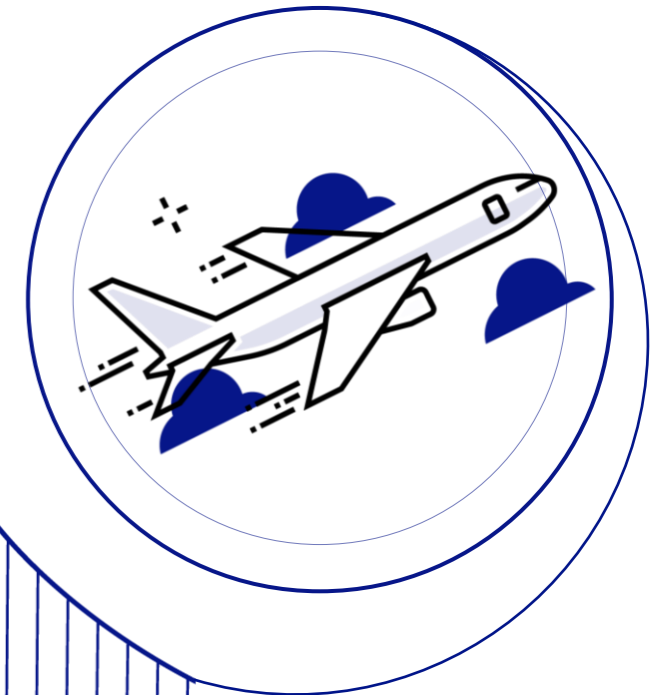


KORDSA

THE REINFORCER



Kordsa Investor Presentation

Nov, 2019

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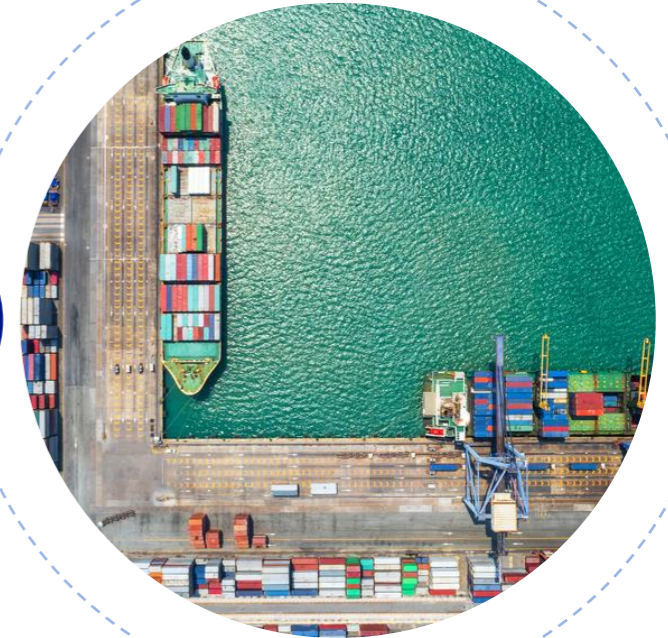
Global Footprint

4 continents
12 facilities

~4,500
employees

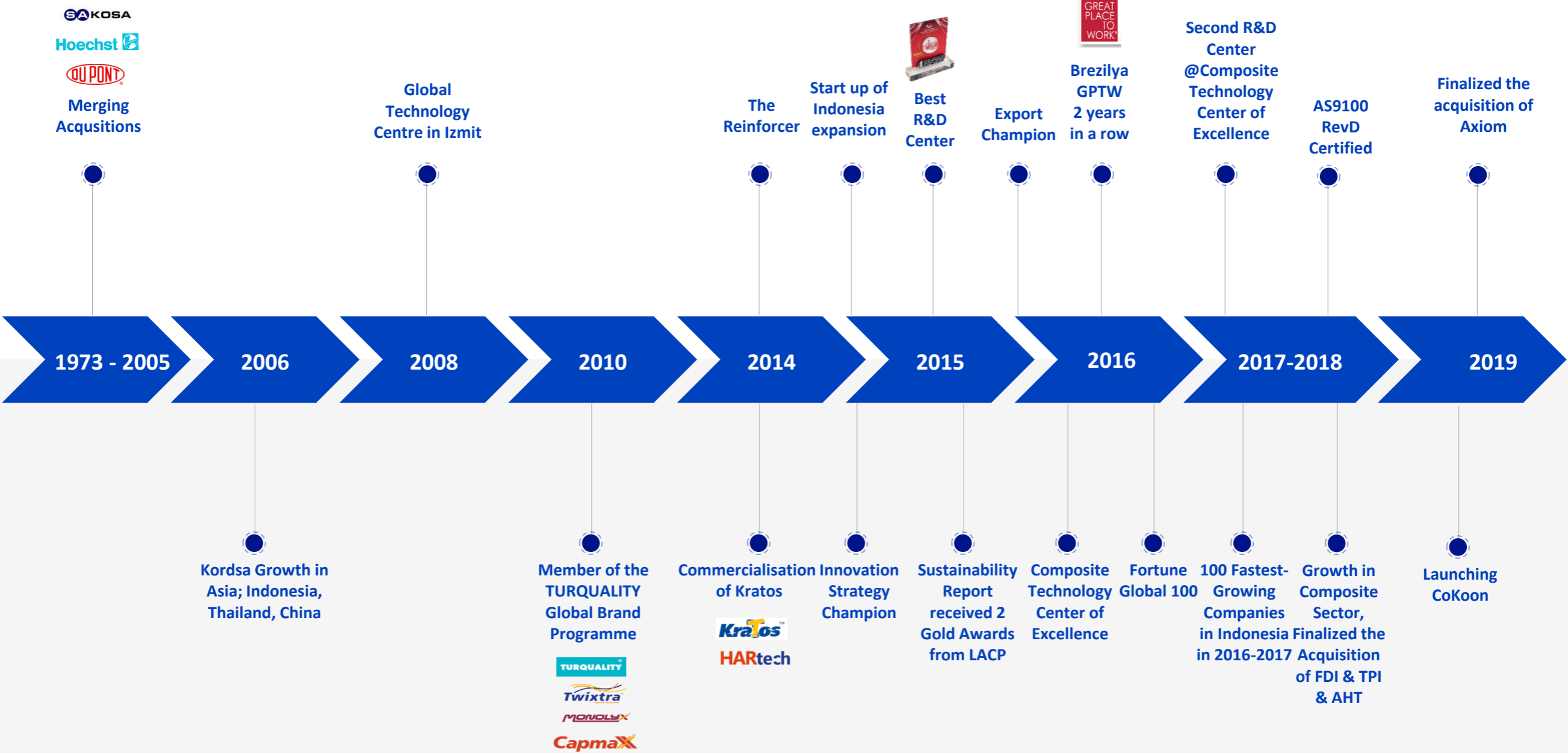
2 R&D
Centers

788 patent applications
188 patents
186 inventions



WE REINFORCE LIFE

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

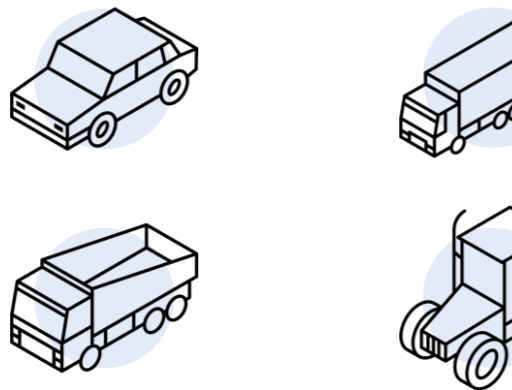
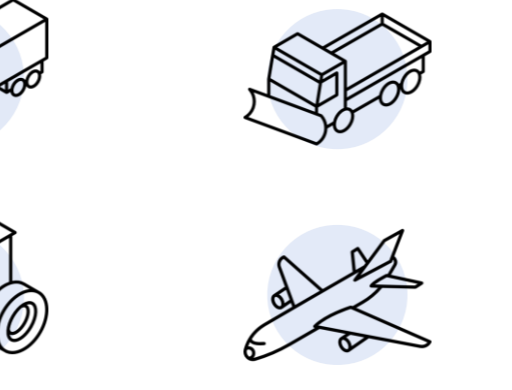
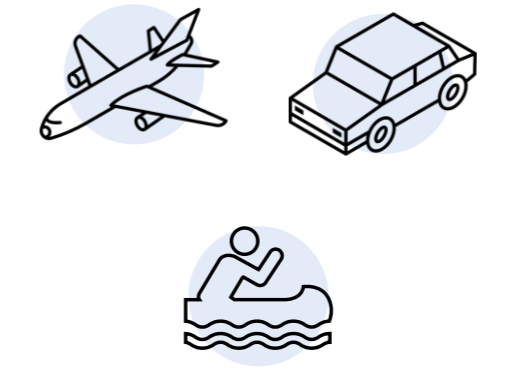
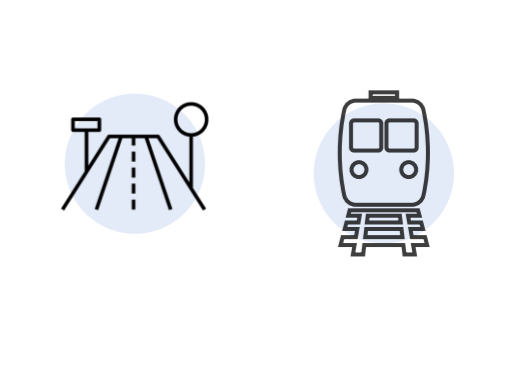




Courage

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

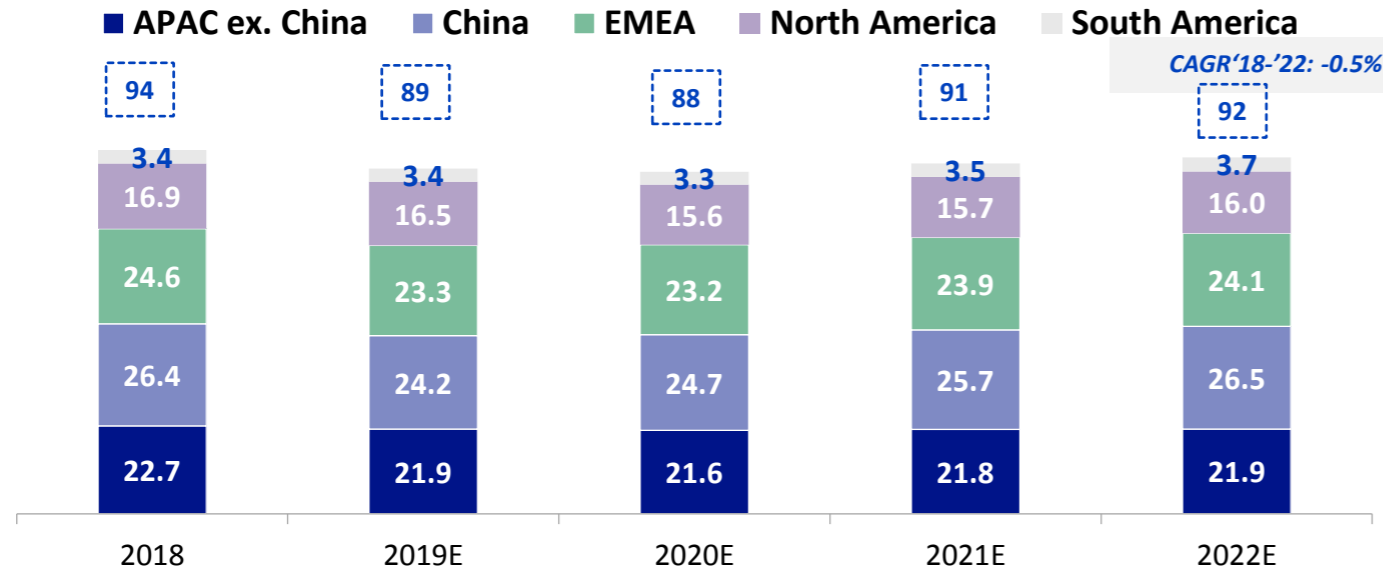


Kordsa fabrics are developed for specific requirements and are custom made

Market Dynamics – Tire Cord Fabric

Global Automotive Market

Global LV Assembly – M Units / Year



North America

Production decrease 2.5% in 2019 (vs 2018)

South America

Production decrease 1.0% in 2019 (vs 2018)

