

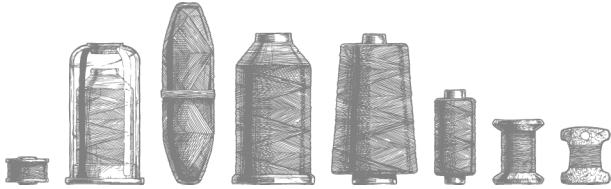


Technical textiles: Emerging opportunities and investments



March 2021

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Foreword - Ministry of Textiles



Smt. Smriti Zubin Irani
Hon'ble Minister of Textiles,
Ministry of Textiles,
Government of India

स्मृति ज़ूबिन इरानी
Smriti Zubin Irani



मंत्री
महिला एवं बाल विकास और वस्त्र
भारत सरकार
नई दिल्ली
Minister
Women & Child Development and Textiles
Government of India
New Delhi

MESSAGE

I am glad to learn that the 9th edition of TECHNOTEX 2021, is being organized by FICCI with support from the Ministry of Textiles from March 17 – 19, 2021. I welcome all the stakeholders from across the global technical textile value chain to this three-day Exhibition-cum-Conference on Technical Textiles. TECHNOTEX would prove to be a unique platform for innovative solutions, identification of new business opportunities and creation of a congenial environment for growth of technical textile sector.

Government of India has ambitious plans and programmes to develop India as one of the leading hubs of Technical Textiles globally and set up a robust manufacturing base in India. Simultaneously, Government is also working towards a sustainable and healthy market growth in the domestic sector as well as encourage exports.

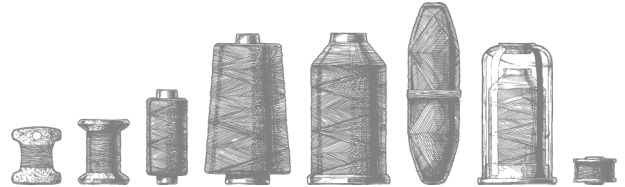
Government has taken many positive initiatives such as rolling out Performance Linked Incentives (PLI) and National Technical Textiles Mission (NTTM), which will provide much desired impetus to the Technical Textile sector.

I am sure TECHNOTEX would play an instrumental role in realising the true potential of this sector in India.

I wish the programme all the very best.


(Smriti Zubin Irani)

Ministry of Textiles : Room No. 129, 'D' Wing, Udyog Bhawan, New Delhi-110011, Phone : 23061385, 23063779, Fax : 23061575



Foreword - Ministry of Textiles



Sh. Upendra Prasad Singh,
Secretary,
Ministry of Textiles,
Government of India

यू. पी. सिंह, भा.प्र.से.
सचिव
U. P. Singh, IAS
Secretary



भारत सरकार
वस्त्र मंत्रालय
उद्योग भवन, नई दिल्ली - 110 011
GOVERNMENT OF INDIA
MINISTRY OF TEXTILES
UDYOG BHAWAN, NEW DELHI - 110 011

March 12, 2021

MESSAGE

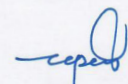
Technical textile is a sunrise technology which offers immense potential for paradigm transformations in every aspect of modern life. It has a wide horizon of applications ranging from humble agriculture on one end to most advanced space applications on the other end. In between these two ends of the spectrum lie path breaking solutions for various strategic sectors and plethora of opportunities.

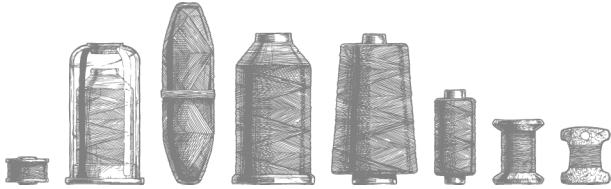
India has a lot of ground to cover in technical textiles and I am happy to share that Government has launched National Technical Textiles Mission in February 2020, with the aim of turning India into a 40 Billion USD market by 2024 with exports target of 12 Billion USD. In pursuance to the Hon'ble Prime Minister's clarion call on 'Atma Nirbhar Bharat' we would be rolling out the Production Link Incentive scheme which will play a catalytic role in providing equitable and resilient manufacturing sector.

FICCI with support from Ministry of Textiles, have been jointly organizing TECHNOTEX for the last many years and happy to see that the 9th edition of TECHNOTEX an International Exhibition-cum-Conference on Technical Textiles is scheduled from March 17-19, 2021.

This initiative of bringing global industry under one roof is an excellent platform to showcase the strength of India Technical Textiles sector.

I wish Technotex 2021 a grand success.


(U.P. Singh)



Foreword - FICCI

At the very outset, I would like to thank Ministry of Textiles for jointly organizing the 9th edition of TECHNOTEX 2021 with FICCI. I take this opportunity to congratulate the Ministry for the prudent plans being rolled out such, as the Performance Linked Incentives (PLI) and National Mission on Technical Textiles (NMTT) for the promotion of technical textiles and manmade fibres.

We truly believe that this will provide the much-desired impetus to the sector and play a catalytic role in developing India as one of the leading hubs of Technical Textiles globally while augmenting the manufacturing capacity in India. Simultaneously, efforts towards building a sustainable and healthy market growth in the domestic sector, including exports, is commendable.

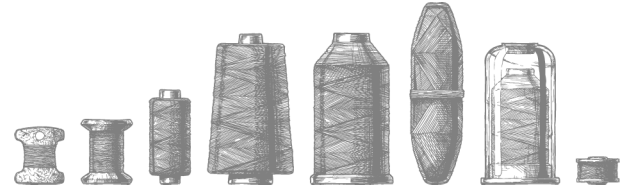
The global technical textiles market was estimated at USD193 bn in 2020 and is expected to reach USD274 bn by 2027, growing at CAGR of 5.1% during 2020-27 backed by increasing global demand for technical textiles across industry and expanding base of new products based on application research. The Indian technical textile market was valued at USD14 bn in 2020 and is expected to reach USD23.3 billion by 2027, growing at a CAGR of 7.6%, which is among the fastest growth rate in the Asia-Pacific region.



Dilip Chenoy
Secretary General
FICCI

This is the most promising time for the sector in India as the government at the highest level is deeply engaged with the stakeholders in devising a robust roadmap for the industry. The sector has the potential to contribute significantly to the Hon'ble Prime Minister's vision to become a USD5 trillion economy in the next few years, and I am hopeful that as we move closer to achieving this milestone, the technical textiles sector would also grow accordingly.

I acknowledge KPMG India for bringing out this report with FICCI, highlighting the current market scenario in the Technical Textile sector and tabulating recommendations for policy interventions.



Foreword - KPMG in India

India is emerging as key investment-centric economy in the global technical textile market, with multifold growth potential, especially in high-growth sub-segments. In fact, India's emergence as one of the top countries in the world to export masks and protective gear during the Covid-19 pandemic is a testament of India's ability to scale up and capitalize on global market opportunities in technical textiles.

Continuous effort by the Government through implementation of various policy initiatives and schemes on pan-India basis has further catapulted the growth of the sector in India. Recently, a Production-Linked Incentive (PLI) Scheme for Textile products with focus on Man-Made Fibre segment and technical textiles has been approved by the Government, while the formulation of Focus Product Incentive Scheme (FPIS) under the ambit of PLI Scheme is currently in process. In addition, Ministry of Textiles has launched National Technical Textiles Mission 2020 to provide impetus to application based research and strengthening India's technical textiles value chain. These initiatives will not only enhance India's manufacturing capabilities in technical textiles sector, but also aid in capturing substantial share in global trade and providing impetus to the 'Atmanirbhar Bharat' initiative by focusing on import substitution.

In order to capitalize on market opportunities presented by high-value/high-tech sub segments such as Indutech, Mobiltech, etc., India needs to focus on capital infusion, skilling upgradation, technology transfer as well as development of innovative products, processes and applications on a continuous basis.

It gives me immense pleasure to share with you that we have come up with a report on the technical textile sector, providing a detailed overview of technical textiles landscape at a global and national level. The report also provides insights on the opportunities, key growth drivers as well as the interventions required to be undertaken by various stakeholders for providing a conducive business ecosystem for technical textiles industry and ensuring that the sector reaches its true potential in India.

We are confident that this report will be useful for the entrepreneurs, industry players and the Government in understanding the current market scenario of technical textiles and will play a pivotal role in shaping the growth of the sector as a manufacturing and export hub.

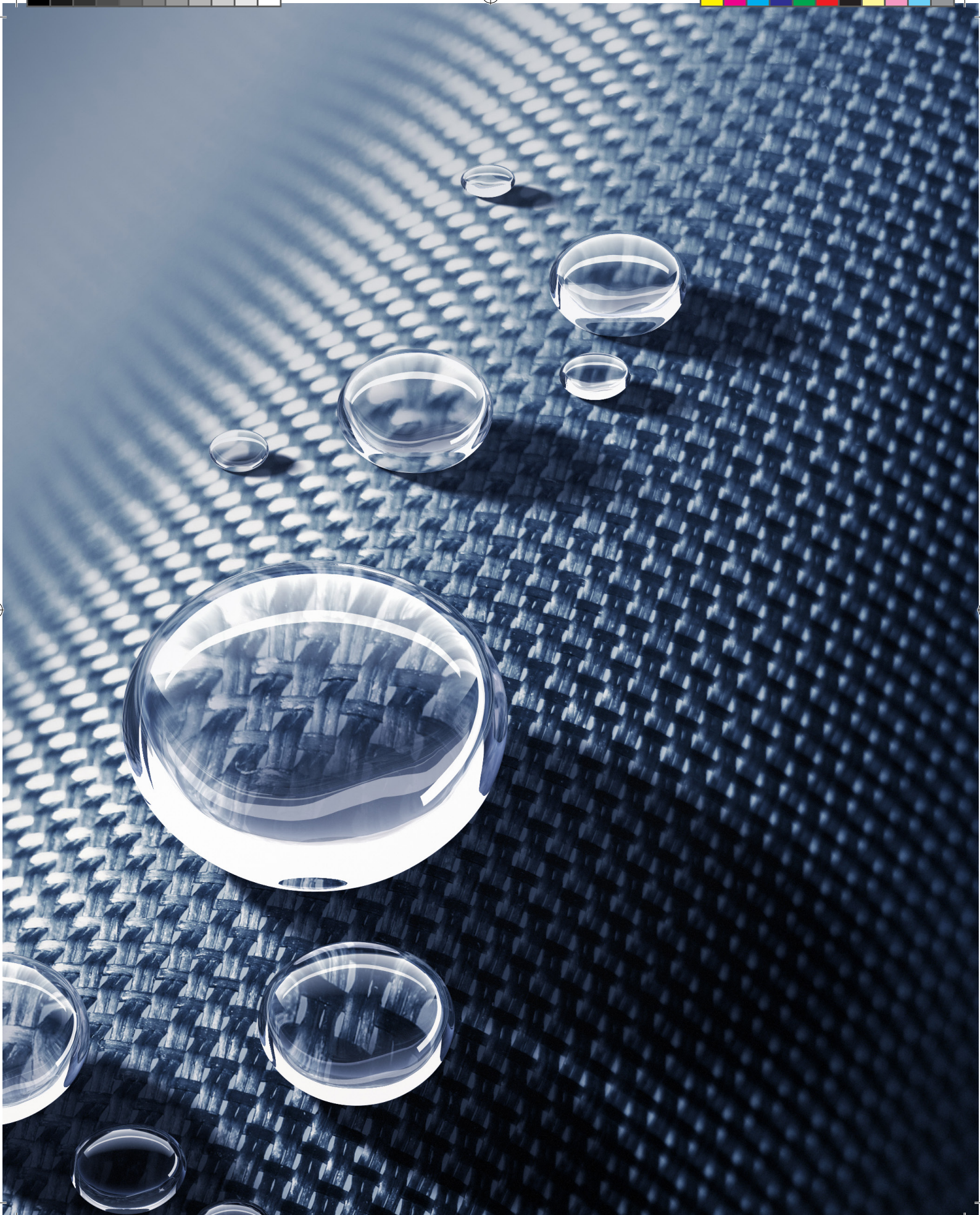
We would like to thank Ministry of Textiles & FICCI for providing KPMG in India an opportunity to present this report to industry stakeholders at Technotex 2021.



