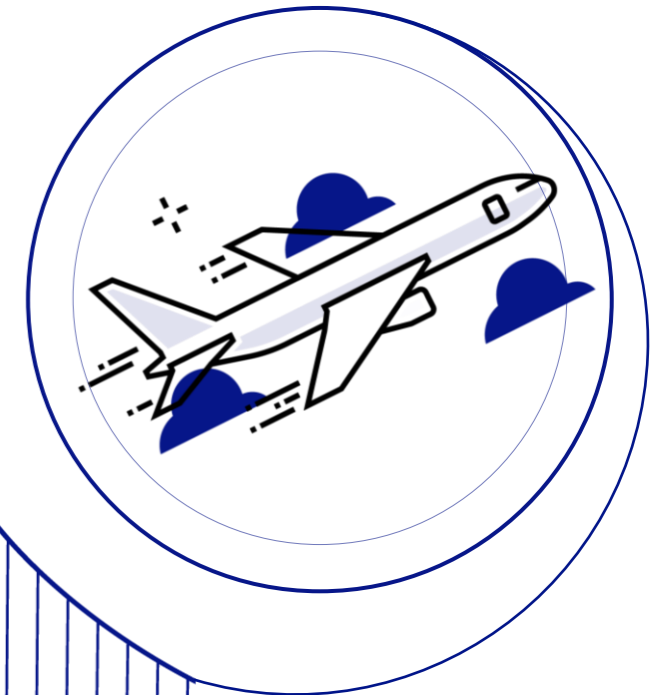


KORDSA

THE REINFORCER



Kordsa Investor Presentation

May, 2019

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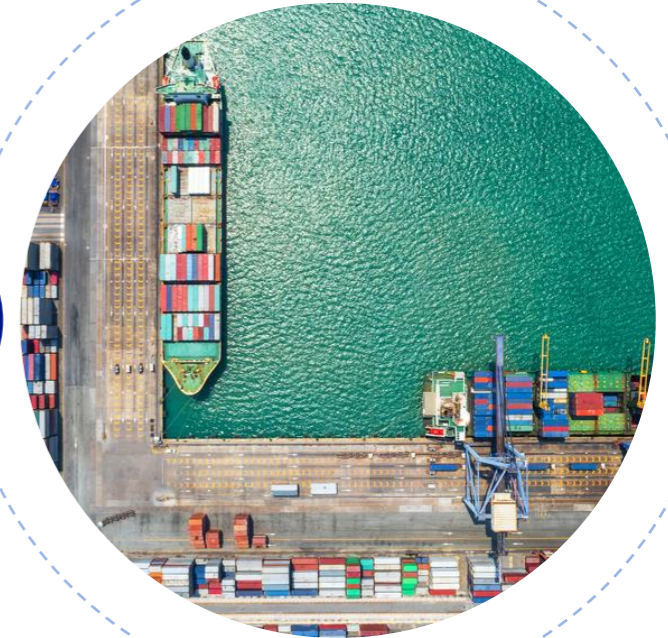
Global Footprint

4 continents
11 facilities*

~4,500
employees

2 R&D
Centers

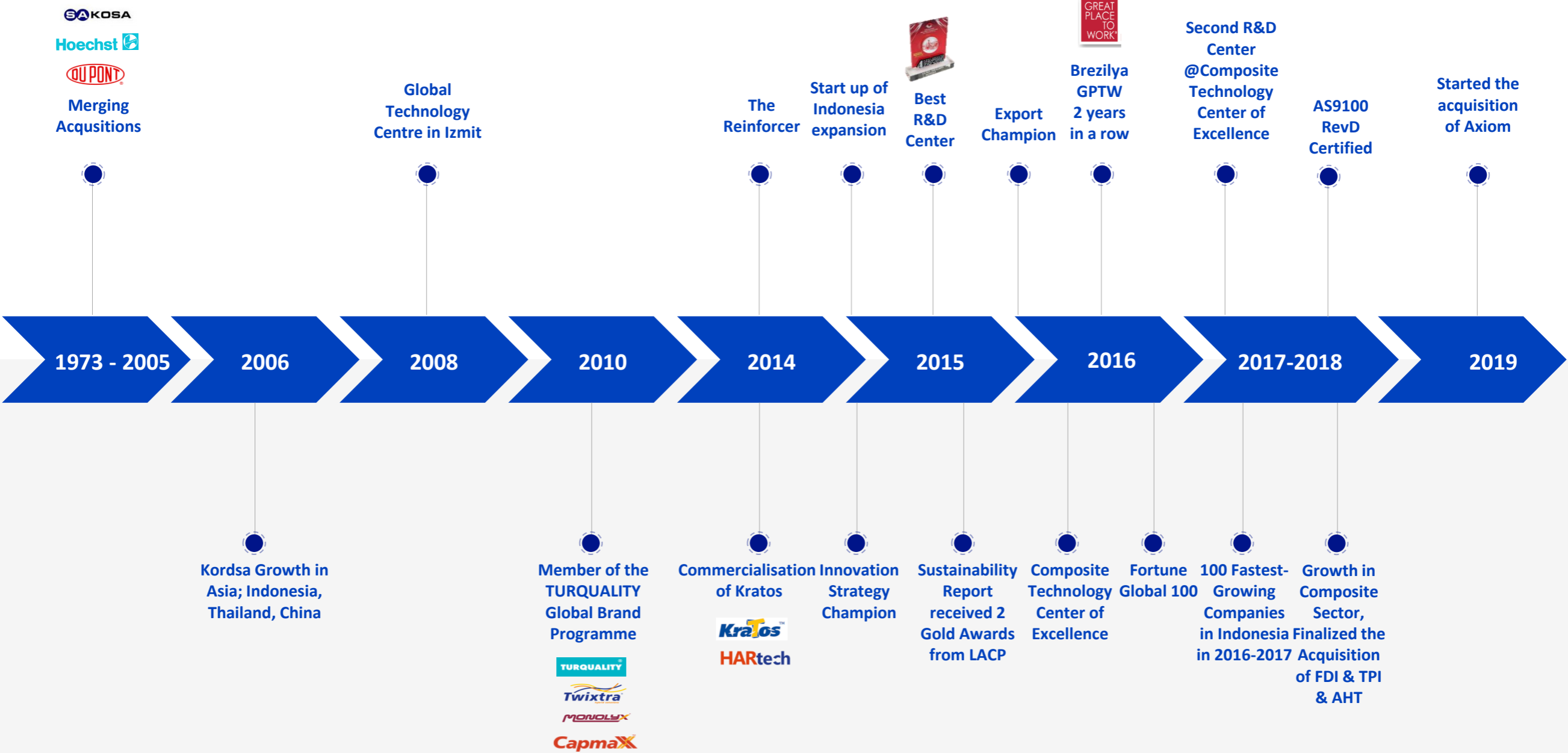
770 patent applications
178 patents
182 inventions



WE REINFORCE LIFE

** Axiom Materials Acquisition LLC excluded due to the acquisition process continues*

Milestones



Strategy House

Our Vision

Agile Kordsa in High Value Businesses
for Sustainable Growth

Pillar Initiatives

Operational Excellence

- ❖ Competitive Cost
- ❖ Product and Service Quality Leadership
- ❖ Lean and Agile Processes and Teams

Growth in Tire Industry

- ❖ Profitable Growth for Tire Industry
- ❖ New Products for High Performing Tires

Growth in Adjacent Ind.

- ❖ Reinforcements for Composites Industry
- ❖ Reinforcements for Construction Industry
- ❖ Fibers for Alternative/ Adjacent Industries

Foundations

Our Values

SHE

Ethics

Continuous Improvement

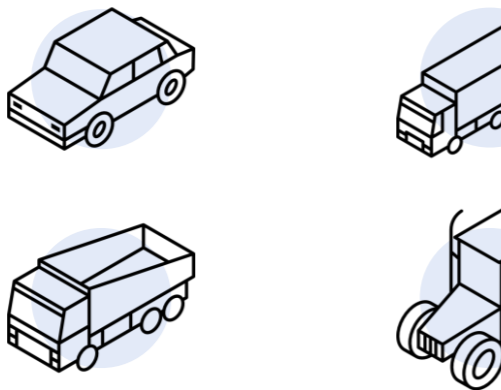
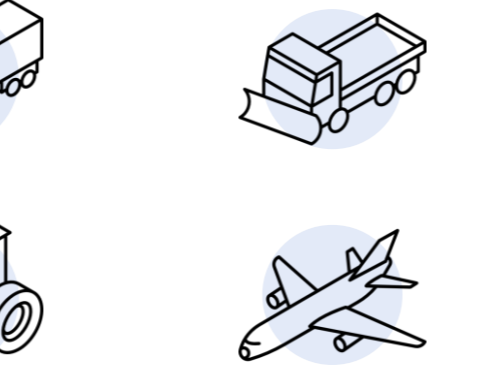
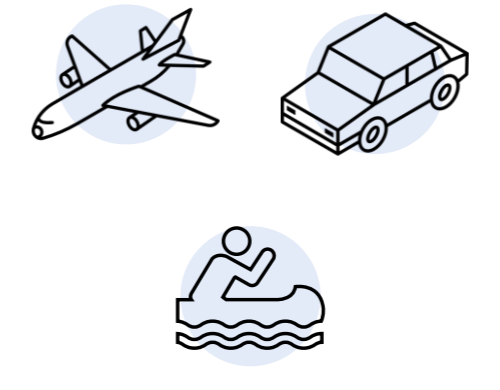
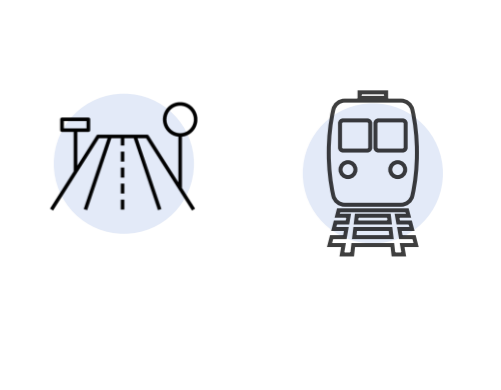




Courage

Passion

Global Collaboration

Continuous Improvement

Kordsa in Brief

| Description | Tire cord fabrics ("TCF") | Next generation fabrics | Composite | Construction |
|----------------------------------|---|---|---|---|
| End markets |  |  |  |  |
| Selected end-market participants |  |  |  |  |

Must Win Battles

1. Operational Excellence

- a. Continue TPM implementation at every site for zero incident, zero defect, zero downtime
- b. High capacity utilization and/or optimisation at all entities
- c. Local Talent Development for cost and productivity

2. Profitable Growth in Tire Industry

- d. Focus on high value added segments
- e. Investing for smart plant, deployment of Industry 4.0 developments to support growth - future plant concept
- f. Continuous Renewal of Product Portfolio – new product revenue and increase approval base

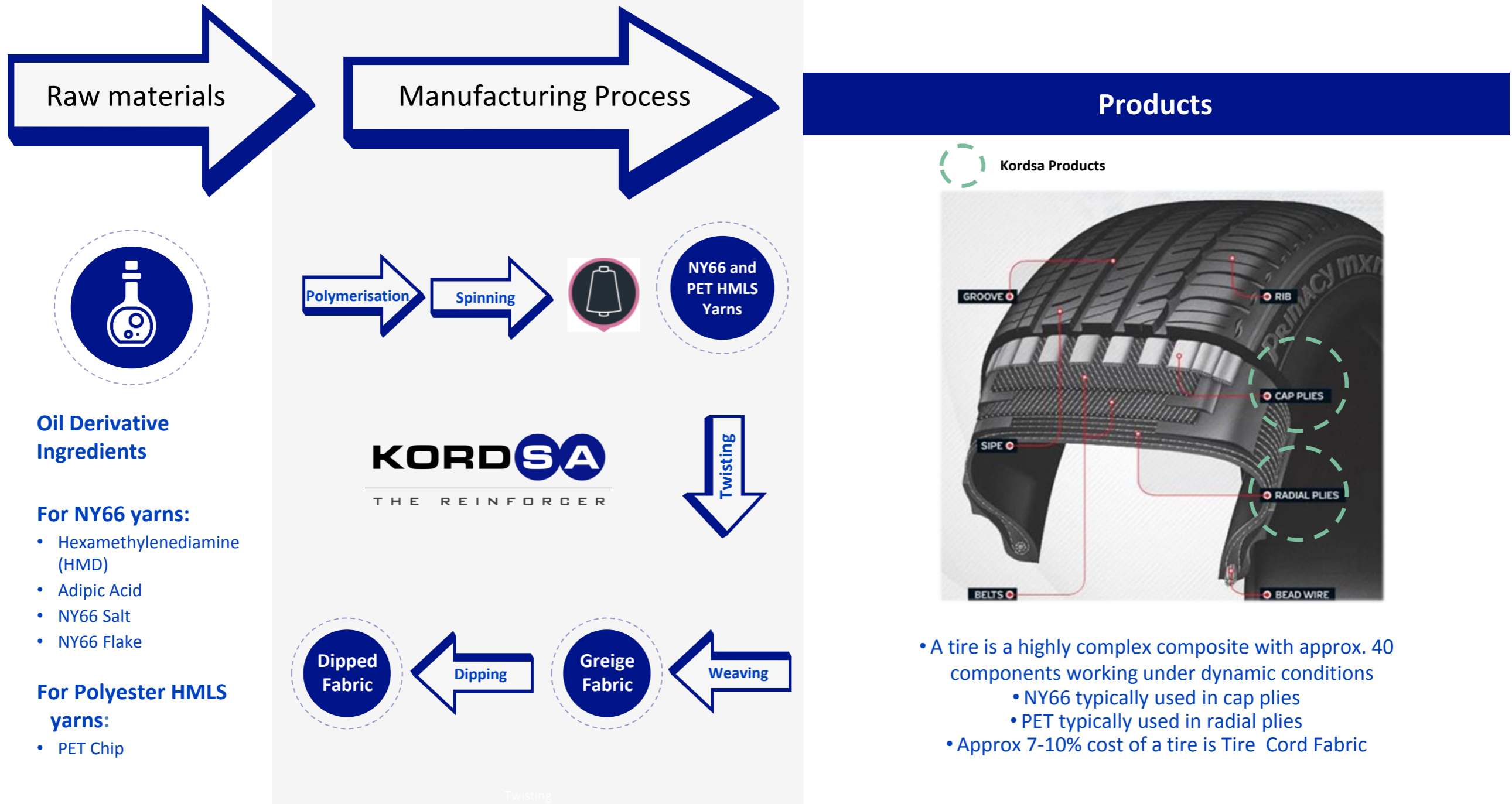
3. Profitable Growth in Adjacent Industries

