TXL 781 Presentation 2024

PROJECT REPORT

MANUFACTURE OF BULLETPROOF JACKET

UTKARSH KUMAR 2021TT11167

Particulars of Project

- Significant market demand exists for lightweight bulletproof jackets.
- The main users include the Army, Police forces, and safety-conscious American parents, including civilians.
- My project is poised to capitalize on this demand by delivering innovative, lightweight bulletproof jackets tailored to specific user requirements.
- Also, the global bulletproof jacket market is projected to grow at 5.7% CAGR from 2022 to 2030.

Promotor's Details

Name	:	Utkarsh Kumar
Address	:	IIT, New Delhi
Phone	:	8595000000
Designation	:	Founder
E-mail	:	Utkarsh@gmail.com
Higher education	:	B Tech
Experience	:	6 months

Location and Land

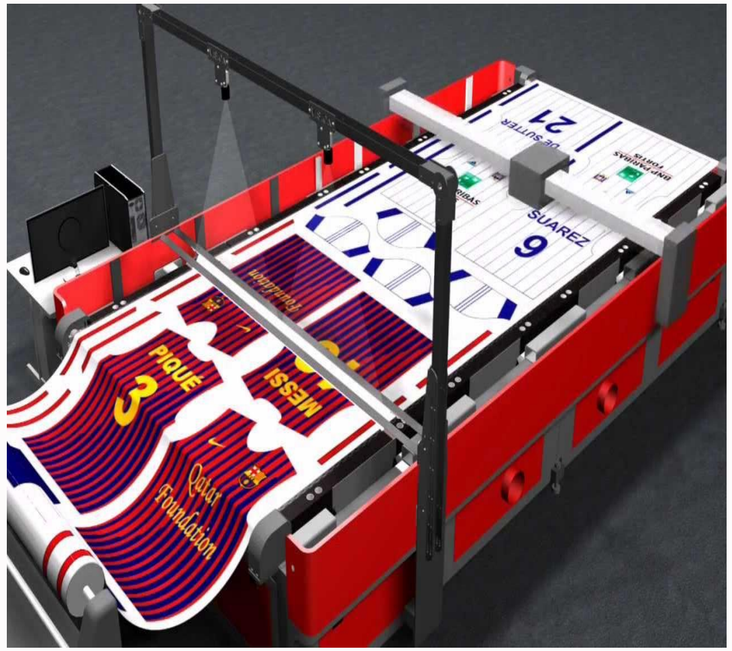
Location	Bhilwara, Rajasthan	
Circle rate (per square feet)	300	
Land	20000 feet2	60,00,000
Building Cost	25 lakh	25,00,000
Machinery Price	22,87,920	22,87,920
Total		1,07,87,920

Details of Machinery

S No.	Item	Units	Amount Rs.
1.	**LM-1390 300w hybrid CO2 laser cutting machine**	1	4,00,000
2.	**Automatic Fabric Cutting Machine | MC 70-80-90**	1	6,87,920
3.	**Automatic sewing Machine** FX201OH	3	12,00,000
	Total		22,87,920

