## **Emerging Opportunities for MSMEs in Textiles.**

#### **SANJAY HARANE**

NAGREEKA EXPORTS LTD KOLHAPUR

## Contents



Subject Matter (Textile & MSME)
 Textile – Today – Trend - Future
 Industry – Today – Trend - Future
 SWOT Analysis
 Environmental aspects



## Subject Matter

Textile MSME

#### **Textiles & MSME**



CAGR = Compound Annual Growth Rate







#### **Garment / Clothing – Basic needs +++**



## **Textile – other than Clothing**

7.00 AM	Jogging shoes
8.00 AM	Stain proof /Bathroom curtains
9.00 AM	Seat covers of car, Mobile covers, Smart clothing
10.00 AM	Office furniture covers / Carpets
1.00 PM	Fire proof dress, Industrial clothing ;
	Personal protective equipment's
2.00PM	Stain proof table mats, Rain coats
4.00 Pm	Theatre seats , Eco proof wall
	coatings
7.00 PM	Fishing nets, Absorbent cotton
9.00 PM	Sailing boats with water resistant
	textile covers
11.00 PM	Mosquito Net
12.00 Night	Home furnishing / carpets etc

	-	
Medical textile – Retina,	Use	of - Various fibres
artificial body parts	•	Cotton
Electronic clothing	•	Wool /Silk
Green house fabrics	•	Linen / Bamboo / Sisal
Fishing nets	•	Viscose
Photo sensitive textiles	•	Hemp/Jute/Ramie
Green house – sun protection	•	Polyamide
Smart Textiles -UV protection	•	Nylon
clothing, Oil & water protection,	•	Polyester
Mosquito repellent, Vitamin E	•	Acrylic
finish, Mineral feed finish	•	Aramid
Medical Textile – absorbent	•	Poly ethylene
cotton, gauzes.	•	Spandex – stretch
Modern Filtration techniques	•	Melamine
UF/Nano/RO filters	•	Treeline
Packaging material &	•	Acetate / Tri acetates
Many more	•	Polyurethanes
Special finishes	•	Poly olefins
	•	Polyurethane fibre
	•	PVC
	•	Rubber
	•	Many more

Textile is not only clothing. It is now everywhere from morning to end of the day

## **Technical Textiles**

*	Agrotech Horticulture + landscape gardening, agriculture + forestry, animal keeping	88	Meditech Hygiene, medicine
	Buildtech Membrane, lightweight + massive construction, engineering + industrial building.		Mobiltech Cars, ships, aircraft, trains, space travel
	Clothtech Garments, shoes		Oekotech Environmental protection, recycling, waste disposal
	Geotech Road infrastructure, Railways, Irrigation and Hydraulic structures, Waste Landfills, Dams etc.		Packtech Packaging, protective-cover systems, sacks, big bags, container systems
-	Hometech Furniture, upholstery + interior furnishing, rugs, floor coverings	9	Protech Person and property protection
00	Indutech Filtration, cleaning, mechanical engineering, chemical industry	200	Sporttech Sport and leisure, active wear, outdoor, sport articles.