Mohit Bhasin
Partner
Government Advisory
KPMG in India

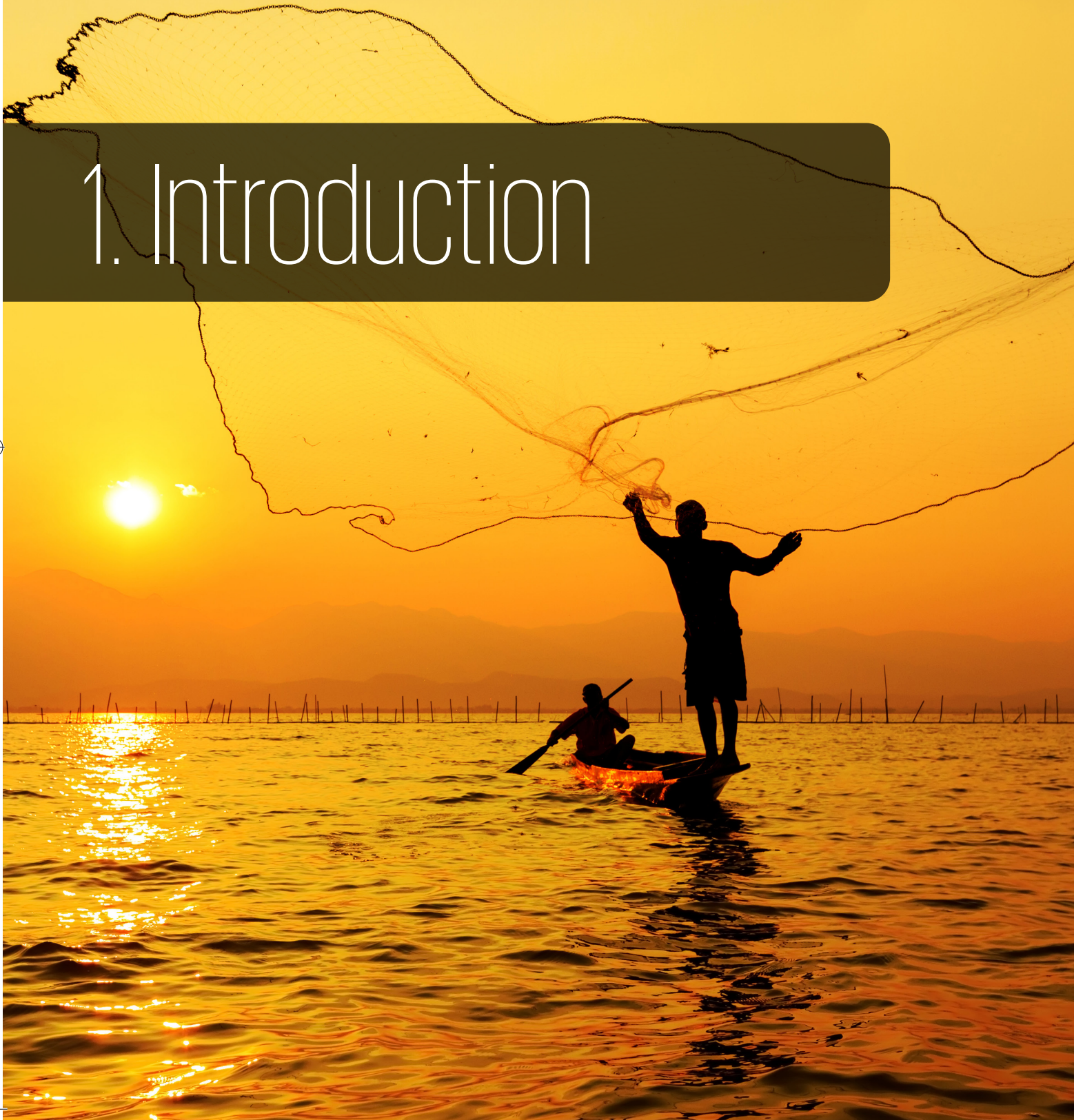
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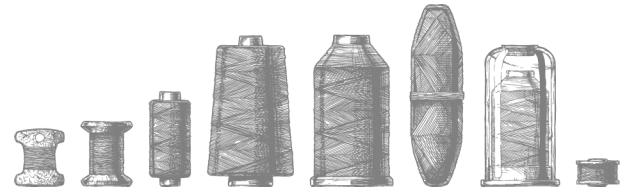




1. Introduction















Introduction



Technical textiles refers to textile products that primarily focus on technical performance and functionality instead of aesthetic purposes, as in the case of conventional textiles. The end-usage of these products cater to wide array of industries including automobile, industries, agriculture, home care, construction, defense, aeronautics, healthcare, etc.,

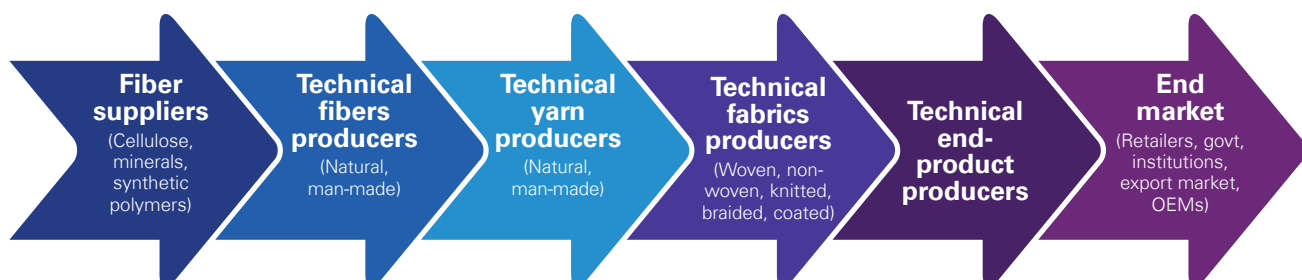
With the rise in dominance of technical textiles, the market has been classified into the following 12 segments based on their application:

Figure 1: Sub-segments of technical textiles

					
InduTech	MobilTech	SportTech	BuildTech	HomeTech	MediTech
Industrial brushes, computer printer ribbon, composites, ropes and cordages, coated abrasives, drive belts, conveyor belts, etc.,	Seat cover, upholstery, tyre cord fabrics, tufted carpet, insulation felts, seat belts, cabin filters, helmets, etc.,	Sports nets, parachutes, artificial grass and turfs, sport composites, hot-air balloons sleeping bags, etc.,	Floor & wall coverings, scaffolding nets, awnings & canopies, etc.,	Pillows, mattresses, blinds, mosquito nets, carpet backing cloth, filters, vacuum cleaner consumables, etc.,	Contact lenses, baby diapers, sanitary napkins, surgical sutures, surgical disposables, etc.,
					
ClothTech	AgroTech	ProTech	PackTech	OekoTech	GeoTech
Interlinings, labels, elastic narrow fabrics, shoe laces, etc.,	Fishing nets, bird protection nets, mulch mats, crop covers, shade nets, etc.,	Bullet-proof protective clothing, high visibility clothing, fire retardant products, etc.,	Soft luggage, woven jute sacks, wrapping fabric, tea bag filter paper, etc.,	Waste management, environmental protection, recycling	Geo-composites, geo-bags, geogrids, geonets

Technical textiles market value chain:

Figure 2: Technical textiles value chain

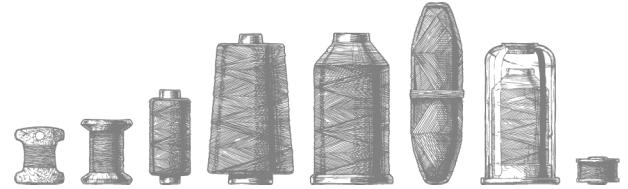




2. Global Scenario



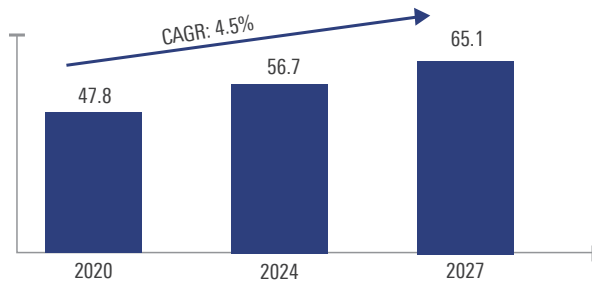
Global scenario¹



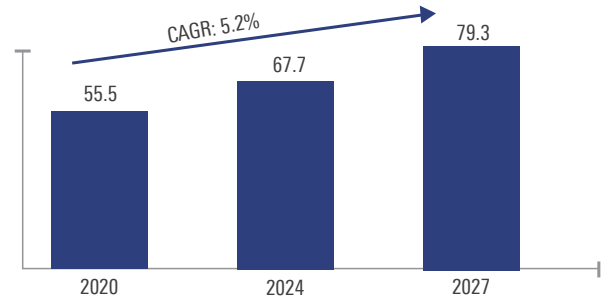
The global technical textiles market is estimated at USD193 Bn in 2020 and is expected to reach USD274 Bn by 2027, growing at CAGR of 5.1% during 2020-27 backed by increasing global demand for technical textiles across industry and expanding base of new products based on application research.

