Fixed Cost
  - Successful selling, general and administrative ("SG&A") cost reduction initiatives across all business units
  - Positive contribution of new products and adjacent businesses



## **Sustainability Focus**



Improve CDP Climate Change score by two levels every year

2017: D 2018: C- 2019: B 2020: A-

 We improved CDP Water Security score by one level every year.

2017: C 2018: B- 2019: B 2020: A-

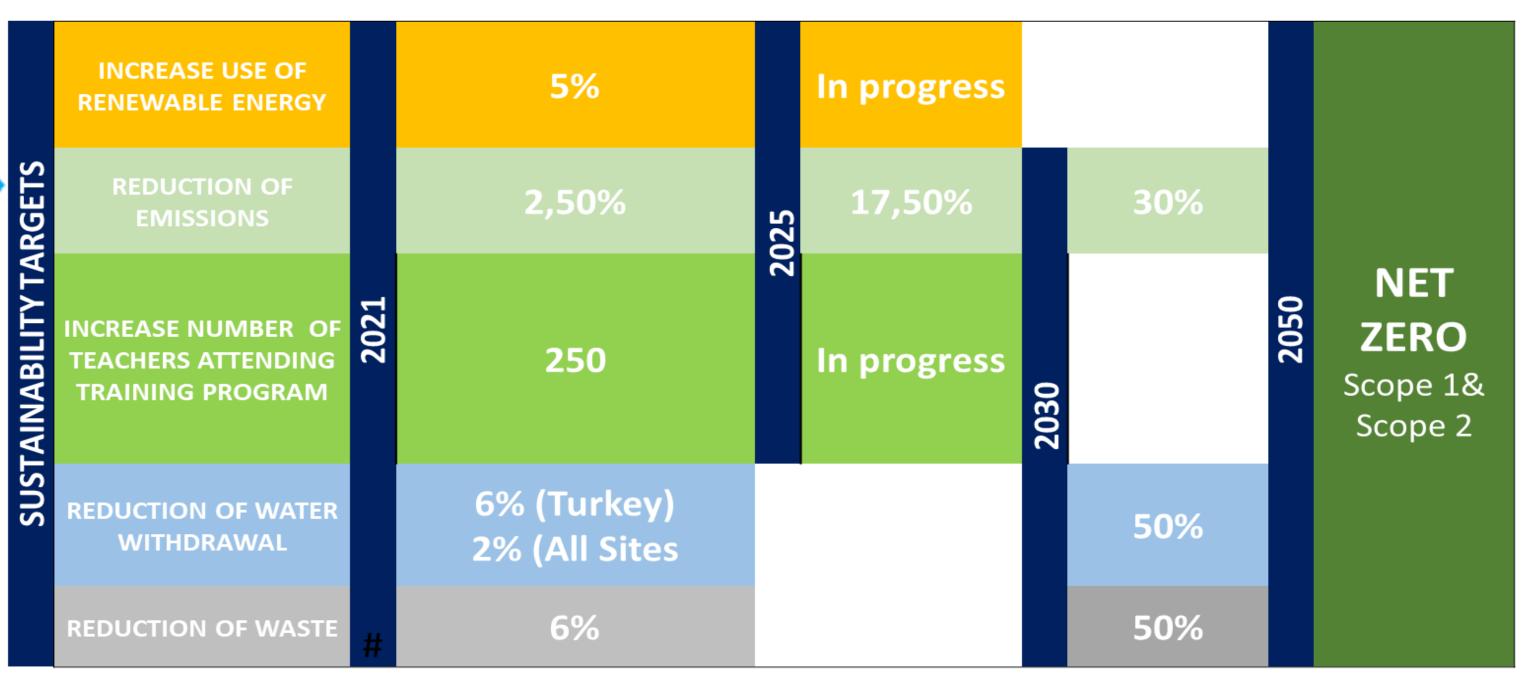


 We participate in the Ecovadis CSR Rating for environmental, social and governance issues.

