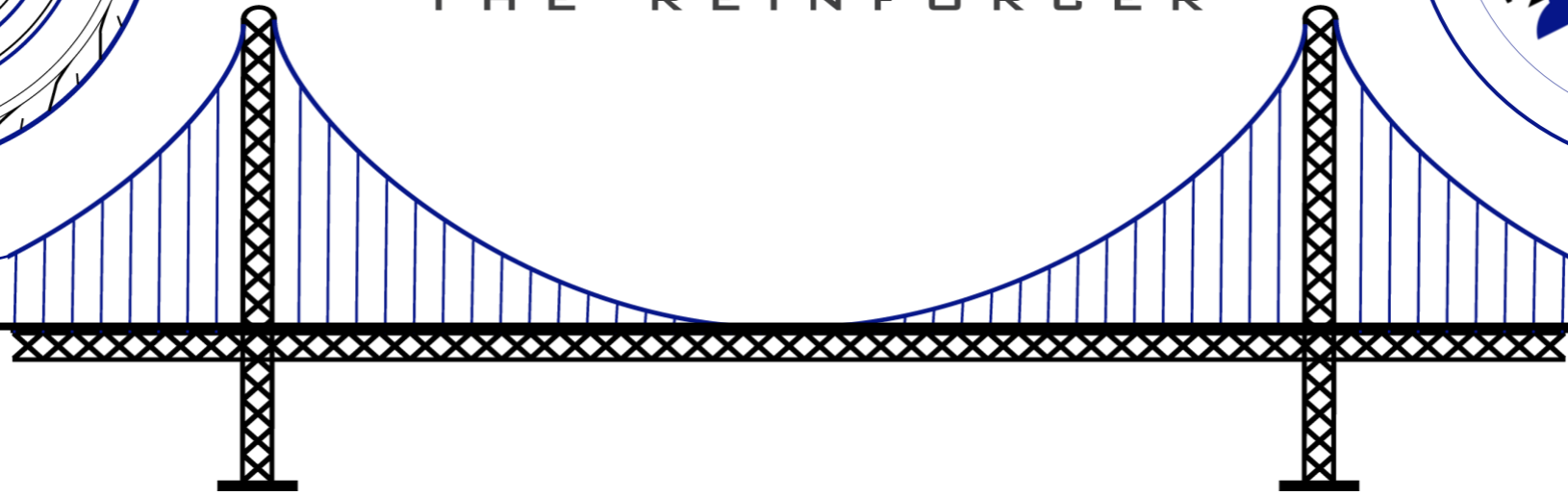
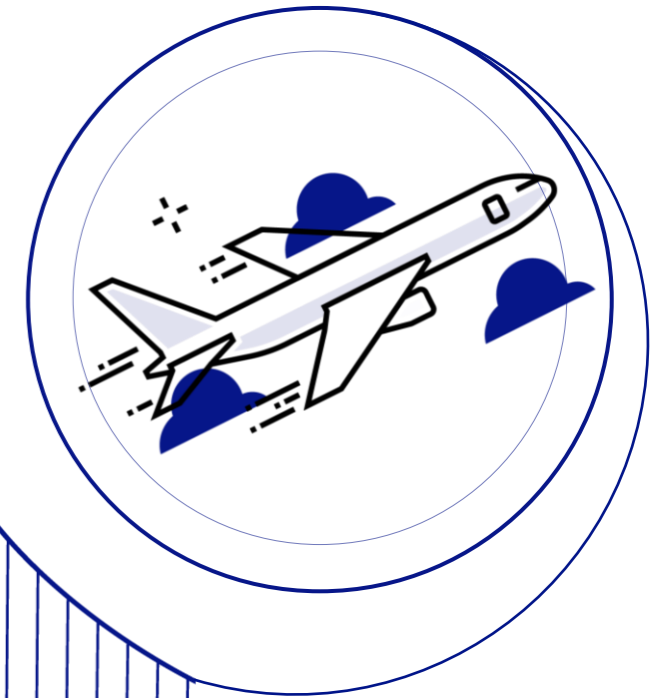


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## Kordsa Investor Presentation

Nov, 2020

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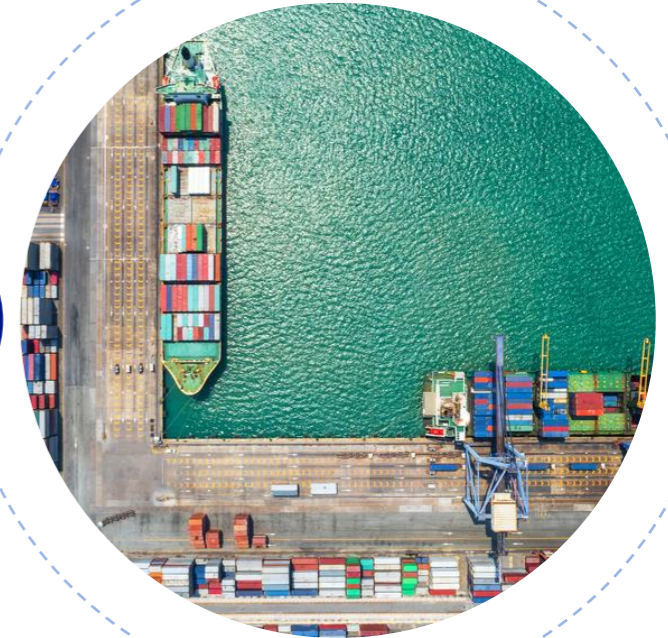
# Global Footprint

**4** continents  
**12** facilities

**~4,500**  
employees

**2** R&D  
Centers

**868** patent applications  
**228** patents



# WE REINFORCE LIFE

# Global Footprint



**Regional footprint versus key competitors**

**Kordsa market position**

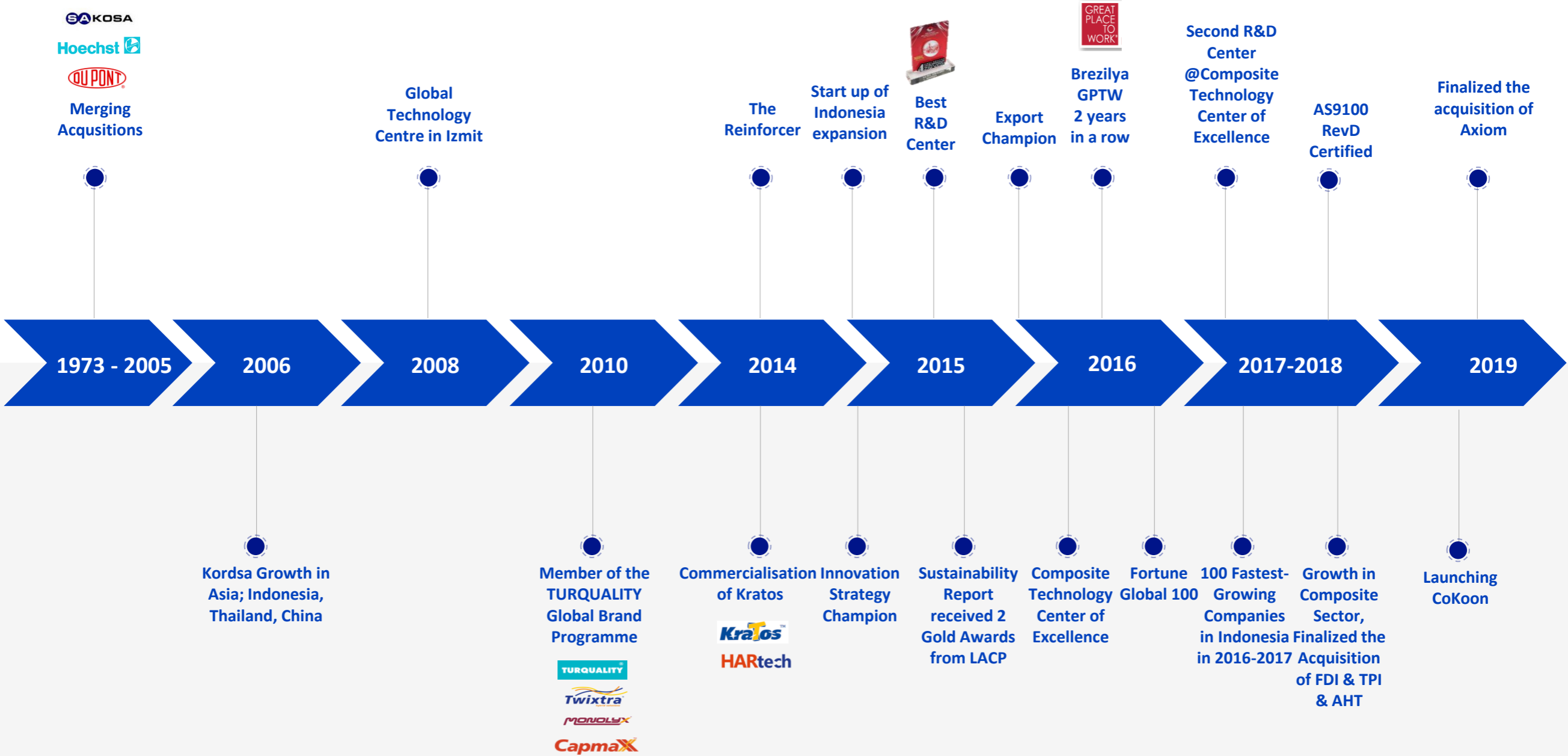
- #1 NY TCF producer
- #1 PET TCF producer

- #1 NY TCF producer in the US

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

- #2 NY TCF producer
- #2 PET TCF producer

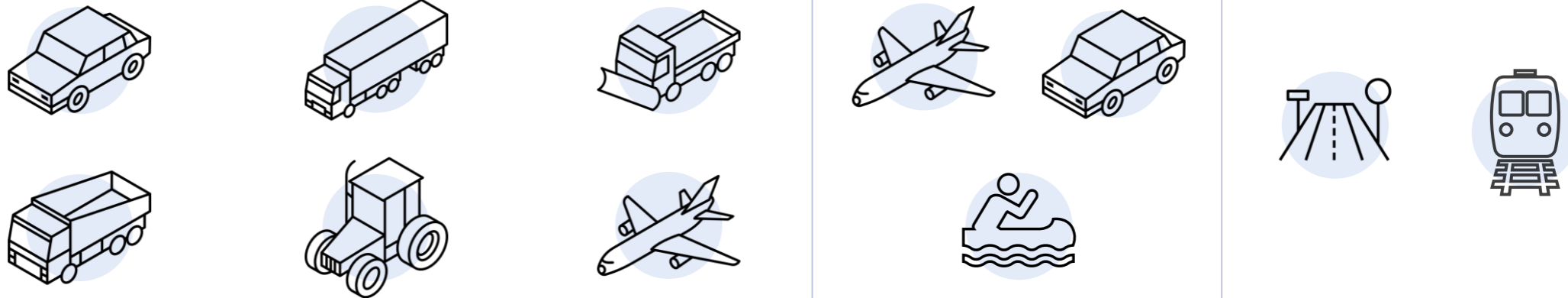
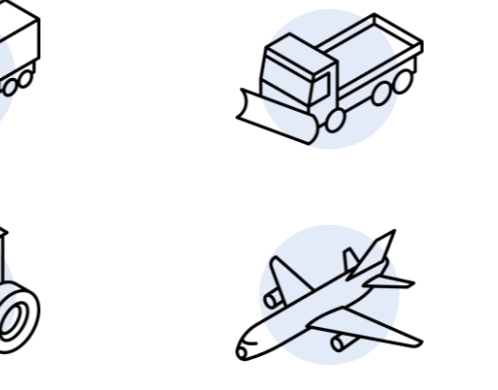
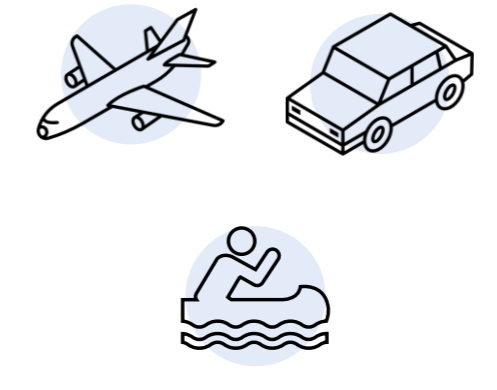
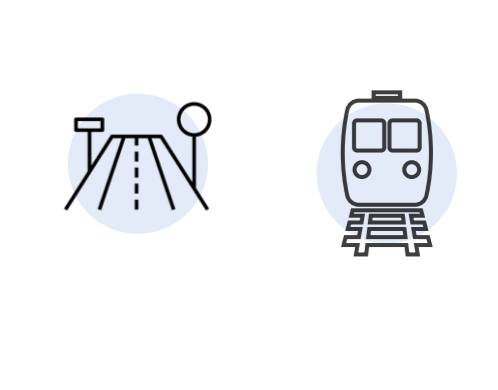