EMEA

Production decrease 5.0% in 2019 (vs 2018)

APAC excl. China

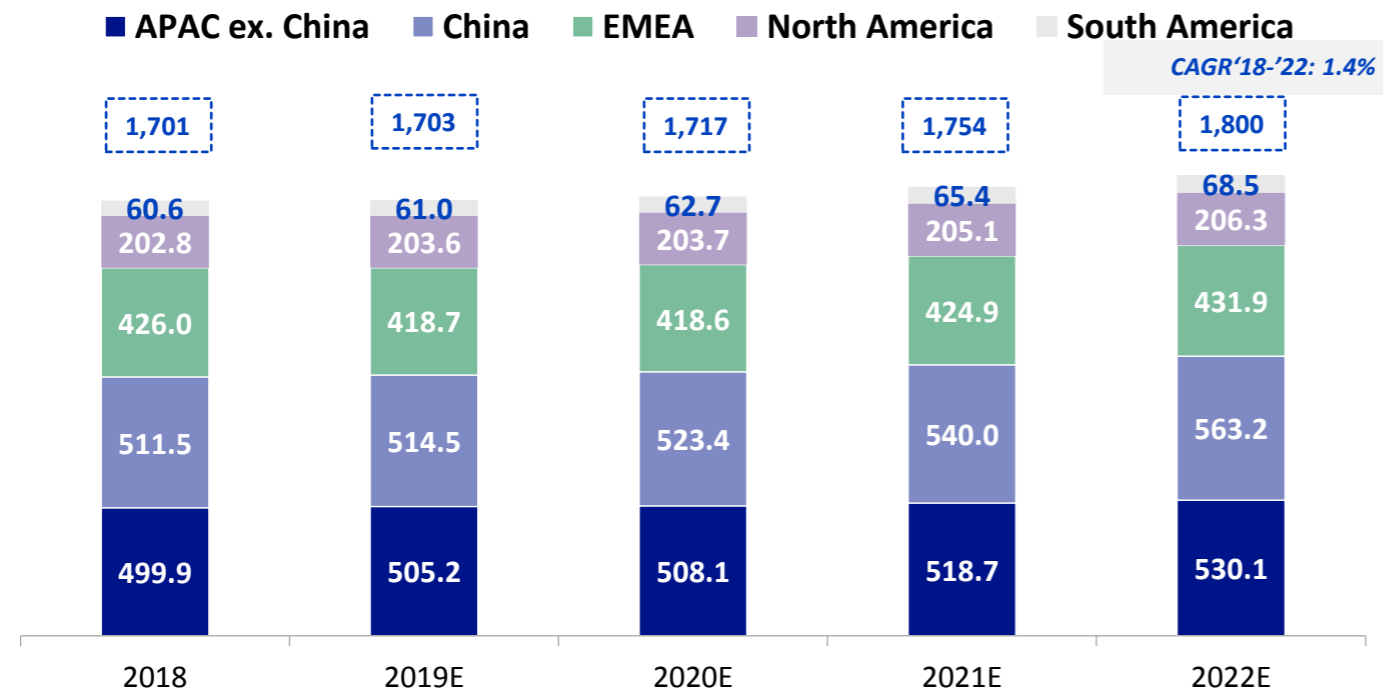
Production decrease 3.6% in 2019 (vs 2018)

China

Production decrease 8.5% in 2019 (vs 2018)

Global Tire Market

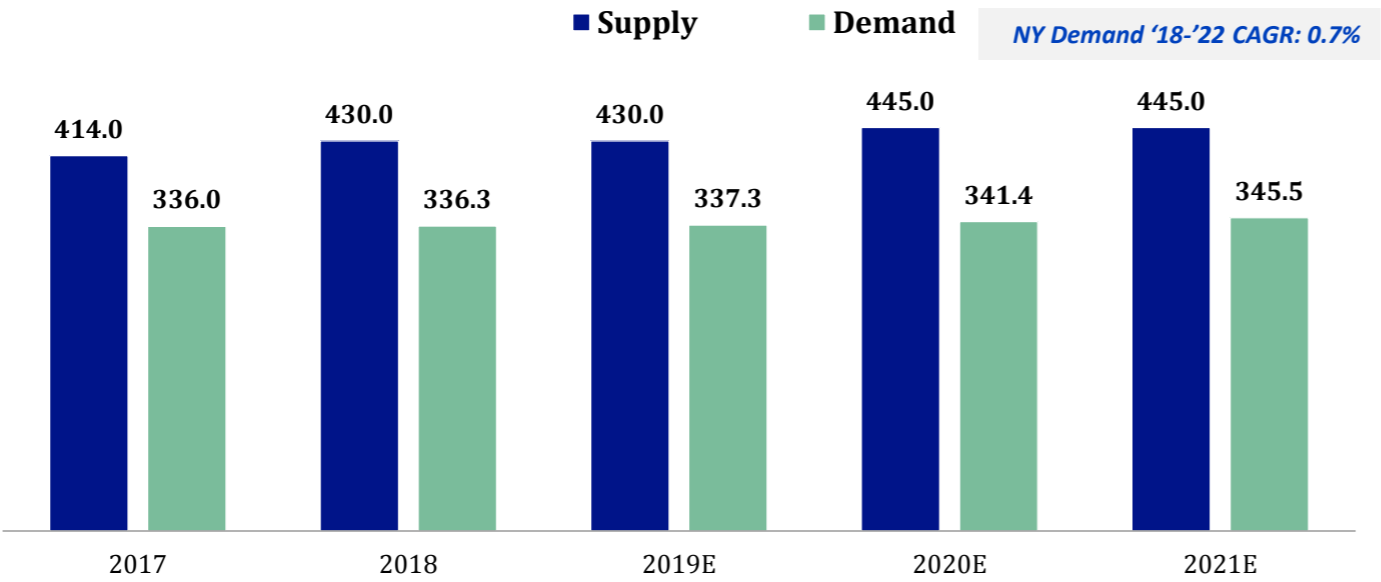
Global LV Tire Production – M Units / Year



- OE: Sales in 2019 were 5% lower than 2018, with declines in all regions
- Replacement: Worldwide replacement tire market to increase about 1%. The ADD (anti-dumping duty) against China is leading to increased investment and exports from other low cost producers, particularly in ASEAN.

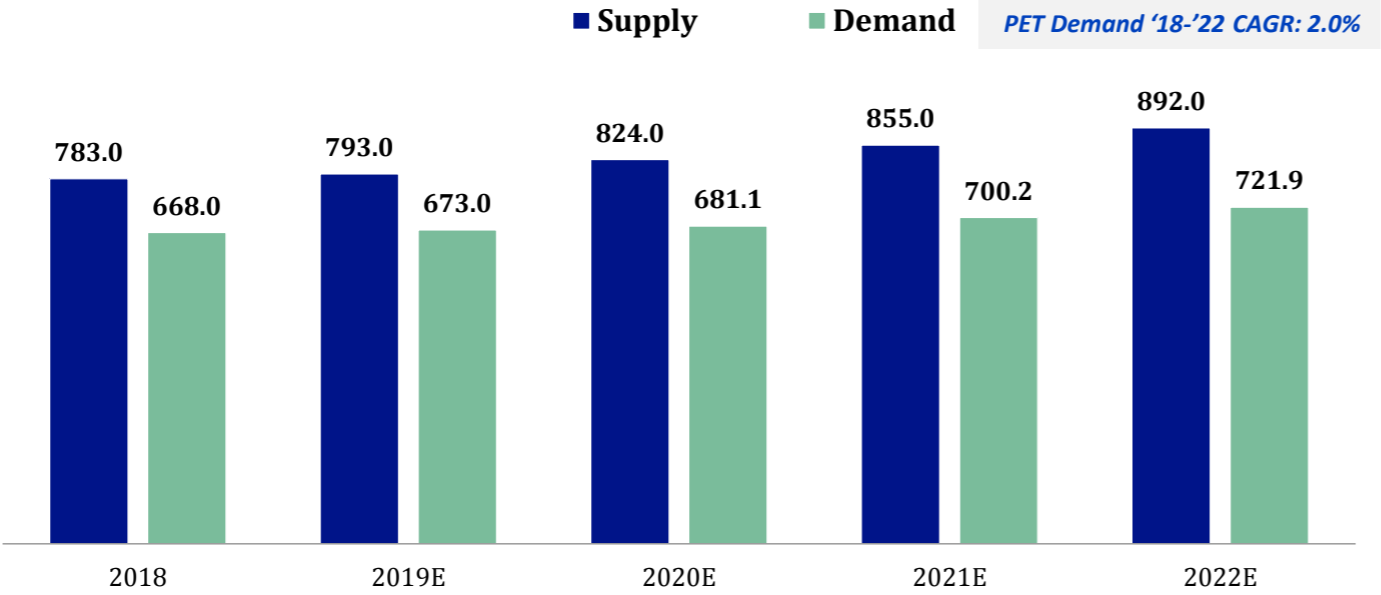
Market Dynamics – Tire Cord Fabric

Tire Reinforcement Market (NY6.6)



Source: Company Estimates

Tire Reinforcement Market (PET)



Source: Company Estimates

Nylon 6.6

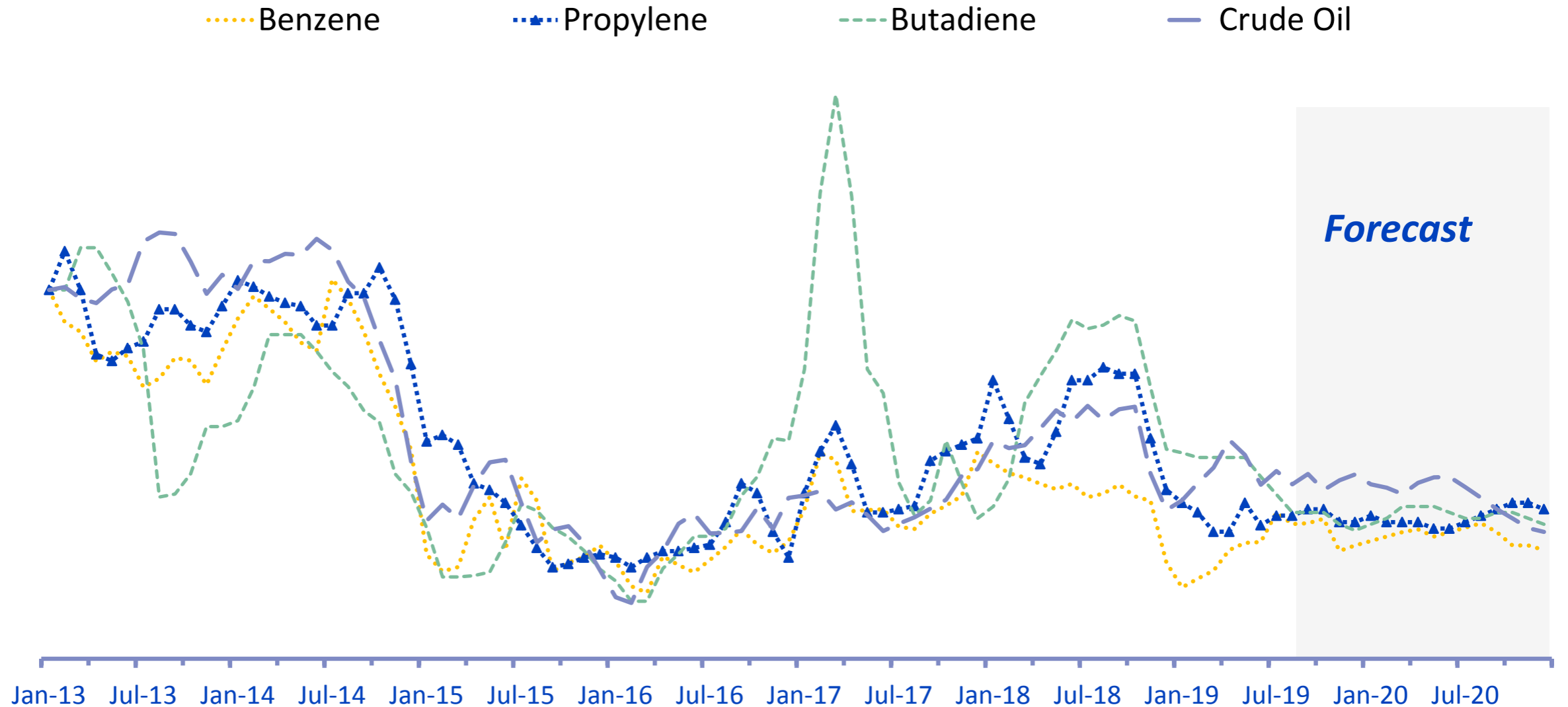
- Utilization rates lower compared to previous years
- Engineering plastics is affected by Automotive markets' slow down
- Switching to NY66
- Market slow-down is reflected to market estimations. NY66 demand increase updated as 0.7%