- g. Ramp up Composite Reinforcement Business and complete inorganic growth
- h. Ramp up Construction Reinforcement Business - PP line start up and global collaboration/ partnership
- i. Find out Alternative end uses for NY6.6

Focus on tire industry for profitable growth, selectively grow adjacencies



Overview of The Tire Cord Fabric Value Chain

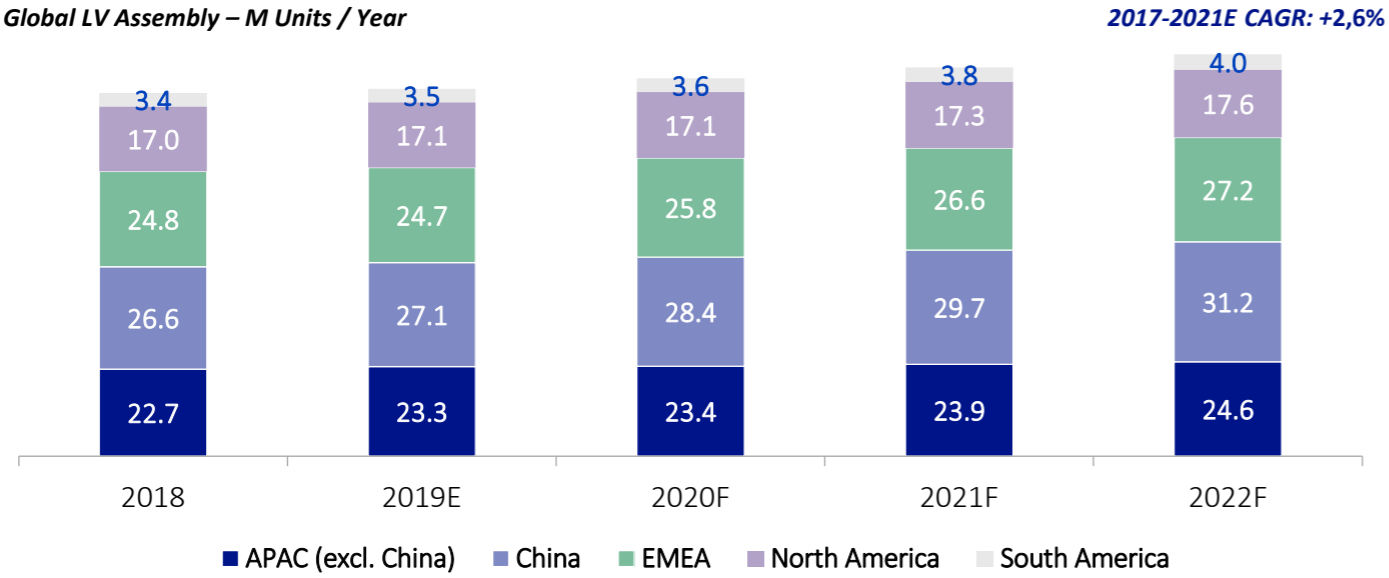


- A tire is a highly complex composite with approx. 40 components working under dynamic conditions
 - NY66 typically used in cap plies
 - PET typically used in radial plies
- Approx 7-10% cost of a tire is Tire Cord Fabric

Kordsa fabrics are developed for specific requirements and are custom made

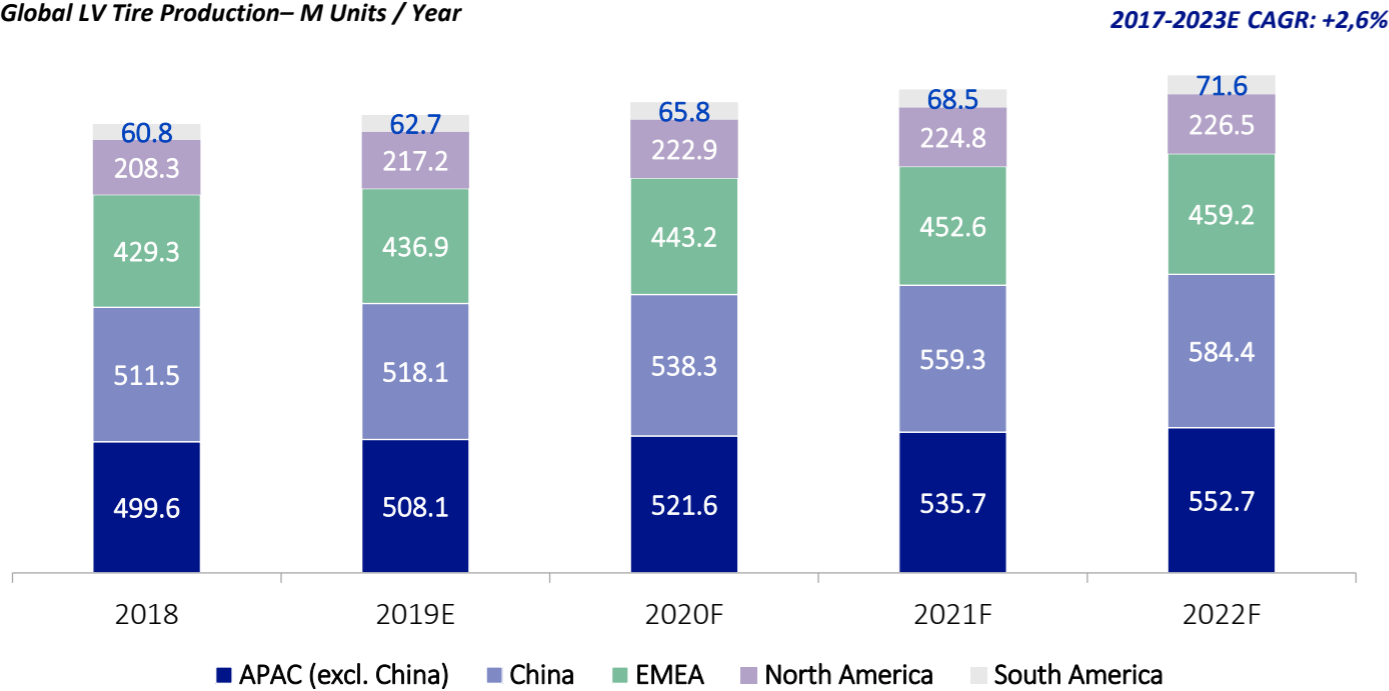
Market Dynamics – Tire Cord Fabric

Global Automotive Market



- **AP Exc. China:** +0.5% Highest growing region because of slowing other regions
- **China:** +1.9% Effected by tariff wars
- **EMEA:** +0.4%
- **NA:** 0.5% Crossover segment demand is strong
- **SA:** +1.4% Expected market recovery was not utilized in 2018 as a result of economic developments, slow trend to continue in 2019

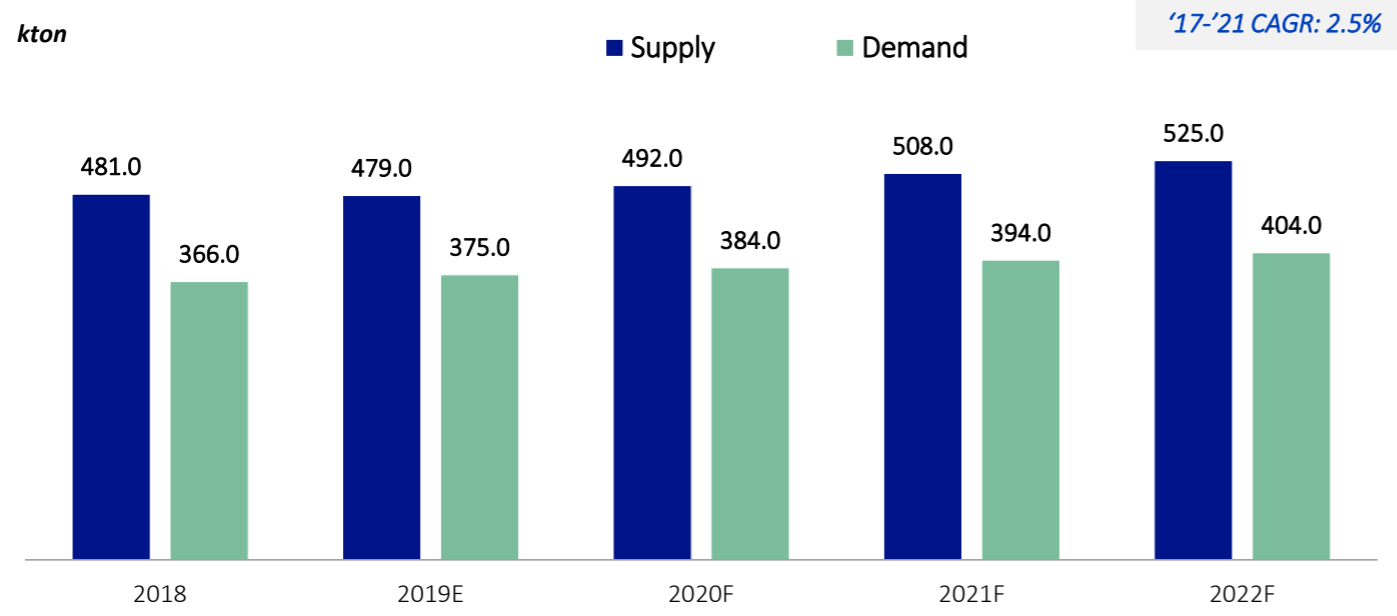
Global Tire Market



- **AP Exc. China:** +2.6%
- **China:** +3.4% (tariff war effect)
- **EMEA:** +1.7% (miles driven decreased in EU with high oil prices)
- **NA:** +2.1% (mainly replacement effect)
- **SA:** +4.2%

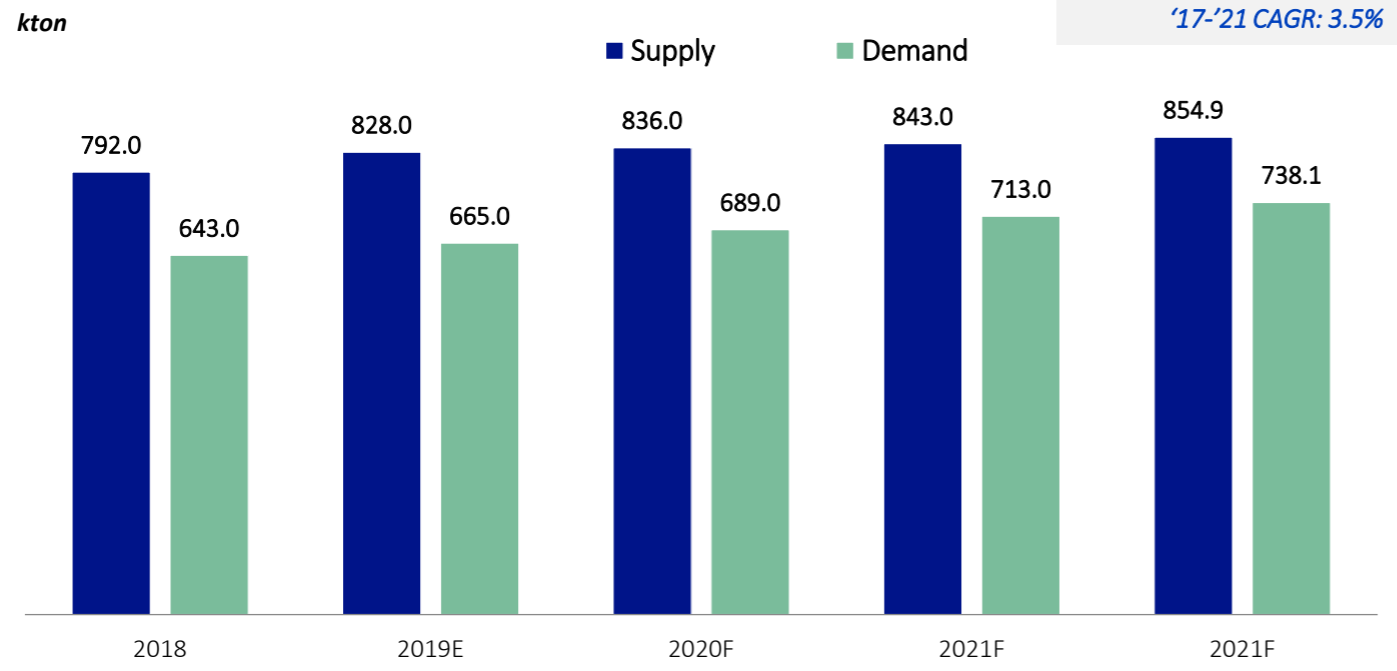
Market Dynamics – Tire Cord Fabric

Tire Reinforcement Market (NY6.6)