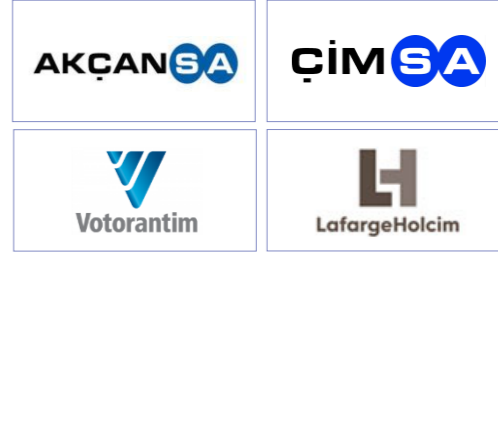
# Milestones



# Strategy House



# Kordsa in Brief

Description	Tire cord fabrics ("TCF")	Next generation fabrics	Composite	Construction
<p>• Nylon and polyester based tire reinforcement fibers and fabrics for radial and bias tires</p> <p>• Global #1 by revenue/ #2 by capacity @ NY66 TCF</p> <p>• Global #2 by revenue / #3 by capacity @PET TCF</p>	<ul style="list-style-type: none"> <li>• Textile reinforcement materials for green tires</li> <li>• High performance Monofilaments</li> <li>• Green Products with Resorcinol Formaldehyde Free Dipping</li> <li>• Highly engineered hybrid cords with superior properties</li> </ul>	<ul style="list-style-type: none"> <li>• Carbon fiber, aramid, hybrid fabrics, and pre-pregs</li> <li>• Production technologies for composite materials</li> <li>• High value added thermoplastic and thermoset resins</li> </ul>	<ul style="list-style-type: none"> <li>• Macro and micro fibers for concrete reinforcement</li> </ul>	
<p>End markets</p>				
<p>Selected end-market participants</p>				

# 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

4

Growth in composite reinforcement market

5

Growth opportunities from new businesses such as thin film and flexible electronics

6

Strong cash generation and dividend payout

7

Experienced management team with proven track record





# Must Win Battles

## 1. Business Excellence

- a. Operational Excellence : Safe and reliable operations, competitive cost
- b. Digital Transformation: Data analytics and Artificial Intelligence, Robotics and Automations, Cybersecurity
- c. Effective Finance & Risk Management
- d. Commercial Excellence

## 2. Growth

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

## 3. Innovation

- a. Innovation in Material Science
- b. Innovation in Tire Technology
- c. Innovation in Composite Technology
- d. Effective Innovation Management



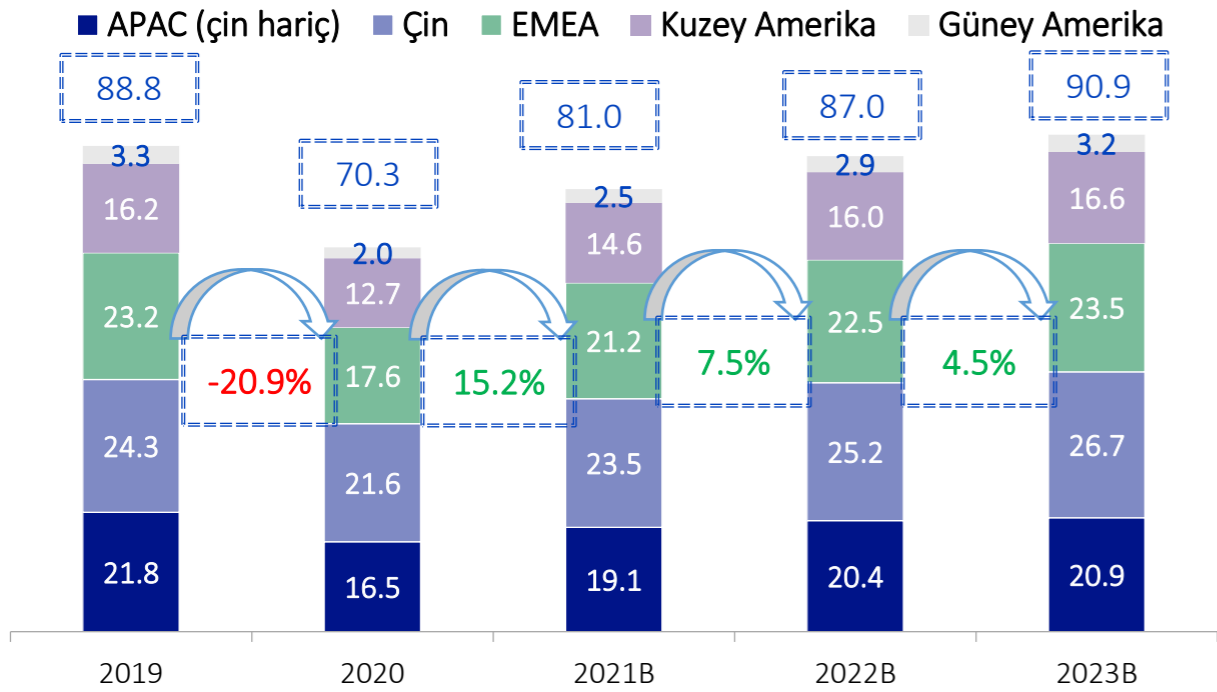
# Overview of The Tire Cord Fabric Value Chain



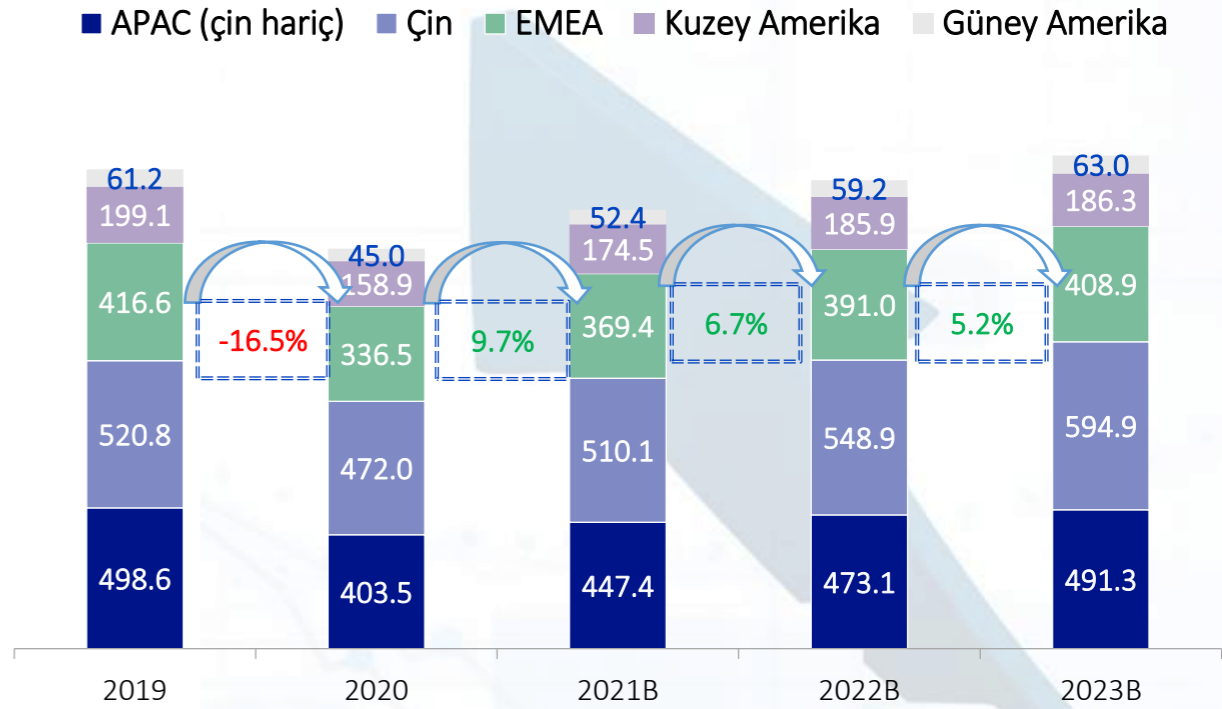
**Kordsa fabrics are developed for specific requirements and are custom made**

# Market Dynamics - Tire

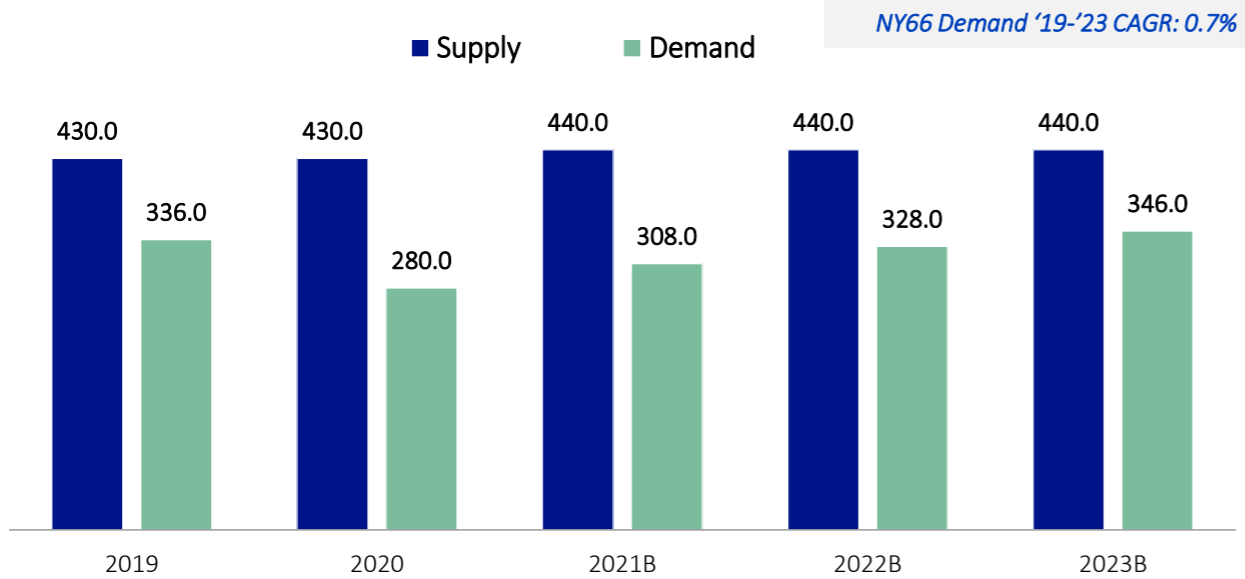
## Global Automotive Market (Munits)