PET HMLS

- Consolidation by Indorama (acquiring PF Kaiping, Glanzstoff, Durafiber)
- Increasing PET usage in Tire
- Market slow-down is reflected to market estimations. PET demand increase updated as 2.0%

RM Price Drivers – Tire Cord Fabric

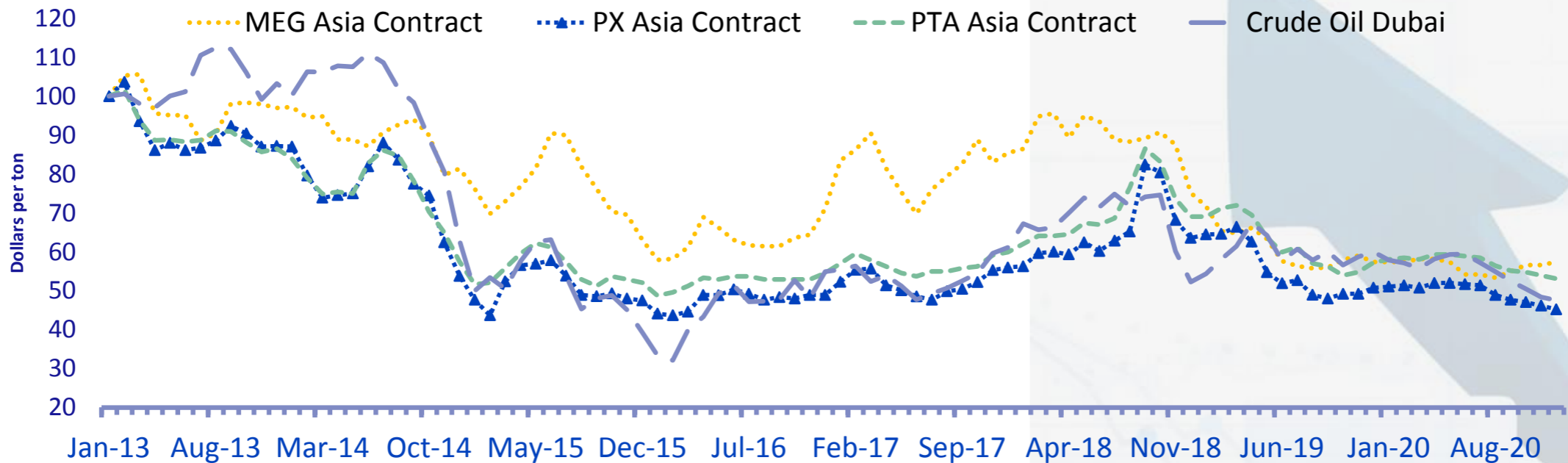
NY Raw Material Trend (Indexed)



Source: Company Estimates

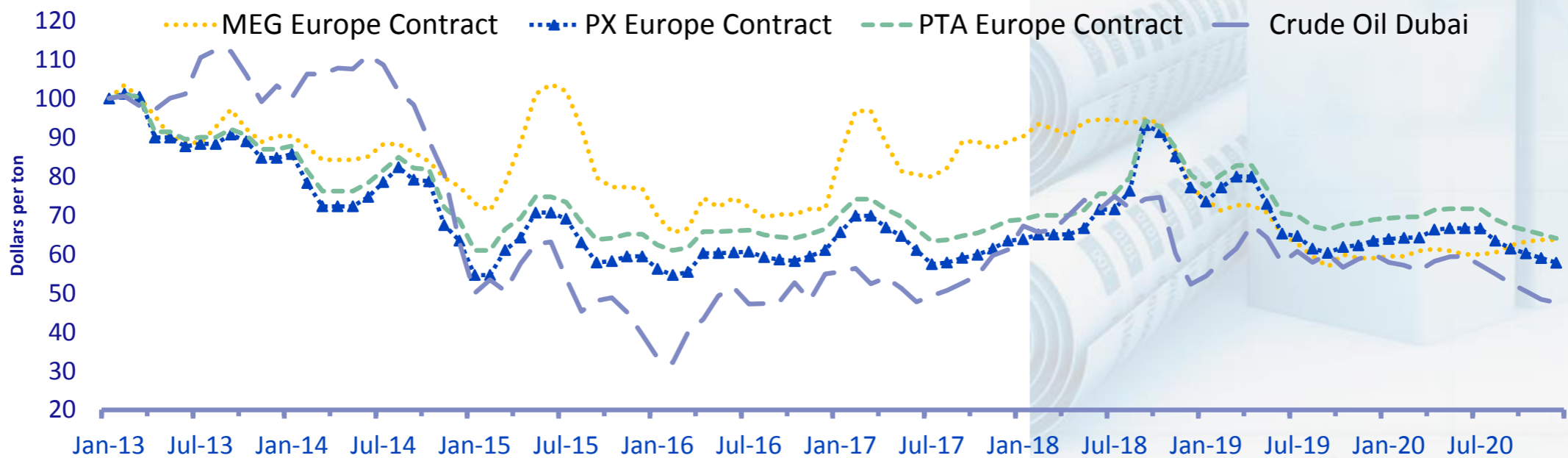
RM Price Drivers – Tire Cord Fabric

PET Feedstock Asia



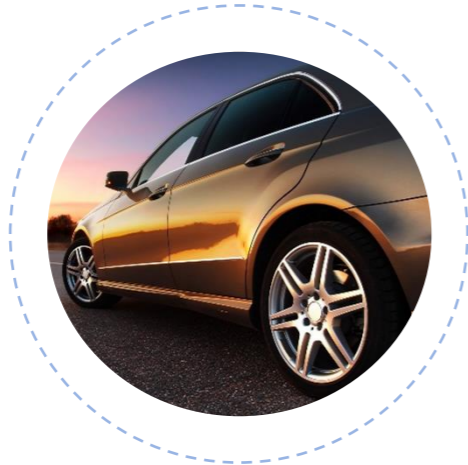
Source : IHS Markit

PET Feedstock West Europe



Further Growth Opportunities: Composite

Mid-term opportunity: composites reinforcement



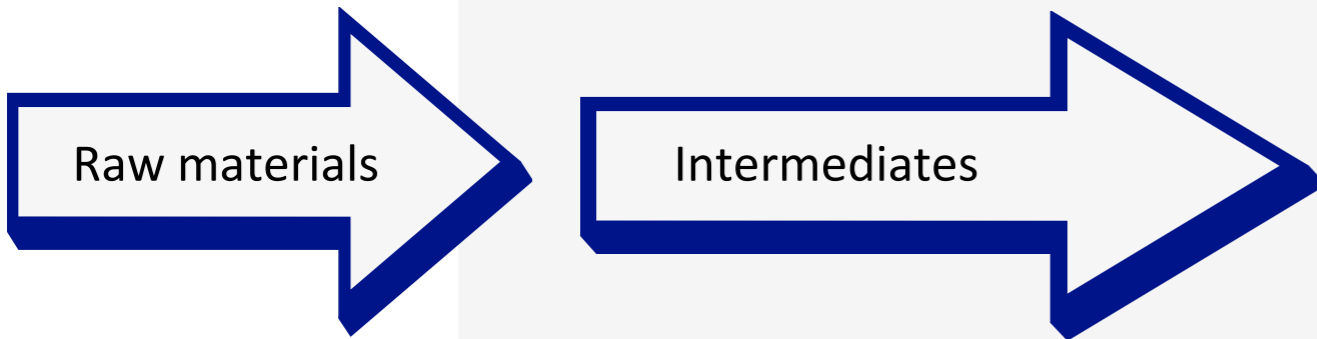
Current status

- 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 Axiom Materials which provides advanced composite materials to the aerospace industry as well as the next generation transportation vehicles in the US in 24th July, 2019
- 280 M\$ acquisition expenditures in the last two years can help us to create 150 M\$ annual sales.
- Potential M&A targets are always under consideration

Overview of The Composites Value Chain



Composite Parts

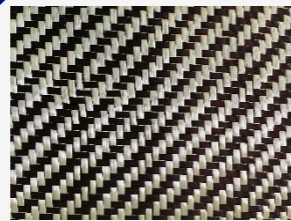
Precursors & Fibers:

- 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

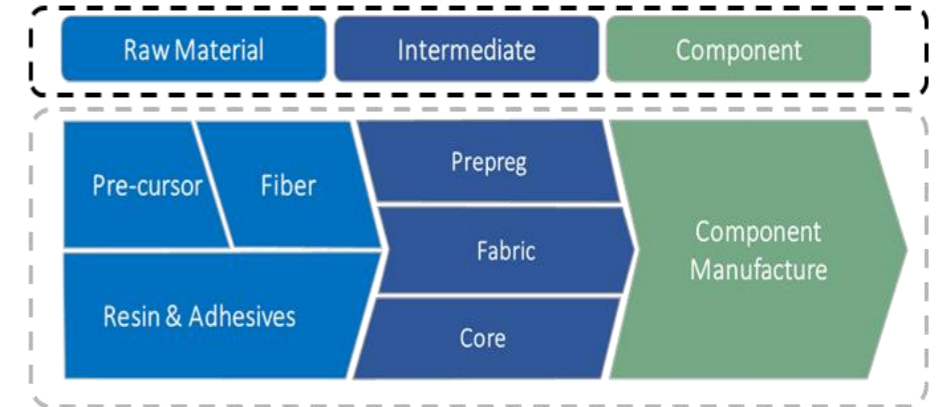
Kordsa fabrics and prepregs offer cutting edge solutions for aerospace & automotive markets

Overview of The Composites Value Chain

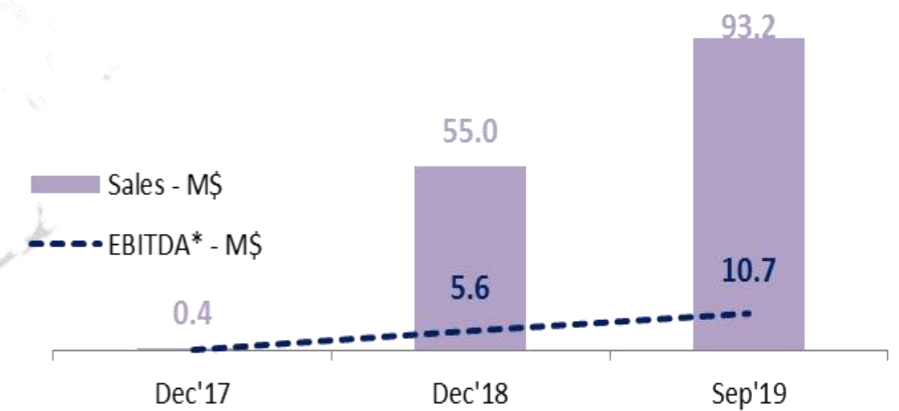
Composite Footprint



Composite Value Chain

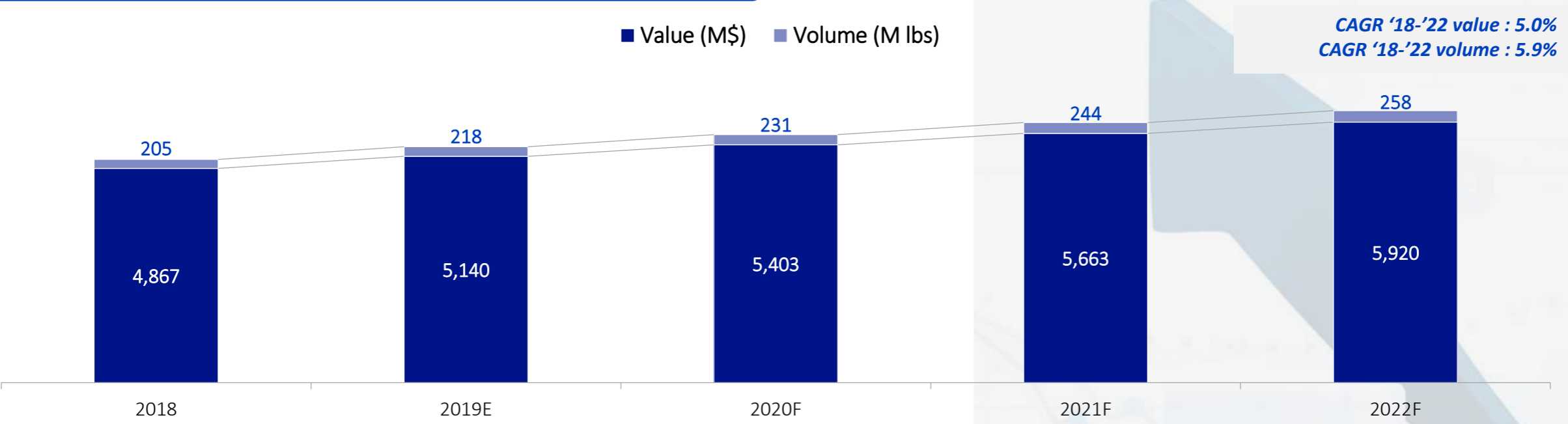


- Composite use in aerospace & automotive is increasing, due to improved material properties and weight savings over conventional materials.
- Total composite investment accounts approx. 310M USD
- Potential M&A targets are always under consideration.
- Specialization areas:
 - Fabric Development Inc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