Figure 3: Global technical textiles market, by region (USD Bn)

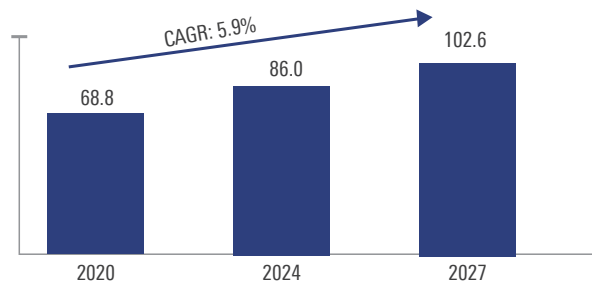
North America (in USD Bn)



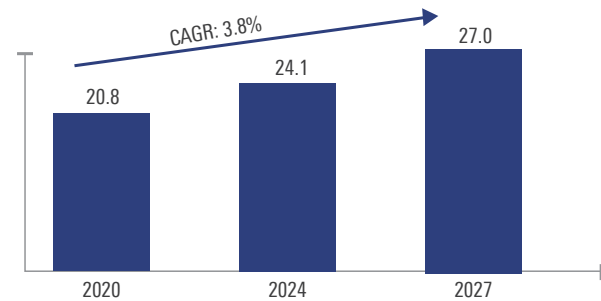
Europe (in USD Bn)



Asia-Pacific (in USD Bn)



LAMEA (in USD Bn)

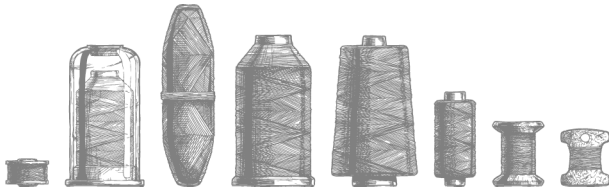


North America: The U.S., Canada, and Mexico; **Europe:** UK, Germany, France, Spain, Italy, and rest of Europe; **Asia-Pacific:** China, Japan, India, Australia, South Korea, and rest of Asia-Pacific; **LAMEA:** Brazil, Saudi Arabia, South Africa, and rest of LAMEA

Source: Global technical textiles market (2020-27) - Allied Market Research ; KPMG Analysis

The Asia-Pacific region is poised to grow fastest and is valued at USD68.8 Bn in 2020 and is projected to grow at impressive rate with CAGR of 5.9% to reach USD102.6 Bn by 2027. This growth is attributed to sectors including healthcare, automotive, construction and industrial development in the region.

1. Global technical textiles Market (2020-27) - Allied Market Research



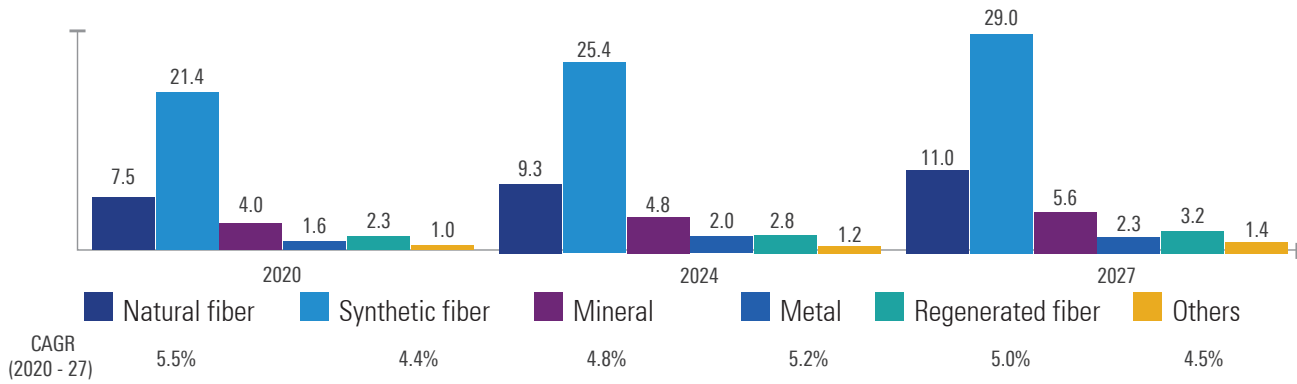
The technical textile market is segmented based on the following parameters:

Material

The market is categorized into natural fiber, synthetic polymer, mineral, regenerated fiber, and others based on raw material used. Currently the market is dominated by Synthetics fibre, followed by natural fibres, minerals and others.

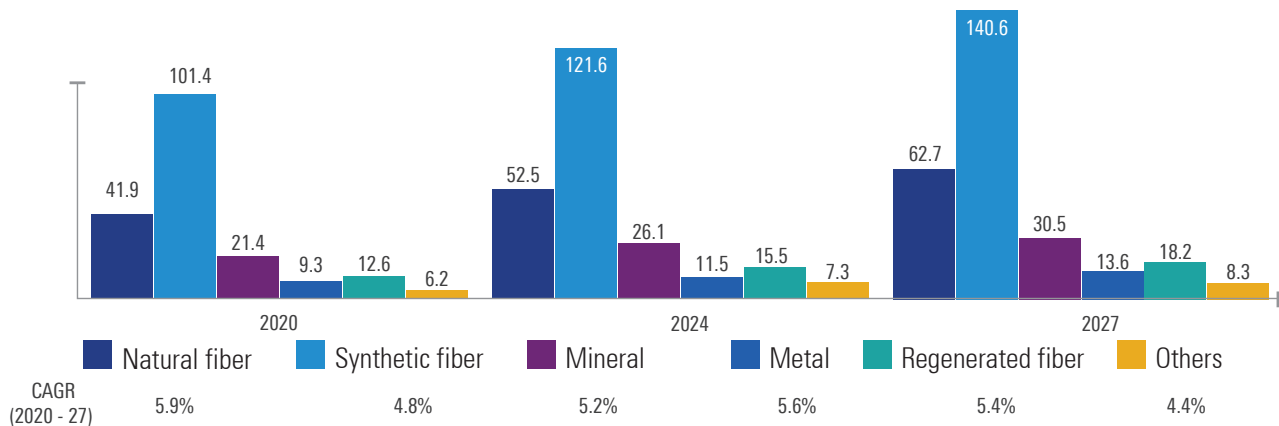
The natural fiber segment is expected to grow the most with CAGR of 5.5% in terms of volume during the period 2020-2027. This is attributed to rise in demand for eco-friendly and sustainable products across industries such as packaging, automotive, healthcare, and others.

Figure 4: Global technical textiles market, by material, (in '000 kilotons)

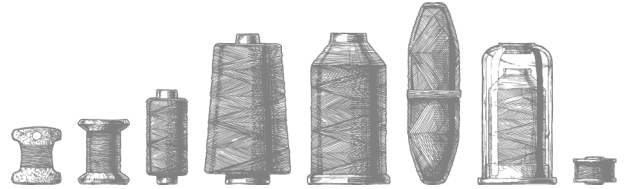


Source: Global technical textiles market (2020-27) - Allied Market Research; KPMG Analysis

Figure 5: Global technical textiles market, by material (USD Bn)



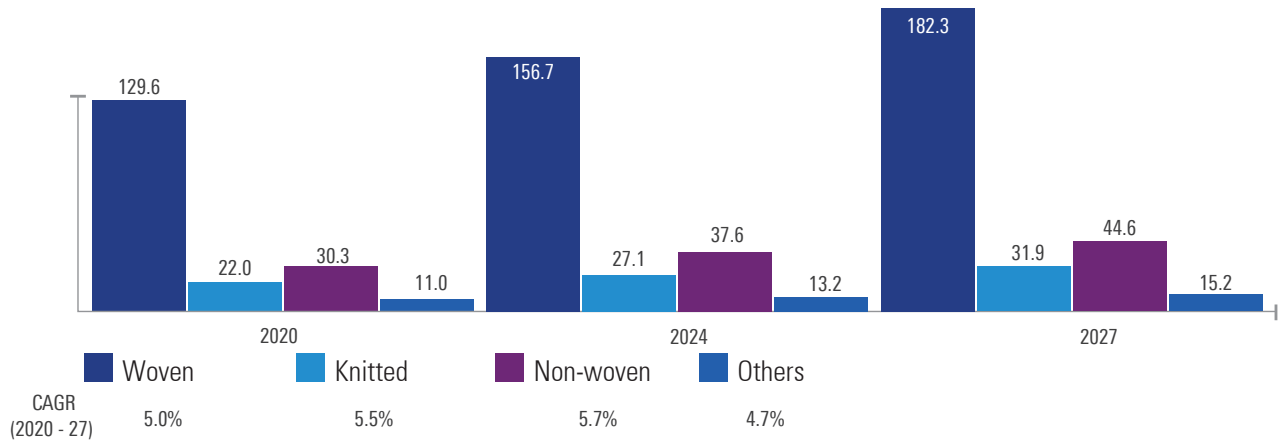
Source: Global technical textiles market (2020-27) - Allied Market Research; KPMG Analysis



Process

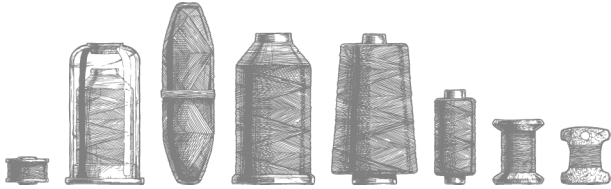
In terms of processes followed during intermediary stage, technical textiles is divided into woven, knitted, non-woven and others. Woven segment accounted for the highest share of 67%, followed by Non-Woven (16%), Knitted (11%) and others (6%) in 2020.