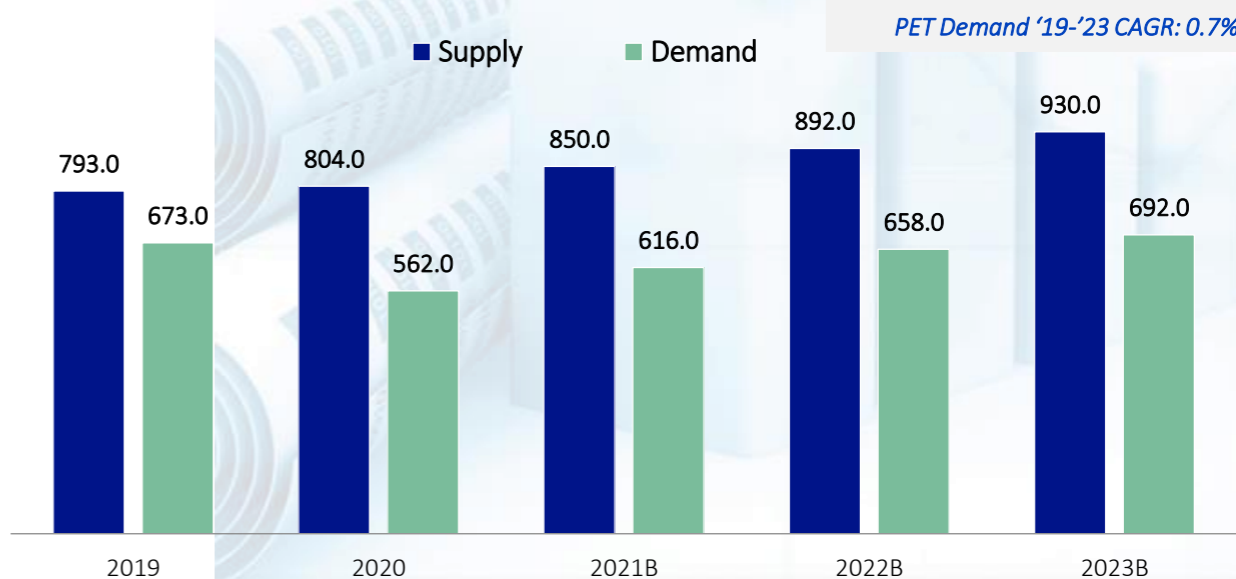
## Global Tire Market (Munits)



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

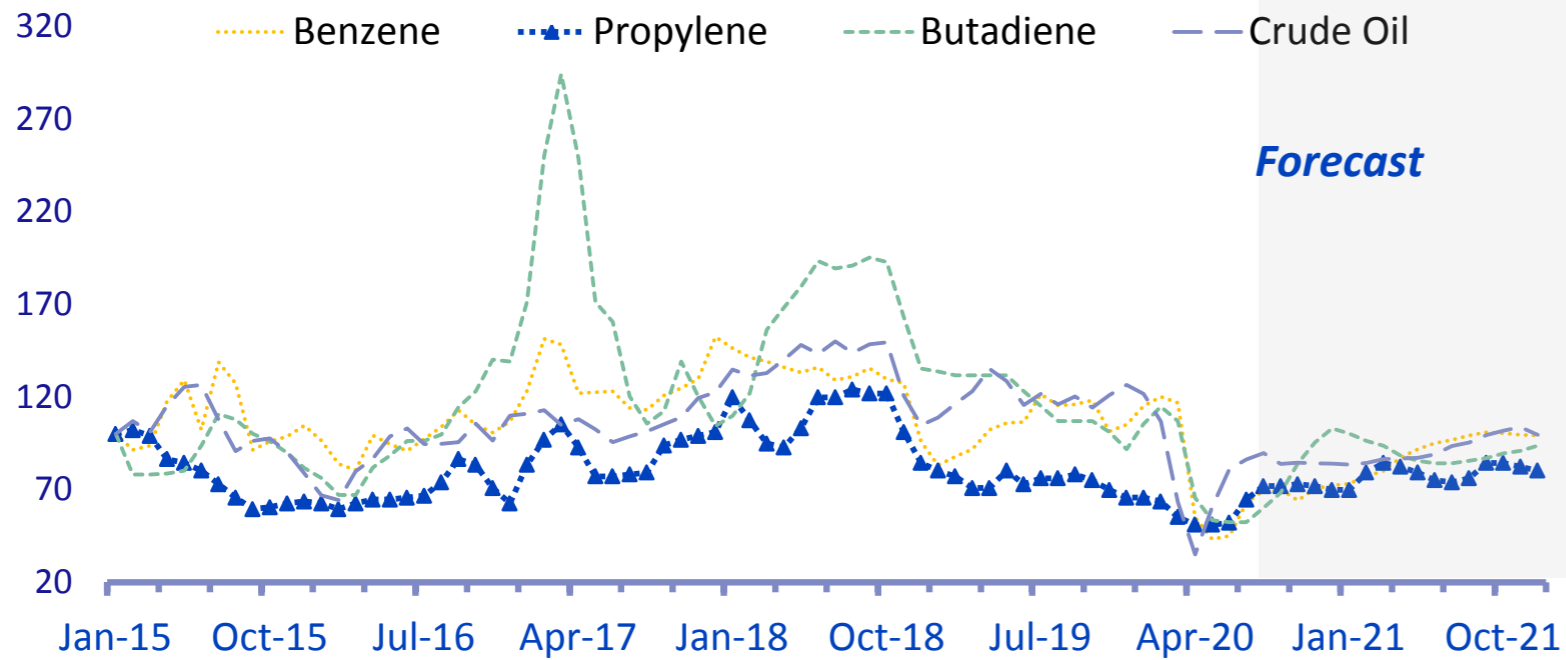


## Tire Reinforcement Market (PET-ktons)



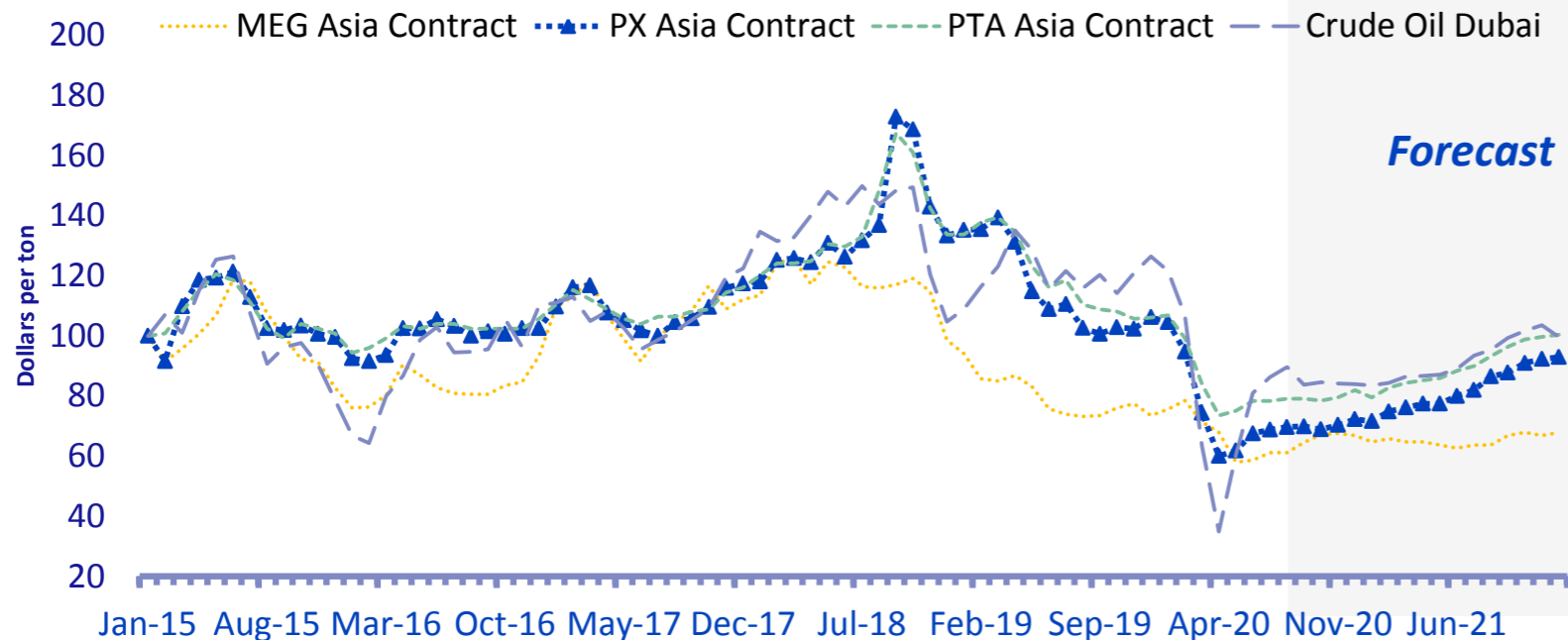
# RM Price Drivers - Tire

## NY Raw Material Trend (Indexed)



- Butadiene: Despite the gradual improvement of butadiene demand, consumption is still at a comparably low level compared to previous years. Butadiene prices are trending higher as inventory restocking the chain and fundamental demand is stronger than it was.
- Propylene: Outages associated with Hurricane Laura for steam crackers continued to incrementally lower propylene production.

## PET Raw Material Trend (Indexed)



- The PET sector has felt growing pressure from a continued inventory build, but preliminary outage plans known at this point indicate that production may start trending lower in the first week of October at the earliest.

Source : IHS

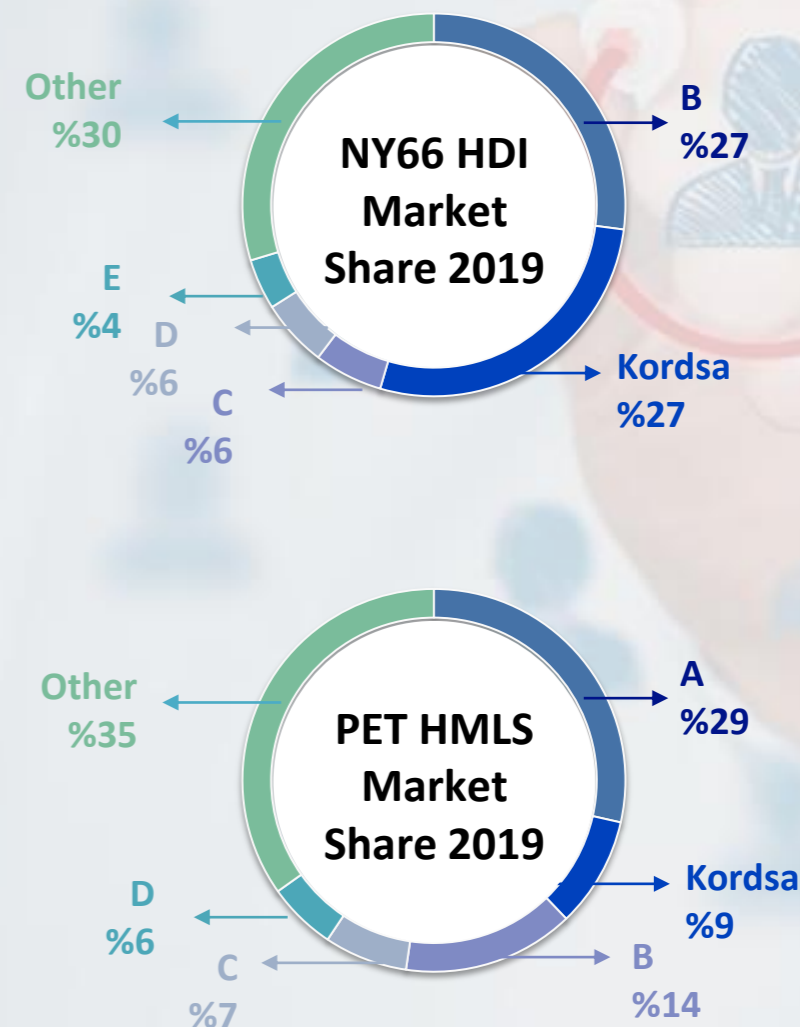
# Market Leadership Based on Longstanding Strategic Partner Status with All Global Tire Players

## 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	✓
Global Tire Player 2	Since 1995	~ 5 years	✓
Global Tire Player 3	Since 1973	~ 3 years	✓
Global Tire Player 4	Since 1985	~ 2 years	✓
Global Tire Player 5	Since 1973	~ 3 years	✓
Global Tire Player 6	Since 1987	~ 2 years	✓