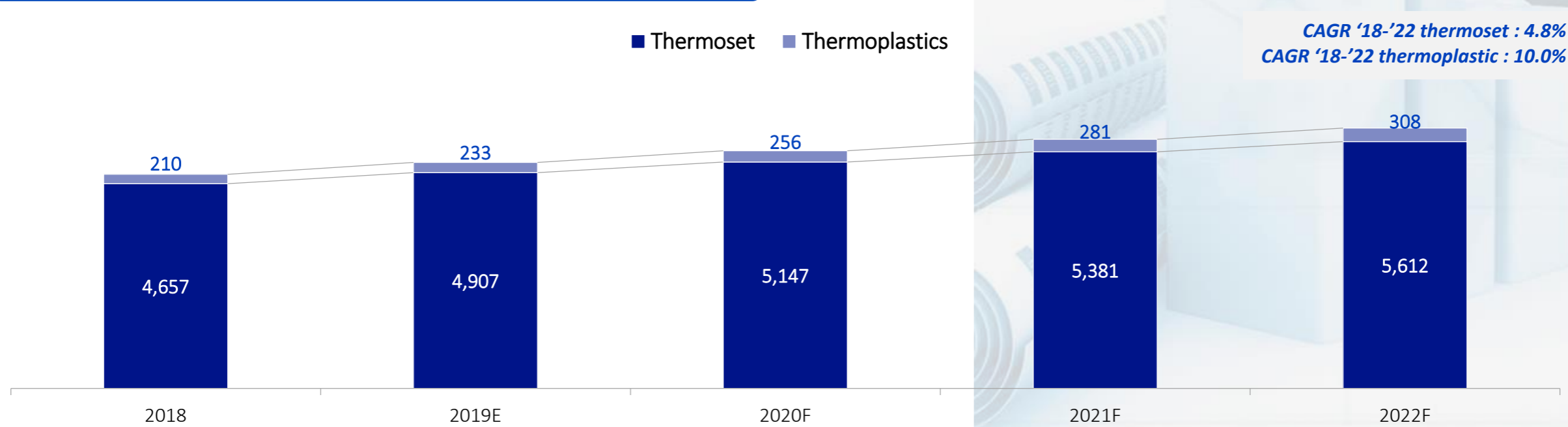


Market Dynamics – Composite Prepreg

Market Size (\$M) – Prepreg

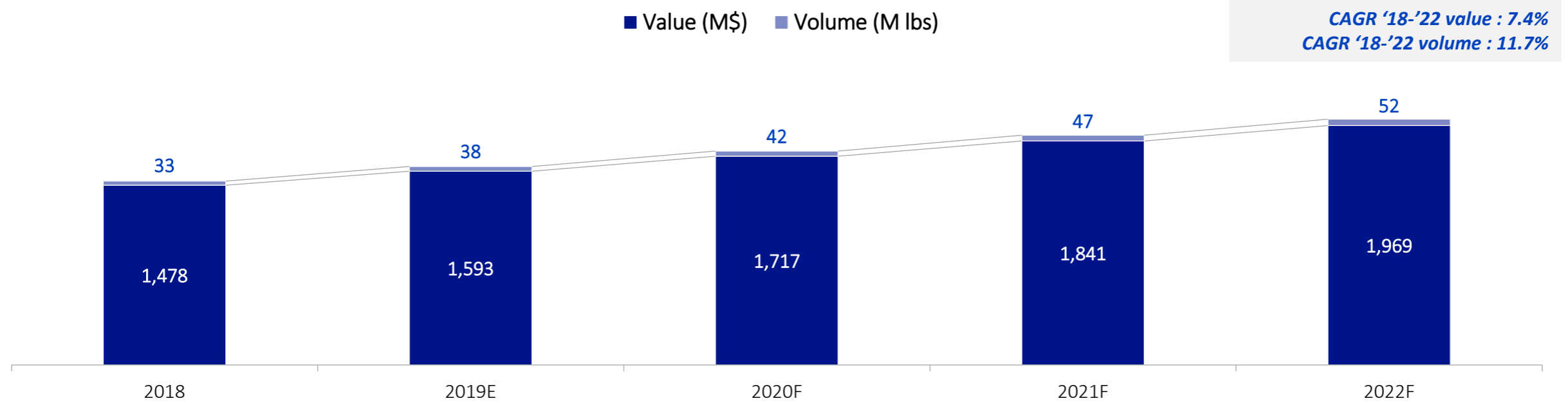


Market Size (\$M) – Thermoset and Thermoplastics

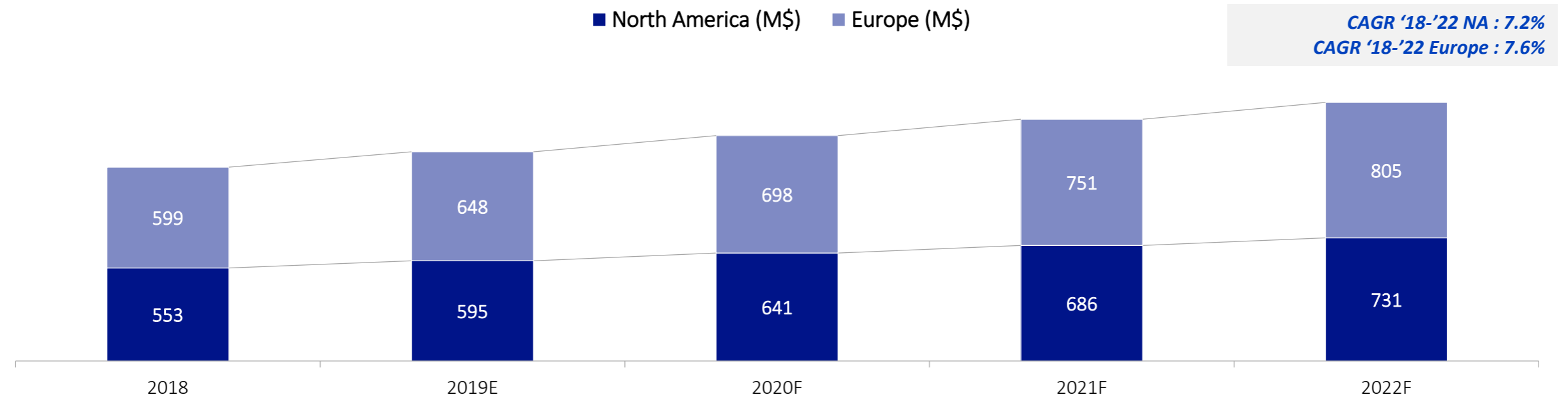


Market Dynamics – Carbon Fabric

Market Size (\$M) – Global Carbon Fiber



Market Size (\$M) – North America and Europe Carbon Fiber



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	
	Sep'18	Sep'19	Sep'18	Sep'19
Sales	2,776	3,871	608	688
Gross Profit	606	760	133	135
<i>Gross Margin (%)</i>	<i>21.8%</i>	<i>19.6%</i>	<i>21.8%</i>	<i>19.6%</i>
EBITDA*	493	583	108	103
<i>EBITDA* Margin</i>	<i>17.8%</i>	<i>15.0%</i>	<i>17.8%</i>	<i>15.0%</i>
<i>OPEX Margin</i>	<i>7.6%</i>	<i>8.5%</i>	<i>7.6%</i>	<i>8.5%</i>
Net Income	290	301	64	53
<i>Effective Tax Rate</i>	<i>18.8%</i>	<i>19.7%</i>	<i>18.8%</i>	<i>19.7%</i>
WC Turnover	2.83	3.48	2.83	3.48
CAPEX	94	118	21	21
Net Debt / EBITDA	2.85	3.07	2.12	3.09
Dept./Amort	99	150	22	27

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

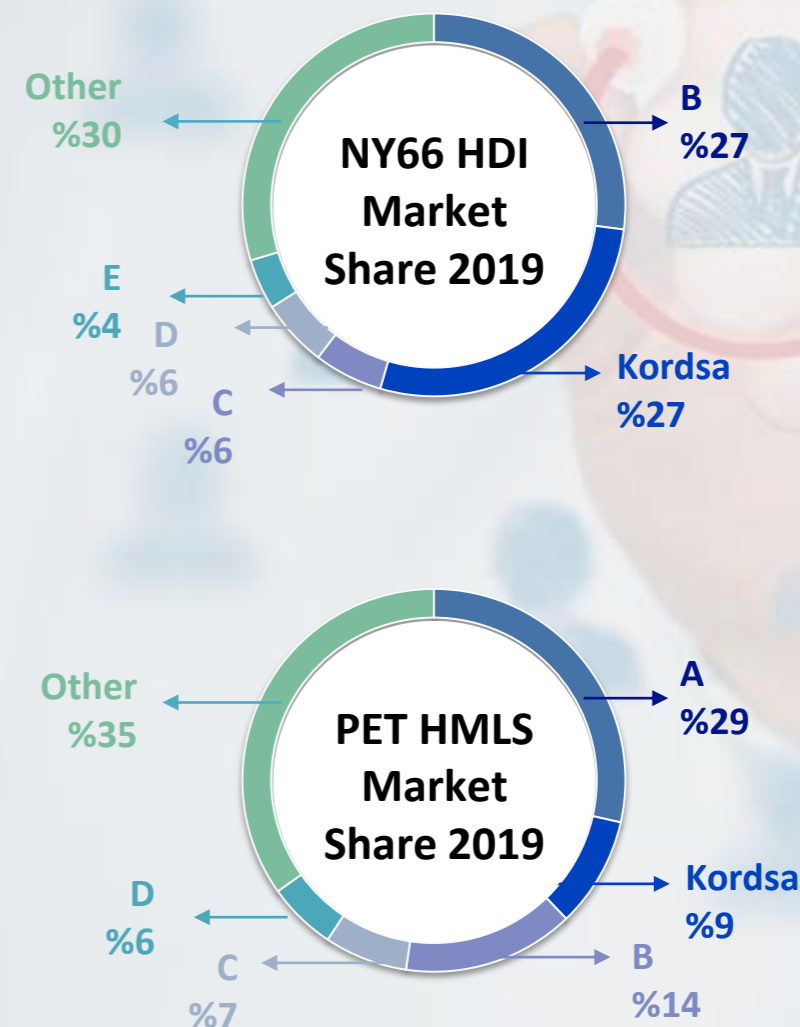
Market Leadership Based on Longstanding Strategic Partner Status with All Global Tire Players