Figure 6: Global technical textiles market, by process (USD Bn)



Source: Global technical textiles market (2020-27) - Allied Market Research; KPMG Analysis



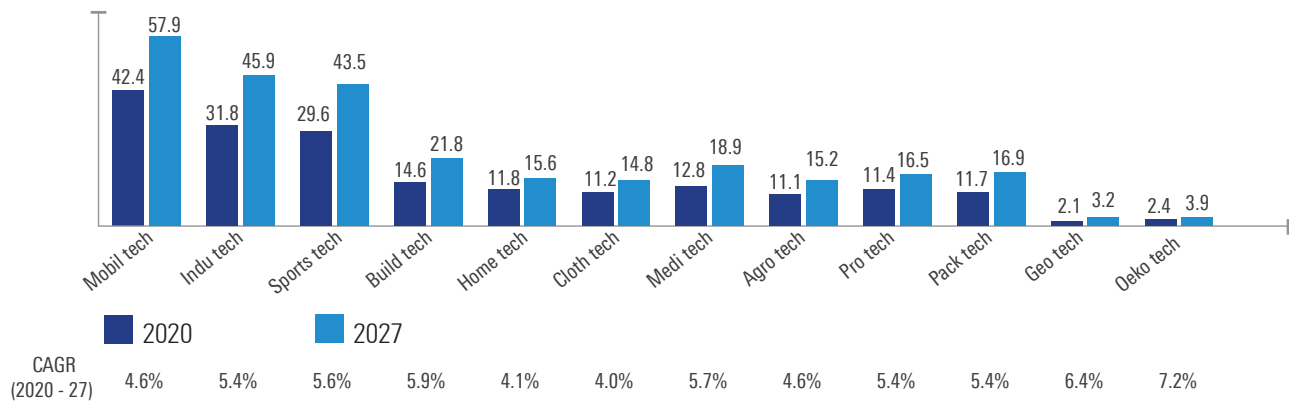


Application

On the basis of application, the technical textiles market is categorized into Mobiltech, Sporttech, Indutech, Homotech, Buildtech, Meditech, Clothtech, Agrotech, Packtech, Protech, Geotech and Oekotech.

The technical textile market for Mobiltech application was valued at USD42.4 billion in 2020 and is projected to reach USD57.9 billion by 2027. This industry is expected to grow due to automobile units catering to huge established automobile consumer base in Europe, North America and Asia.

Figure 7: Global technical textile market, by application (USD Bn)

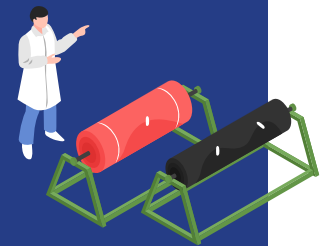
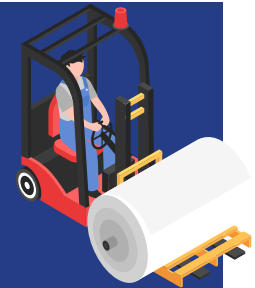
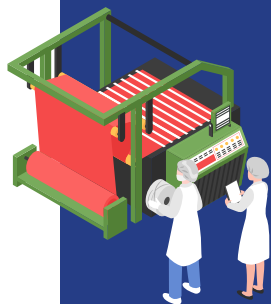
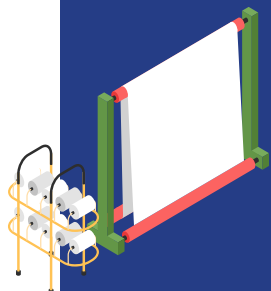
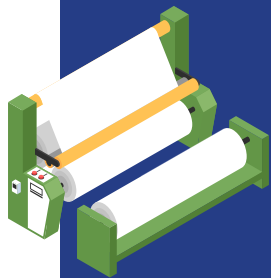
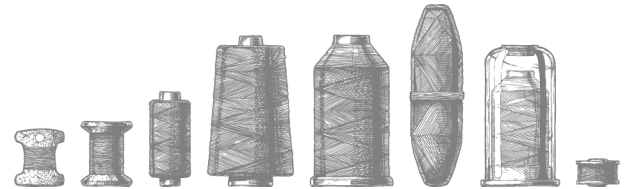


Source: Global technical textiles market (2020-27) - Allied Market Research; KPMG Analysis





Key trends & growth drivers :



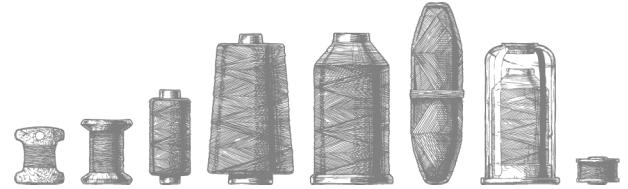
- With the issue of land degradation being faced globally, Geotextiles are increasingly being used to control soil erosion on hillsides and embankments. Additionally, rise in infrastructure projects in the developing economies is playing a key factors driving the market growth.
- Use of latest technologies such as Mulching, Vertical Farming, Aeroponic and Hydroponic farming technologies in agriculture has significantly increased the demand for agricultural sheets and covers.
- The demand for non-woven fabrics in the healthcare end-use industry has significantly increased owing to rise in health concerns among consumers. Additionally, non-woven now-a-days plays a significant role in renovation of existing buildings as well as construction of new homes.
- The ability of nonwoven wipers to absorb more liquid in comparison to alternatives like towels and napkins has resulted in a shift in demand to nonwoven wipers.
- The demand for natural or bio-based materials for technical textile products has been increasing owing to awareness among consumers and industries on sustainability and ecological impact of synthetic materials.
- The growth of sectors such as construction, automotive, healthcare, packaging, etc., in emerging nations is driving the growth of these sub-segments in technical textiles.
- Large scale migration of automotive industry towards electric vehicles, autonomous driving, lighter components, environmental regulations, safety and health monitoring would result in new applications, end-uses and innovation in technical textiles for this sector.





3. India outlook

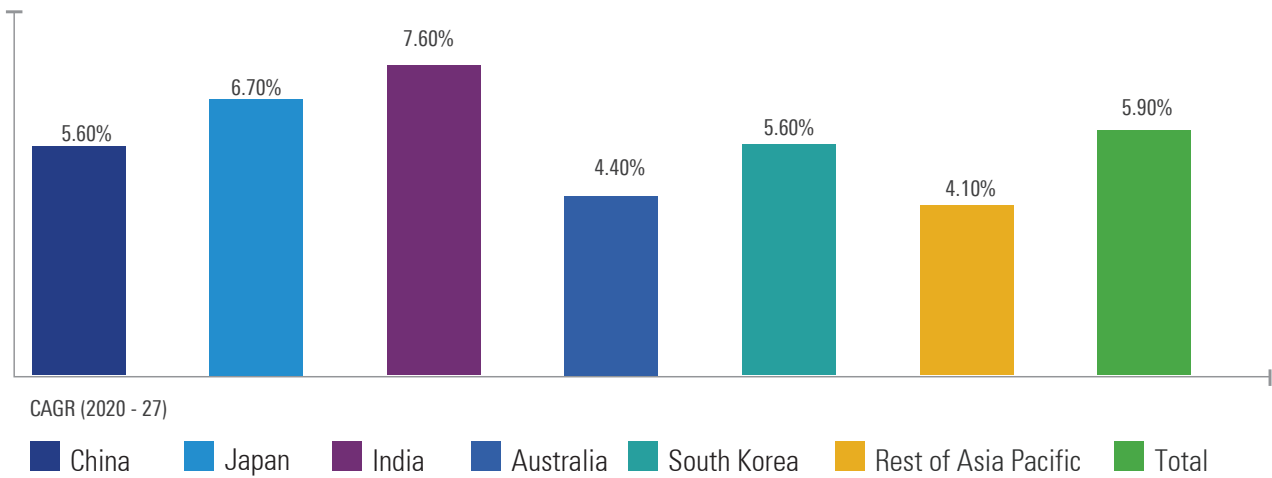




1. Domestic scenario

Indian technical textile market was valued at USD14 billion in 2020 and is expected to reach USD23.3 billion by 2027, growing at a CAGR of 7.6% which is among the fastest growth rate in the Asia-Pacific region, as shown in the figure below:

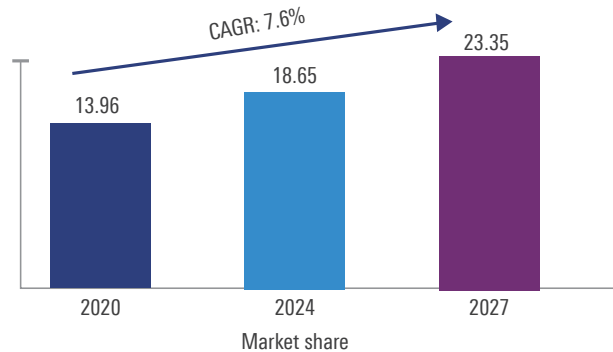
Figure 8: Asia-pacific technical textile market - CAGR (2020-2027) (in terms of value)



Source: Global technical textiles market (2020-27) - Allied Market Research; KPMG Analysis

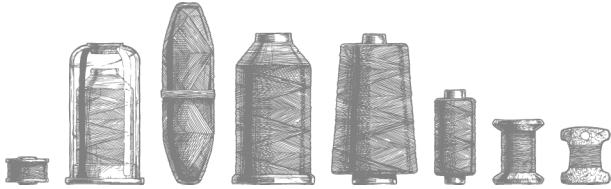
The projected growth of Indian technical textiles market is as follows:

Figure 9: India technical textile market size (USD Bn)



Source: Global technical textiles market (2020-27) - Allied Market Research; KPMG Analysis

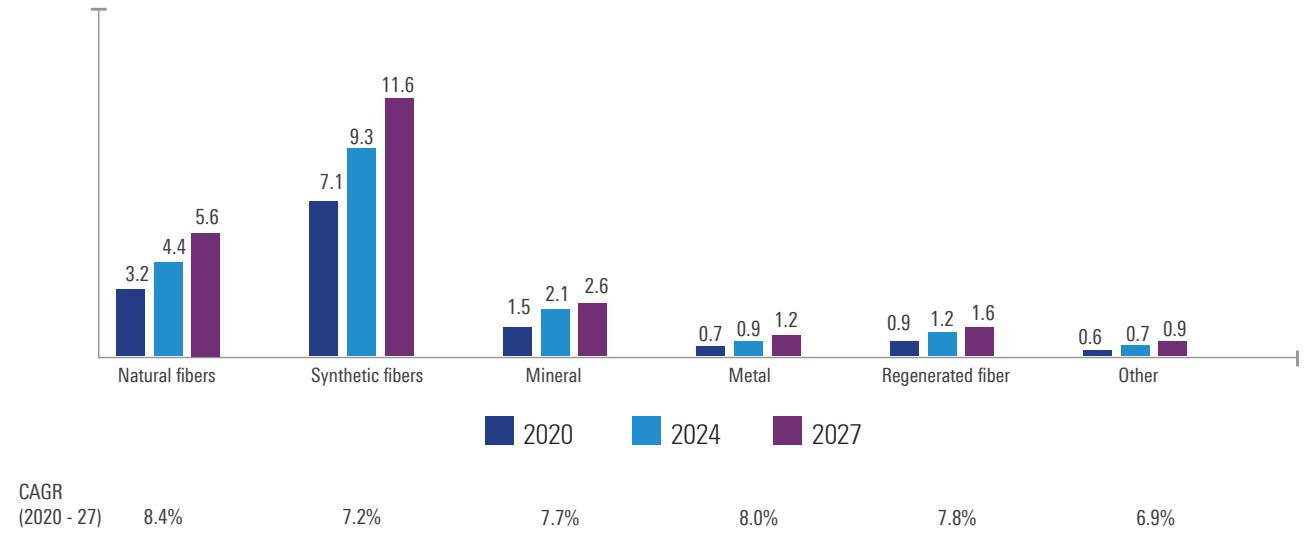
2. Global technical textiles Market (2020-27) - Allied Market Research



The technical textile market is expected to witness considerable growth in coming years in India, owing to numerous factors such as developing end-user sectors, rising awareness, government initiatives, regulations, standardizations, technology upgradation among others.