(a) For a new supplier

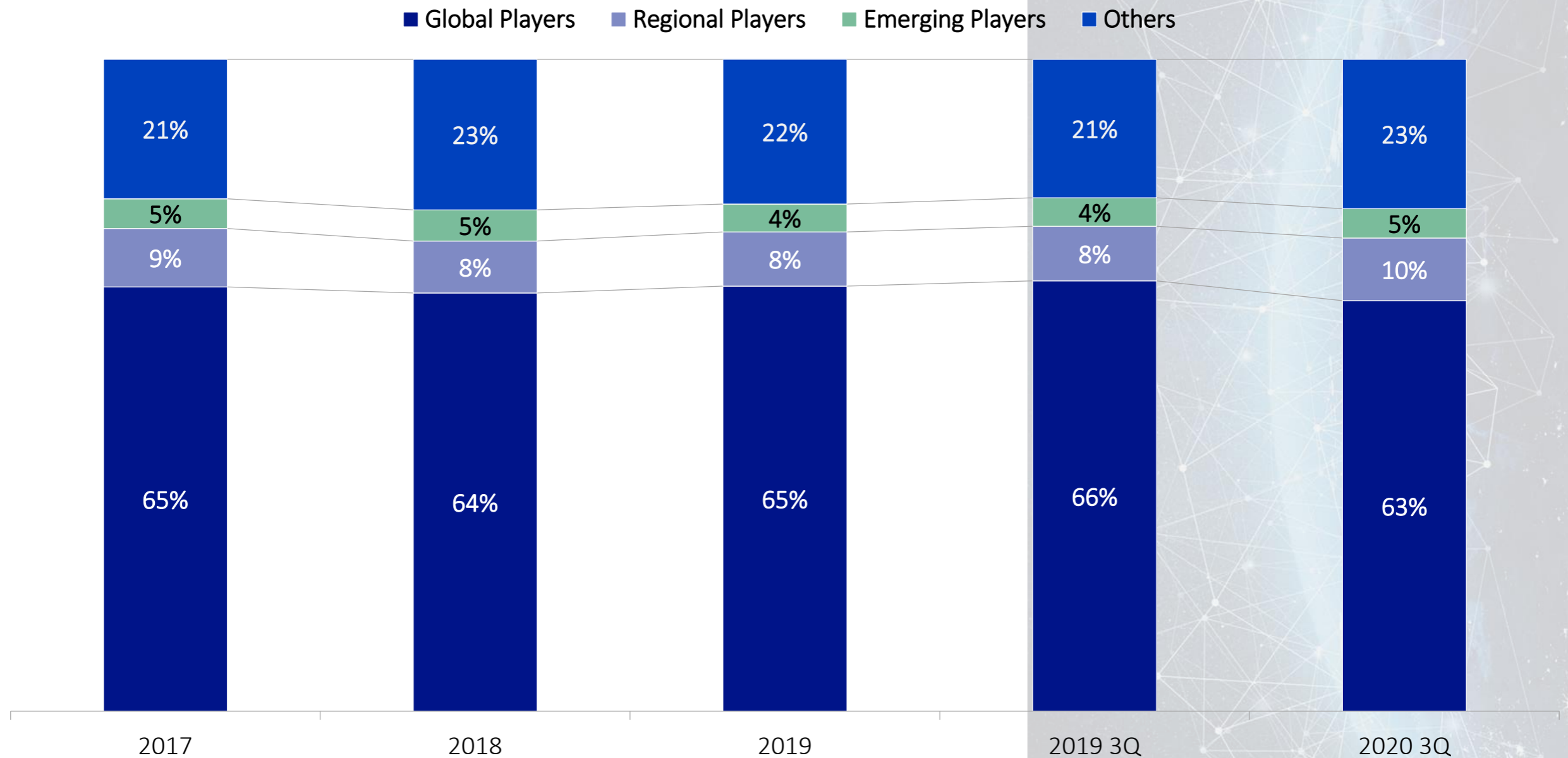
## Leading market shares



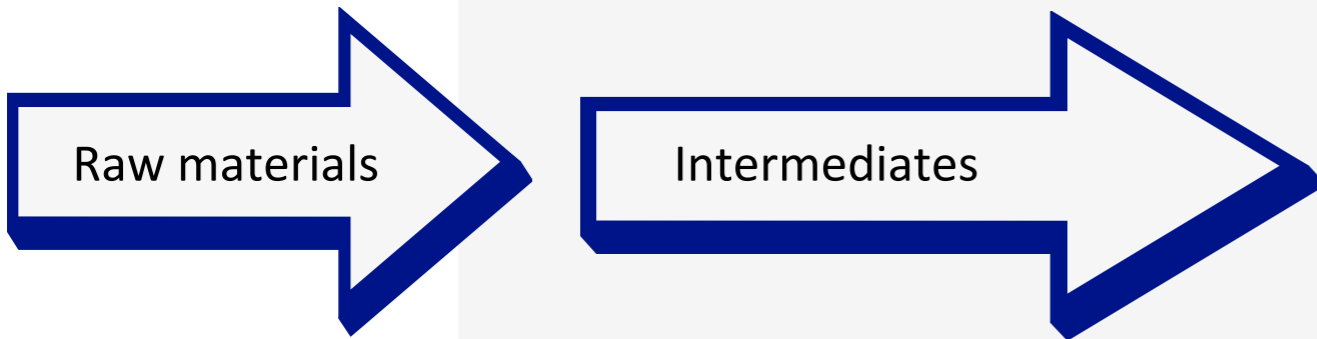
Source: Company Estimate

**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



## Composite Parts

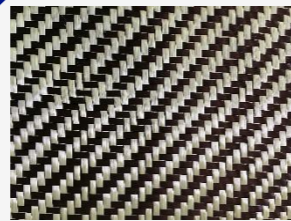
### Precursors & Fibers:

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



### Resins:

- Phenolic
- Epoxy
- Cyanate ester



- 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



Twisting

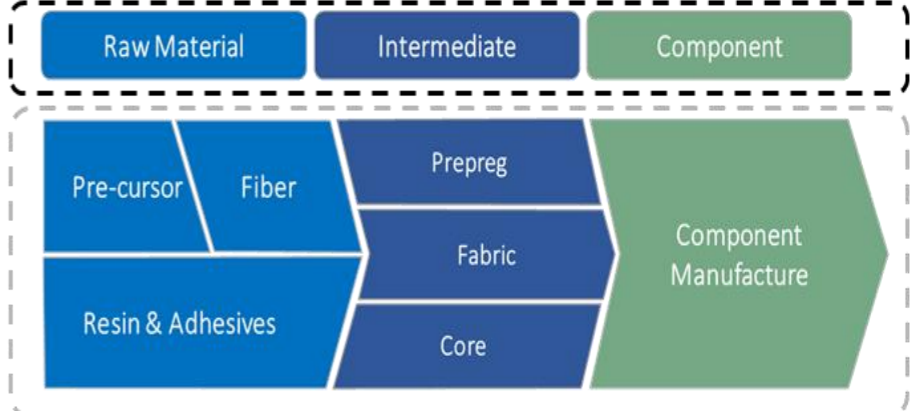
**Kordsa fabrics and prepregs offer cutting edge solutions for aerospace & automotive markets**

# Overview of The Composites Value Chain

## Composite Footprint



## 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 aprox. 310M USD
- 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

*\* 2019 Full year performance of entities regardless of joining time to Kordsa*

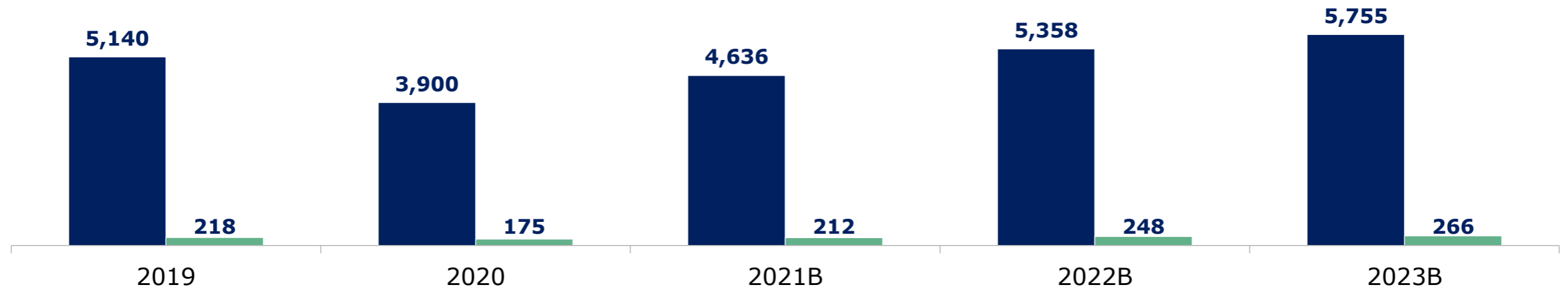


# Market Dynamics – Composite

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

■ Değer (M\$) ■ Hacim (M lbs)

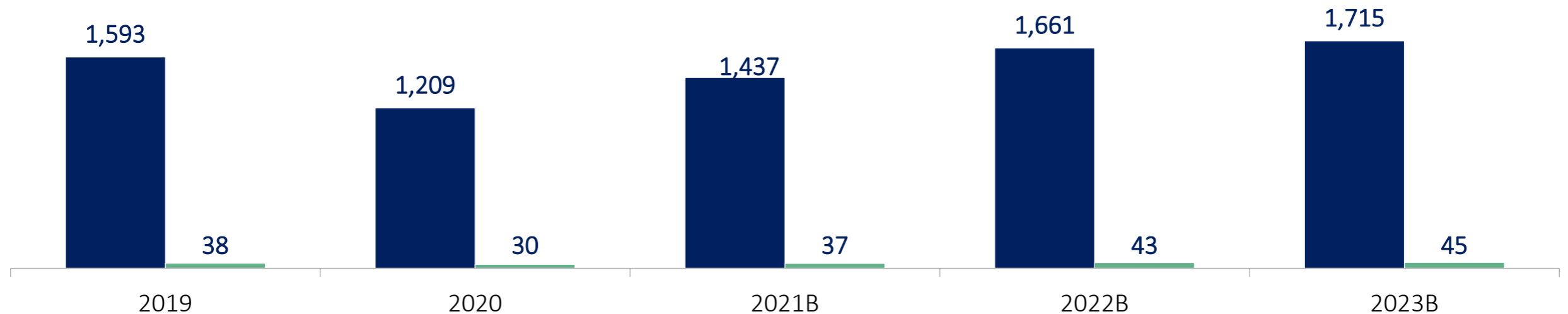
CAGR '19-'23 değer : 2.9%  
CAGR '19-'23 hacim : 5.1%



## Market Size (\$M) – Prepreg

■ Değer (M\$) ■ Hacim (M lbs)

CAGR '19-'23 değer : 1.9%  
CAGR '19-'23 hacim : 4.3%



# Overview of The Construction Reinforcement Value Chain



**Oil Derivative Ingredients**

**For NY66 Fibers:**

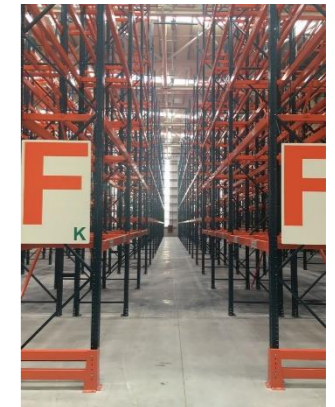
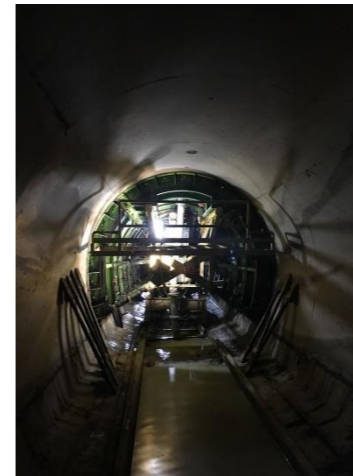
- Hexamethylenediamine (HMD)
- Adipic Acid
- NY66 Salt
- NY66 Flake

**For PP Fibers:**

- Polypropylene Chips



## Reinforced Concrete Structures



**Major applications:**

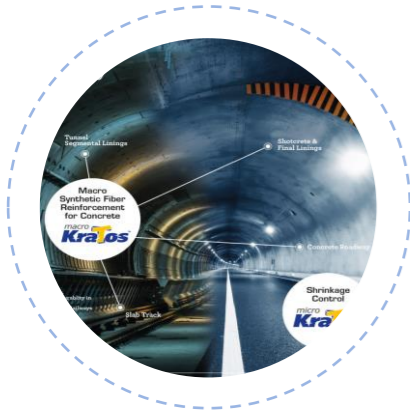
- Tunneling
- Shotcrete
- Slab on ground concretes