Details of Machinery

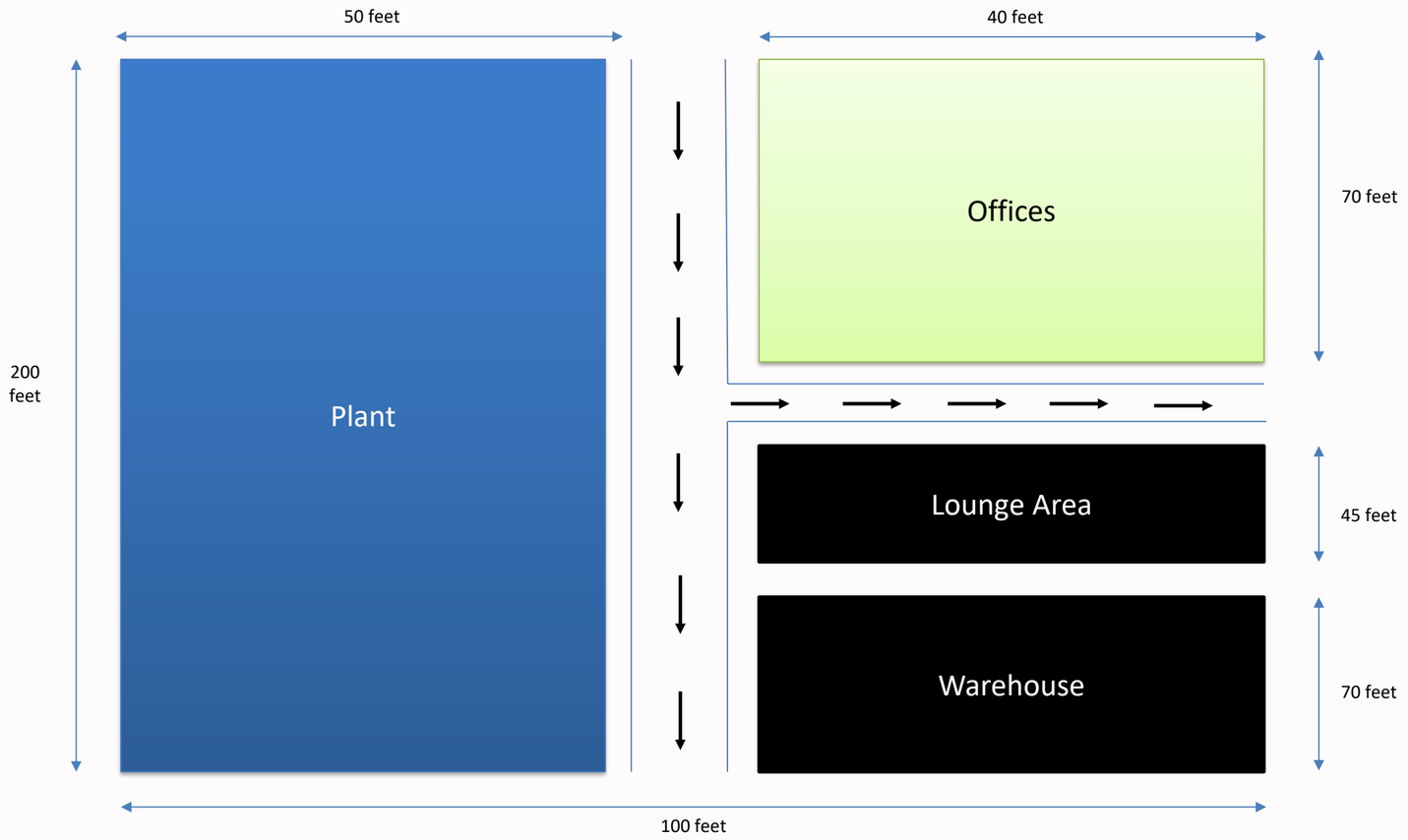
Automatic sewing Machine
FX201OH



LM-1390 300w hybrid CO2 laser cutting machine

Automatic Fabric Cutting Machine | MC 70-80-90

Plant layout



Warehouse Capacity – 50,000 jacket

Product

Level 3+ - BP jacket 1.O for Army @60000

Exportable @ $850

Level 3A - BP vest1.O for Civilians @25000 in India

Exportable item @ $550

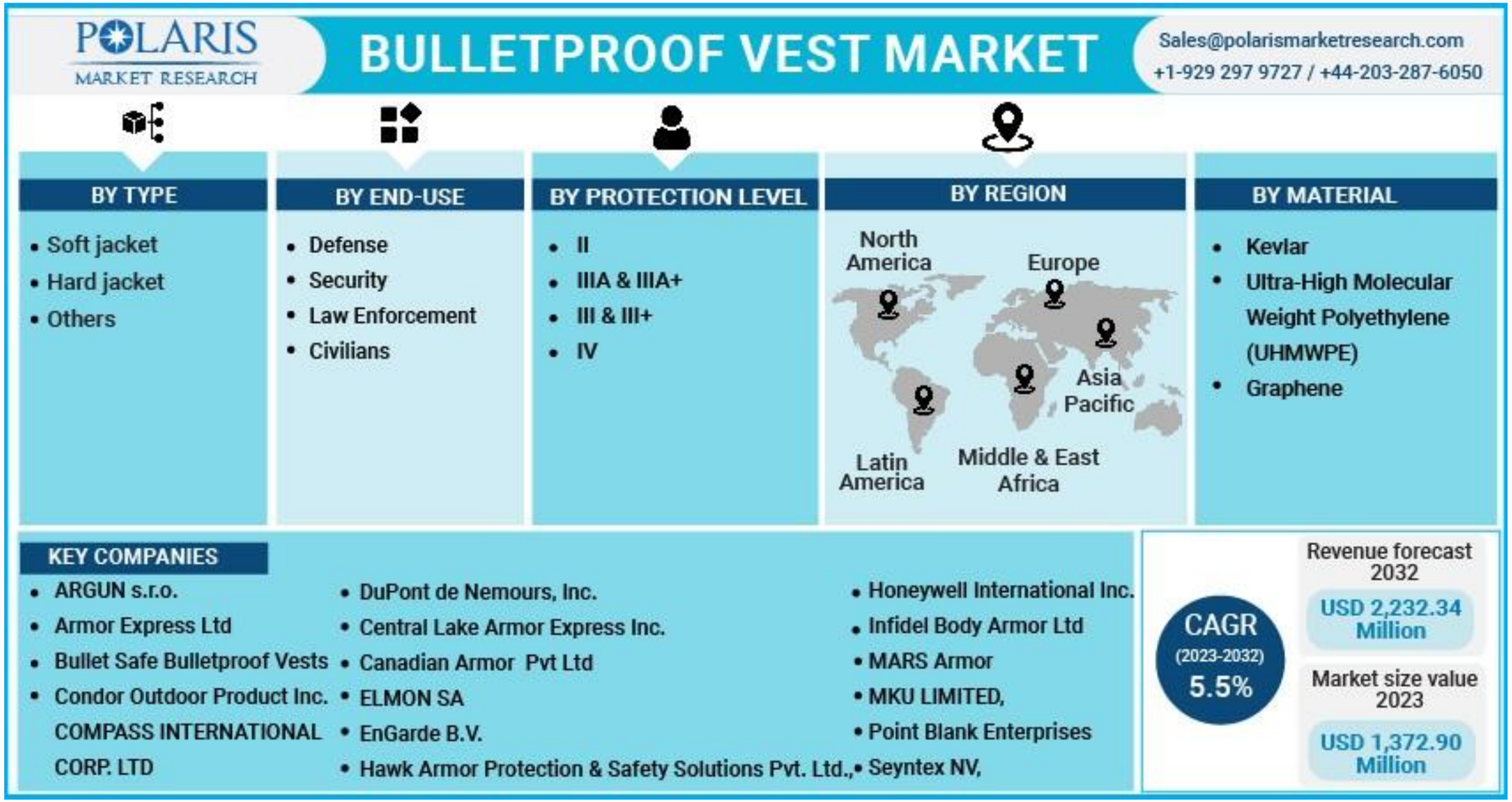
Glance at a Level 3+ BP jacket for Army

Row Material	Unit Cost	Quantity in 1 Jacket	Weight added	Price
Kevlar	1350/m^2	7-8 m^2	1.50 -2.00 kg	10,125
Ceramic Plate	10000	2	5.00 -6.00 kg	20,000
Nylon fabric	120/m^2	3m^2	0.45 -0.60 kg	360
Nylon Straps	50/m	4m	0.50 -0.60 kg	200
Sweing Thread(polyester)	300/kg	0.25 – 0.30 Kg	0.25 -0.30 kg	75
Packaging material	100/ peice	1	0	100
Operation Cost	550/unit	-	-	550
		Total	7.70 -9.50 kg	31,410