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

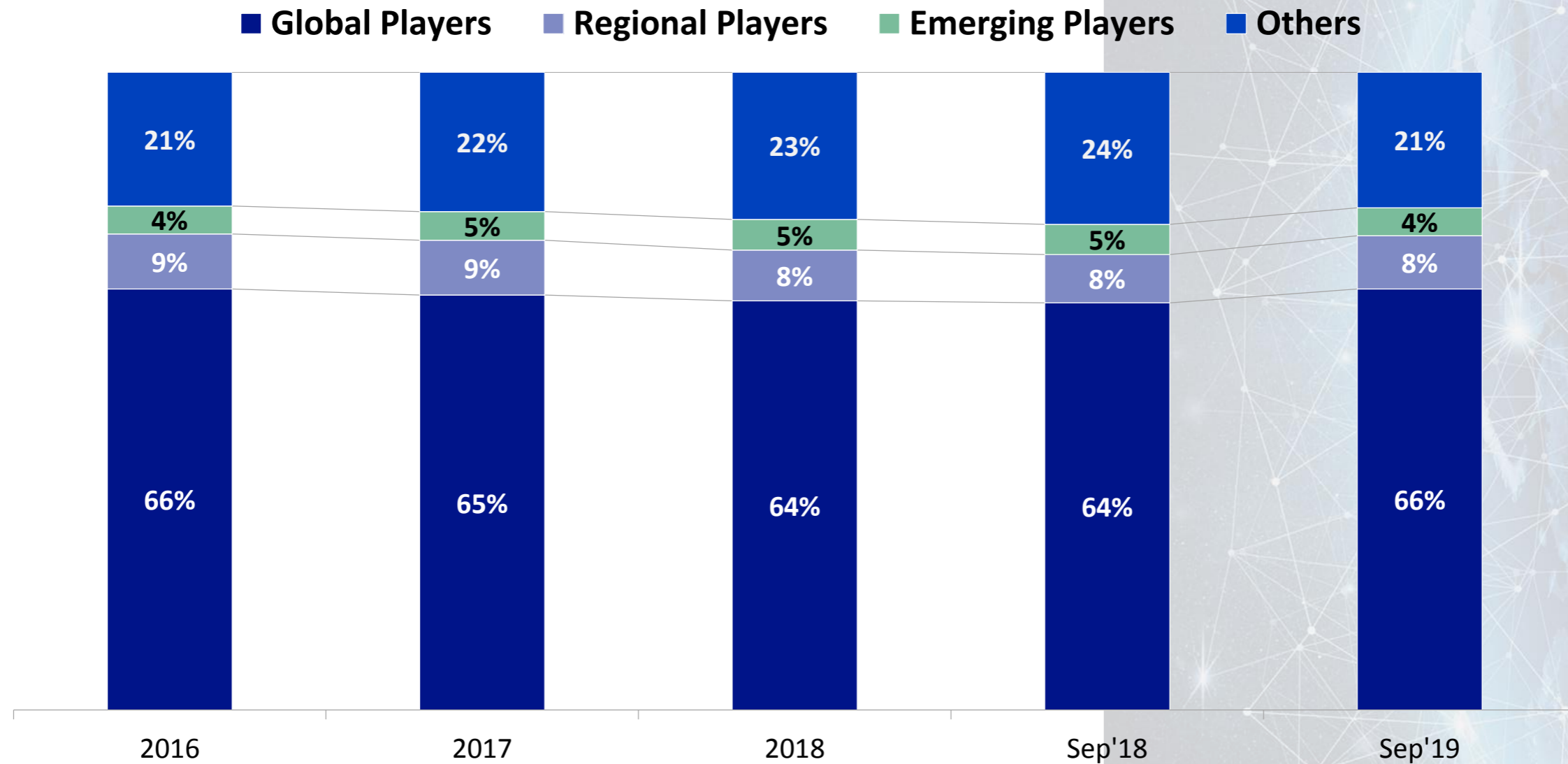
Leading market shares



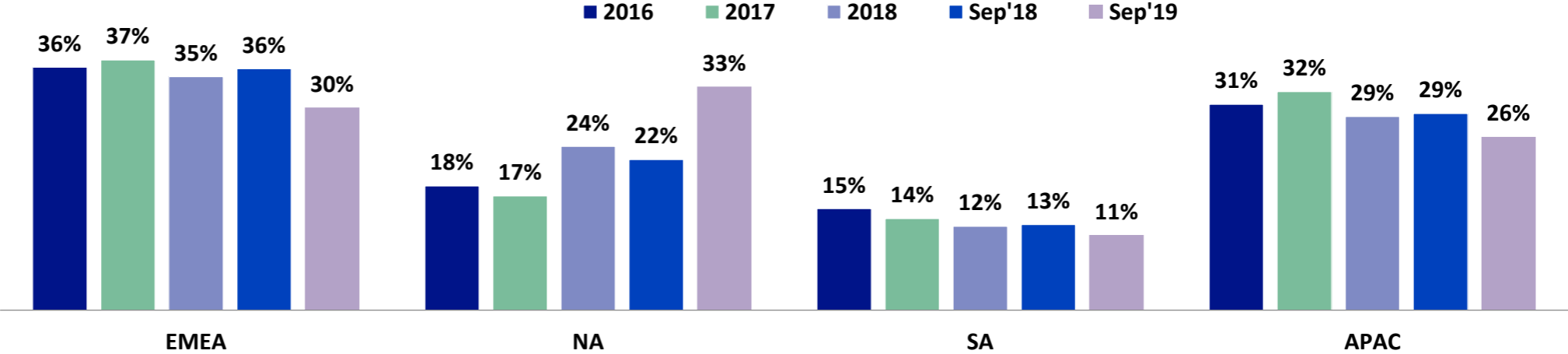
Source: Company Estimate

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

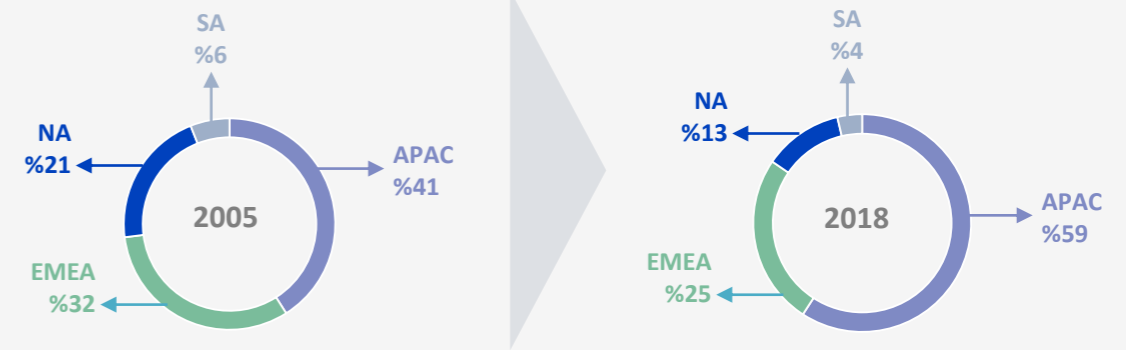
- #1 NY TCF producer
- #1 PET TCF producer
- #1 NY TCF producer in the US
- The only PET yarn, TCF and SEC producer in LATAM
- #2 NY TCF producer
- #2 PET TCF producer

Well – Positioned to Enable Volume Growth

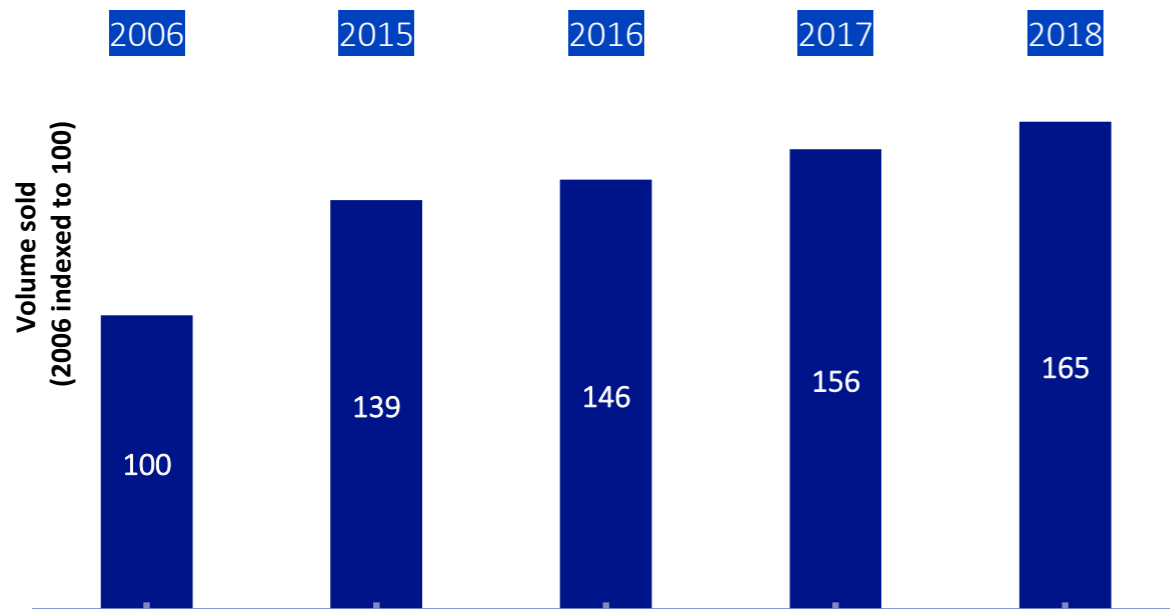
Comments

- 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 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

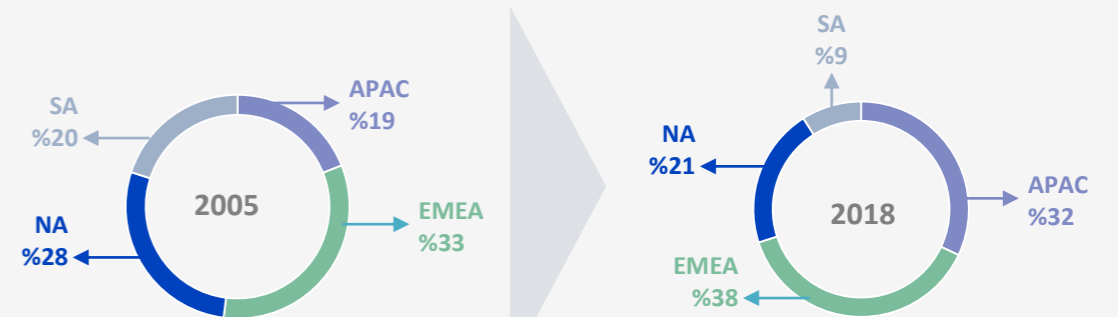


Kordsa volume development(a)



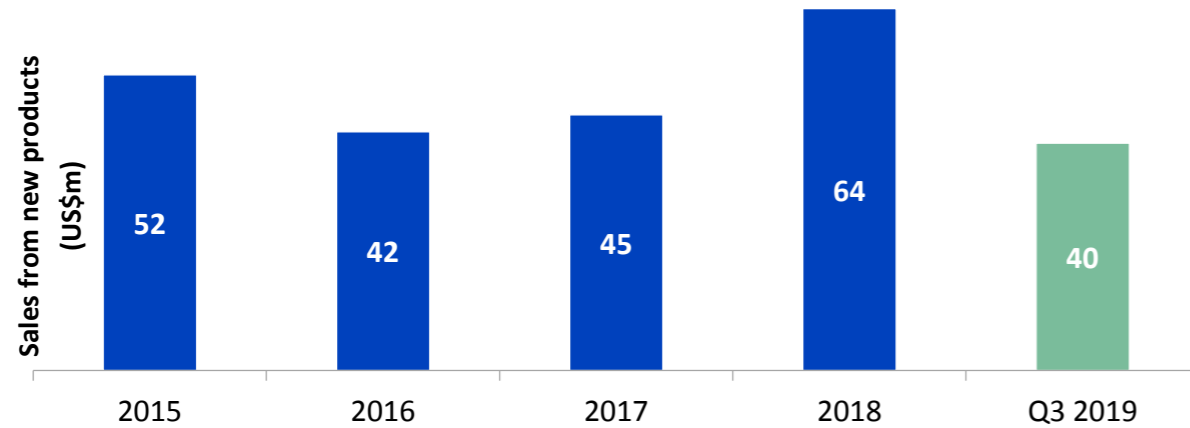
(a) Volume development adjusted for divested volumes

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



- Participation to World of Concrete Las Vegas Expo 2019, World Tunneling Congress, Naples 2019, Sao Paulo Concrete Show 2019 and Road2Tunnel