- Screed concrete
- Concrete roads

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

# Growth Opportunities: Construction

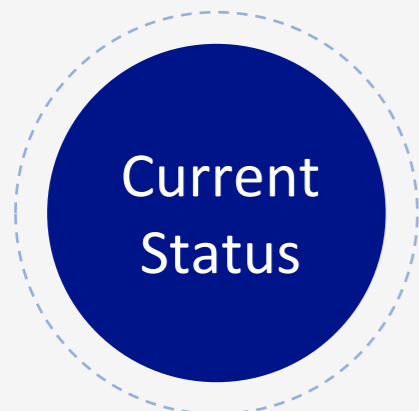
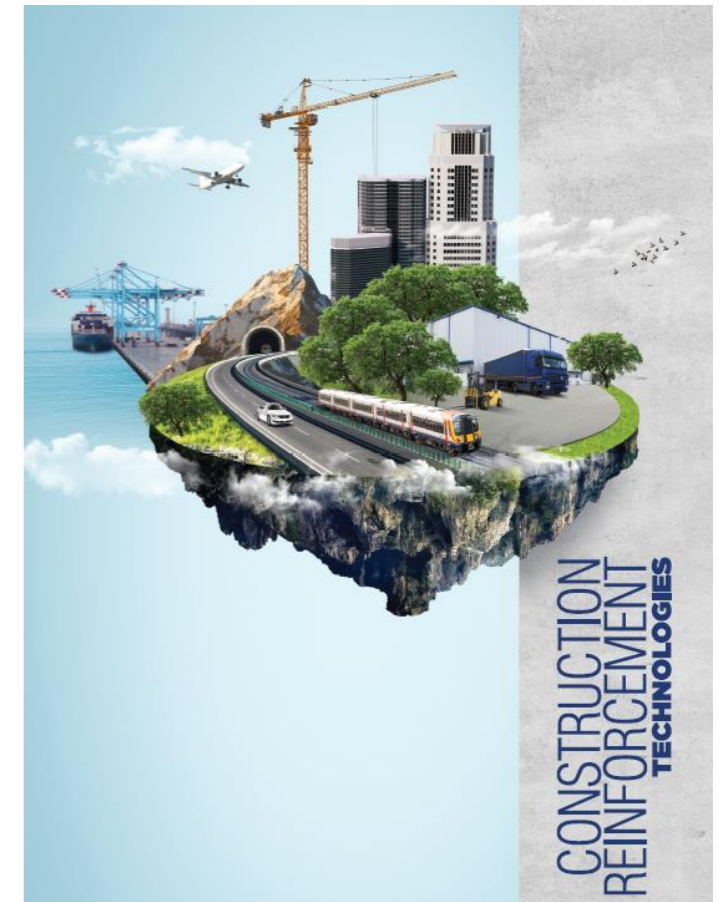
## Construction Reinforcement



**Samsun 2<sup>nd</sup> and 3<sup>rd</sup> Stage Light Railway Track Slab (Non-Conductivity Concrete Reinforcement) KraTos Macro Reinforcement**

**3<sup>rd</sup> Bosphorus Bridge Toll Booths and Electronic Pass Areas (Non-Conductivity Concrete Reinforcement) KraTos Macro Reinforcement**

**Asyaport Tekirdağ Port KraTos Macro Reinforcement**



- KraTos Macro & Micro Synthetic Fibers are approved and applied in over 50 significant superstructure, industrial and infrastructure reference projects.
- Non-conductivity concrete reinforcement applications with KraTos Synthetic Fiber Reinforcements are approved in significant government-funded infrastructure projects.
- Kordsa Izmit Plant, R&D Concrete Lab technical and test equipment capabilities have increased. Technical Project Report service will be available for infrastructure projects.



July 2018

We have launched our new **Polypropylene Monofilament Fiber Reinforcement** production line.

Let's check **our latest post!**

Discover →



# Update on 3Q 2020 Results

## Key Financials

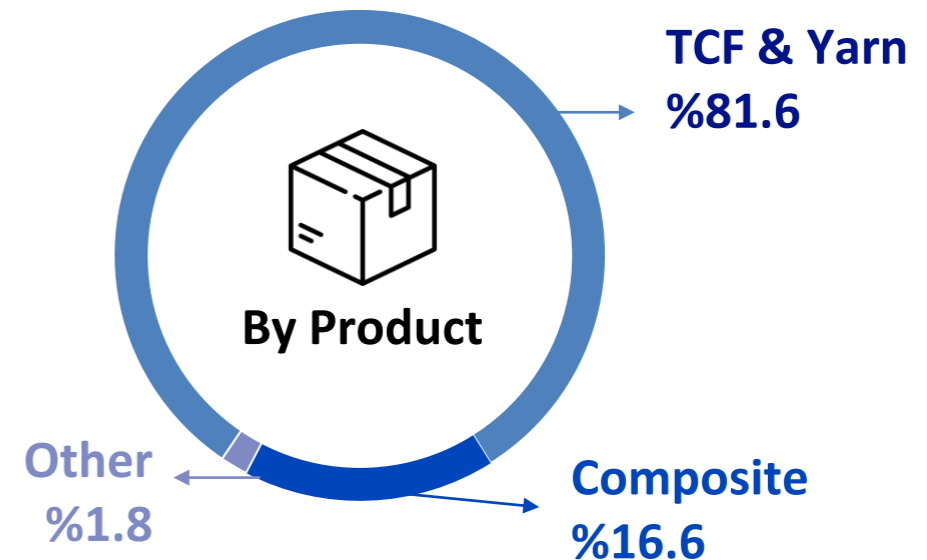
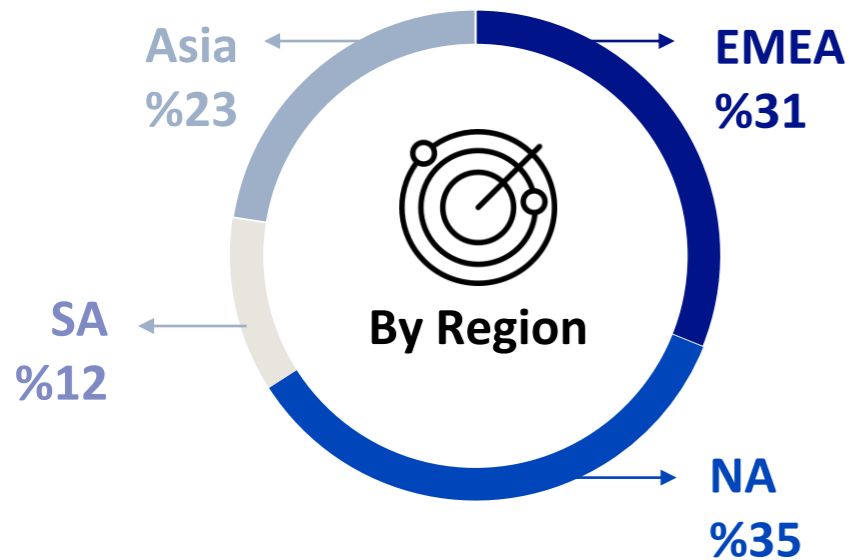
	TL Financials (MTL)			USD Financials (MUSD)		
	3Q 2019	3Q 2020	Δ	3Q 2019	3Q 2020	Δ
Sales	3,871	3,086	-20.3%	688	460	-33.1%
Gross Profit	760	509	-33.1%	135	76	-43.8%
Gross Margin (%)	19.6%	16.5%	-4 pts'	19.6%	16.5%	-4 pts'
OPEX (%)	8.5%	11.4%	3 pts'	8.5%	11.4%	3 pts'
Operating Profit	473	264	-44.2%	84	39	-53.2%
Operating Profit Margin (%)	12.2%	8.5%	-3 pts'	12.2%	8.5%	-3 pts'
EBITDA*	583	364	-37.5%	103	54	-47.6%
EBITDA* Margin (%)	15.0%	11.8%	-3 pts'	15.0%	11.8%	-3 pts'
Net Income	301	94	-68.7%	53	14	-73.7%
Effective Tax Rate (%)	19.7%	-0.4%	-20 pts'	19.7%	-0.4%	-20 pts'
Net Income (%)	7.8%	3.0%	-5 pts'	7.8%	3.0%	-5 pts'
EPS (TL/100 shares)	1.38	0.48	-65.1%	0.25	0.07	-70.7%

\* EBITDA Calculation: Gross Margin-OPEX+Dept & Amort

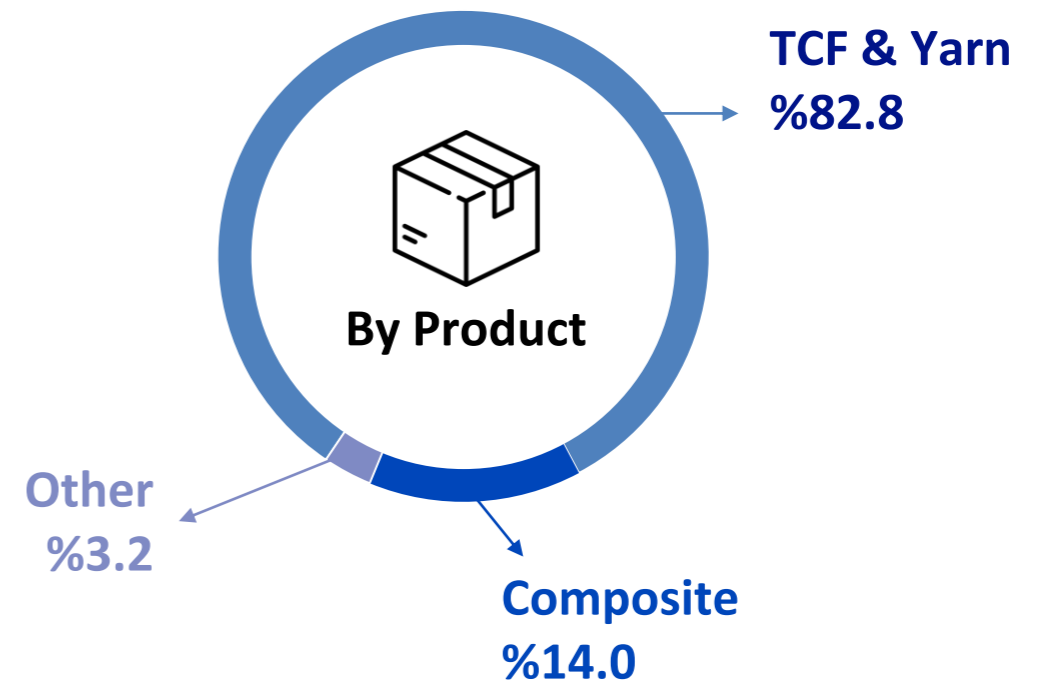
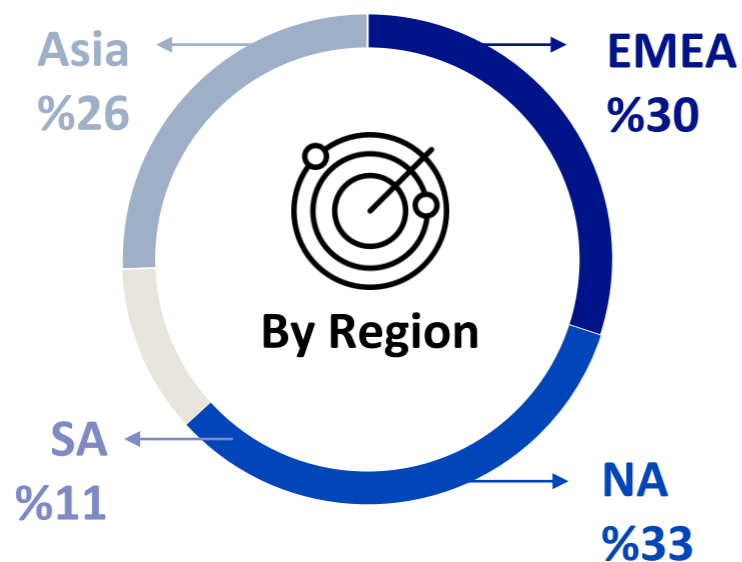
**Kordsa continues to perform well based on its value strategy**