Source: Company Estimates

Tire Reinforcement Market (PET)



Source: Company Estimates

Nylon 6.6

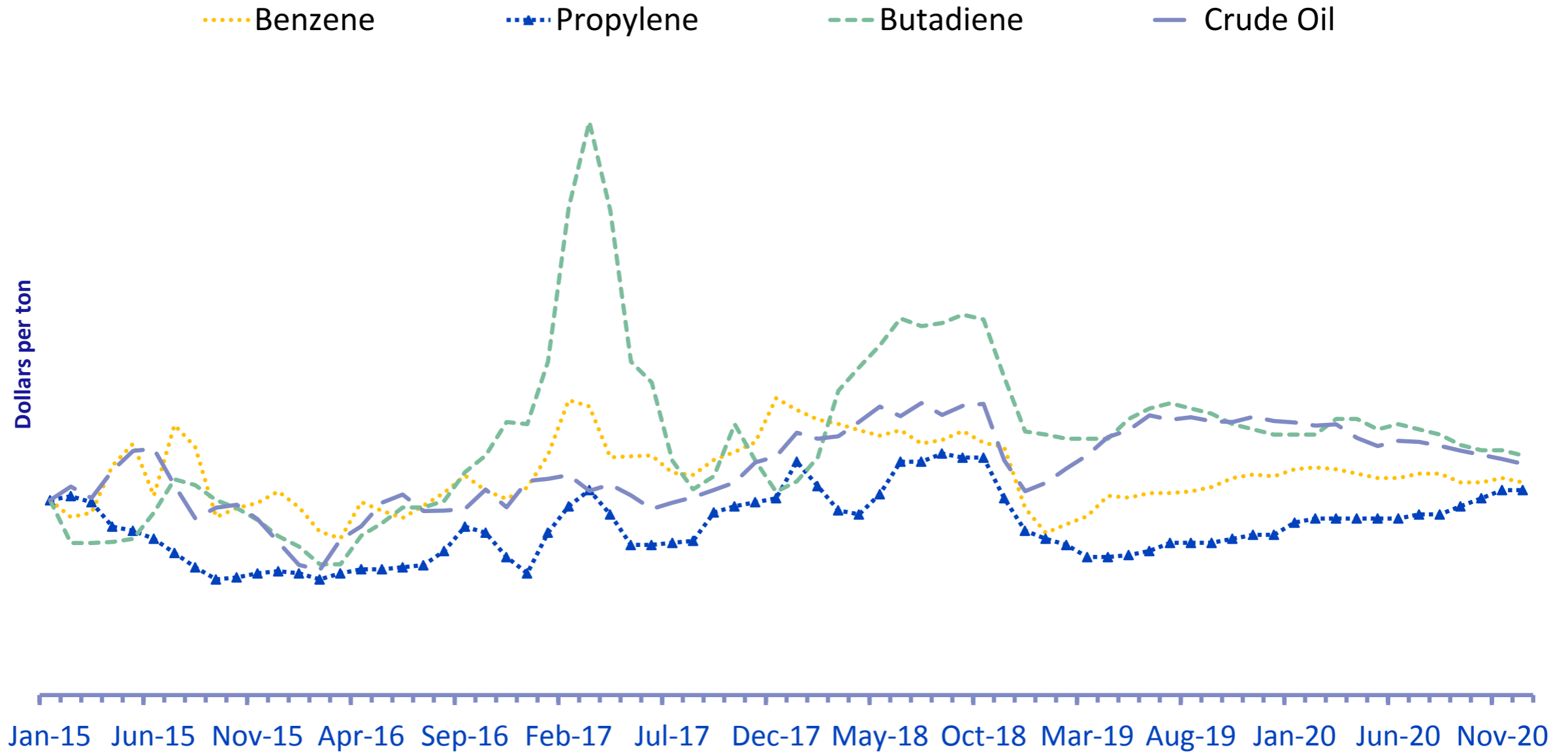
- High capacity utilization rates
- Increasing demand for another market, Engineering Plastics
- Switching to NY6

PET HMLS

- Consolidation by Indorama (acquiring PF Kaiping, Glanzstoff, Durafiber)
- Increasing PET usage in Tire

RM Price Drivers – Tire Cord Fabric

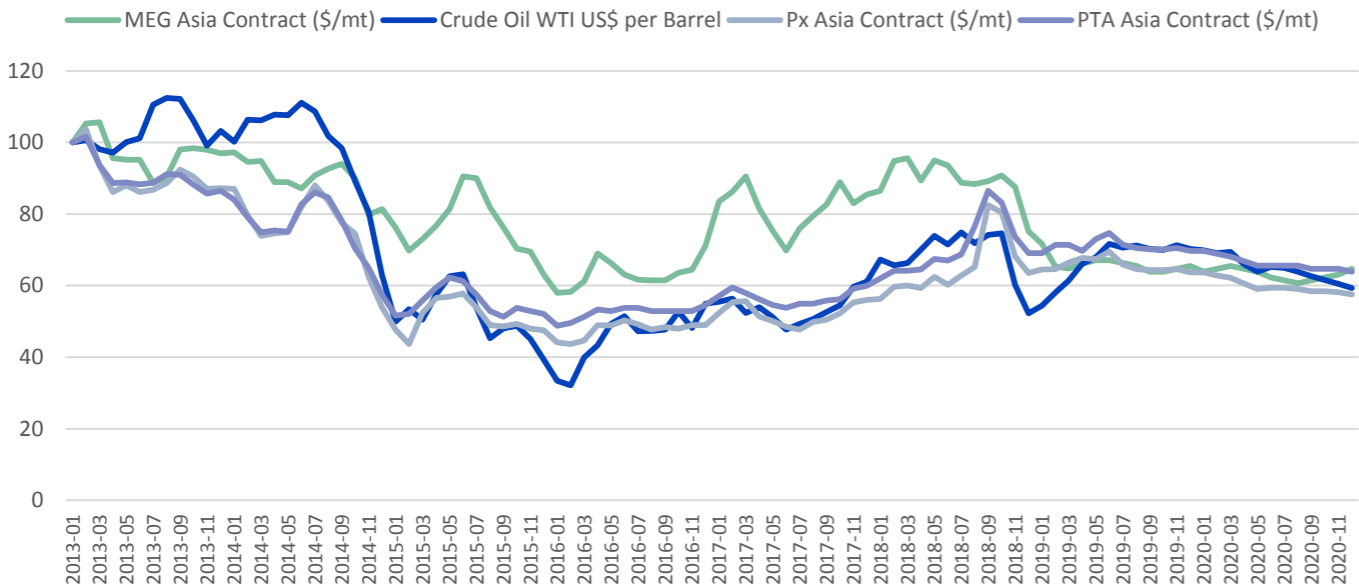
NY Raw Material Trend (Indexed)



Source: Company Estimates

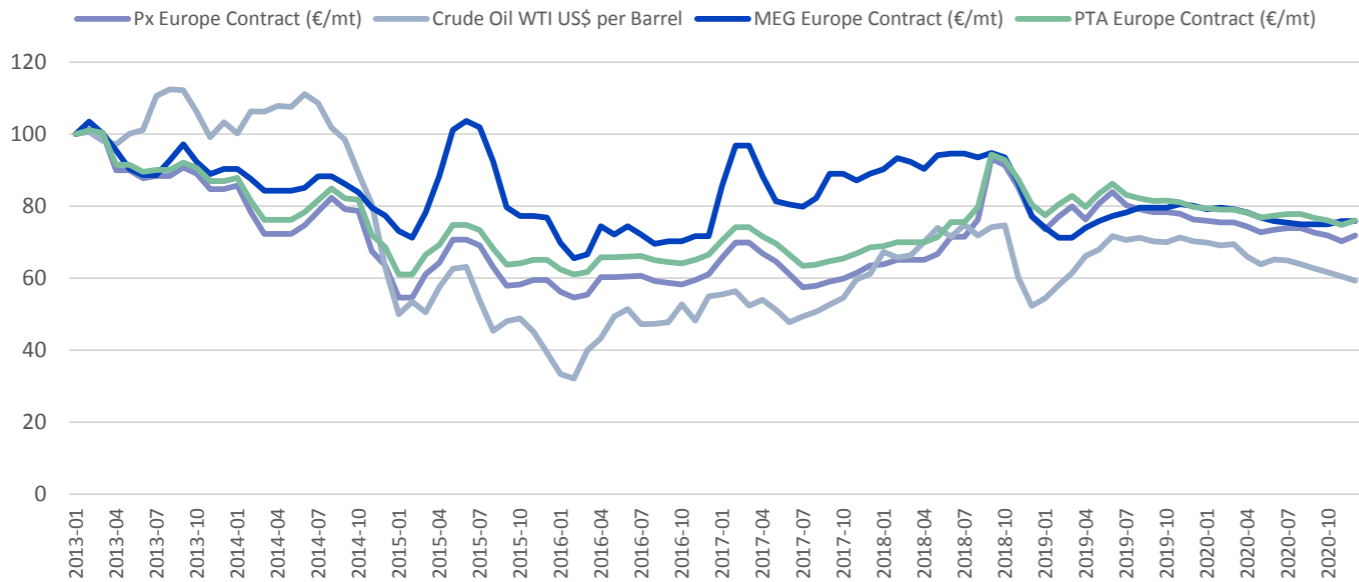
RM Price Drivers – Tire Cord Fabric

PET Feedstock Asia



Source: IHS Markit

PET Feedstock West Europe



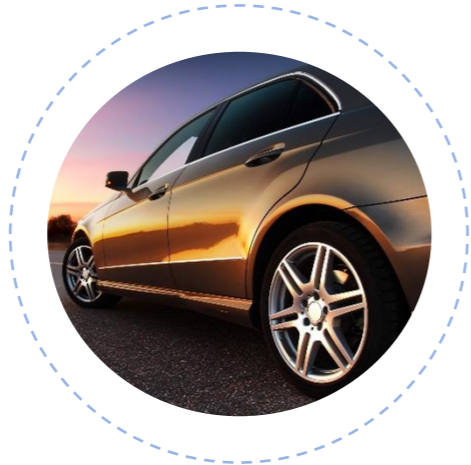
Source: IHS Markit

- Crude oil WTI (based on IHS) price is the major driver for PET price,
- MEG prices decrease in 2019 due to new capacity becoming online,
- 2020 and onwards still not clear from crude oil side due to IMO regulations, OPEC supplies, USA sanctions, etc,
- PTE & MEG are expected to remain tight in 2019.