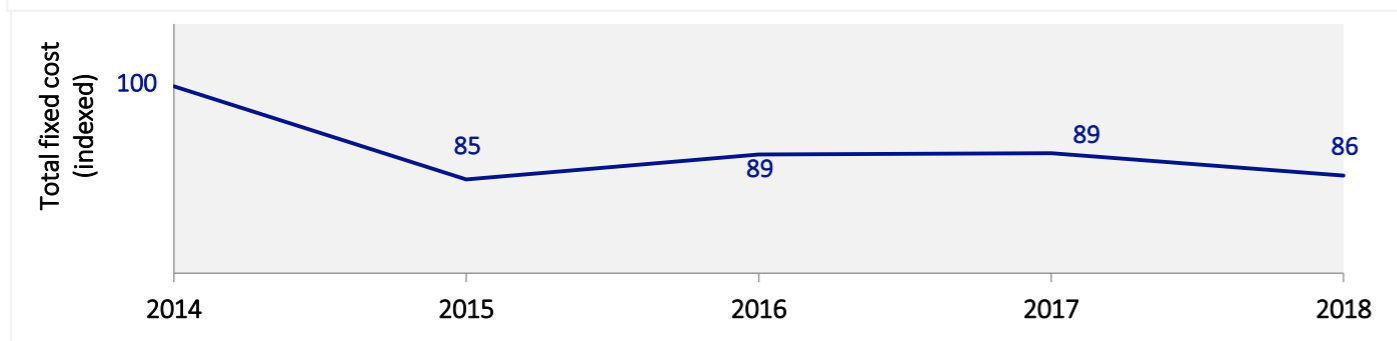
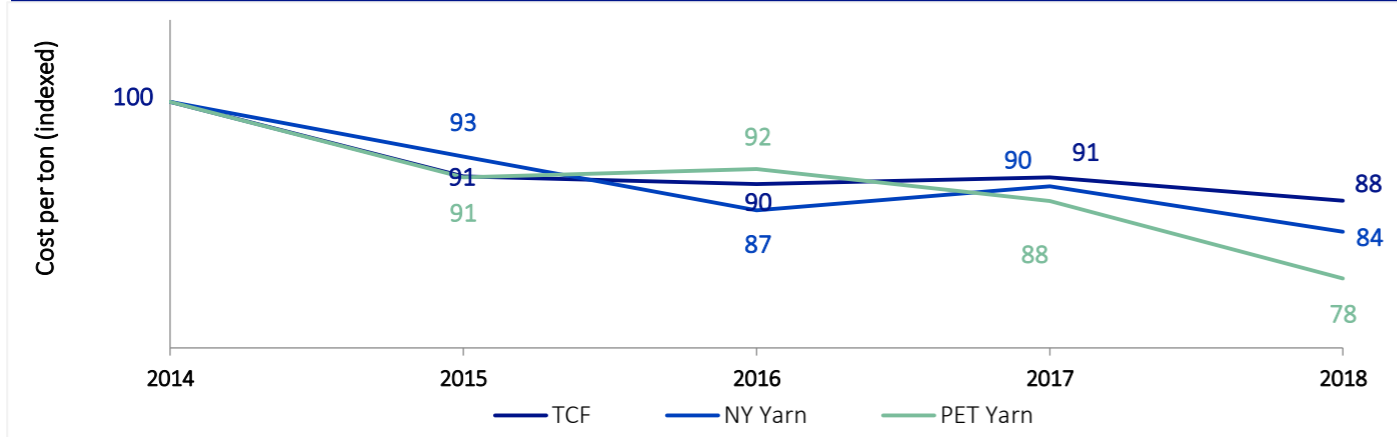
- Kordsa received the “Best Supplier Award” from Pirelli in terms of goal presence and service level criteria



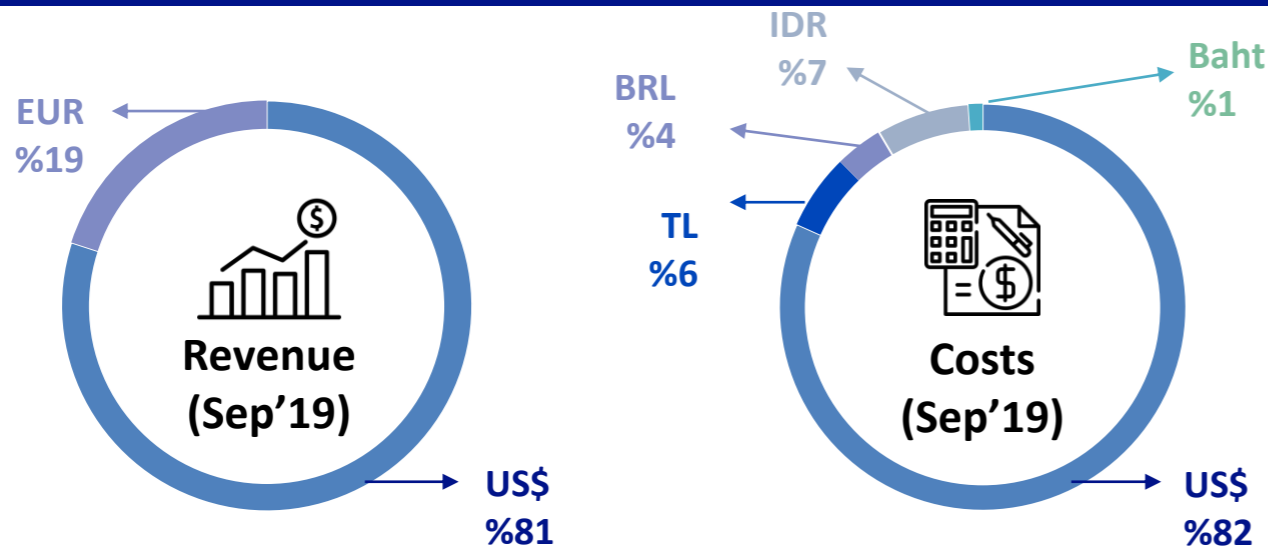
- The third meeting of the EU funded project PolynSPIRE within the Horizon 2020 program was hosted by Istanbul Chemicals and Chemical Products Exporters’ Association (IKMIB) and supported by Kordsa.

Well-Positioned for Strong Cash Generation and Dividends

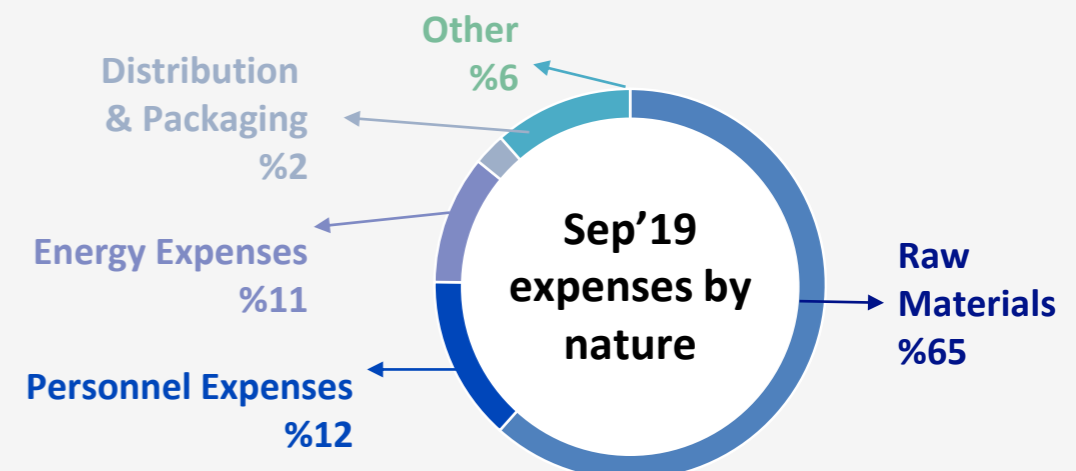
Cost development (US\$)



FX exposure



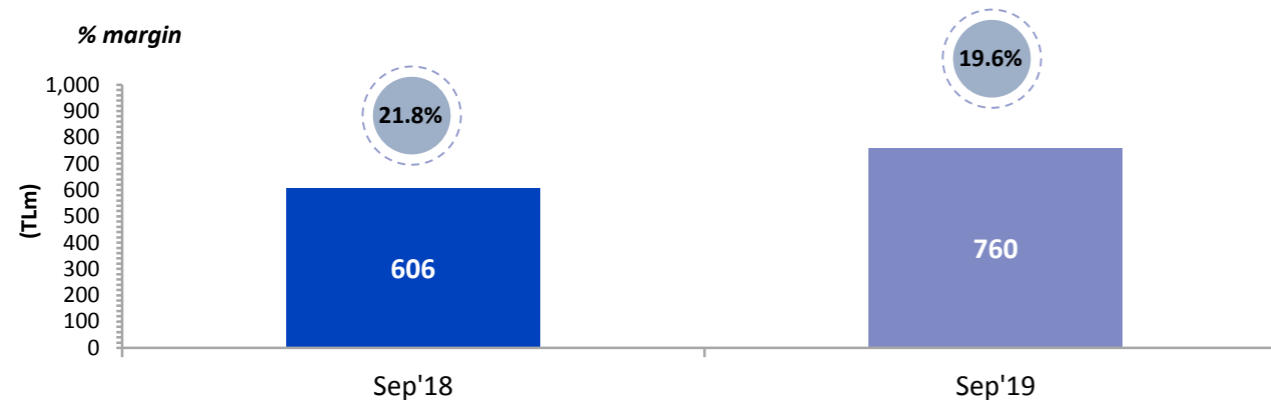
- Demonstrates value-based pricing model
- Ability to pass through raw material price volatility:
(Revenue – raw material costs) tracked as a KPI by sales team
- Conversion costs as a key metric for management KPIs (main components are personnel expenses and energy costs)



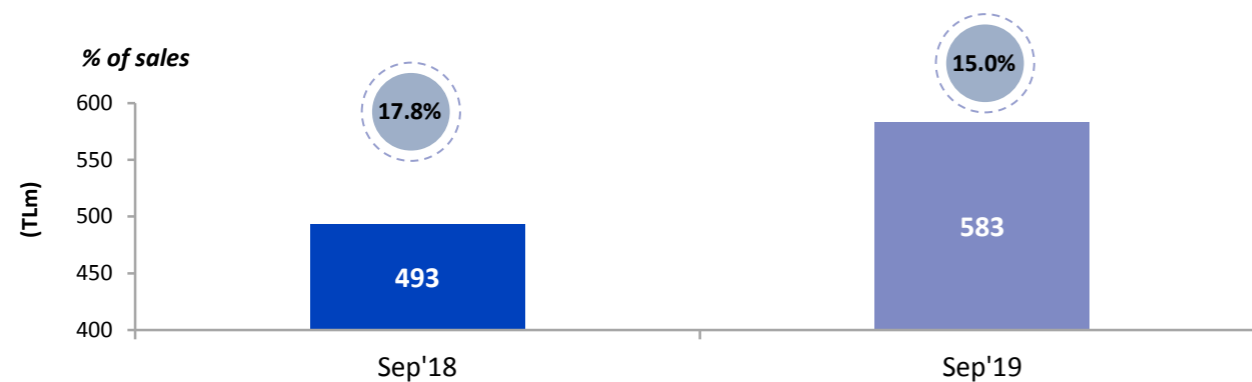
- Hard currency revenues
- FX exposure on costs => EM footprint on local costs + hard currency priced raw materials
- Benefit from US\$ appreciation vs. TL, IDR and BRL

Well-Positioned for Strong Cash Generation and Dividends

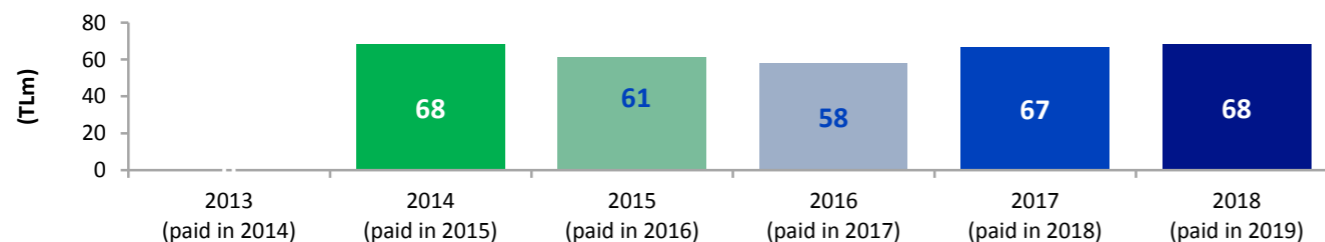
Gross profit



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 : 20%-25% TL basis; 2%-5% USD basis
- Composite business segment revenue : 130-135 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