# Segment Reporting

## Sep'20 Revenue Split



## Sep'19 Revenue Split

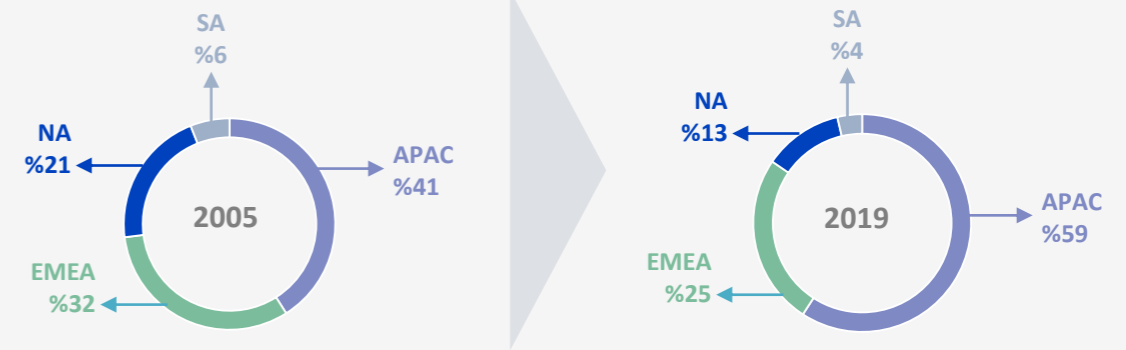


# Well – Positioned to Enable Volume Growth

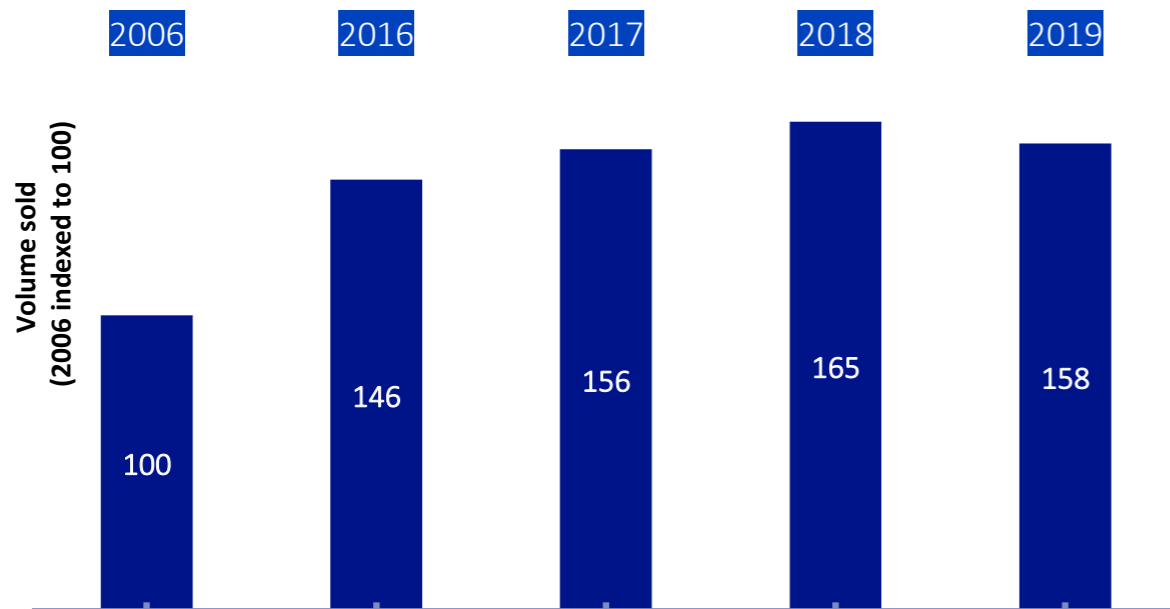
## Comments

- 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 ktors
- 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 ktors – completed in 1H 2019.
  - In Indo for 6,5 ktors – completed in Jan-2018.

## Light Vehicle Tire manufacturing market evolution

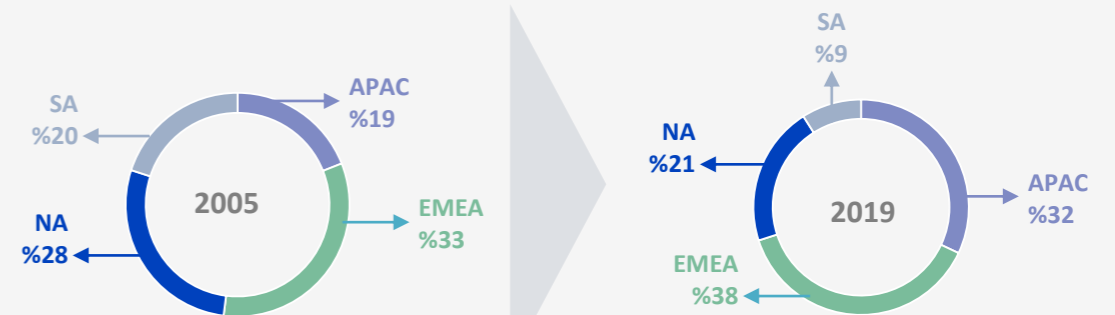


## Kordsa volume development(a)



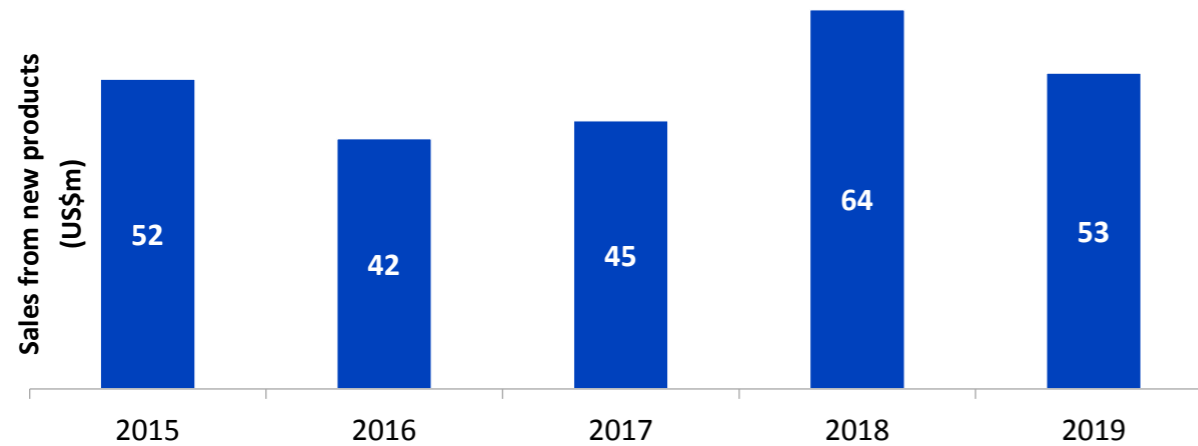
(a) Volume development adjusted for divested volumes

## Kordsa regional capacity development



# 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



- The Carbon Disclosure Project has raised Kordsa's score from C- to B in 2019 as a result of the efforts that were carried out to manage risks and opportunities related to climate change.



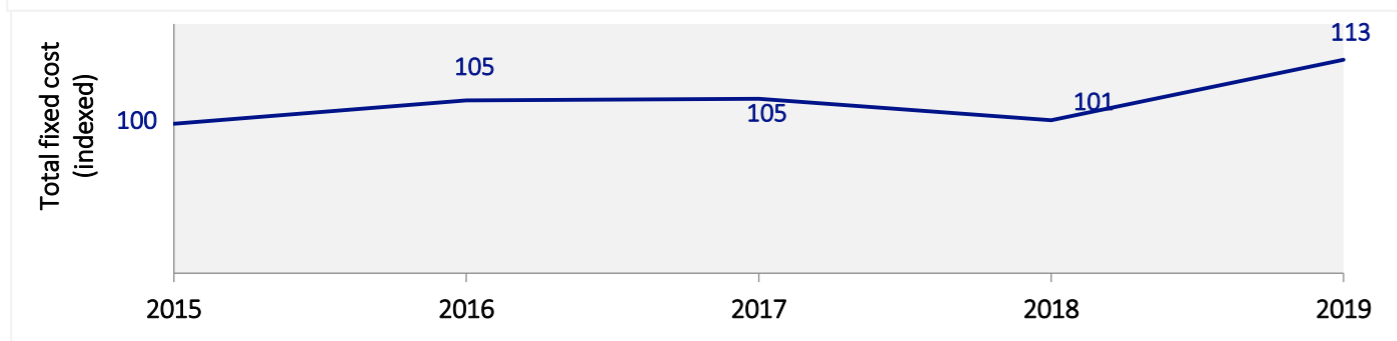
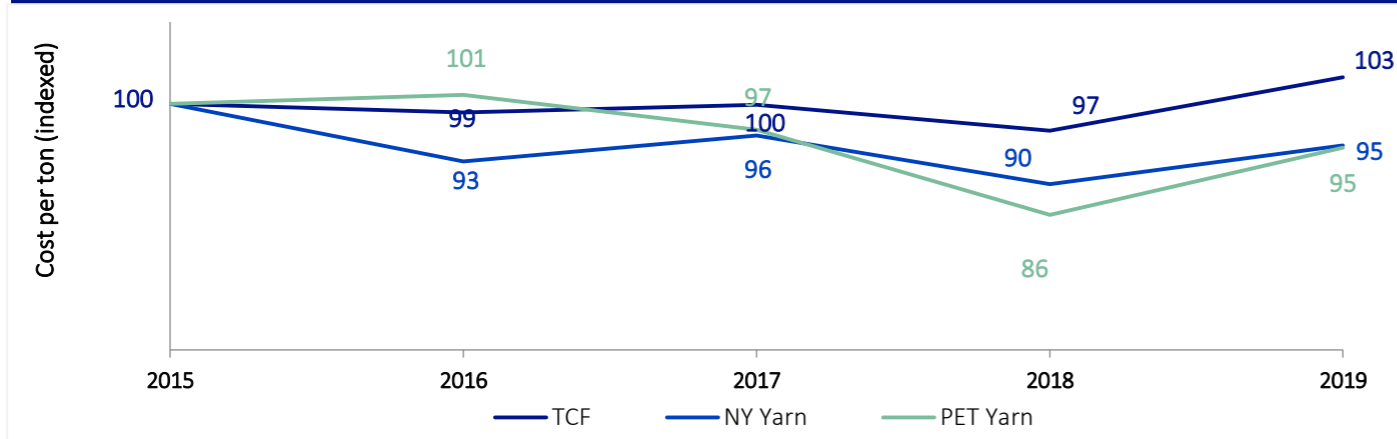
- Kordsa participated in the International Concrete Fair – World of Concrete (WOC) 2020, one of the world's most prestigious fairs in the field of concrete



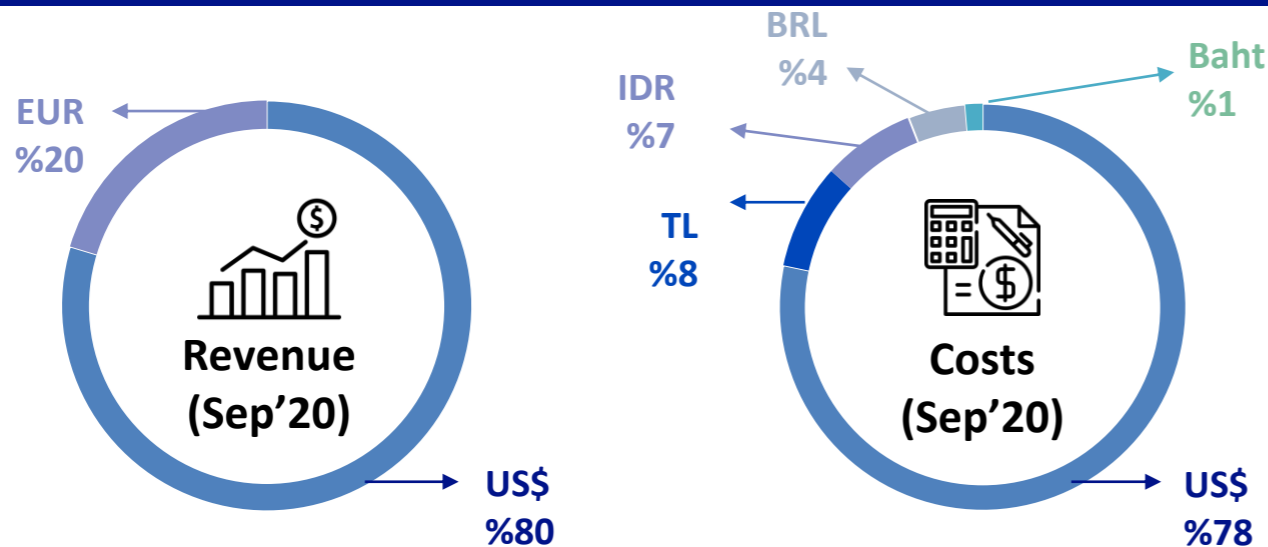
- Kordsa was included as 50th place to 100 most valuable companies in Turkey by Brand Finance as