- Crude oil price is the major driver for PET price,
- Europe PET chip feedstock prices tend to follow Asian market prices,
- PTA in Europe has also been affected by BP Geel & PK Orlen's recent FMs in 2019

Further Growth Opportunities: Composite

Mid-term opportunity: composites reinforcement



Current status

- Composite Technologies Center of Excellence opened in 2016 (~30 MM\$ investment)
- Ongoing development programs & joint projects with aerospace & automotive customers and major universities in both Turkey and Europe.
- Our target markets are Aviation, Automotive, Maritime and also Rail Systems

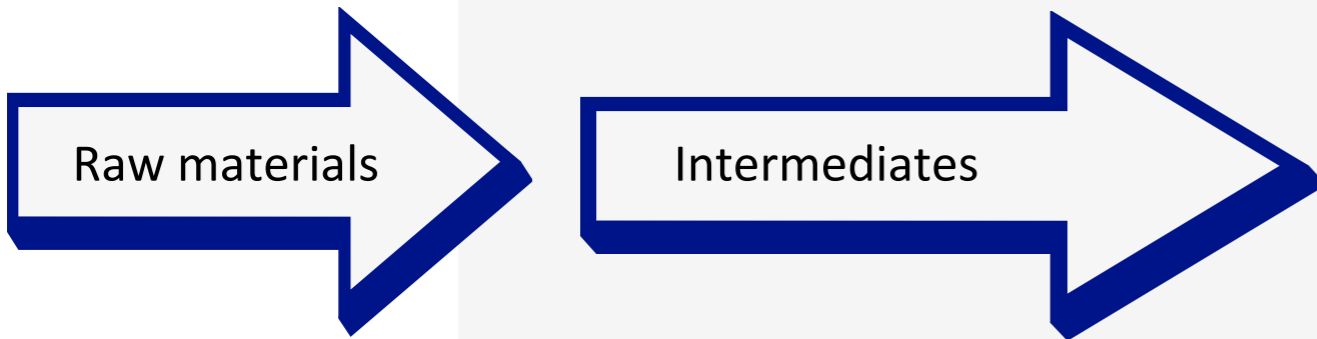
Buy & Build

- Finalized acquiring FDI & TPI in the US in 16th July, 2018; AHT in October 1, 2018



- The approval process of the acquisition of Axiom Materials continues
- Potential M&A targets are always under consideration

Overview of The Composites Value Chain



Composite Parts

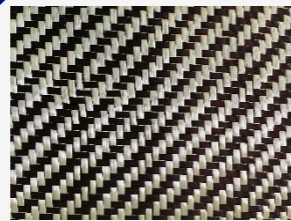
Precursors & Fibers:

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



Resins:

- Phenolic
- Epoxy
- Cyanate ester



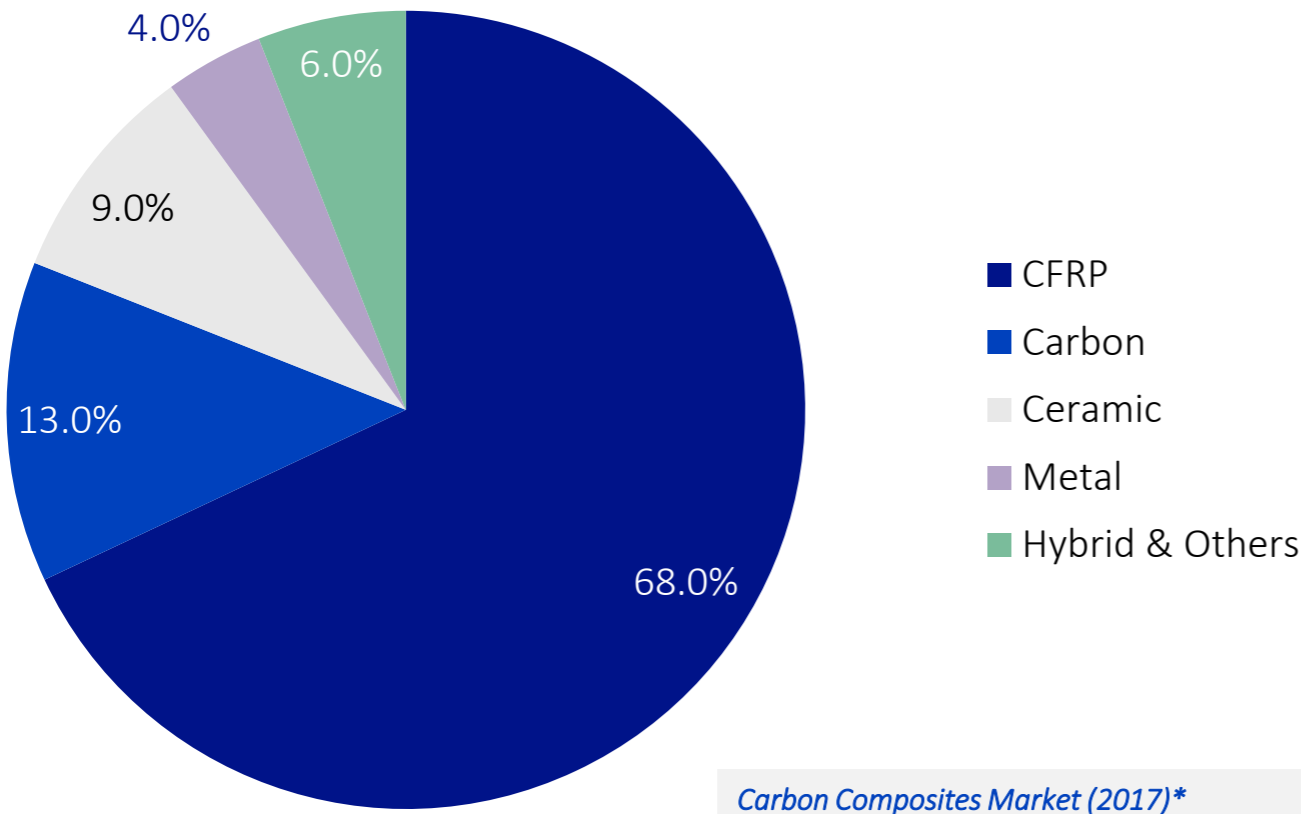
- Composites use in aerospace & automotive is increasing, due to improved material properties and weight savings over conventional materials
- «Lightweighting» is a major theme, driven by emission regulations as well as fuel-efficiency needs



Twisting

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

Market Dynamics – Composite



Carbon Composites Market (2017)*
19.2 B\$ ----> 38.6 B\$

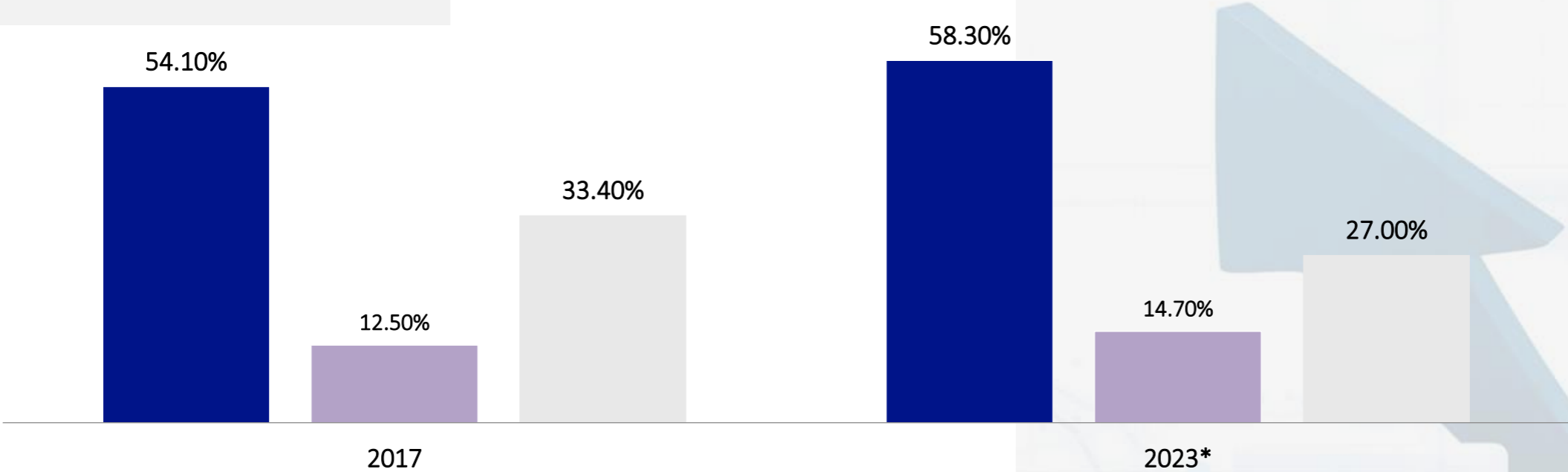


* AVK Composites Market Report - 2017

Market Dynamics – Composite

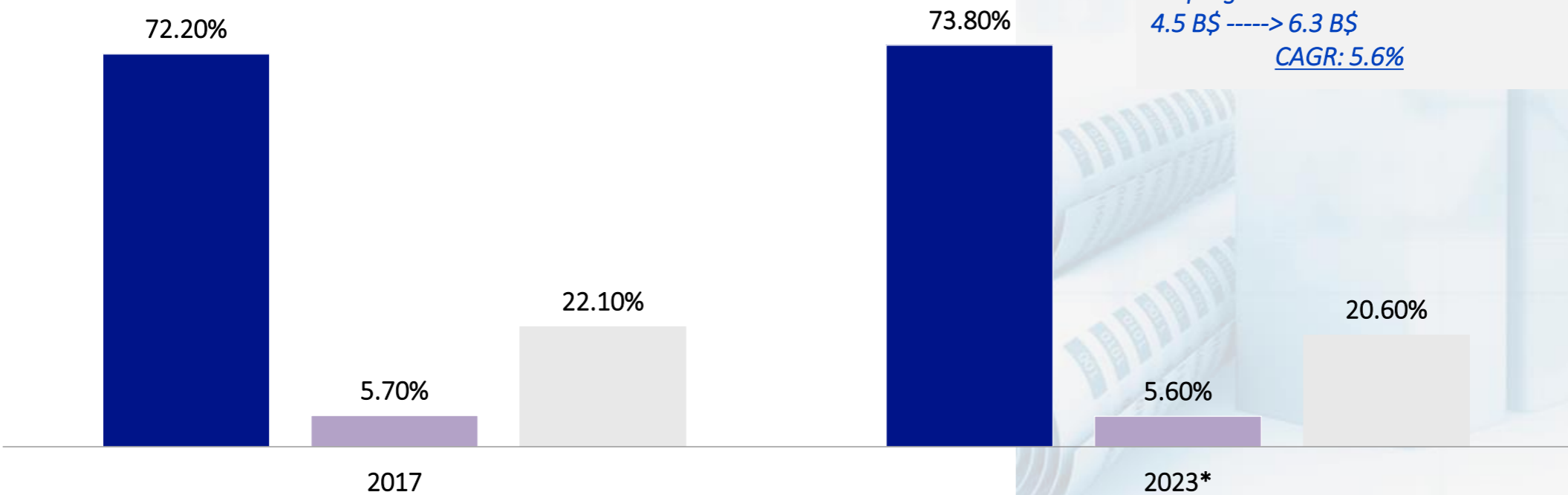
Advanced Composite Market **
 3.5 B\$ -----> 5.6 B\$
CAGR: 8.0%

■ Aerospace ■ Automotive ■ Other



■ Aerospace ■ Automotive ■ Other

Prepreg Market **
 4.5 B\$ -----> 6.3 B\$
CAGR: 5.6%



* Extrapolated values for 2023

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

Volume growth supported by favourable OE and replacement tire demand

4

Technology leadership at the cutting edge of reinforcement

5

Growth opportunities from new tire reinforcement products and adjacent construction and composites reinforcement sectors

6

Strong cash generation and dividend payout

7

Experienced management team with proven track record



Kordsa in Brief

| Key Financials | | | | |
|----------------------------|--------------|--------------|--------------|--------------|
| | Million TL | | Million USD | |
| | 2018 1Q | 2019 1Q | 2018 1Q | 2019 1Q |
| Sales | 713 | 1.265 | 187 | 236 |
| Gross profit | 150 | 257 | 39 | 48 |
| <i>Gross profit margin</i> | <i>21.1%</i> | <i>20.3%</i> | <i>21.1%</i> | <i>20.3%</i> |
| EBITDA* (a) | 120 | 197 | 31 | 37 |
| <i>EBITDA* margin (a)</i> | <i>16.8%</i> | <i>15.6%</i> | <i>16.8%</i> | <i>15.6%</i> |
| <i>OPEX margin</i> | <i>8.4%</i> | <i>8.1%</i> | <i>8.4%</i> | <i>8.1%</i> |
| Net income | 71 | 111 | 19 | 21 |
| <i>Effective Tax Rate</i> | <i>16.7%</i> | <i>21.0%</i> | <i>16.7%</i> | <i>21.0%</i> |
| WC Turnover | 3.25 | 3.48 | 3.25 | 3.48 |
| CAPEX | 46 | 39 | 12 | 7 |
| Net Debt/EBITDA | 1.90 | 1.94 | 1.77 | 1.80 |
| Dep./Amort. | 29 | 43 | 7 | 8 |

(a) EBITDA* = Gross Profit – OPEX + Depreciation/Amortization

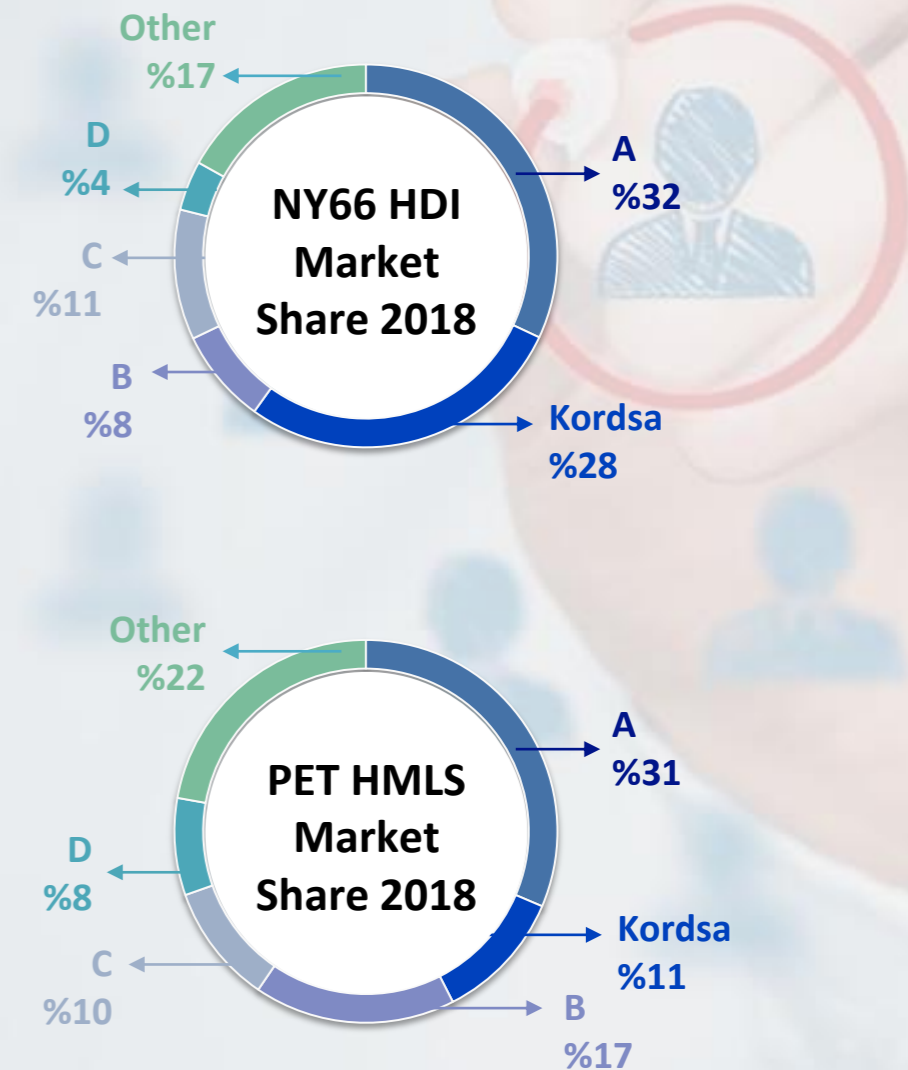
Market Leadership Based on Longstanding Strategic Partner Status with All Global Tire Players