## **Technicl Textiles - Growth**

	Segment wise Compound Annual Growth Rate (CAGR) Analysis in Technical textile									
CAGR Analysis			2007-08	:		2012-13			2017-18 Expected	
Sr No	Segment	Rs (Crore)	% contribution on total Tech textile business	Base Value	Rs (Crore)	% contribution on total Tech textile business	% Growth against Base value 2007/08	Rs (Crore)	% contribution on total Tech textile business	% Growth against Base value 2007/08
1	Pack tech	14630	39.78	100	28020	42.51	91.5	48318	41.58	230.3
2	Home Tech	4345	11.82	100	6249	9.48	43.8	12145	10.45	179.5
3	Cloth Tech	3466	9.42	100	4835	7.33	39.5	8133	7.00	134.7
4	Indu tech	3206	8.72	100	6625	10.05	106.6	13127	11.30	309.5
5	Mobil tech	3183	8.66	100	6607	10.02	107.6	11433	9.84	259.2
6	Sport tech	2851	7.75	100	4132	6.27	44.9	7111	6.12	149.4
7	Medi Tech	1669	4.54	100	3321	5.04	99.0	5142	4.42	208.1
8	Build Tech	1317	3.58	100	2514	3.81	90.9	4587	3.95	248.3
9	Pro tech	1302	3.54	100	1988	3.02	52.7	3139	2.70	141.1
10	Agro Tech	553	1.50	100	826	1.25	49.4	1614	1.39	191.9
11	Geo tech	185	0.50	100	683	1.04	269.2	1275	1.10	589.2
12	OEKO tech	68	0.18	100	120	0.18	76.5	193	0.17	183.8
Total      36775      100.00      100      65920      100.00      79.3      116217      100.00      216.0						216.0				
Note - dat	Note - data collected from- http://ficci.in/spdocument/20811/1-Technotex-2016-Knowledge-Paper.pdf									

#### **Special finish – Health & Protective Applications**

- Self Cleaning Fabrics
  Soil resistance
- Soil resistance
- Moisture Management
- Wrinkle resistance
- ✓ Anti-bacterial effect
- ✓ Anti-static property
- ✓ UV-protection
- Flame retardation
- ✓ Aroma Finish

- Mall Odor finish
- Vitamin E Finish
- Mineral feed finish
- Aloe-vera Finish
- Water repellency & wicking
- Medical Textiles
- Smart Clothing



#### **Smart Clothing**

#### Future Requirements for cloth

#### SAFETY AND MILITARY APPLICATIONS ARE THE BIGGEST MARKET FOR SMART FABRICS

Home/architecture /other

22.3.

Protection and sistety/military

30.4

Fashion & entertainment

11.4.

Sports and fitness

15.4.

Medical and healthcare

6.1.

Transportation

1AA



#### **Future-Textiles**

#### Speciality cloths



#### **Smart Clothing**

#### Future Requirements for Health Care Textiles

#### Non-Implantable Textiles

E.g. Wound Dressing, Bandages, Plasters.

#### Implantable Textile

E.g. Artificial Tendons, Ligaments

Life Protection

#### **Textile for Extra Corporeal Device**

E.g. Artificial Kidney, Liver,

Lung

#### **<u>Clothing for Healthcare</u>**

E.g. Surgical Clothing, Covers, Bedding

#### **Medi Tech**

#### Non Implantable Textiles

<b>Product Application</b>	Fibre Type	Manufacturing system
Wound Care		
•Absorbent Pad	Cotton & Viscose	Non-woven
•Wound contact cloth	Silk, Viscose, Polyamide	Knit, Woven
Bandages		
Simple	Cotton, Viscose, Polyamide	Knit, Woven, Nonwoven
Light Support	Cotton, Viscose, Elastomeric	Knit, Woven, Nonwoven
Compression	Cotton, Polyamide, Elastomeric	Knit, Woven
Orthopedic	Cotton, Viscose, Polyester, PP	Woven, Nonwoven
Plasters	Cotton, Viscose, Polyester, PP,	Knit, Woven & Non-woven
Lint	Cotton	Absorbent Cotton
Gauze	Cotton,	Woven, Non Woven, Knits

### Medi tech

#### Implantable Textiles

<b>Product Application</b>	Fibre Type	Manufacturing system
Sutures		
•Biodegradable	Cotton, collagen, poly-lactide,	Mono/Multi filament Braided
•Non-Biodegradable	poly-glycolide. Polyamide, polyesters, polypropylene, steel	
Soft tissue implant		
•Artificial Tendon	PET, PTFE, Polyamide, Silk	Woven, Braided
•Artificial Ligament	PET, Carbon fibre	Braided
•Artificial Cartilage	Polymethyl metha-crylate, collagen,	Nonwoven
•Eye Contact Lances	silicone.	
Orthopaedic Implants	Silicone, Carbon, Polyacetal, HDPE	
Cardiovascular Implant		
Vascular Graft	PET,PTFE	Woven, Knitted
Heart Valves	PET	Woven, Knitted