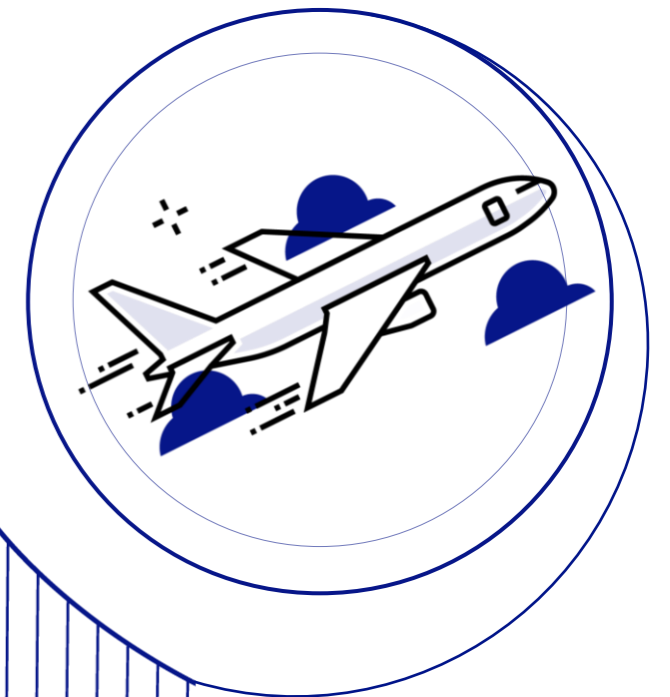
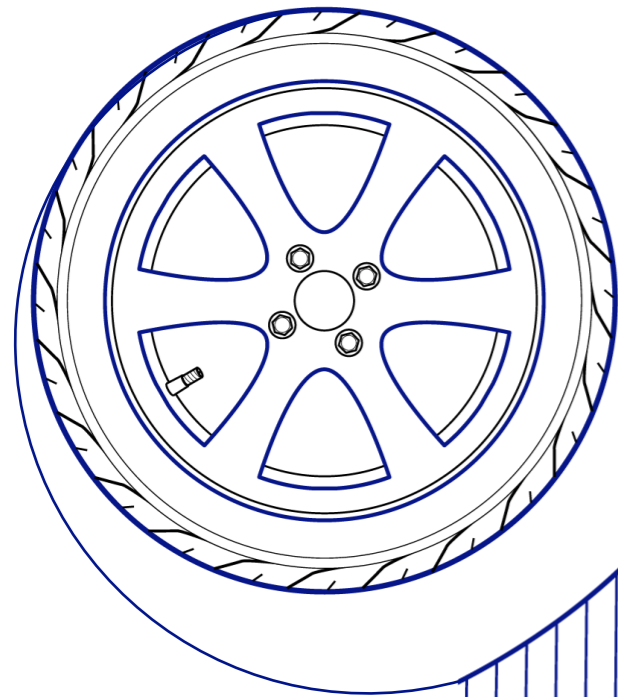
Reoccurring Creep Capex

USD 23 million

The logo for KORDSA, featuring the word "KORDSA" in a bold, black, sans-serif font. The letters "S" and "A" are enclosed within blue circles. A horizontal line is positioned below the text.

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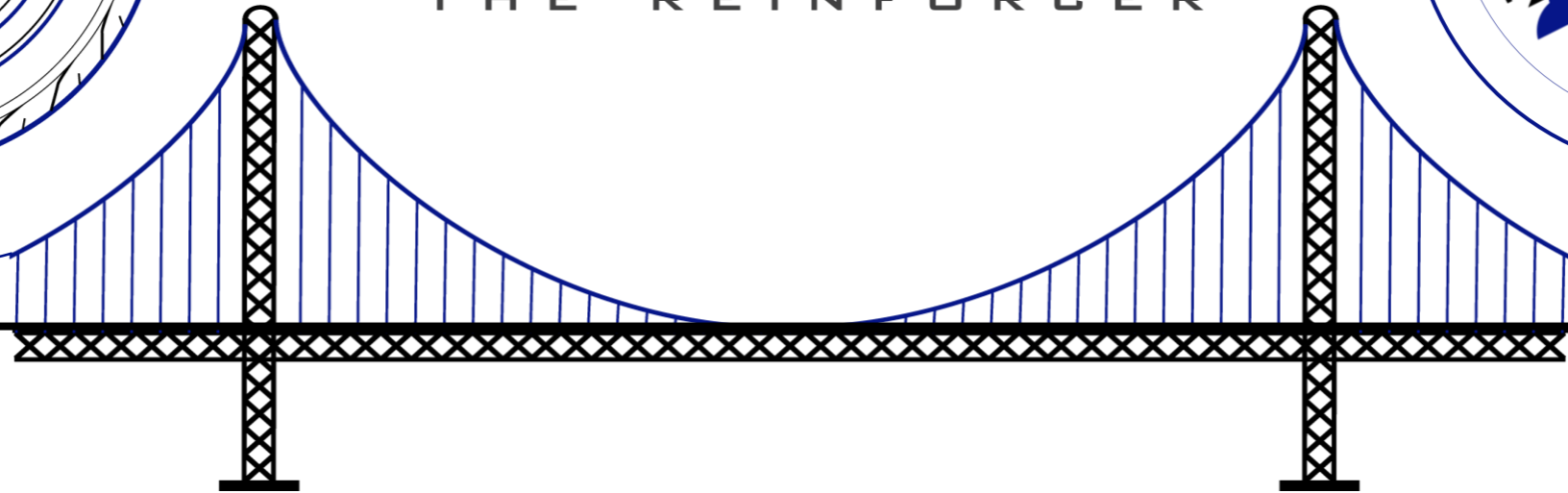
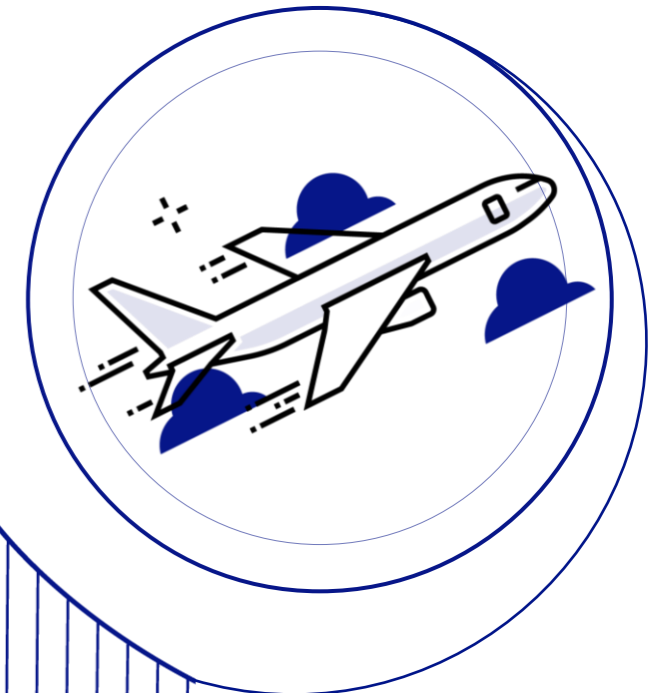
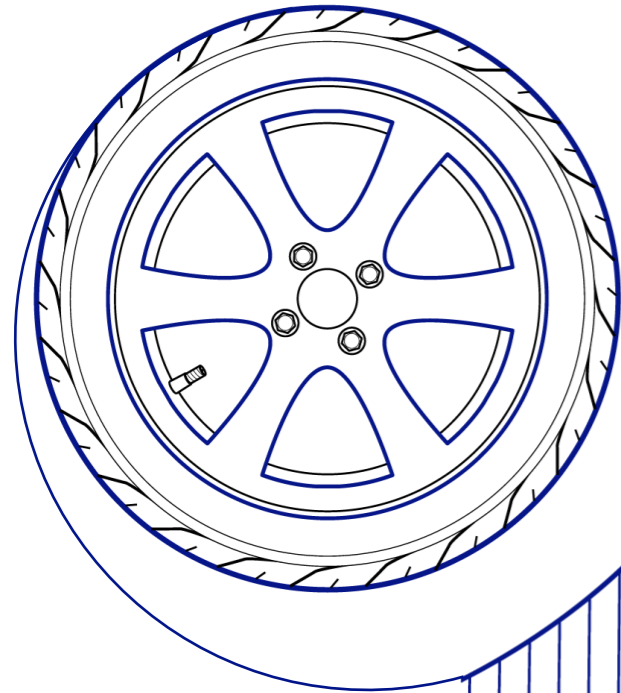


We Reinforce Life

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

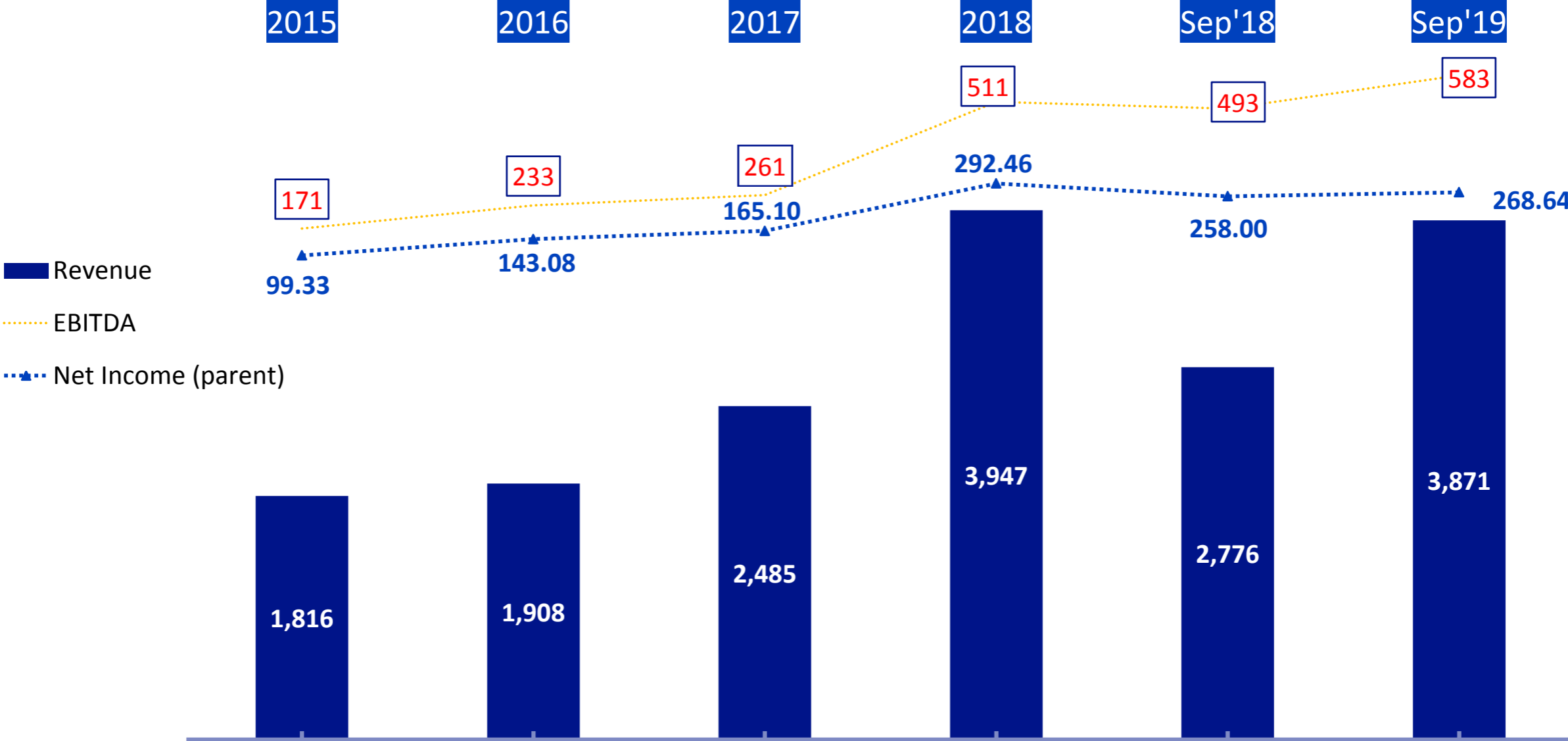
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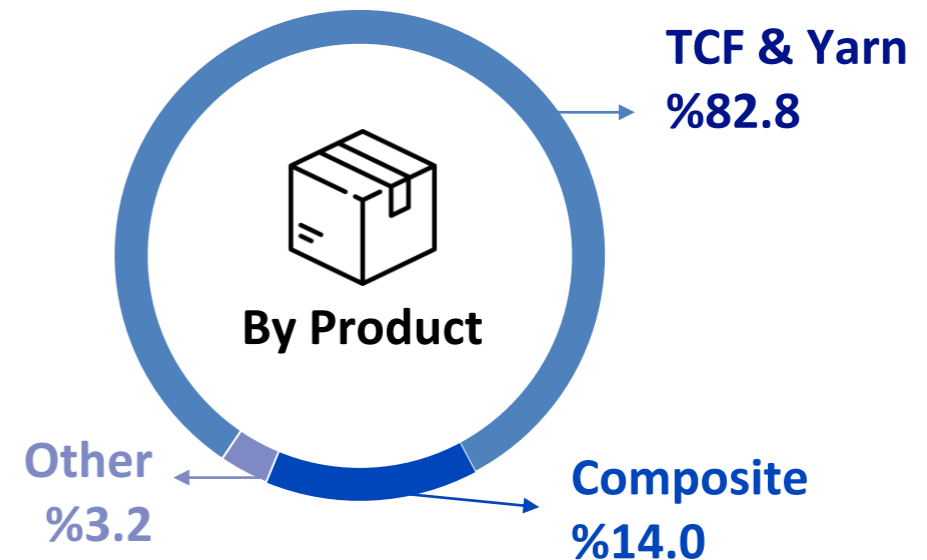
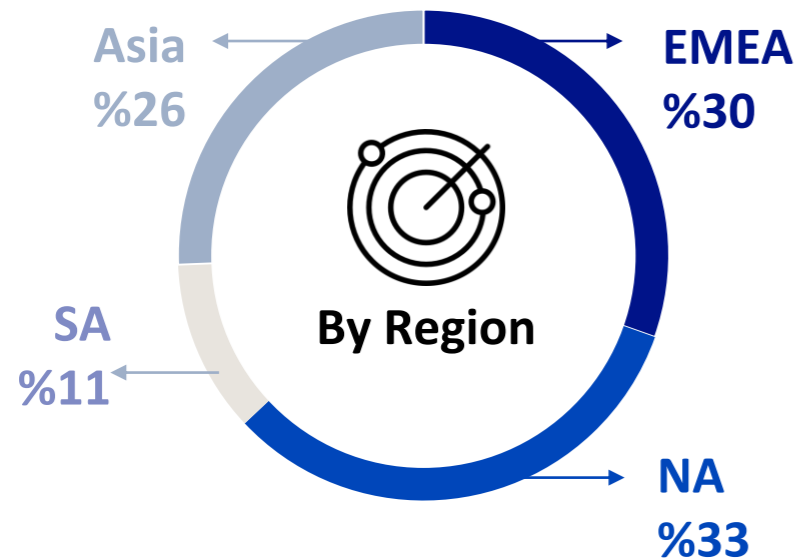
Appendix