Nature of customer relationship as key barrier to entry

| | Length of relationship | Typical length of approval period ^(a) | 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

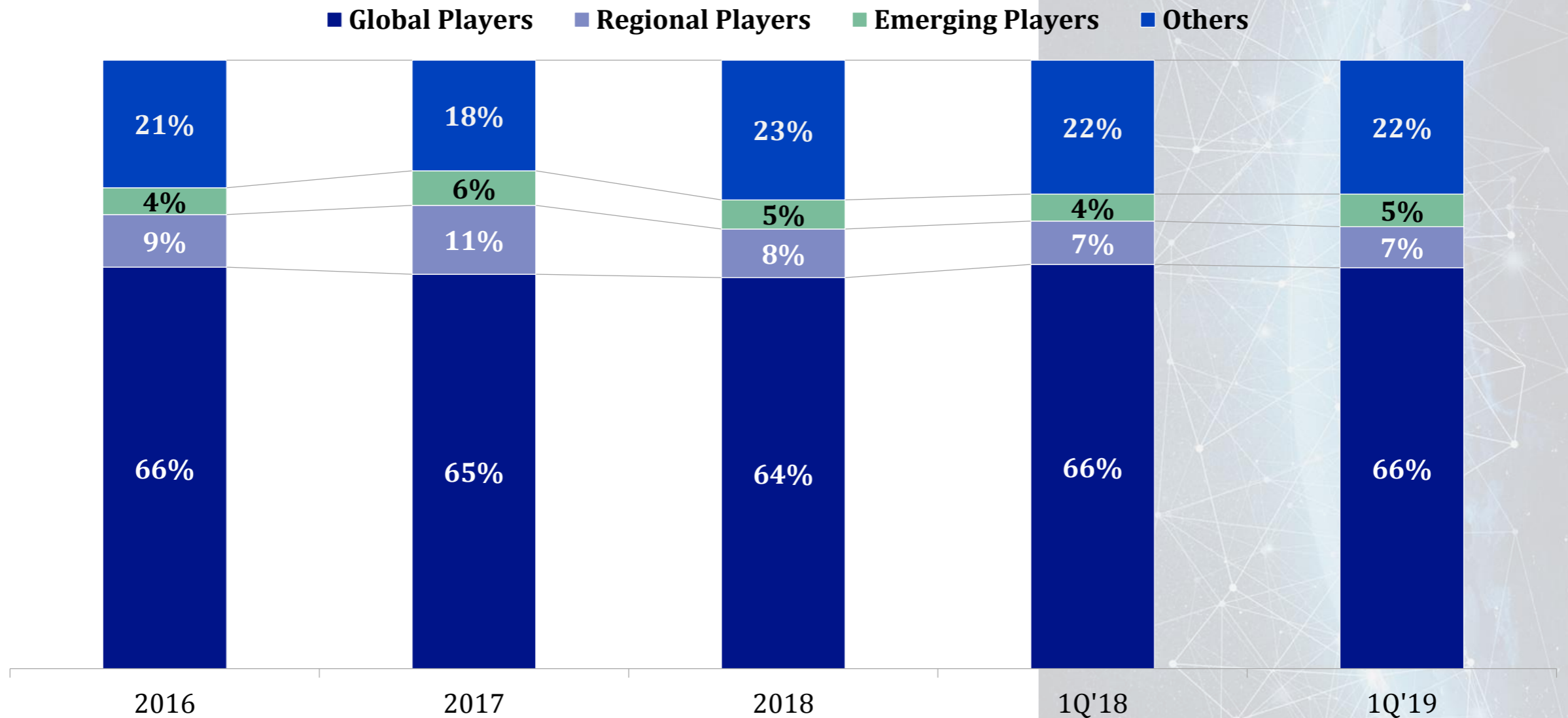
Leading market shares



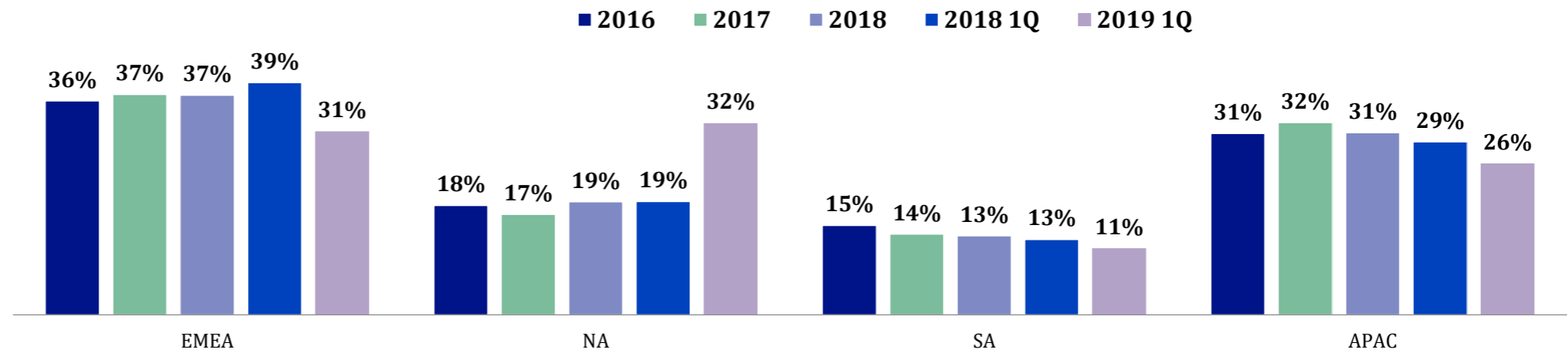
Source: Company Estimate

Strong barriers to entry for new comers

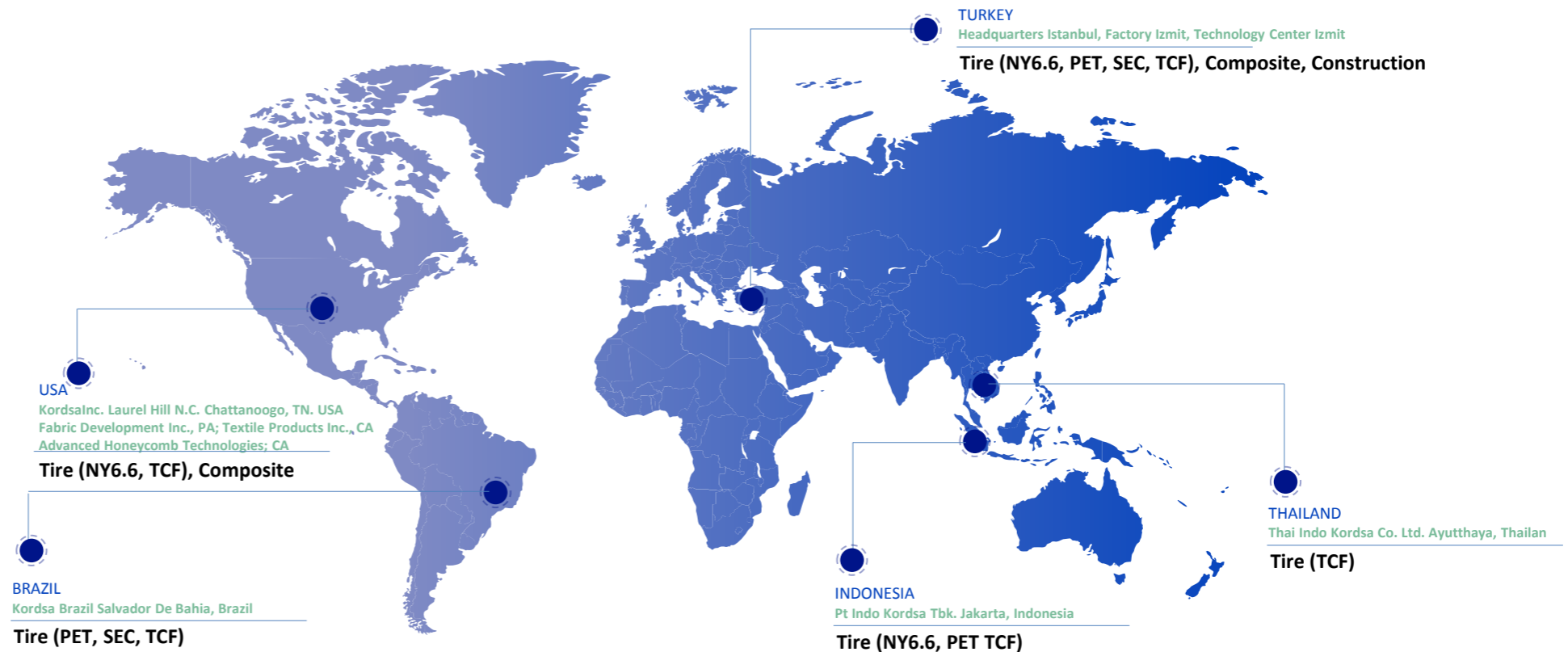
Capitalize on Global Footprint and Entrenched Supplier Status with All Key Tire Manufacturers - Segmental Progress



Global Footprint – Regional Breakdown of Revenues



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

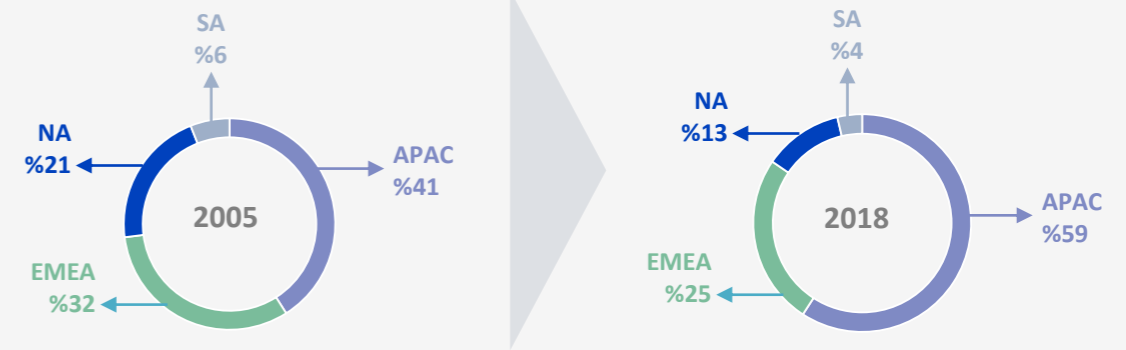
- #2 NY TCF producer
- #2 PET TCF producer