Glance at a Level 3A BP jacket for Civilians

Row Material	Unit Cost	Quantity in 1 Jacket	Weight added	Price
Kevlar	1350/m^2	7-8 m^2	1.50 -2.00 kg	10,125
Nylon fabric	120/m^2	3m^2	0.45 -0.60 kg	360
Nylon Straps	50/m	4m	0.50 -0.60 kg	200
Sweing Thread(polyester)	300/kg	0.25 – 0.30 Kg	0.25 -0.30 kg	75
Packaging material	100/ peice	1	0	100
Operation Cost	550/unit	-	-	550
		Total	7.70 -9.50 kg	11,410

Market Analysis



Market Analysis

- Increasing war and border Conflict like Israel vs Islamic Countries, Ukraine vs Russia, America vs Iran(expected), Pakistan vs India vs China vs Hongkong, no doubt global demand for BP jacket is going to increase.
- Unwanted firing in western school mainly in America also increase the demand for BP jacket among Civilians.
- There is huge market and very limited supply, @ 5.5% CAGR.
- Government giving tax incentive on export of BP jacket.
- Customer – Indian Army, African nations, Afghanistan, Nepal, Sri Lanka, American Civilians.

Product	Manufacturing Cost	Selling Cost	Export Selling Cost	Profit Margin / Unit
Level 3+ - BP jacket 1.O for Army	31,410	36,000	$450 – 37528 approx.	15 -20%
Level 3A - BP vest1.O for Civilians	11,410	15,000	$225 - 18,764 approx.	31-64%

Working Capital

Administration		Amount
	Accountant (2)	2 * 40,000/m
	Manager for outsource stuff (stock handling or shipment) (1)	1* 60,000/m
	Master labour for operation handling (1)	1* 70,000/m
	Quality checker for raw materials and Products (1)	1* 60,000/m
Labour		
	Sweing Machine operator (3)	3* 40,000/m
	Cutting Machine Operator (1)	1* 30,000/m
	General labour (4)	4* 15,000/m
Total (1 month)		4,80,000
Amount for 6 month		6* 4,80,000
Raw Material (for 2 months)	(200 +100) jacket production / week	
	Total jacket in 2 months = 300 *8	
	1 Jacket	31,410 / 11,410
Total Amount of Raw material		200*8 *31,410 + 100 *8*11,410 = 5,93,84,000
Utilities		
	Electricity and Water	1,50,000/m
Amount for 6 months		1,50,000 *6
	Total	5,43,64,000

Cost of Project

Activity	**:**	**Light weight Bullet Proof Jacket manufacturing**
Location	:	Bhilwara, Rajasthan
Land and site/building Development	:	85,00,000
Plant and machinery	:	22,87,920
Training for Company Technician	:	12,00,000
Ofiice Setup	:	5,00,000
Plant Setup	:	2,50,000
Technology - Computer	:	2,00,000
Misc. Fixed Assets	:	2,50,700
Provision for contingencies	:	77,50,000
Fixed Capital	:	2,09,38,620
Total working Capital	:	5,43,64,000
Total project cost	:	7,53,02,620

Means of Finance

Means of Finance	:	Amount
Promotors	:	70,00,000
Term loans	:	1,46,57,034 @ 11% for 4 year
Working Capital Loans	:	4,34,91,200 @ 13% for 3 year
Misc. Sources	:	31,54,386 @ 20%
Govt. Subsidy	:	70,00,000

Estimation of sales and production in a year

- It is estimated that for first year the production will 200 level3+ BP jacket and 100 level3A BP jacket for civilians per week and which will eventually increase on increasing network and demand of BP jacket in Plant
- It is estimated that sales for first year is around 9600 Level3+ BP jacket and 2100 Level3A BP Jacket.
- Around 2000 Level3A and around 4000 Level3+ is expected to exported.
- Means Revenue for first year is around 71,20,00,000.