2016 – 2019 Financial Trend (MTL)

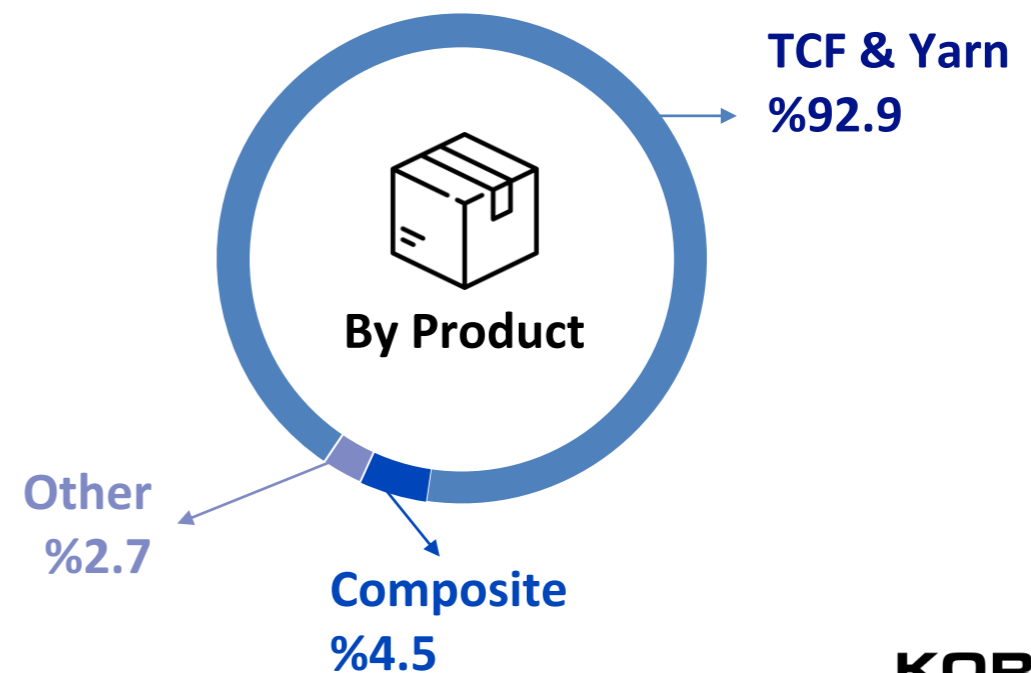
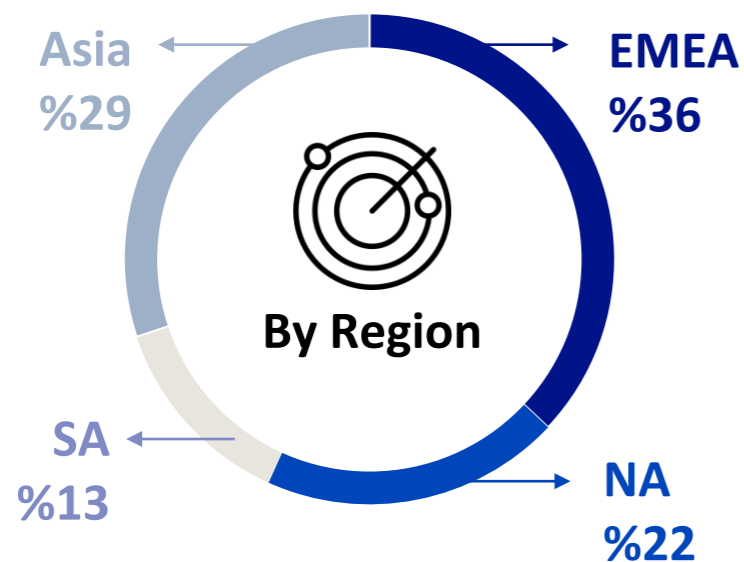


Kordsa in Brief

Sep'19 Revenue Split



Sep'18 Revenue Split



FX Rates

FX Rates as of Sep,19

Monthly Avr	Sep'19	Sep'18	2018 YE
\$/TRY	5.63	4.57	4.81
EUR/\$	1.12	1.19	1.18
\$/BRL	3.89	3.60	3.65
\$/IDR	14,173	14,052	14,237
\$/THB	31.30	32.14	32.31
Month End	Sep'19	Sep'18	2018 YE
\$/TRY	5.66	5.99	5.26
EUR/\$	1.09	1.16	1.15
\$/BRL	4.16	4.00	3.87
\$/IDR	14,174	14,929	14,481
\$/THB	30.59	32.41	32.45

Overview of The Construction Reinforcement Value Chain



Oil Derivative Ingredients

For NY66 Fibers:

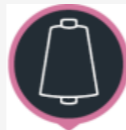
- Hexamethylenediamine (HMD)
- Adipic Acid
- NY66 Salt
- NY66 Flake

For PP Fibers:

- Polypropylene Chips

Polymerisation

Spinning



NY66 and PP Fibers



Twisting

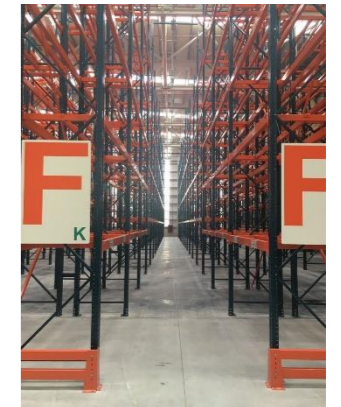
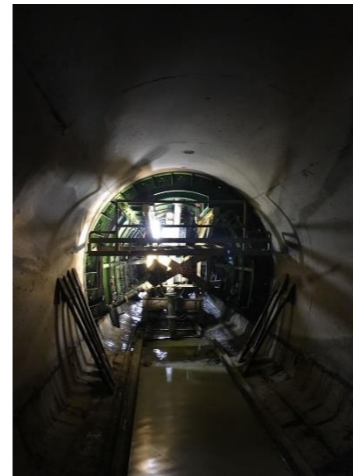


Cutting

Pucking

Dipping

Reinforced Concrete Structures



Major applications:

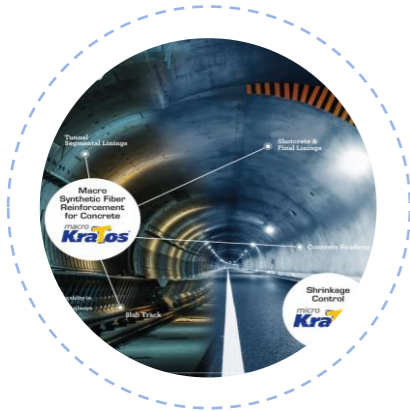
- Tunneling
- Shotcrete
- Slab on ground concretes

- Screed concrete
- Concrete roads

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

Growth Opportunities: Construction

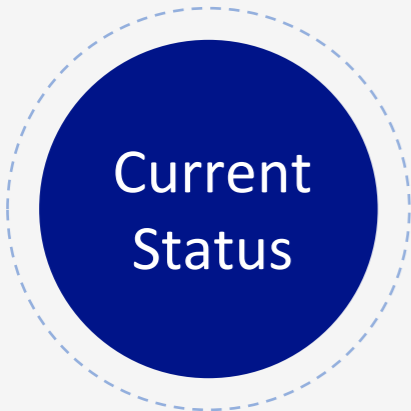
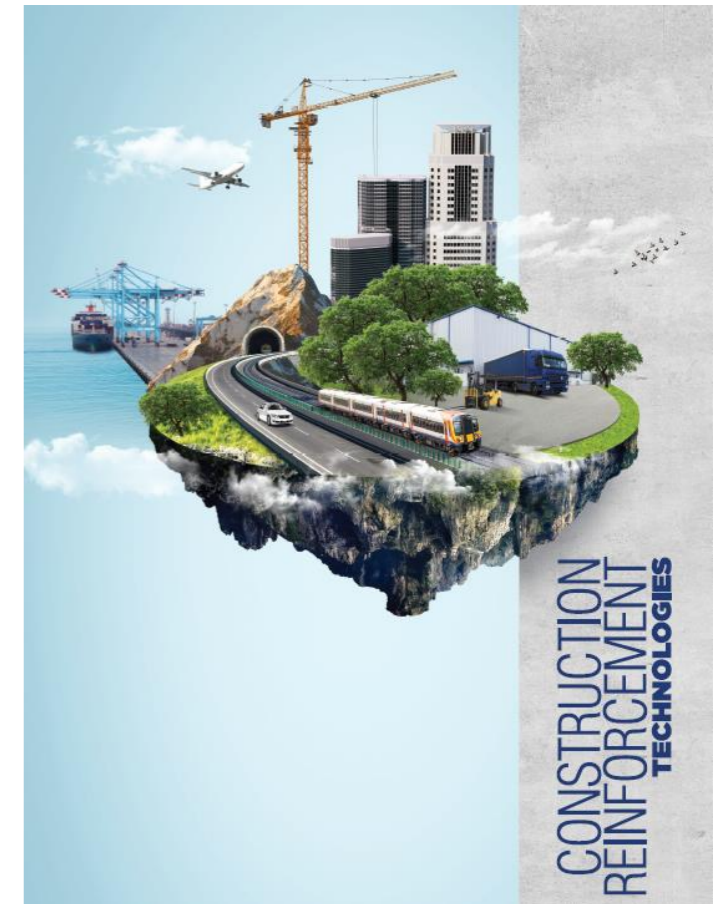
Construction Reinforcement



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!**

Discover →