The segment-wise projections are given below:

Figure 10: India technical textile market, by material (USD Bn)



Source: Global technical textiles market (2020-27) - Allied Market Research; KPMG Analysis

The India technical textile market for synthetic polymer was valued at USD7.1 billion in 2020 and is projected to reach USD11.6 billion by 2027, growing at a CAGR of 7.2%.



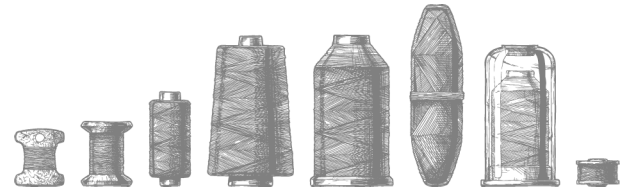
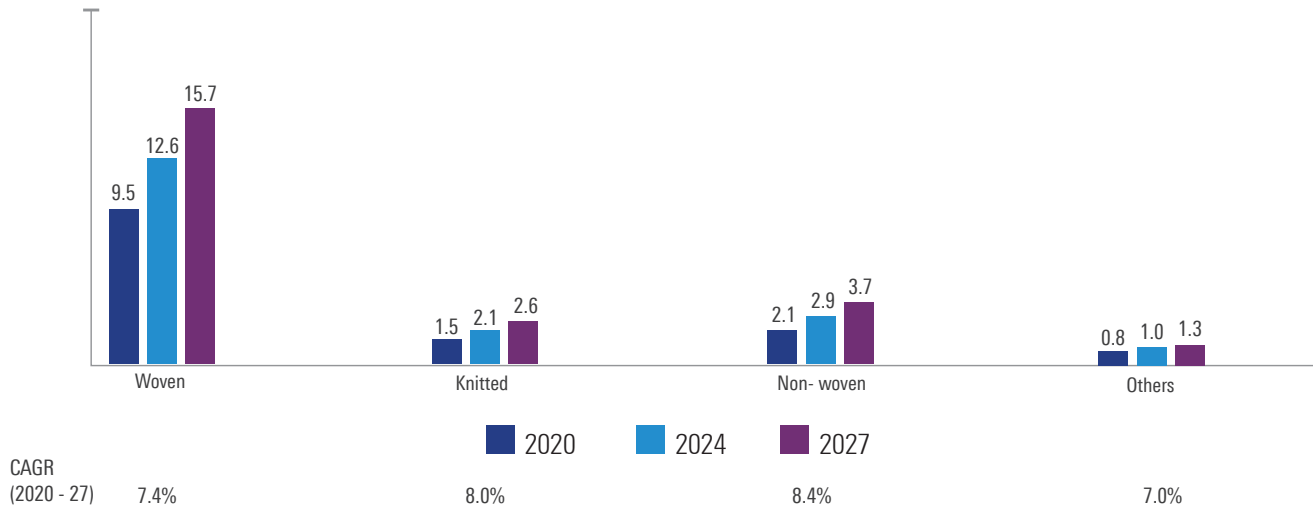


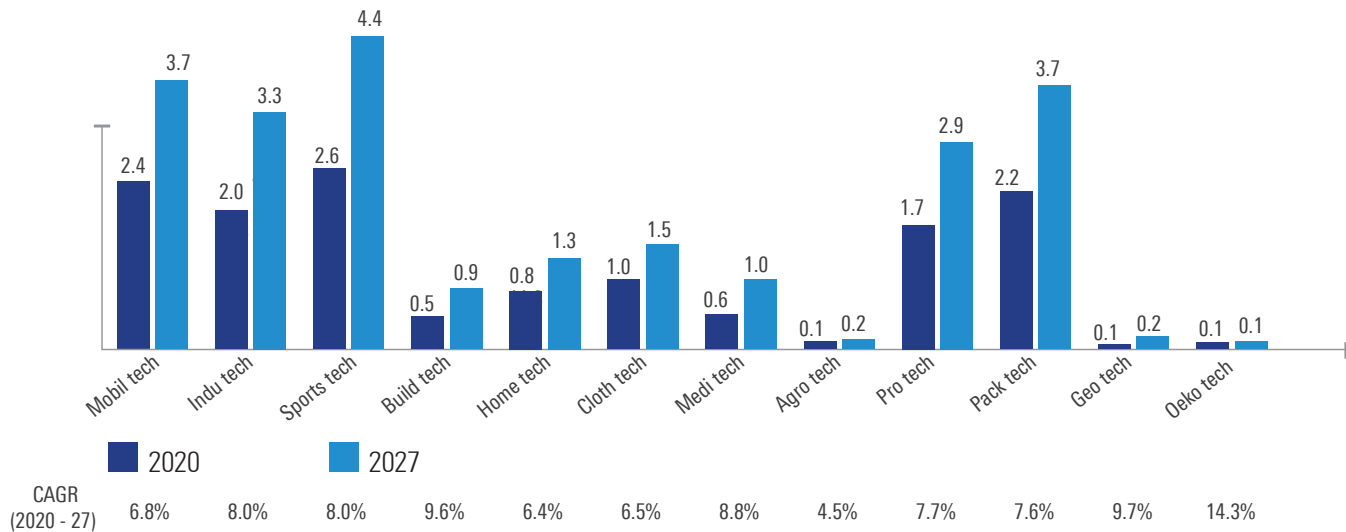
Figure 11: India technical textile market, by process (USD Bn)



Source: Global technical textiles market (2020-27) - Allied Market Research; KPMG Analysis

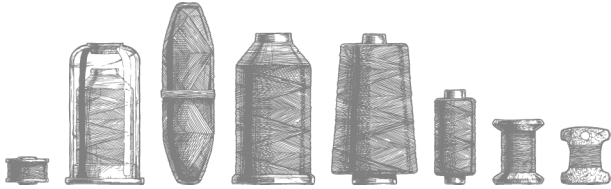
The India technical textile market for woven was valued at USD9.5 billion in 2020 and is projected to reach USD15.7 billion by 2027, growing at CAGR of 7.4%.

Figure 12: India technical textile market, by application (USD Bn)



Source: Global technical textiles market (2020-27) - Allied Market Research; KPMG Analysis

The India technical textile market for MobilTech was valued at USD2.4 billion in 2020 and is projected to reach USD3.7 billion by 2027. Similarly, the market for InduTech was valued at USD2.0 billion in 2020, and is projected to reach USD3.3 billion by 2027, growing at a CAGR of 8%.

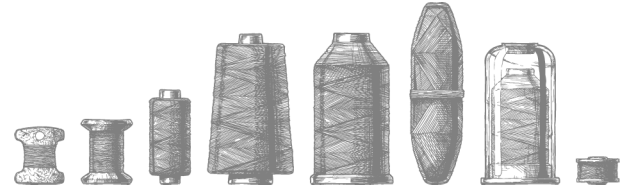


Government's key initiatives in technical textiles³⁴⁵

- **National Technical Textiles Mission** announced to provide a boost to Indian players and enable them to compete with international players in the technical textiles sectors and man-made fiber. This is a four-year execution period from 2020-21 and 2023-24 at an estimated outlay of INR1,480 Crores.
- Government of India approved the **Production Linked Incentive (PLI)** scheme in textiles sector with focus on MMF segment and technical textiles, which will help in attracting large scale investment and augment scale/capacities in the technical textiles sector to further boost domestic manufacturing.
- The Government has proposed setting up of **7 Mega Investment Textiles Parks (MITRA)** over the next 3 years to give domestic manufacturers a level-playing field in the international textiles market and pave the way for India to become a global champion of textiles exports across all segments, including technical textiles.



3. Ministry of Textiles
4. DGFT, Department of Commerce; KPMG Analysis
5. India Investment Grid



2. Indian technical textiles – A SWOT analysis:

Strengths	Weaknesses	Opportunities	Threats
<ul style="list-style-type: none"> • Strong end-to-end textile value chain • Large domestic market with high growth potential • Availability of young and skilled workforce • Focus Areas for the Central and State Governments • Ability to scale up in short time 	<ul style="list-style-type: none"> • Import dependence for machinery • Low awareness about technical textile products in end users • Lack of standardisation and related regulation • Little or no domestic manufacturing of specialty fibres 	<ul style="list-style-type: none"> • Growing economy fueling demand for technical textiles • Global opportunities in key segments such as Indutech, Mobiltech, etc., • Largely untapped institutional buying for domestic technical textiles products • Regulatory mechanism to increase consumption 	<ul style="list-style-type: none"> • Misplaced priorities with focus on low value segments • Import of high-value technical textiles • Limited technology upgradation • Lack of focus on Innovation and R&D

A. Strengths:

a. Strong textiles value chain:

India is the only country in the region, other than China, with entire textile value chain in both natural and synthetics fibres. India is the largest producer of Cotton and second largest producer synthetics in the world. Owing to availability of raw materials for many technical textiles sub-segments, India is well positioned to capitalize on opportunities presented by both domestic and international markets.

b. Large domestic market with high growth potential:

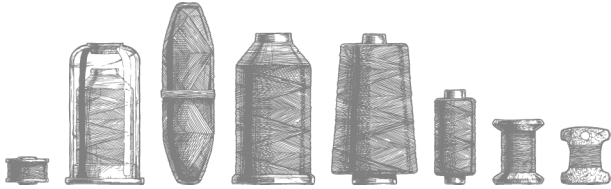
The domestic market in India is expected to grow at rapid pace owing to industrial growth in the country and significant increase in income of Indian consumers. India is expected to become manufacturing hub with focus on export promotion and import substitution, resulting in high growth opportunities in the domestic market. In addition, awareness among citizens on consumer based technical textiles products is expected to rise over the next decade.

c. Availability of young and skilled manpower:

India has one of the largest working-age population (62 per cent of Indian population being between 15 and 59 years of age) in the world. India has a significant share of skilled workers at comparatively low wage rates compared with peers in Asia and developed economies in North America and Europe. Abundant workforce with relatively lower average manpower costs provides India a distinct edge as key global manufacturing destination.

d. Focus areas for central and state government:

Ministry of Textiles, Government of India and various States across the country are actively working towards development of technical textiles by developing industrial ecosystem, infrastructure and promoting investments in Technical Textiles. Government of India has launched several programs such as National Technical Textiles Mission (NTTM), Production Linked Incentive (PLI) and Mega Textiles Parks with Plug and Play Facility. In addition, various States have provided special incentives/subsidies to promote investments in Technical Textiles.



e. Ability to scale up in short time:

- During COVID-19 India was able to scale up rapidly in medical textiles and within a short span become second largest medical textiles producer in the world. Owing to India's strengths in textile value chain, the country has the potential to replicate such capacity growth in short span of time for certain other technical textiles products.