	:	Projected Quantity Exported	Exprted Price/Unit	Quntity Sold Locally	Local Price/ unit	Total
Level 3+ BP Jacket	:	4,000	37,528	5600	36,000	37,528*4000 + 36,000*5,600 = 35,17,12,000
Level 3A BP Jacket	:	2,000	18,764	100	15,000	45,650*2,000 +25,000*100 = 3,90,28,000
Total	:					39,07,40,000

Profitability Projections

	31/03/25	31/03/26	31/03/27	31/03/28
Utilisation of installed capacity	35%	42%	54%	67%
Cost of Production	36,08,24,000	36,13,43,610	36,22,00,140	36,31,99,360
Administrative Expense	1,82,16,000	2,00,37,600	2,20,41,360	2,42,45,496
Total Assets expenses	10,20,000	10,70,000	11,20,000	11,70,000
Total Cost of Production	38,00,60,000	37,24,51,210	38,53,61,500	41,86,14,856
Expected Sales	39,07,40,000	41,80,91,800	46,82,62,816	54,91,36,982
Gross Profit Before Expenses	1,06,80,000	4,56,40,590	8,29,01,316	13,05,22,126
Financial Expenses / Current Liability				
Payment for Term Loan	52,76,532.24	52,76,532.24	52,76,532.24	52,76,532.24
Payment for working capital loan	1,64,02,481	1,64,02,481	1,64,02,481	-
Interest on misc. capital	6,30,877.20	6,30,877.20	6,30,877	6,30,877
Auditor fee	2,00,000	2,25,000	2,50,000	2,75,000
Total	(-)1,11,99,013	4,31,05,700	-	-
Depreciation @ 10%	20,93,862	21,10,972	21,34,245	21,54,864
Operating Profit	(-)1,32,92,875	2,09,94,728	5,82,07,181	12,22,55,536
Other income	50,45,000	53,98,150	60,03,550	66,59,400
Profit/loss Before Taxation	(-) 82,47,875	2,63,92,878	6,42,10,731	12,93,14,936
Tax subsidize	-	-	-	-
Profit after Taxation	(-) 82,47,875	2,63,92,878	6,42,10,731	12,93,14,936
Dividend	0	0	0	0
Profit Retained	(-) 61,54,013	2,17,91,027	6,42,10,731	12,93,14,936
Net Cash Flow	(-)61,54,013	2,17,91,014	6,42,10,731	12,93,14,936

Balanced Sheet

Assets	
Fixed Assets	1,68,15,626
Plants and machinery	22,87,920
Land	85,00,000
Current Assets	
Raw material	5,93,84,000
Cash and cash equivalents	60,27,706
Total Assets	7,61,99,626
Liabilities and Equity	
Term Loan	1,62,69,307
Working Capital Loan	4,91,45,056
Loan from misc. sources	37,85,263
Total Liabilities	6,91,99,626
Promotor’s Equity	70,00,000
Liabilities and promotor’s equity	7,61,99,626

Pay Back period

Year	Cash Flow	
	Annual	Cummulative
0	**(-) 7,46,57,034**	**-7,46,57,034**
1	**(-) 61,54,013**	**(-) 8,08,11,047**
2	**2,17,91,014**	**(-) 5,90,20,033**
3	**6,42,10,731**	**51,90,698**
4	**12,93,14,936**	**13,45,05,634**

$$PB = E + \frac{B}{C}$$

E = 3
B = 51,90,698
C = 12,93,14,936

PB = 3.04

Accounting Rate of return

Year	Book Value of Investment	Profit/loss after tax
1	7,53,02,620	(-) 61,54,013
2	9,85,53,070	**2,17,91,014**
3	13,01,26,452	**6,42,10,731**
4	**16,54,32,498**	**12,93,14,936**

ARR = 45 %

Benefit Cost Ratio (BCR)

Persent Value of Benefits = 10,43,65,450

BCR = PVB/ Initial Investment = 1.38

Initial Investment = 7,53,02,620

Debt service coverage ratio

Persent Value of Benefits = 12,93,14,936

Annual debt payment = 7,53,02,620 DSCR = 1.71

Your Feedback ?

THANK YOU !