# Well-Positioned for Strong Cash Generation and Dividends

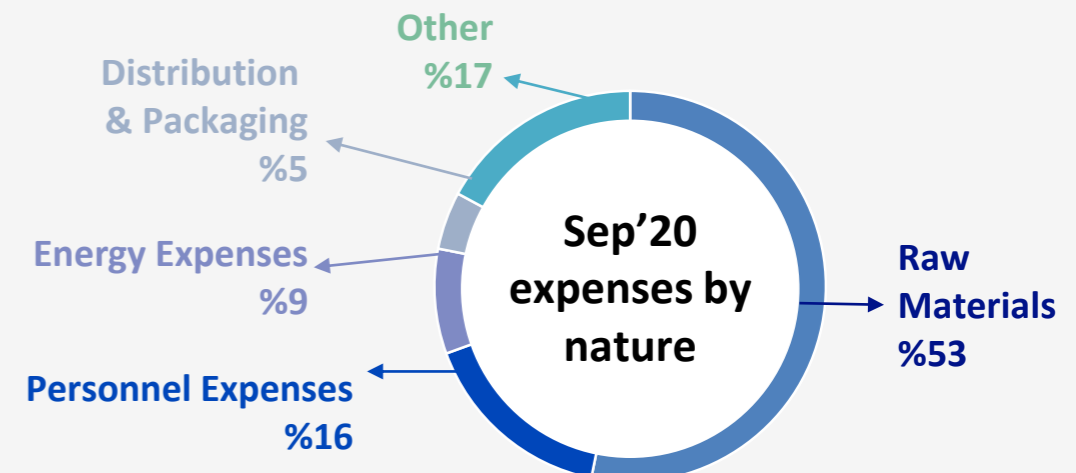
## Cost development (US\$)



## 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)

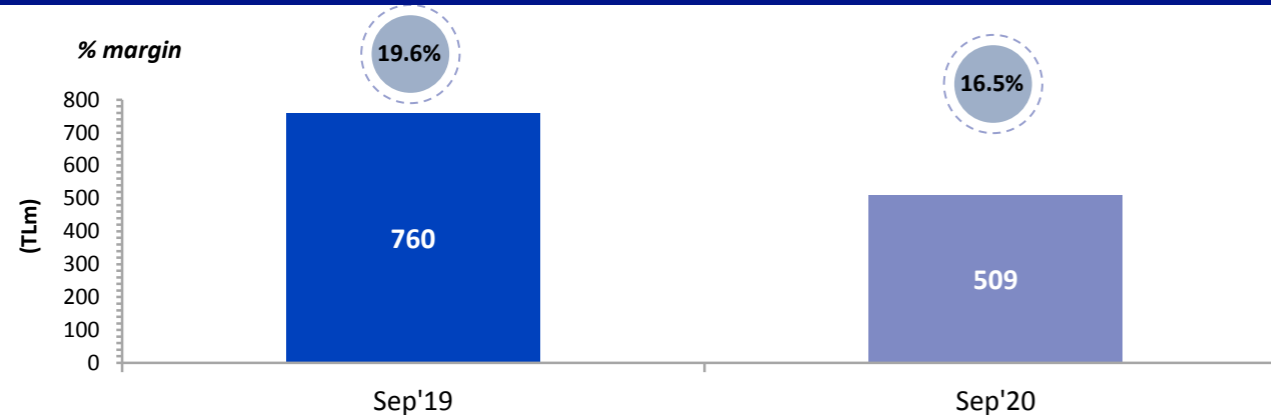


- Hard currency revenues
- FX exposure on costs => EM footprint on local costs + hard currency priced raw materials
- Benefit from US\$ appreciation vs. TL, IDR and BRL

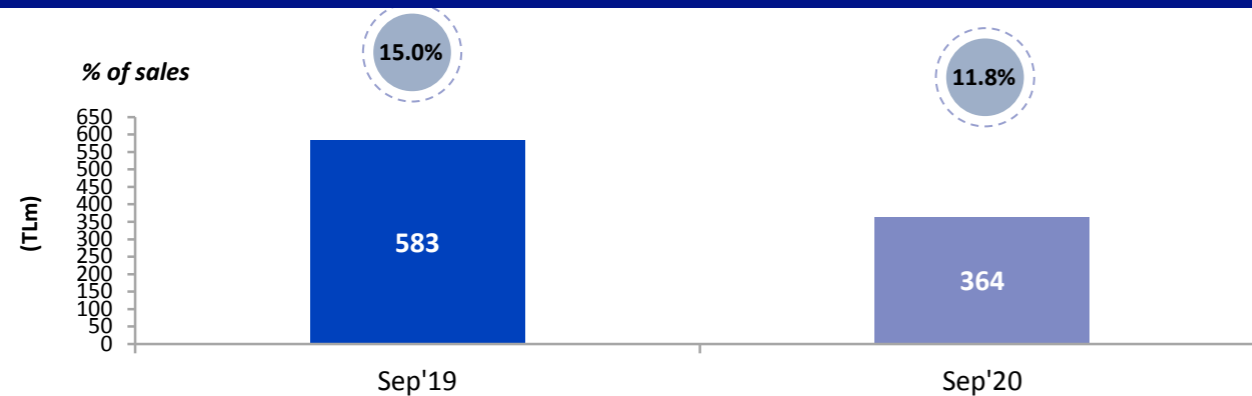


# Well-Positioned for Strong Cash Generation and Dividends

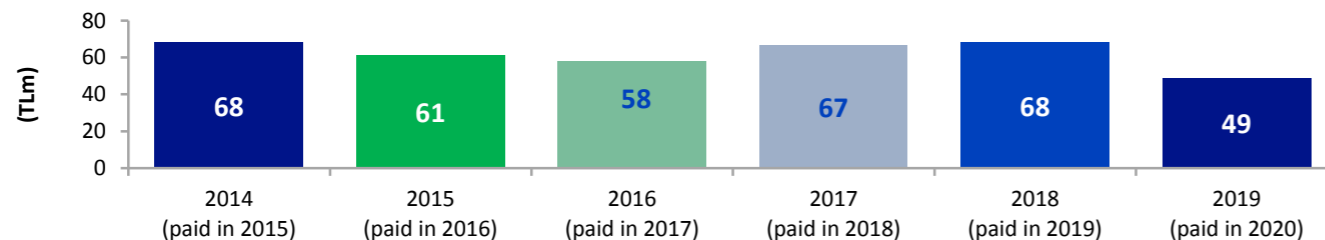
## Gross profit



## EBITDA\*



## 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

EBITDA\* = Gross Profit – OPEX + Depreciation/Amortization

# What we have for Sustainability



**2018 INSPIRE AWARDS**  
CORPORATE PUBLISHING COMPETITION

**Kordsa Teknik Tekstil A.S.**  
Sercom Consulting  
is recognized for developing one of the  
**Top 100 Corporate Publications**

with the development of The Kordsa Sustainability Report 2016 ranking at #21 worldwide among all entries reviewed this year.

*Tyson Heyn*  
Tyson Heyn  
Principal

*Christine Kennedy*  
Christine Kennedy  
Competition Director



**2018 INSPIRE AWARDS**  
CORPORATE PUBLISHING COMPETITION

**Kordsa Teknik Tekstil A.S.**  
Sercom Consulting  
is presented with the  
**Platinum Award**

for excellence within its Competition Class on the development of The Kordsa Sustainability Report 2016

*Tyson Heyn*  
Tyson Heyn  
Principal

*Christine Kennedy*  
Christine Kennedy  
Competition Director



# Kordsa's Financial Policy

## EBITDA margins

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

## Dividend policy

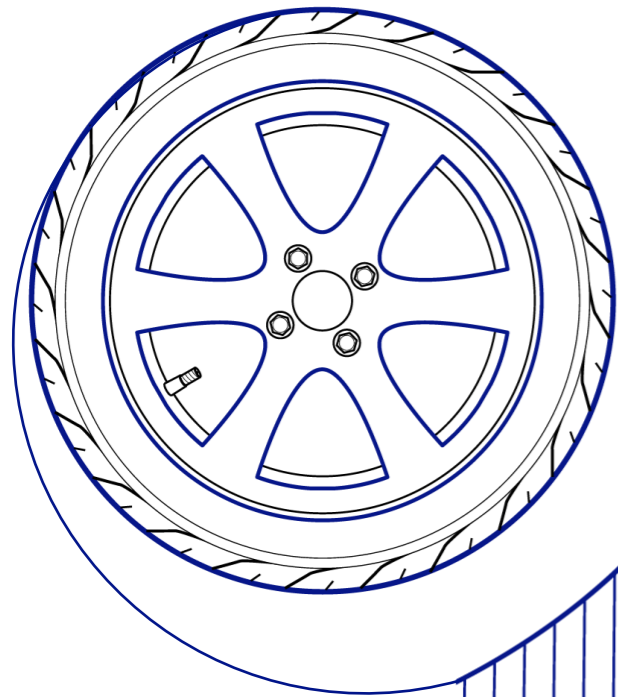
Distribution of all the distributable profits

- 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

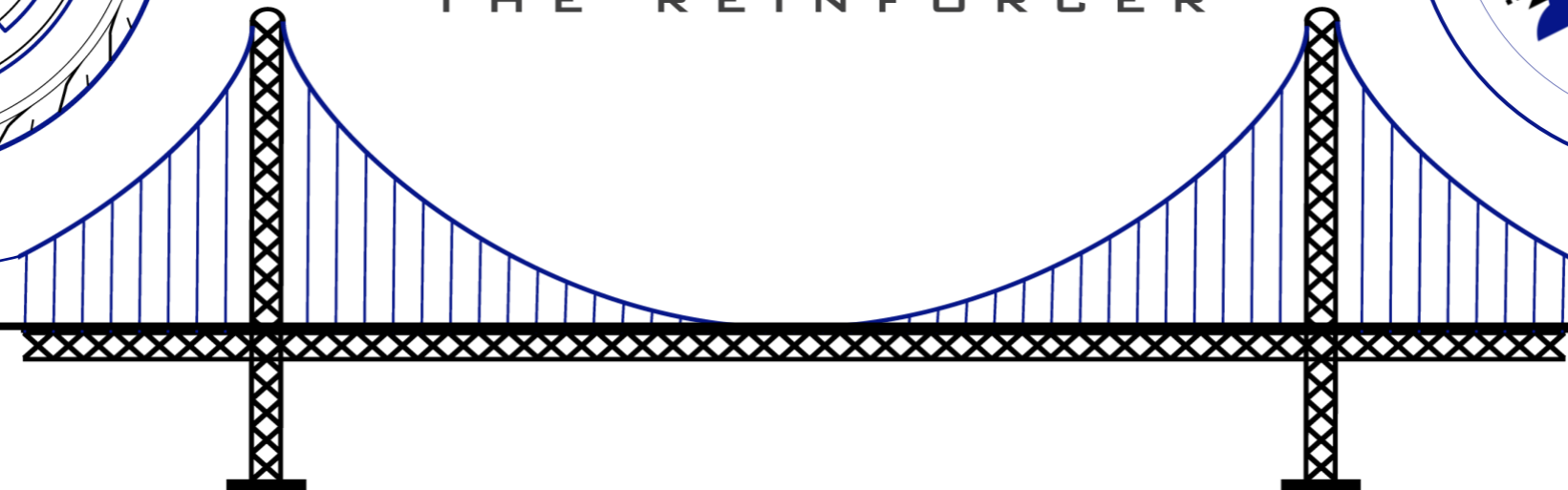
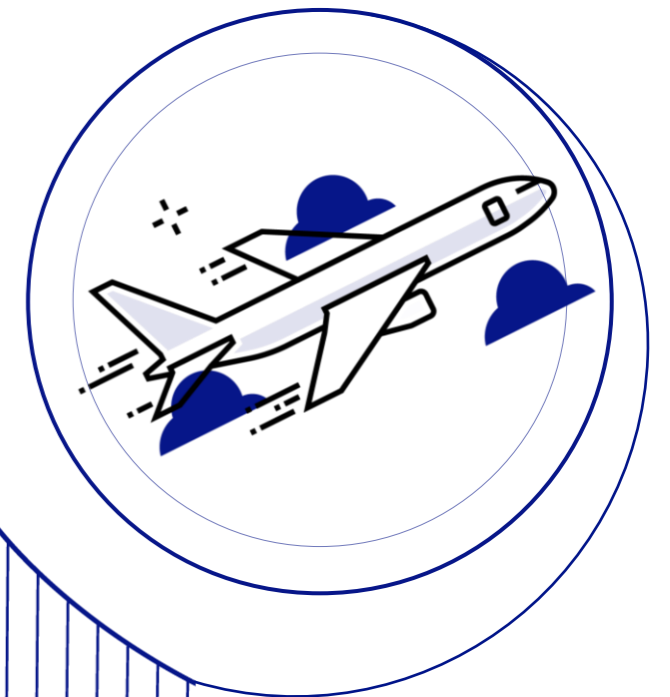
## Reoccurring Creep Capex