B. Weaknesses:

a. Import dependence for machinery:

- Currently, majority of machinery used to manufacture high-end technical textiles products are not available in India and the industry is heavily dependent on imports. In order to attract investments in technical textiles, Government needs to promote manufacturing of high-tech machinery to boost technical textiles sector. In addition, considering importance of applied research in this sector, industry needs to closely work with machine manufacturers to build core competencies in the long term.

b. Low awareness about technical textile products in end users:

- In India, majority of entrepreneurs as well as intended end users of technical textile products are still unaware of the benefits of usage of such products, thereby leading to lack of adoption. In comparison, businesses in other manufacturing hubs follow stringent safety and regulatory norms, resulting in higher adoption of technical textiles products.

c. Lack of standardization and related regulations:

- Currently, several technical textile products do not have standard benchmarks and clearly defined quality standards, resulting in availability of sub-standard cheaper products. Implementation of regularized standards for technical textiles needs to be established for product standardization and migration towards high value/high tech production in line with global requirement. All the relevant stakeholders of this sector need to come forward and implement Indian and International Standards and adopt the standard quality certifications such as BIS to promote consistent quality of their products.

d. Little or no domestic manufacturing of specialty fibres:

- Currently, majority of specialty fibres are imported in India, thus making India globally uncompetitive in high-value technical textiles products. Government needs to promote innovation and infrastructure for high value specialty fibres.

C. Opportunities:

a. Growing economy fueling demand for technical textiles:

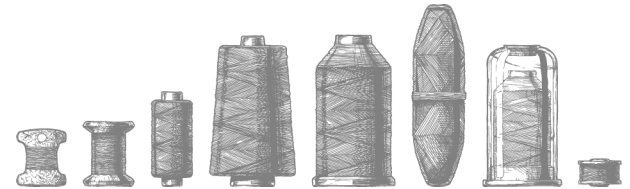
- India is among the fastest growing economies in the world leading to higher disposable income and increased awareness among young Indian population on functional products. Further, India's economic growth has led to growth of various end user industries such as Automobiles, Healthcare, etc., resulting in increasing demand for technical textile products. In addition, these industries are increasingly exporting, resulting in ample growth opportunities for technical textiles in India.

b. Relatively untapped domestic market:

- Functional products are still in nascent stage in India. However, with growing awareness among young population about the benefits of these products, market shall expand exponentially.

c. Global opportunities in key segments (Indutech, Mobiltech, etc.,)

- At a Global level the Technical Textiles market is driven broadly by developed countries such as Germany, US, France, etc., and emerging industrial hubs such as China, Vietnam, etc., In high growth segments such as Indutech, Mobiltech, etc., there are opportunities in both these markets. Indian technical textiles industries need to focus on high-value/high-tech product categories and expand into hitherto unexplored markets.



d. Largely untapped domestic institutional buyers for domestic technical textiles products:

Institutional buyers such as railways, defence forces, hospitals, etc., are still heavily dependent on imports for high-value technologically intensive technical textile products. However, in the recent past, some Indian technical textile manufacturers have started working with such institutional buyers, but significant market share is yet to be tapped.

e. Regulatory mechanism to increase consumption

Setting up clearly defined standards will help in developing products of international standards and higher global outreach. Further, safety and other related regulations need to be enforced across industries to propel demand for technical textiles products such as protective wear for industrial workers including fire-retardant fabrics for public places where public usually gathers such as hospitals, malls, movie theatres, etc.,

D. Threats:

a. Misplaced priorities with focus on low value segments

Traditionally, India has focused on low value segments such as Packtech, while limited penetration in high-value/high-tech segments such as Indutech and Mobiltech. Industry stakeholders need to align their focus with global high-tech/high-value product/segments such as Meditech, Indutech and Mobiltech. This initiative could boost both India's exports and make India Atma-Nirbhar by focusing on import substitution.

b. Import of high-value technical textiles

With limited capabilities/capacities, India is currently depending on imports for high-value/high-tech technical textiles products used in segments such as Mobiltech, Indutech, Geotech, etc.,

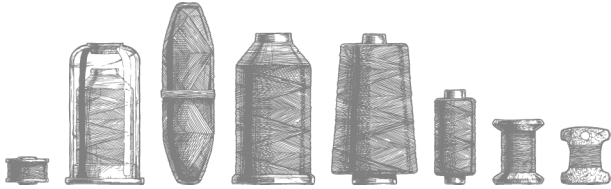
c. Limited technology upgradation

Considering the technical/functional nature of the end products, Technical Textiles industry needs to adapt to newer technologies at a faster pace. Indian Technical Textiles industry predominantly uses outdated machines and technologies. In order to stay globally competitive, the industry needs to upgrade technology.

d. Limited focus on innovation and R&D:

This sector inherently hinges on research and innovation based on new applications and end usages on a regular basis. India has not focused on application based research and innovation, resulting in industry focus on commodity products with low value realization. The industry needs to closely work with Textile Research Associations (TRAs) on innovation and research, resulting in stronger global positioning, migration towards high-tech products and better value realization in the long term.



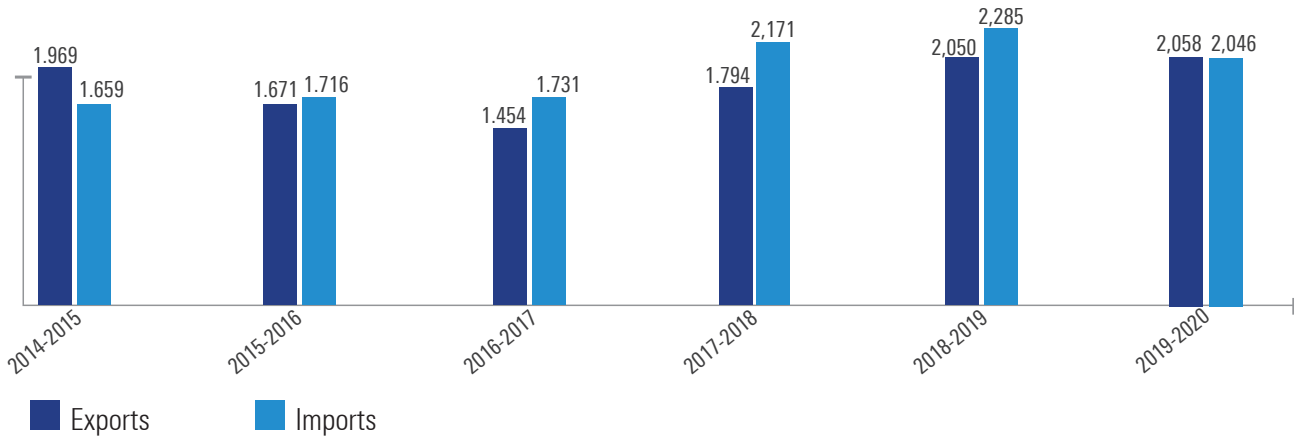


3. Indian technical textiles trade analysis

Government of India has notified 207 HSN Codes from technical textiles exports.

Below is a brief analysis of India's technical textiles imports and exports:

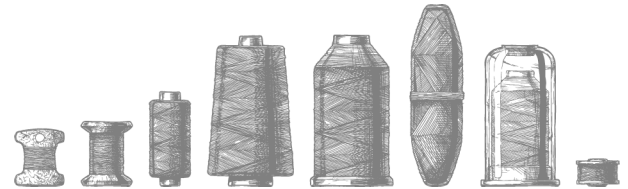
Figure 13: India technical textile trade (In USD Mn)



Source: DGFT, Department of Commerce, Government of India; KPMG Analysis

During 2014-15 to 2019-20, India's exports have grown at a 0.9 per cent CAGR, whereas India's imports have grown at a 4.3 per cent CAGR during the same period. India is depending on imports for high-value technical textiles products.

In terms of imports, the below top 10 product categories (4.8% of the total categories) account for approx. 45 per cent of the total imports valued at approx. USD930 Mn.



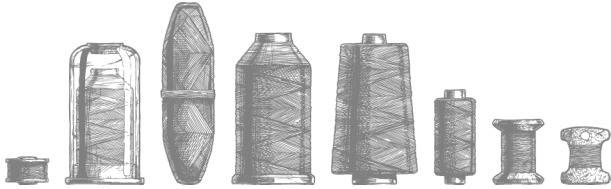
Technical textile imports in India

Figure 14: Technical textile imports in India

Values in USD Mn

S. No.	ITC HS Codes (2017)	Description of goods	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	CAGR 5 years
Share of total technical textile imports in India			52%	48%	47%	48%	46%	45%	
1	87089500	Parts and accessories of the motor vehicles of headings 8701 to 8705 : other parts and accessories : safety airbags with inflater system; parts thereof	105.8	121.8	129.9	175.6	176.6	159.1	8.5%
2	59032090	Other fabrics impregnated laminated plated and coated with polyurethane	96.2	95.3	84.4	121.3	125.0	132.0	6.5%
3	59039090	Other fabric plated laminated coated impregnated with other plastics	151.6	155.2	155.8	172.2	144.5	124.1	-3.9%
4	59031090	Other fabrics impregnated, laminated plated and coated with pvc	134.1	121.7	111.4	167.6	145.1	116.2	-2.8%
5	59021090	Tyre cord fabric of nylon or other polyamides: others	144.3	107.5	98.7	119.8	148.0	93.9	-8.2%
6	54022090	High tenacity yarn of nylon or other polyester (others and textured yarns) 206	51.4	51.0	57.7	68.5	75.0	70.6	6.5%
7	56039400	Non wovens other: weighing more than 150 g/sqm	44.8	44.1	42.2	55.8	52.8	68.2	8.8%
8	59021010	Tyre cord fabric of high tenacity yarn of nylon or other polyamides: impregnated with rubber	81.4	61.7	60.8	75.4	87.2	63.8	-4.8%
9	57032090	Carpets and other textile floor coverings, tufted, whether or not made up : of nylon or other polyamides : other	36.4	41.6	38.6	47.1	43.0	54.1	8.3%
10	56039200	Non wovens other: weighing between 25 g/sqm and 70 g/sqm	20.9	29.3	37.7	41.9	54.3	48.7	18.4%

Source: DGFT, Department of Commerce, Government of India; KPMG Analysis



Top 10 Exports products:

The below listed top 10 technical textiles exported products account for approximately 60 per cent of India's technical textiles exports in five out of six years. Among these top 10 categories, there are two low value packtech products. India need to focus on moving towards high value/high-tech exports.