Well – Positioned to Enable Volume Growth

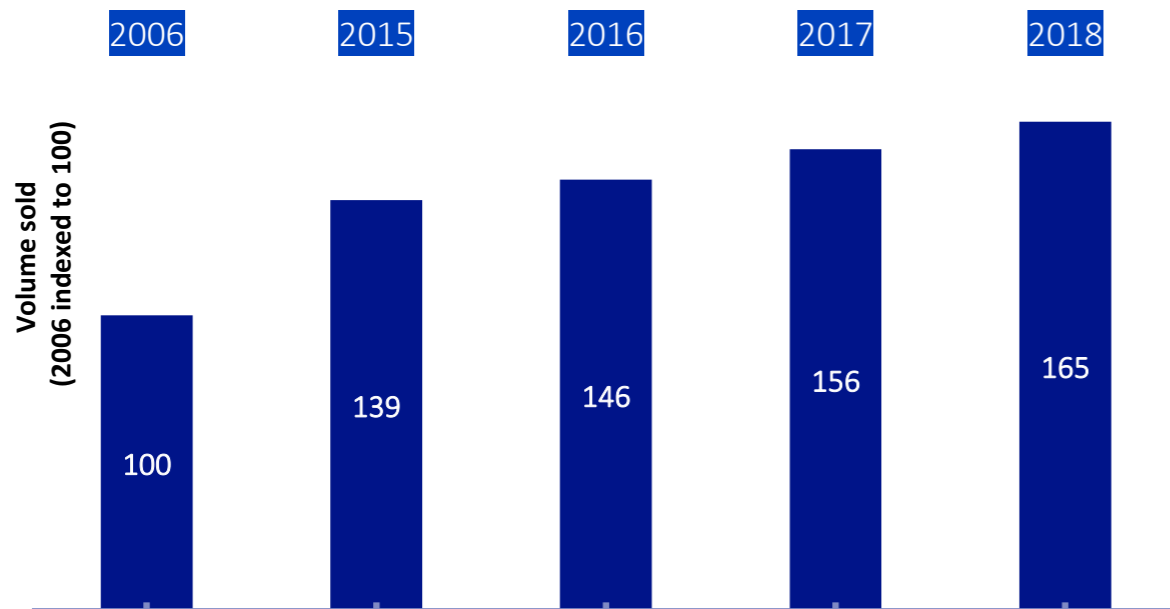
Comments

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

Light Vehicle Tire manufacturing market evolution

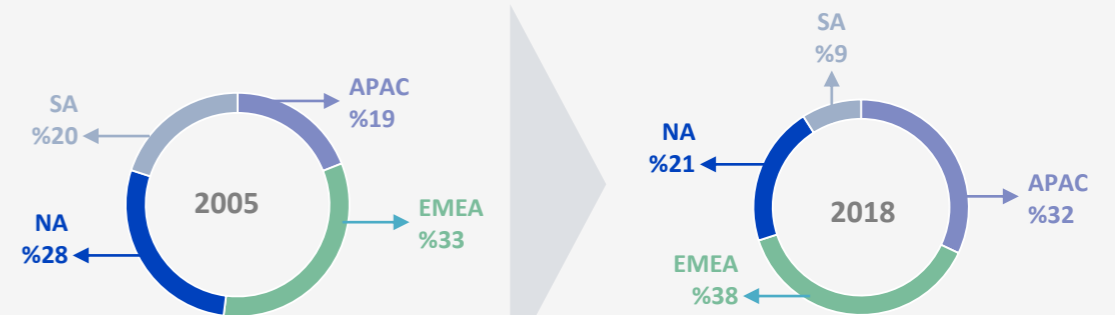


Kordsa volume development(a)



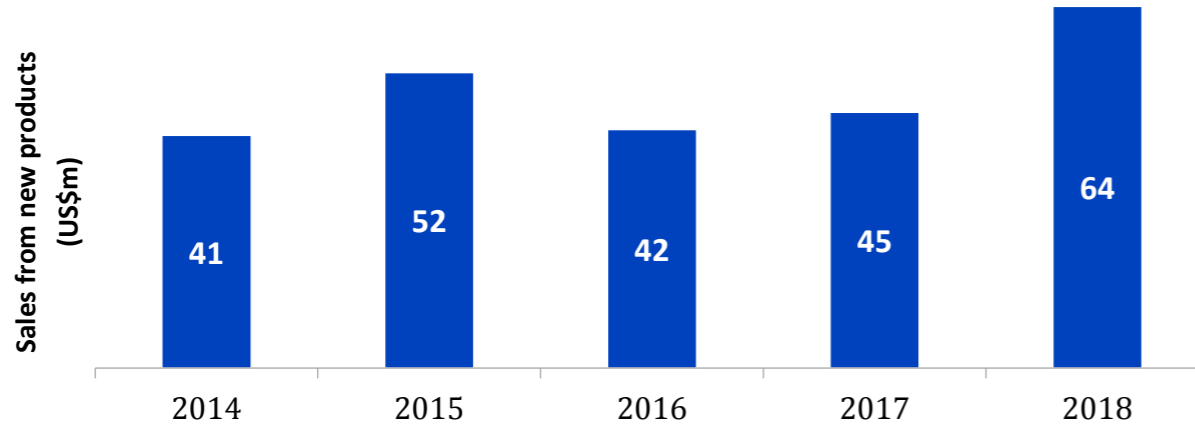
(a) Volume development adjusted for divested volumes

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

Twixtra

✓ Rolling resistance improvements through higher modulus for high performance tires

MONOLYX

✓ 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”



• Kordsa will launch on the free licensing process of environmentally friendly formula, striving to make it the new standard instead of the 80-year old formula.



• According to the patent research database, Kordsa is among the top 10 companies in the world with the number of patents issued in industrial textiles as of 2018.

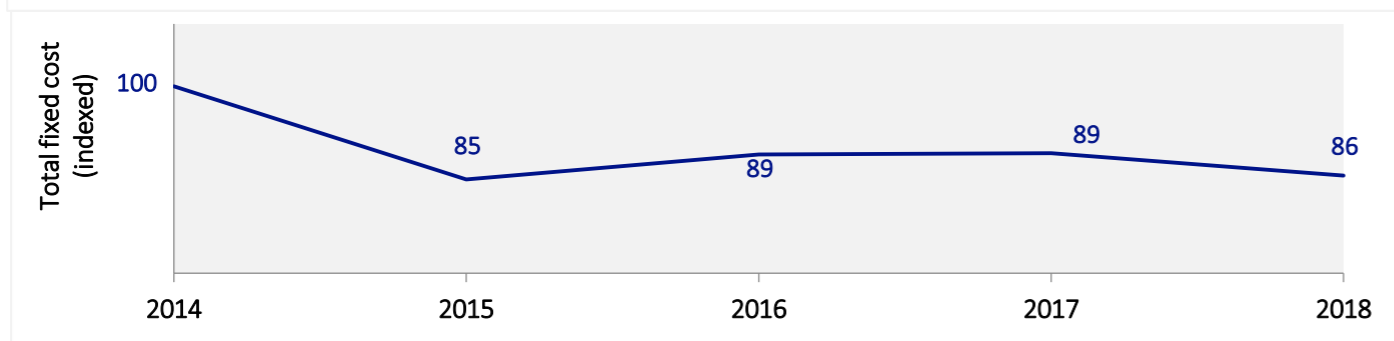
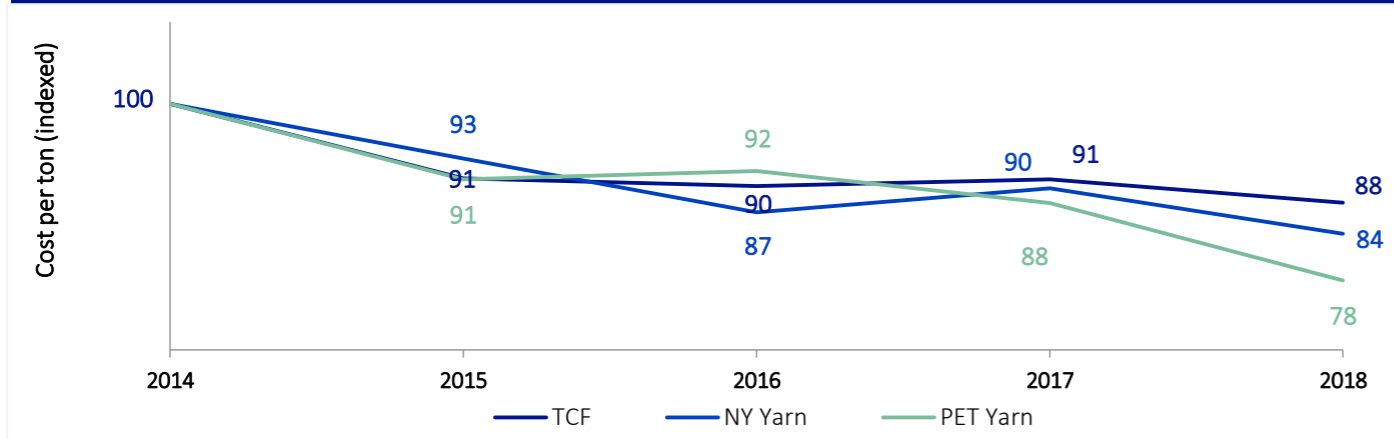


• Kordsa’s 2016 Sustainability Report received Platinum Award in 2018 Inspire Awards by LACP and ranked 21st among top 100 companies

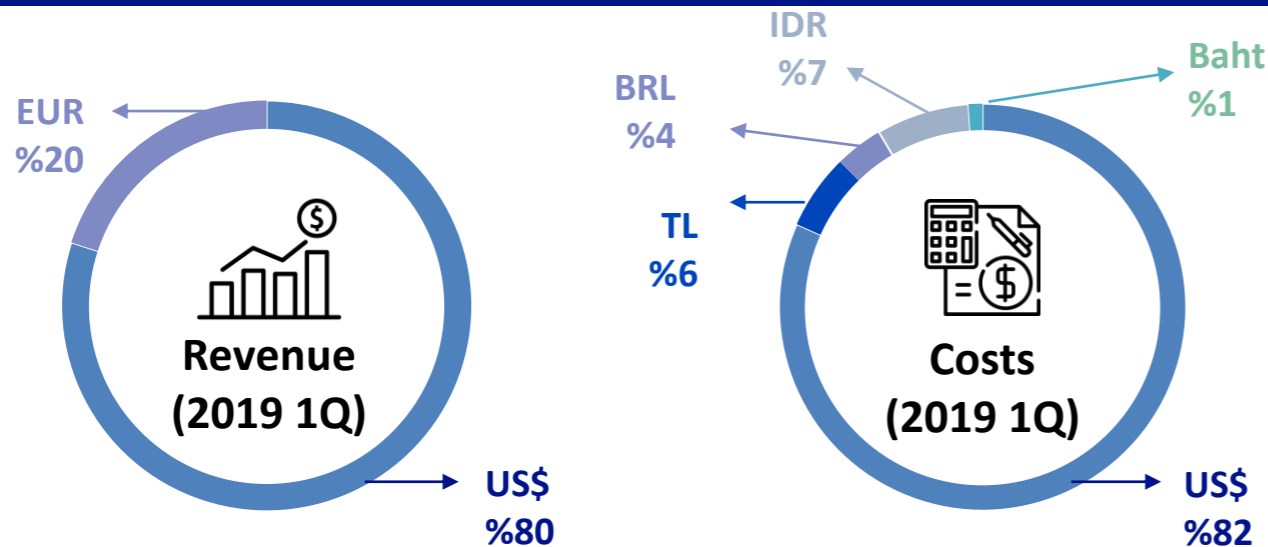
• Listed in BIST Sustainability Index for the third consecutive year

Well-Positioned for Strong Cash Generation and Dividends

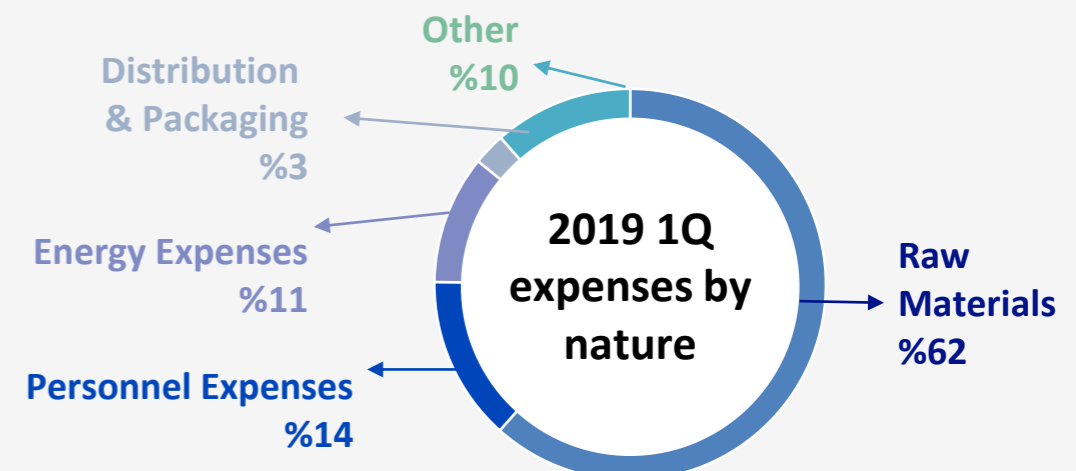
Cost development (US\$)



FX exposure



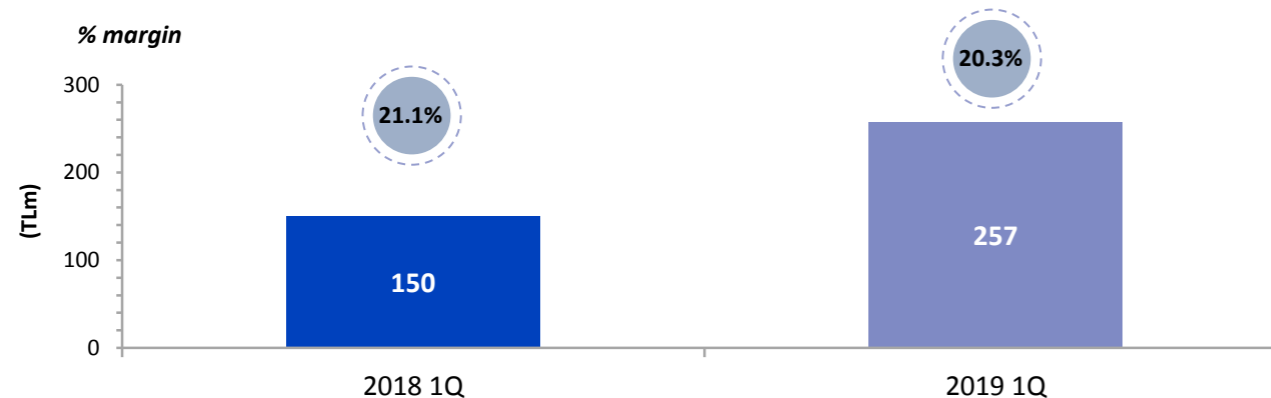
- Demonstrates value-based pricing model
- Ability to pass through raw material price volatility:
(Revenue – raw material costs) tracked as a KPI by sales team
- Conversion costs as a key metric for management KPIs (main components are personnel expenses and energy costs)