#### **Medi Tech**

#### Health care clothing

<b>Product Application</b>	Fibre Type	Manufacturing system
For Operation Theatre		
•Surgical Gowns	Cotton, Polyesters, PP	Woven, Nonwoven
•Surgical Caps	Viscose, Cotton	Woven, Nonwoven
•Surgical Masks	Viscose, Polyesters, Glass	Nonwoven
•Surgical Cloths	Polyethylene, Polyesters,	Woven, Nonwoven
	Cellulose Acetate.	
•Wipes/Clothes	Viscose	Nonwoven
For Hospital Ward		
•Bedsheet	Cotton, Polyesters	Woven
•Pillow Covers	Cotton	Woven
•Uniform	Cotton, Polyesters	Woven
•Protective Clothing	Polyesters, Polypropylene	Woven, Nonwoven





## Industry

#### Previous – Today - Future

#### **Textile Industry Previous -Today – Future**

Trond	Previous	Today	Future			
ITEIIu	Before 2010	2010 to 2020	Beyond 2020			
Man	Low cost	Moderate cost with HR activity	Higher cost with smart activity			
Machine	No-Less automation	Fully automation Benefits of Volume	Specialized sectors			
Money	Less investment More ROI	More Investment ROI Reduced	ROI Increased			
Material	less availability	Available	Selection of raw Material / Recycle			
Method	Standard method	Push towards scientific approach	Scientific work with reduced NPO Use CMS in production			
Market	Easy market Less compitition	Stress Marketing More competition	Specialized product with Better Quality, Low Cost & Timely delivery			
Quality requirements	Ok	Higher Quality with Brand RSL, effluent Discharge Norms etc	Sustainability in material			
Environmental aspects	Very low awareness	High Awareness Reuse/Reduce /Recycle	ZLD - Reuse / reduce / recycle / Research			
Natural resources	Large qty with lower cost	Available with higher cost	Restricted availableity Need to Research for Recycle			
	NPO = Non productive Output // CMS = Chemical management system					

#### **How to Meet Future Trend**

Trend	Beyond 2020	Support from Government	Action by Industry
Man Higher cost with smart activity Training cen		Training centres for every class of employees	Training - Number of man days per person per year
Machine	Specialized sectors	Ease of legal compliances need to generate Textile hub with separate support of Boilers, water supplies, ETP, R&D labs, etc. Industry should use his full expertise in his product. Less headache of cost for steam, water, ETP etc	No NPO (Non Productive Outputs) Focus on wastage - Reduce / recycle/ Research.
Money	ROI Increased	Separate industry for Steam, water supply , ETP, Compressed air , Solar power etc Steam, water, ETP at chargeable basis. This will reduce cost & headache of industry.	Industry to focus on Market & production activity with Cost , Quality, Timely delivery & implement CMS (Chemical management System)
Material	Selection of raw Material / Recycle	Easy Transportation & support for easy availability	Explore recycle of raw material &
Method	Scientific work with reduced NPO		Reduce Non Productive Output
Market	Specialized product with Better Quality, Low Cost & Timely delivery	Govt need to generate Market India strategy	Explore possibility with full efforts. Need to establish own Brand in garments
Quality requirements	Sustainable product	Training centres for every class of employees	Strict quality conciousness.
Environmental aspects	ZLD Reuse / reduce / recycle / Research	Government ETP / Boilers will perform better & maintain all aspects with no profit no loss basis.	Must apply CMS in plant. Must be agreed to pay costs of Treatment charges
Natural resources	Restricted available need to Research for Recycle	Water recycling is possible at a common manner even for MSME industries	Industry must develop an association to monitor common facilities given by Governments.

#### **Need help – from Government**





- To promote END PRODUCT & Demote raw material.
- That is promote ultimate garment rather than basic raw material.
  - This will improve value addition
- Generate more employment
- Contribution in revenue generation
- Increase industries.