There are six product categories with impressive double digit CAGR over the last six years

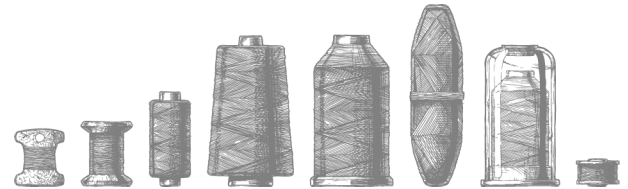
Technical textile exports from India

Figure 15: Technical textile exports from India

Values in USD Mn

S. No.	ITC HS Codes (2017)	Description of goods	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	CAGR 5 years
Share of total technical textile exports in India			69%	55%	59%	62%	61%	60%	
1	63053200	Sacks and bags, flexible intermediate bulk containers: of man made textile materials	537.2	460.3	460.4	602.8	734.9	672.6	4.6%
2	56074900	Other cordage etc.: Of polyethylene/polypropylene	110.3	40.5	46.7	68.8	70.8	77.3	-6.9%
3	59031090	Other fabrics impergnated, laminated plated and coated with pvc	239.8	97.5	90.1	89.8	73.6	76.3	20.5%
4	59039090	Other fabric plated laminated coated impregnated with other plastics	10.5	10.9	11.3	16.9	49.4	72.3	47.1%
5	53101013	Unbleached: containing 100% by weight of jute: hessian fabrics	91.4	85.7	94.3	90.1	73.8	67.0	-6.0%
6	56031200	Non wovens of man-made filaments: weighing more than g/sqm but not more than 70 g/sqm	58.5	53.3	55.1	55.7	68.9	62.1	1.2%
7	54071041	Printed parachute fabrics	269.2	129.0	50.1	57.5	50.8	59.9	25.9%
8	87082100	Parts and accessories of the motor vehicles of headings 8701 to 8705 : other parts and accessories of bodies (including cabs) : safety seat belts	11.8	13.3	24.6	58.5	57.2	48.1	32.4%
9	87089500	Parts and accessories of the motor vehicles of headings 8701 to 8705 : other parts and accessories : safety airbags with inflater system; parts thereof	17.4	22.6	26.7	39.9	42.6	46.3	21.7%
10	61152990	Panty hose, tights, stockings, socks and other hosiery, including graduated compression hosiery (for example, stockings for varicose veins) and footwear without applied soles, knitted or crocheted : of other textile materials: panty hose and tights of other fibres	9.2	2.6	3.1	34.2	31.9	44.0	36.9%

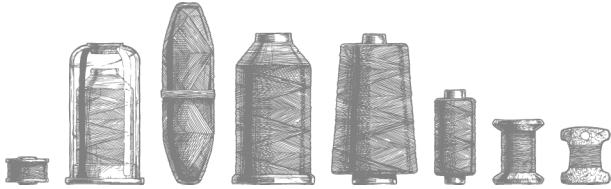
Source: DGFT, Department of Commerce, Government of India; KPMG Analysis



It is worth noting that in the above list, India is also indigenously manufacturing and exporting certain products such as air-bags for automobiles (HS Code 87089500), PVC coated fabrics (HS Code 59031090, 59039090) etc. This indicates presence of existing capacities in the country. Concrete steps need to be taken to understand the issues faced by the manufacturers of above product categories and support manufacturers in promoting import substitution, thus resulting in higher value retention within the economy.

Detailed analysis of Indian technical textiles export for the period of 2014-15 to 2019-20 indicate that Packtech sector contributes 36 per cent (FIBC primarily), followed by Indutech at 21.5 per cent, Mobiltech at 10.3% and Hometech (carpets) at 6.4 per cent. In the same period, import data indicates that Indutech (coated fabrics) has accounted for 29.3 per cent of total imports, followed by Mobiltech (airbags and tyre cords primarily) at 28.2 per cent, Hometech at 16.2 per cent and Clothtech at 13.2 per cent.





4. Potential growth areas in technical textiles:

Technical Textiles industry infrastructure in India predominantly focuses on low value commodity products such as bags and sacks under basic nonwovens as indicated by the highest market share of 36% for Packtech segment. Other industrial countries such as China, Korea and Taiwan focus on high-value Meditech, Indutech and Protech segments of Technical Textiles. At Global level categories such as Mobitech, Indutech, Sportech and Buildtech are considered most lucrative segments.

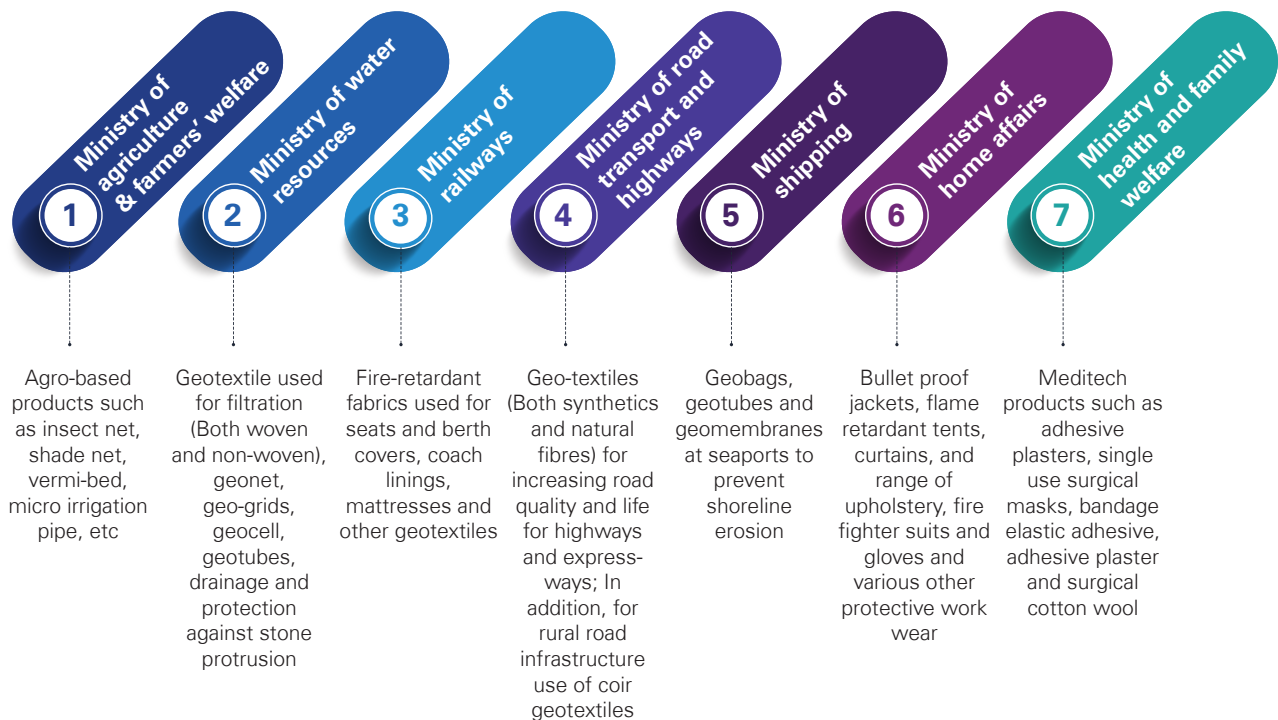
In addition, based on analysis of import data, Mobiltech, Indutech and specialty fibres are some of the products which are currently being extensively imported into India. Import substitution through favorable policies would help growth of these high-growth segments and ensure value retention within the economy and new skilled employment opportunities for Indian youth.

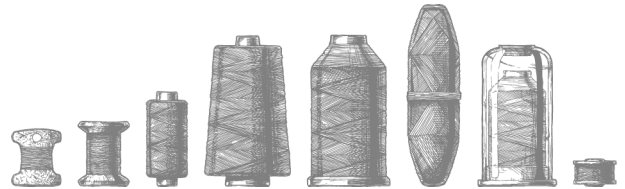
With key projects in infrastructure development including highways, railways, irrigation, power, renewable energy, irrigation, healthcare, etc., national infrastructure pipeline of USD 1.89 Tn in December 2019 which will be implemented in the next five years provides significant opportunities for technical textiles to be used extensively. Institutionalization of technical textiles across ministries will help the introduction of technical textile products across these projects.

The regulatory and promotional mechanism and incentives delivery medium needs to be developed for introduction and promotion of specific technical textile products relevant to various ministries.

Potential opportunities for technical textiles based on national infrastructure pipeline

Ministry of Agriculture & Farmers' welfare – Agro-based products such as insect net, shade net, vermi-bed, micro irrigation pipe, etc





5. Key growth drivers for the Indian technical textile sector:

Technical textile products are finding increasing acceptance across end user industries due to their cost, durability, ease of use and sustainability in India. Increasing awareness about the products, higher disposable incomes, changing consumer trends, etc., are contributing to India's growth in this sector. Besides these, there are certain sector specific growth drivers that have fuelled growth of these sectors.

A. Growth factors driving consumption of technical textiles:

A Increasing adaptability and awareness of the products
Growing awareness about the superior functionality/technicality such as personal safety, high strength, light weight and application of technical textiles is driving higher consumption of technical textiles and related products.

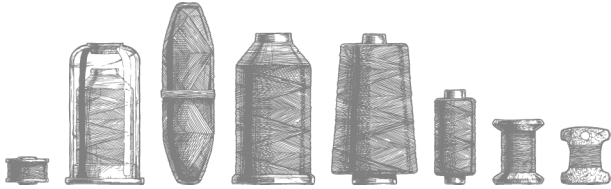
B Regulation and standardization across various sectors
With regulation and standardization across various sectors and industries, Technical Textiles Sector is poised to witness significant growth in the coming years. A case in point is increase in demand for Airbags and Composites in Automobiles Sector, Fire Retardant/ Resistant upholstery in Railway Coaches, Bullet Proof Vests for Defence/ Police personnel etc.