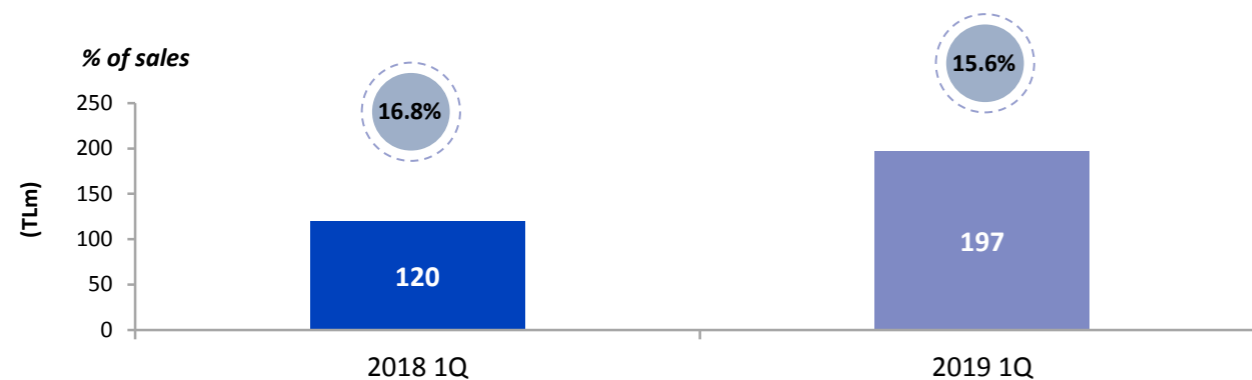
- Hard currency revenues
- FX exposure on costs => EM footprint on local costs + hard currency priced raw materials
- Benefit from US\$ appreciation vs. TL, IDR and BRL

Well-Positioned for Strong Cash Generation and Dividends

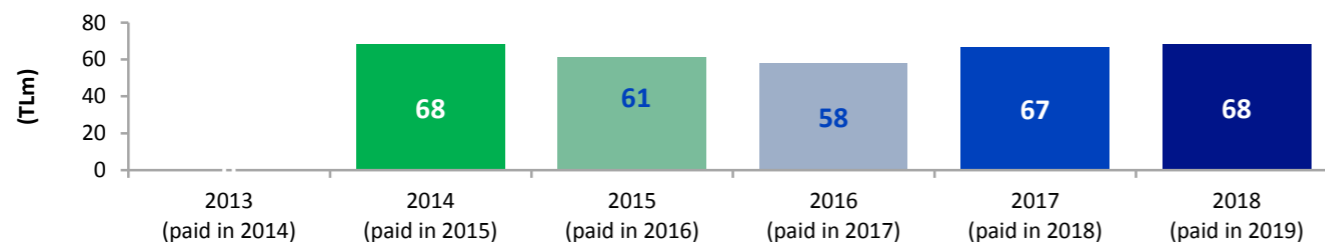
Gross profit



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

Kordsa's Financial Policy

Our company guidance for financial year 2019 is as follows:

- Revenue : 30%-40% TL basis; 10%-15% USD basis
- EBITDA : 30%-40% TL basis; 10%-15% USD basis
- Composite business segment revenue : 105-115 M\$

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

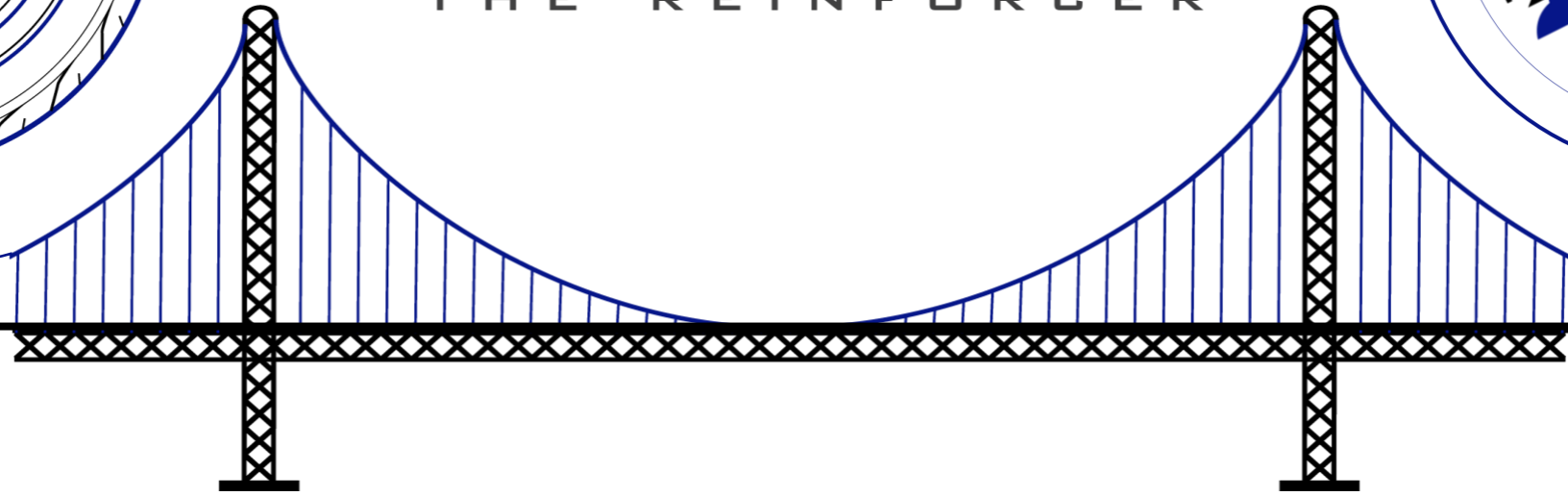
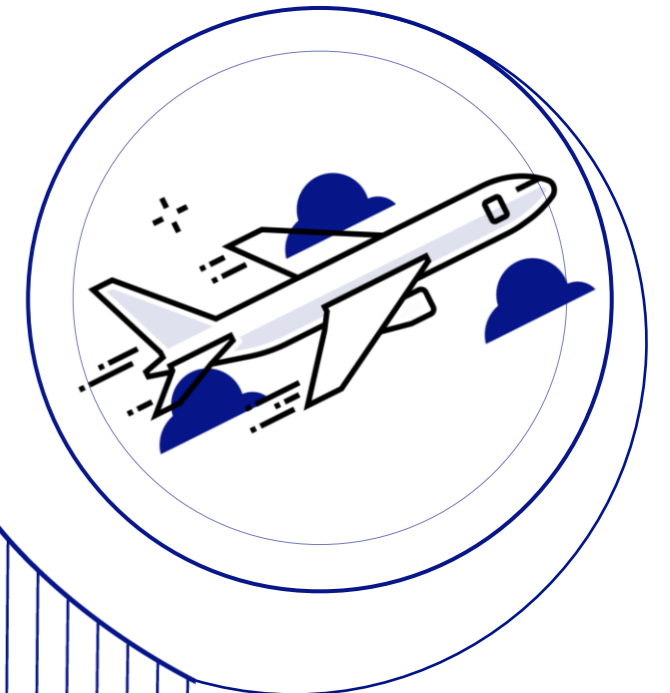
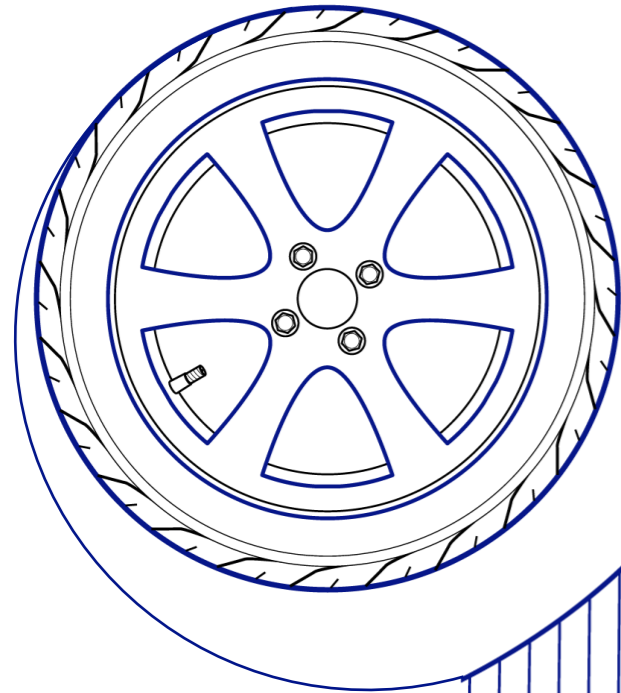
The distribution decision is agreed taking into consideration the sizable fixed asset purchases, acquisitions, covenants of current liabilities and the Company's mid and long term strategies, national and global economic conditions

Reoccurring Creep Capex

USD 23 million

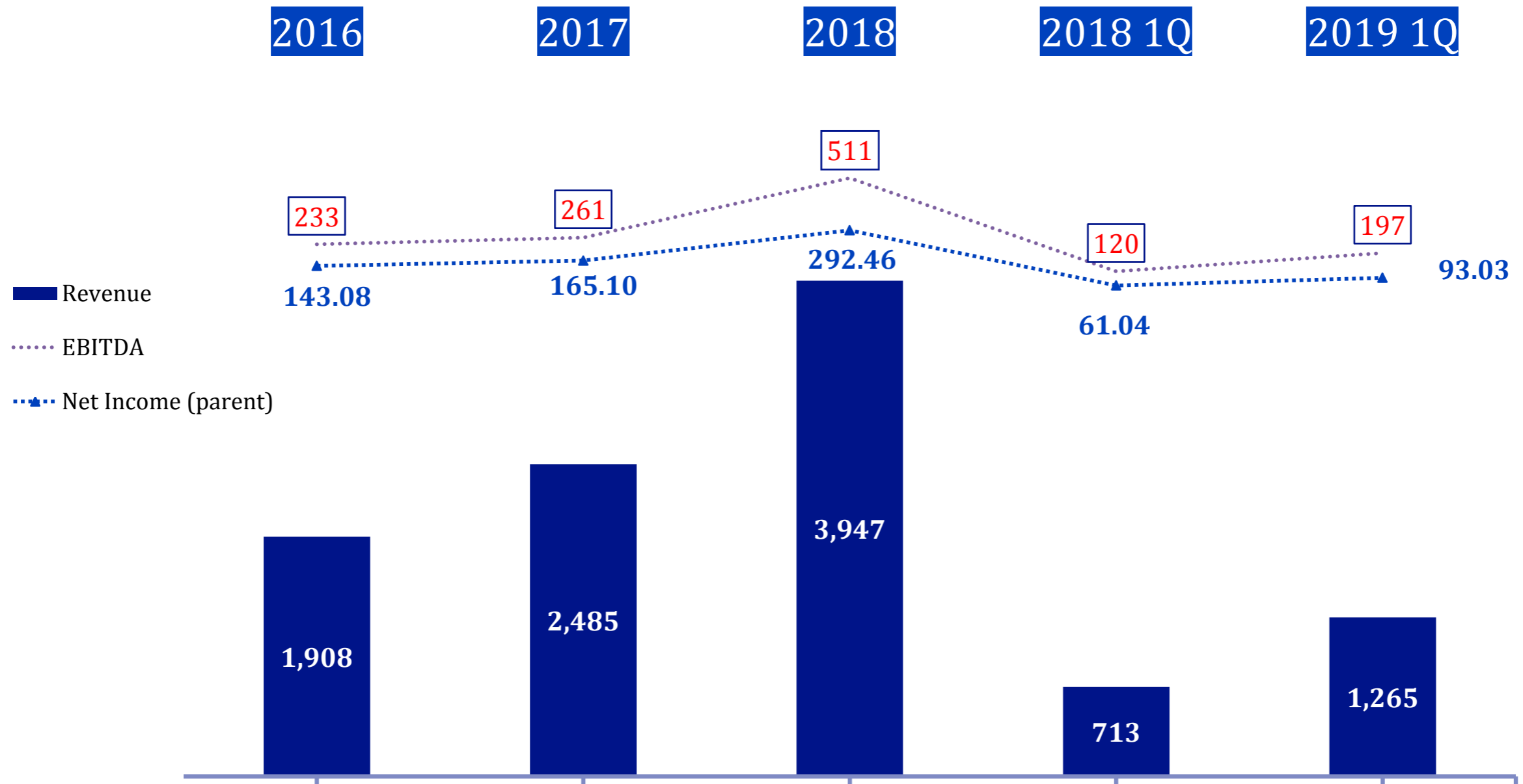
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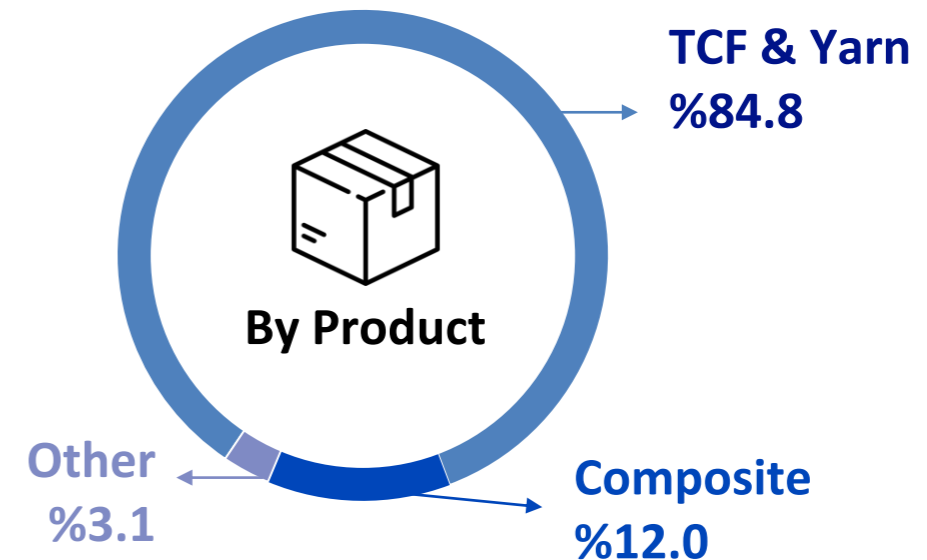
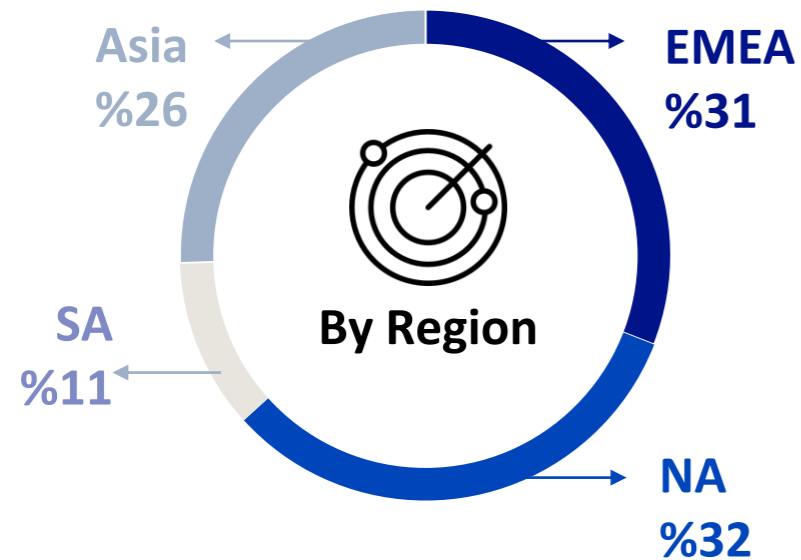
Appendix