#### Marketing style is changing - Be prepared

New Style of Marketing

#### **Marketing style is changing - Be prepared**

New Style of Marketing

No Stock in Show Room Only one piece for display

Online Garment Selection Design, sixe, color style, on your body fit

Advance payments

Delivery of garment in 7 days from fabric making to garmenting.



## SWOT Analysis

## **Business Opportunity - Textiles**

Stre	ngth	Wea	akness
1)	Availability of educated technical officials	1)	Fragmented / Limited production units.
2)	Huge Domestic market	2)	Need to change existing infrastructure for more
3)	India is one of the fastest growing economy		productivity
4)	Self sufficiency of mostly all the fibres used in Technical Textiles	3)	Poor R&D facility & also no/less research work in
5)	Substantial textile manufacturing network		industry.
6)	Future growth in technical textile is expected at higher level.	4)	Lack of skilled work force.
7)	Entrepreneur intelligence & mind set towards investment & growth	5)	Lack of knowledge / awareness / willingness on
			Environmental issues
Орр	ortunity	Threats	
1)	One of the fastest growing economy	1)	Absence of vision towards future requirements in
2)	Massive developments in infrastructure & developments (Geo-tech)		Technical Textile (eg. Geotech, meditech, etc)
3)	Mega automobile manufacturing projects (Auto-tech)	2)	Hesitancy in acceptance of sizable scales for new
4)	Systematic way of agriculture production leads to use of Agro-Tech /		technology
	Irrigation techniques	3)	Mind-set of investors is moving towards out-
5)	Educational institutes / sports authority is focused on sports activity –		sourcing & selling rather than producing in India &
	(Sport-Tech)		selling.
6)	Real Estate - Building infrastructure is growing – (Build-Tech)		
7)	India growing as medical tourism – (Medi-tech)		



## **Environmental Aspects**



## EMERGING Sustainable TECHNOLOGIES

#### Sustainability



#### Most Important in Textile Business

## Sustainability Challenges

Global Per Capita Water Availability (2025)



Source: 'Global Water Initiative' (June 2005), GEF International Waters Conference, The Coca-Cola Company

## Sustainability Challenges



## Water Pollution



#### Fiber

Possibility of Toxic Chemicals

Need to avoid the use of these chemical group This is listed in REACH document.

e.g. NPEO molecule is very close to Female Hormone Use of APEO /NPEO leads to feminization of human & leads to imbalance of nature

Do you know what we purchase along with our cloths?

#### Example of APEO - Endocrine Disruptors :

- They are naturally-occurring compounds or man-made substances that may mimic hormones & thus interfere with their functions in the endocrine system of the body.
- Thus, <u>they directly affect development</u>, reproductive, neural & immunity systems in human beings.
- e.g.: Nonyl phenol





For menstrual cycle)

(part of NPEOs)

**AL PHENOL IS TH DOCRINE DISRUPTOR !!!** 

## tainability Challenges

#### **PR** SH. **ISSUE:-Phthalates** from the print on

T - shirt the

• Approximental

## **Use of toxic** chemicals

#### LADIES **GARMENT ISSUE:**-

**NPEO** - 9600 mg/kg was detected

#### COST

• 7,380 pieces were re-worked.

ION ing che Ical substituted at supplier end.

### Sustainability Challenges



Some of the infrared radiation passes through the atmosphere, and some is absorbed and re-emitted in all directions by greenhouse gas molecules. The effect of this is to warm the Earth's surface and the lower atmosphere.

Infrared radiation is emitted from the Earth's surface.

Source: U.S. Department of State 1992

## **Sustainability Challenges**







# Sustainability Lenses Water Energy/CO<sub>2</sub> Waste Chemicals Biodiversity Land Use Social

### **Prevent Pollution – Save Earth**

# **Prevent Pollution**

## Air

# Water

# Soil

#### Future is very Bright with an OATH



#### Let us take an oath

We will take care of mother earth with social responsibility and environmental protection.

This is our contribution to a better future for us and for coming generations