C Increase in consumer awareness about environmental issues
Owing to globalisation and social media, Indian consumers are increasingly evaluating products providing higher functionality along with environmental benefits. A case in point is environmental concerns along with a shift in consumer trends towards eco-friendly green buildings and materials, which is expected to increase usage of Geotextiles.

D COVID induced Meditech demand boost
Owing to outbreak of COVID-19, the demand for medical textile increased. The consumers who previously shifted to affordable products with better safety and hygiene benefits embraced hygiene medical supplies (Wipes, Masks etc.) manifolds during and post COVID-19. In the post COVID-19 world era too, market for certain habitual hygiene products such as wipes are expected to grow in the domestic market.

E Increasing disposable income with young Indian population
India's Gross National Disposable Income (GNDI) has grown 11.2 per cent during 2017-18⁶ and is expected to grow at a higher pace due to improving economic scenario and younger population willing to adapt to high-tech products with higher spending capacity

6. National Statistical Office (NSO), Ministry of Statistics and Programme Implementation



B. Growth factors driving manufacturing of technical textiles:

Availability of raw materials

A India's textile value chain economy has abundant availability of raw materials such as natural fibres, synthetic fibres, chemicals for processing, etc.

Growth of medical textiles due to COVID-19

B The pandemic situation had resulted in severe stress for healthcare industry globally in terms of medical supplies such as masks, protective clothing and single-use disposable clothing. To bridge the supply-demand gap, some of the manufacturers in India strengthened their production capacity to serve the domestic as well as international demands.

Import substitution

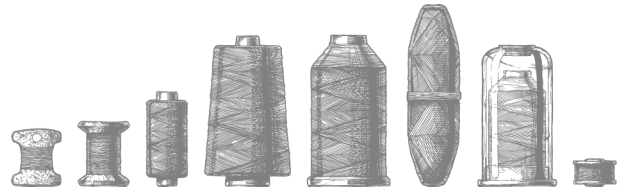
C India needs to focus on building/enhance competencies and capacities for heavily import dependent products, considering the ready domestic market for these products, which is expected to grow in the long term.

Availability of young and affordable manpower

D India has significant share of young skilled workers at comparatively low wage rates compared to certain Asian countries, USA and Europe. This is expected to drive investments in technical textiles in India

Production-Linked Incentive Scheme (PLI)

E PLI scheme is expected to boost technical textiles, as this scheme focus on strengthening Man-Made end products with focus on 10 key technical textiles HS codes and making India globally competitive in high-growth products/segments.



C. Sector specific growth drivers:

1. Mobiltech:

- Growing automobile industry
- Growing usage of products like seat belts, airbags and automotive carpets
- Lighter automotive components required for Electric Vehicles
- Evolving motor safety regulations

2. Buildtech:

- Demand is expected to grow on account of increased spending on infrastructure
- Increasing awareness and usage of products like architectural membrane, scaffolding nets
- Growing demand for protective clothing at construction sites

3. Meditech:

- Increased demand of PPEs, masks etc. due to COVID-19
- Growth of healthcare industry
- Growing population
- Increasing awareness on hygiene and safety related parameters

4. Sportech:

- Government schemes such as subsidies to university/colleges to improve sports infrastructure
- Increasing popularity of sports and sportswear due to Khelo India mission.

5. Protech:

- Enhanced defence spending
- Growing awareness and use of fire-retardant clothing and chemical protective clothing
- Evolving regulations for protective clothing usage

6. Indutech:

- Evolving manufacturing sector in India
- Global demand for indutech products with new end-use applications.

7. Geotech:

- Significant investment in infrastructure under USD1.89 Tn National Investment Pipeline fund planned by the government
- Increasing awareness of the benefits of usage
- Inclusion in various government construction norms

8. Oekotech:

- Awareness about usage of products for environment protection - floor sealing, air cleaning, prevention of water pollution, waste water recycling treatment, erosion protection and domestic water sewerage plants
- Significant investment in infrastructure under USD 1.89 Tn National Investment Pipeline fund planned by the government.

9. Packtech:

- General consciousness for avoiding the usage of plastics in packaging
- Ease of manufacturing leading to lower prices per unit, leading to higher public adoption

10. Agrotech:

- Active support from the government for promoting the usage of Agrotexiles
- Increasing awareness creation through krishi vigyan kendras

11. Homotech:

- Increasing importance of usage of fire resistant and / or retardant textile material in public places.
- Regulations in usage of technical textiles in public places
- Evolving customer awareness

12. Clothtech:

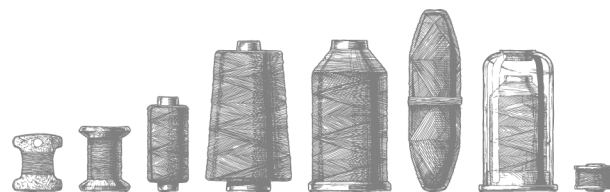
- Increasing awareness on usage of technical textiles
- Changing consumer preferences



4.Way forward



Way forward



With industrial development in the region and beyond, robust technical textiles industry ecosystem needs to be developed to transform India into a global technical textiles hub. The below steps would facilitate to growth of the sector with focus on sustainable growth of employment and economic value retention.

a. Promotion of international standards to enhance quality in domestic market and meet the demands of global market

Standardisation of a product being sold in global market is one of the key parameters to ensure the quality of the product. This helps in ensuring that the intended functionalities expected from technical textile products are retained and provided to the end user every time the product is used. To strengthen existing quality standards, a new task force dedicated for establishing standardisation in technical textiles must be formed. In addition, the Government needs to ensure appropriate implementation of these standards.

b. Promote end-use/application based awareness for Technical textiles

The superior functionality of the technical textiles gives these products edge over traditional textiles. However, it is necessary to develop market for these products and at the same time encourage adoption of technical textiles products among end users. Therefore, the government should encourage awareness among consumers on their implicit benefits through setting up demonstration centers and awareness drives across industrial centers in the country.

c. Resolving the inverted duty structure

For certain product categories, at present, lower duties are levied for finished products, while duties on raw materials are higher, thus resulting in higher imports and lack of indigenous capabilities. Government should revisit the duty structure to ensure growth of indigenous manufacturing. However, the inversion of duty structure needs to be considered in phased manner, to ensure the overall industry for product/segments is not impacted significantly.

d. Regulatory reforms supporting the usage of standardised technical textile products

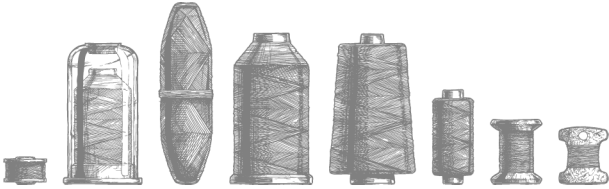
Regulatory reforms are essential for technical textile products deemed necessary for the usage in specific conditions such as car seat belts, air bags for cars, flame resistant/retardant fabrics for public places, etc., Such regulations shall ensure better quality of life of the citizens and shall also expand the technical textiles market.

e. Incentivising research, innovation and production of technical textiles

India pales in comparison to other countries in terms of R&D expenditure on technical textiles. With high capital requirement, setting up large capacities for technical textiles remains a challenge. The industry needs to explore Mega Textiles Parks being planned by the government with special focus on plug and play infrastructure for MSME units. In addition, the industry should closely work with Government on applied based research initiatives undertaken in National Technical Textiles Mission (NTTM).

f. Promotion of exports of technology intensive technical textiles

In order to transform India into a global hub for technical textiles, it is essential that India develops the required infrastructure, expertise and skill sets for high-value technical textile products. India should focus on the exports of technology-intensive products such as in Protech, Geotech, Meditech and Mobiltech segments. The proposed Technical Textiles Export Promotion Council can sensitise the Government about the various opportunities and challenges that India's technical textiles face in the international arena. Opportunities to collaborate with foreign players could also be sought by the local industries to facilitate technology know-how and transfer.



g. Setting up world class labs

With technicality/functionality at core for Technical Textiles products, it is imperative for India to have world class state-of-art lab infrastructure with focus on technical textiles products in collaboration with national/international labs with international accreditations. The facilities will enable the technical textile manufacturers to speed up the process of site testing and research and innovate new products.

h. Production Liked Incentive (PLI) Scheme

PLI scheme by incentivising production of 40 key HS codes would boost domestic manufacturing in the MMF segment, which is key raw material for Technical Textiles and 10 key HS codes in Technical Textiles products. The scheme is expected to attract large scale foreign investment and facilitating scale/capacities, promotion of research, innovation boosting Indian exports and making India truly Atma-Nirbhar in Technical Textiles with focus on import substitution. This scheme will play a huge role in achieving size and scale in manufacturing, as these schemes incentivise incremental production.

i. Spurring domestic demand and growth of exports of technical textiles by NTTM

To boost the potential domestic demand and scope for exports of technical textiles, the Government of India has decided to setup a National Technical Textiles Mission at an estimated budget of USD197.33 million (INR 1,480 crores) with four-year implementation period from 2020-21 to 2023-24. Out of the proposed budget, INR. 1000 crores is allotted for R&D, INR. 400 crores for skill development and training, INR. 50 crores for marketing and promotion, INR. 20 crores for administrative purposes and INR. 10 crores for export promotion. The mission which aims to position India as a leader in the global textile industry puts emphasis on using technical textiles in the government programmes like Jal Jivan Mission, Swachh Bharat Mission, Ayushman Bharat, etc. and across strategic sectors like agriculture, defence, highways, ports, railways, etc., The NTTM would also focus on development of R&D infrastructure such as innovation and incubation centres to encourage MSMEs in the country and boost domestic technical textile manufacturing.

j. Continuous investment in research and development

Focusing on R&D ecosystem for the Indian technical textiles sector is critical for achieving its true potential. The government should consistently invest in R&D and application based innovation to guide and handhold industry in developing capabilities in future technologies and enable multi-stakeholder collaboration between the academia, industry and government.

k. Capitalising on opportunities presented by national infrastructure pipeline fund of USD1.89 Tn

With infrastructure projects focused on highways, renewable energy, power, railways, irrigation and health sectors, national infrastructure pipeline has been set-up to the tune of USD1.89 Tn in December 2019 to be implemented in the next five years. This initiative provides significant opportunities for technical textiles industry in India and help transform Indian technical textiles industry. However, in order to capitalize on this initiative, it is critical to institutionalize use of technical textiles across various sectors with interventions from various relevant ministries/departments.



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