2016 – 2019 Financial Trend (MTL)

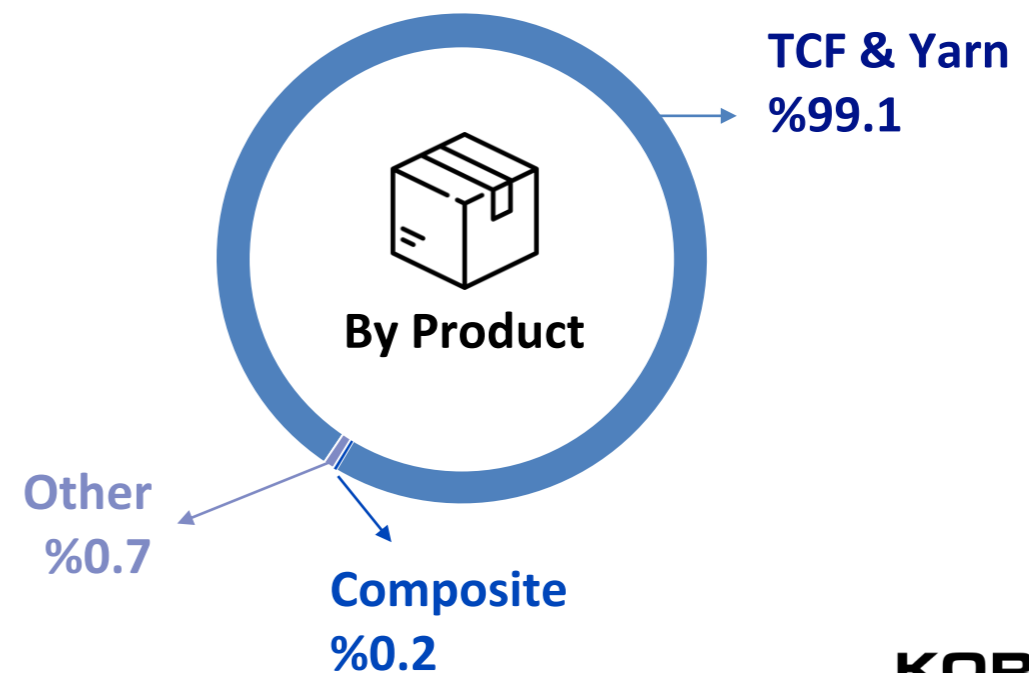
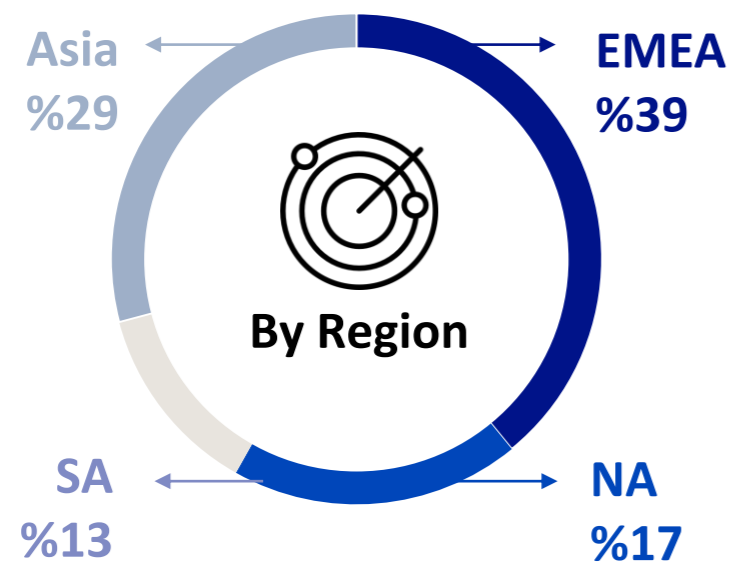


Kordsa in Brief

Q1 2019 Revenue Split



Q1 2018 Revenue Split



FX Rates

FX Rates as of Mar,19

| Monthly Avr | 1Q'19 | 1Q'18 | 2018 YE |
|-------------|--------|--------|---------|
| \$/TRY | 5.36 | 3.81 | 4.81 |
| EUR/\$ | 1.14 | 1.23 | 1.18 |
| \$/BRL | 3.77 | 3.24 | 3.65 |
| \$/IDR | 14,136 | 13,576 | 14,237 |
| \$/THB | 31.61 | 31.54 | 32.31 |
| Month End | 1Q'19 | 1Q'18 | 2018 YE |
| \$/TRY | 5.63 | 3.95 | 5.26 |
| EUR/\$ | 1.12 | 1.23 | 1.15 |
| \$/BRL | 3.90 | 3.32 | 3.87 |
| \$/IDR | 14,244 | 13,756 | 14,481 |
| \$/THB | 31.81 | 31.23 | 32.45 |

Overview of The Construction Reinforcement Value Chain



Oil Derivative Ingredients

For NY66 Fibers:

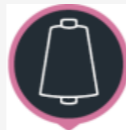
- Hexamethylenediamine (HMD)
- Adipic Acid
- NY66 Salt
- NY66 Flake

For PP Fibers:

- Polypropylene Chips

Polymerisation

Spinning



NY66 and PP Fibers

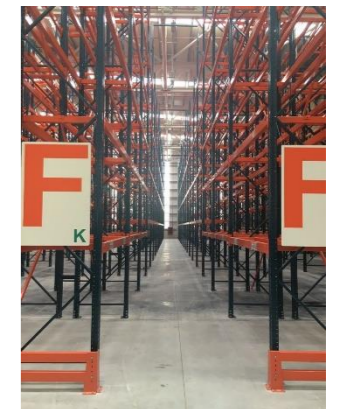
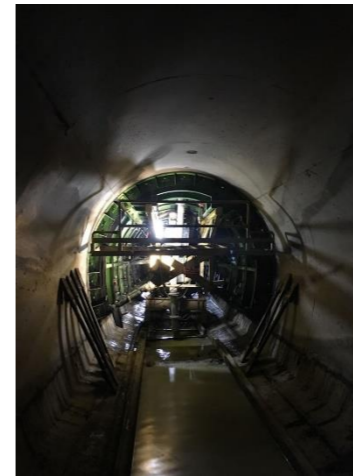


Cutting

Pucking

Dipping

Reinforced Concrete Structures



Major applications:

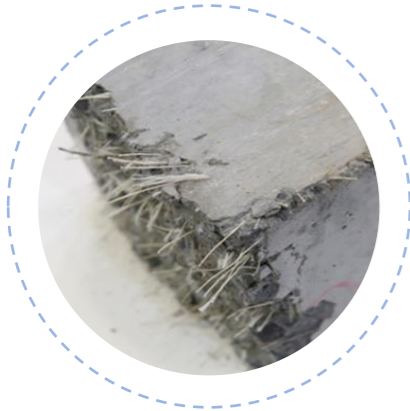
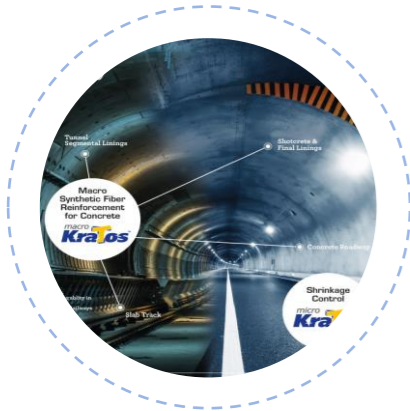
- Tunneling
- Shotcrete
- Slab on ground concretes

- Screed concrete
- Concrete roads

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

Growth Opportunities: Construction

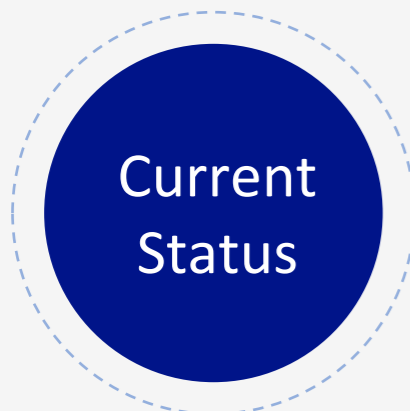
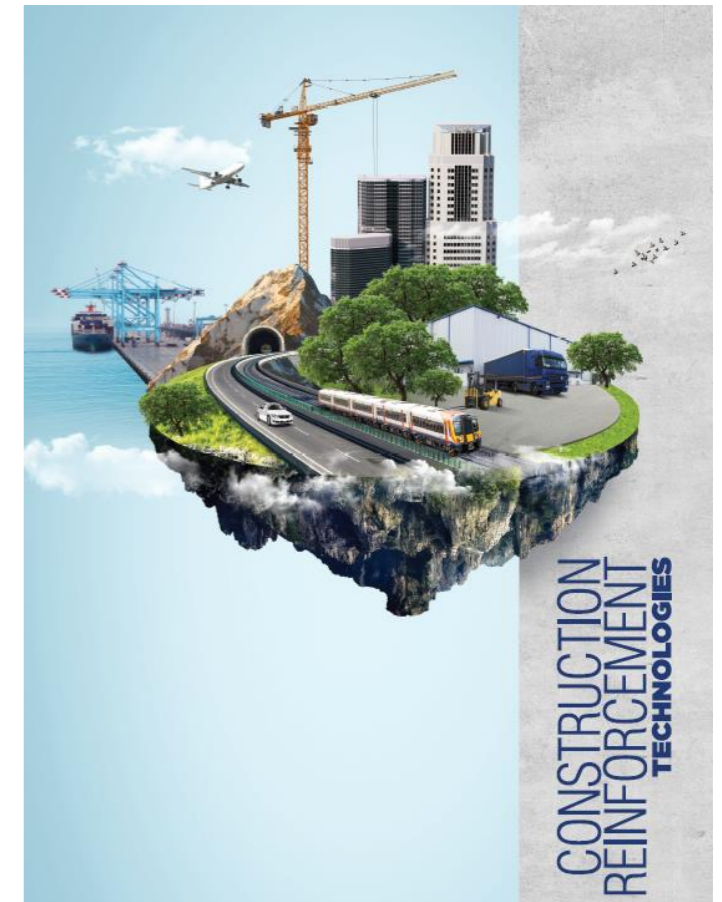
Construction Reinforcement



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

3rd 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!**

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