USD 23 million



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THE REINFORCER

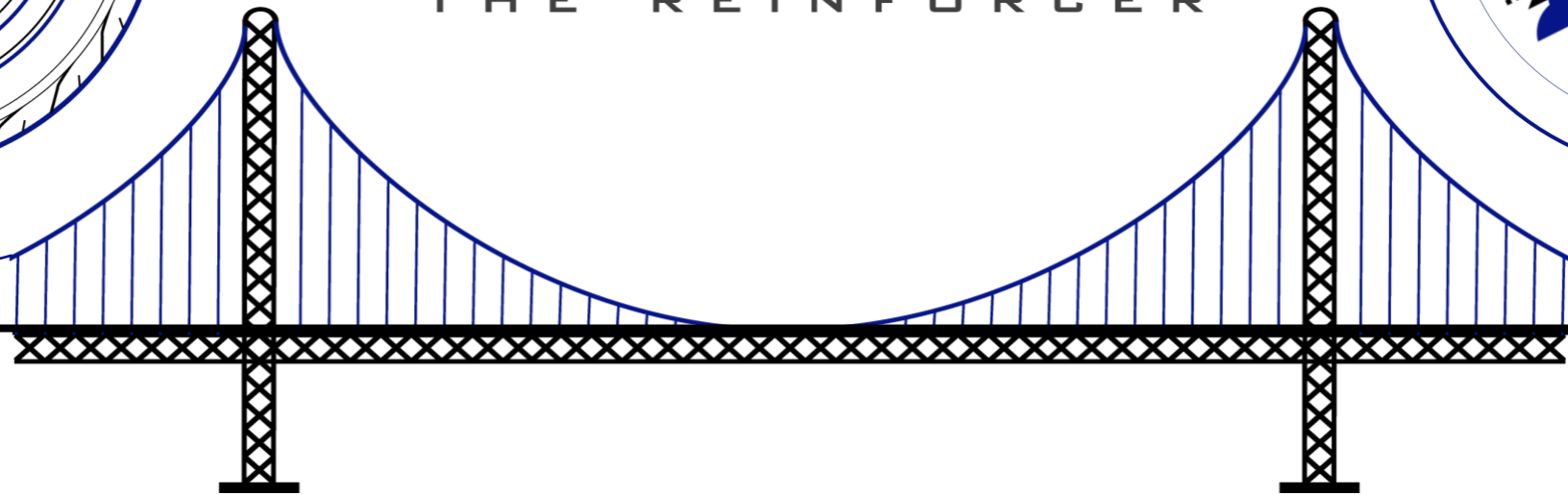
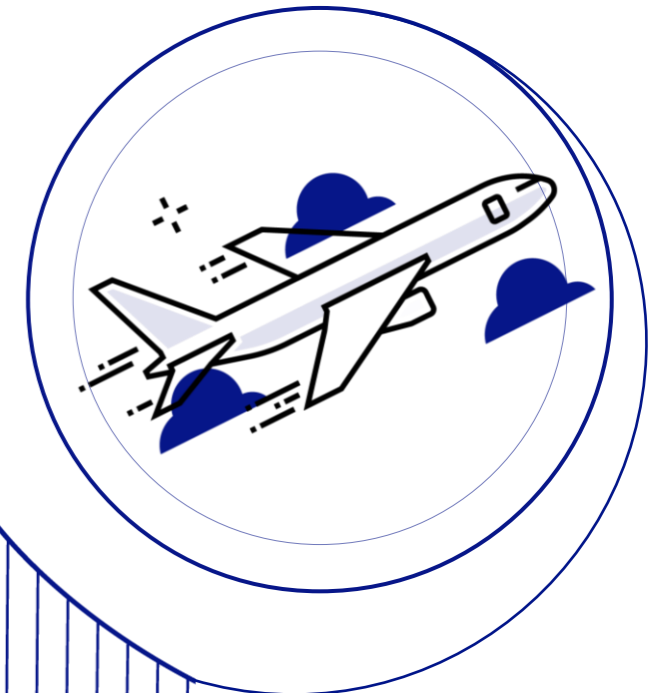
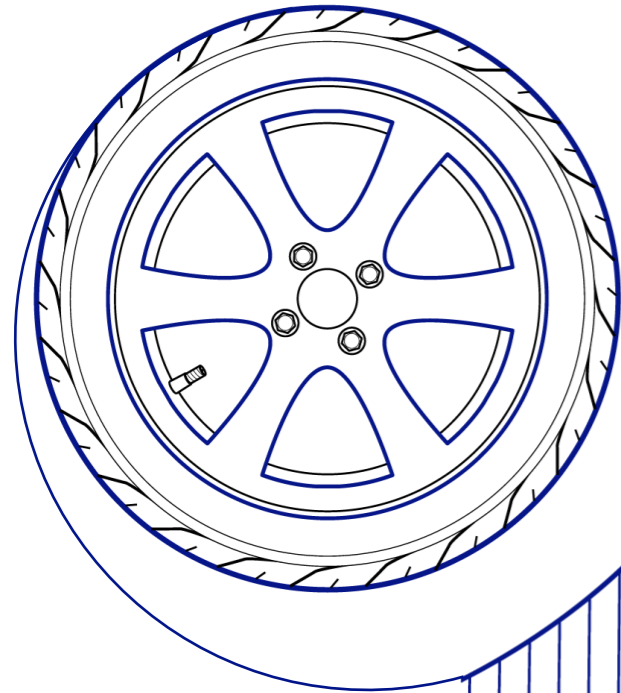


## We Reinforce Life

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

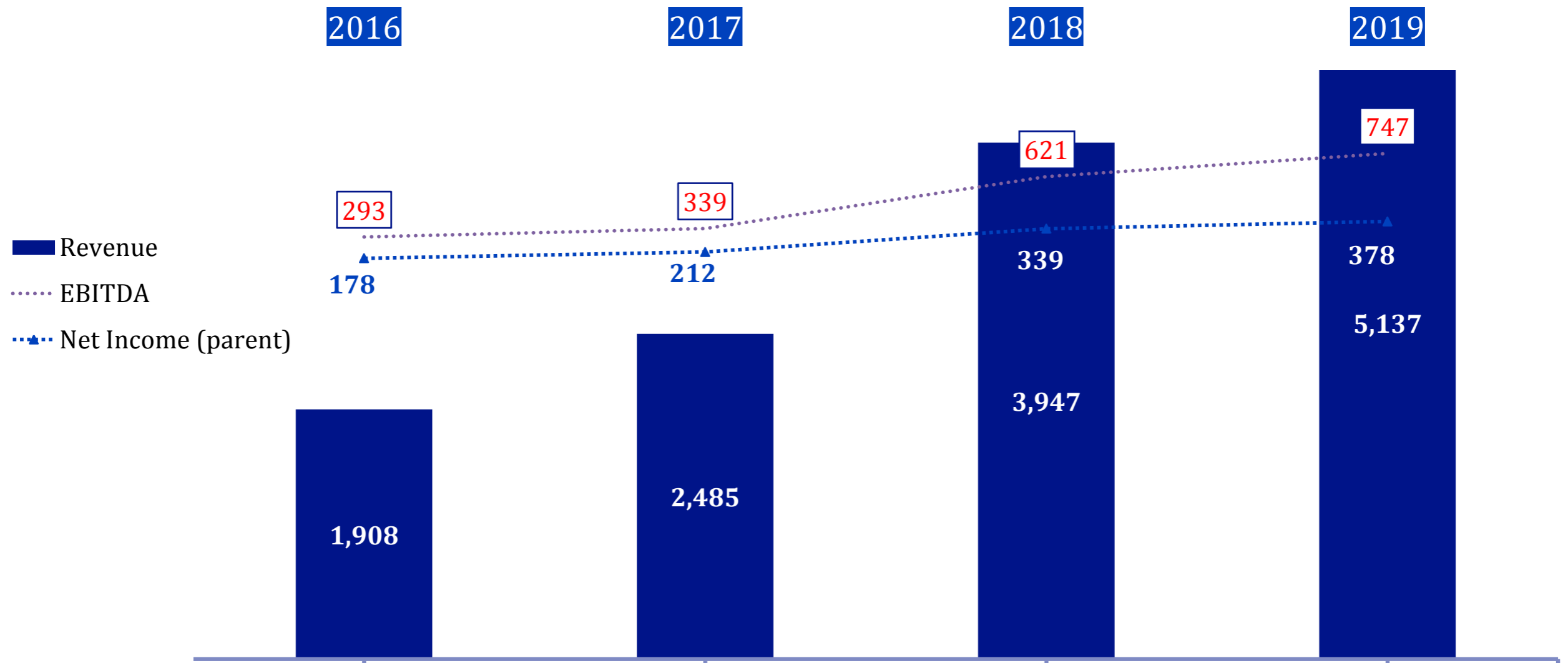
**KORDSA**

THE REINFORCER



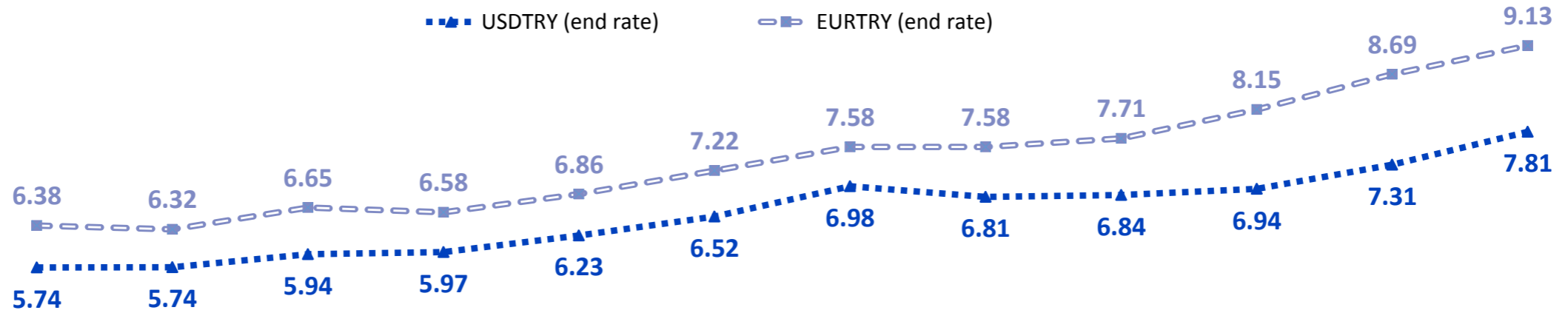
# Appendix

# 2016 – 2019 Financial Trend (MTL)



# 3Q 2020 Highlights (FX Rates)

Oct'19   Nov'19   Dec'19   Jan'20   Feb'20   Mar'20   Apr'20   May'20   Jun'20   Jul'20   Aug'20   Sep'20



Oct'19   Nov'19   Dec'19   Jan'20   Feb'20   Mar'20   Apr'20   May'20   Jun'20   Jul'20   Aug'20   Sep'20

IndexedUSDBRL (end rate)   IndexedUSDTHB (end rate)   IndexedUSDIDR (end rate)