2018: 67 2019: 70

#### Among Top 3 Companies in Turkey for Emission and Water Management Performance







## **Kordsa's Financial Policy**

Our company guidance for financial year 2021 is as follows:

## Revenue:

**35%-45%**TL basis;

20%-25%
USD basis;

## **EBITDA:**

55%-65%

40%-45%

TL basis; TL basis;



Kordsa is targeting progressive improvement in EBITDA margins over the medium term



Distribution of all the distributable profits

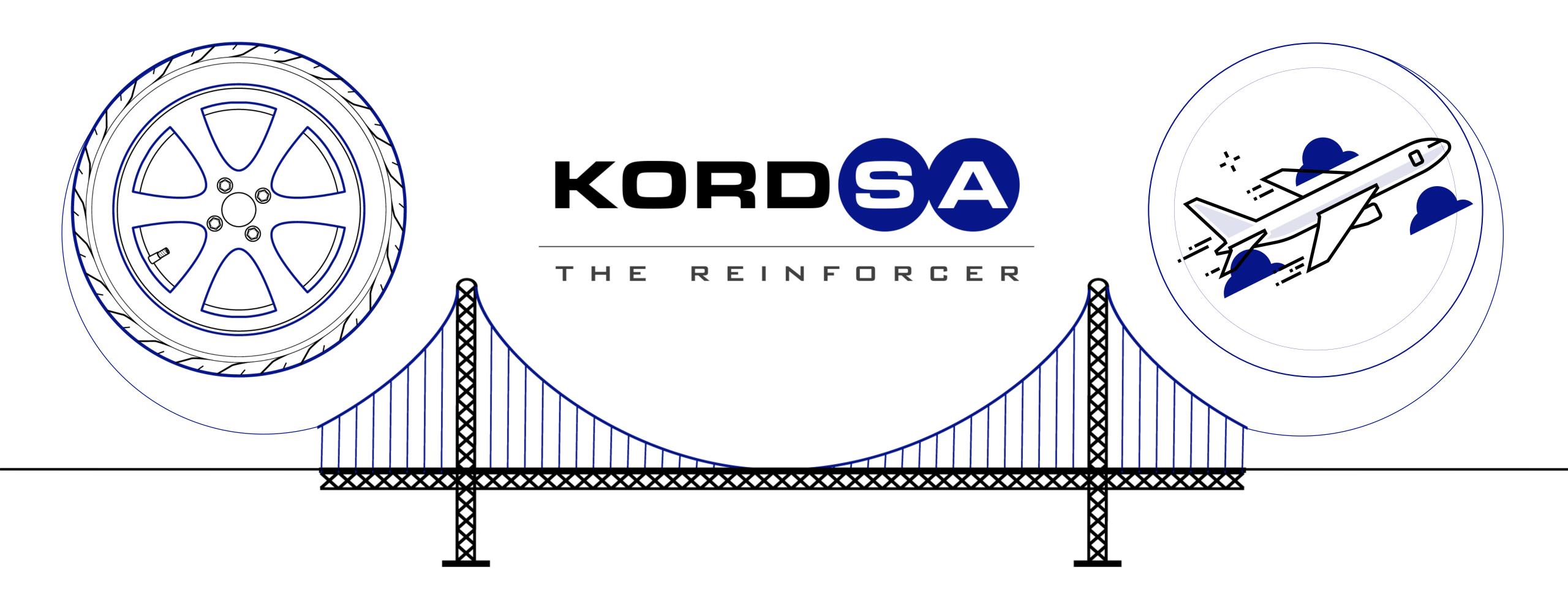
- which is lower of the Kordsa Turkey local GAAP (VUK) or Kordsa Consolidated TFRS (IFRS) net income
- in the form of cash and/or bonus shares
- subject to general assembly approval

The distribution decision is agreed taking into consideration the sizable fixed asset purchases, acquisitions, covenants of current liabilities and the Company's mid and long term strategies, national and global economic conditions



USD 23 million





## We Reinforce Life

Reinforcing 2 out of every 3 aircraft tires and 1 out of every 3 automobile tires produced in the world