



High End Leather Processing

CSIR-CLRI Initiatives in the Twelfth Five Year Plan

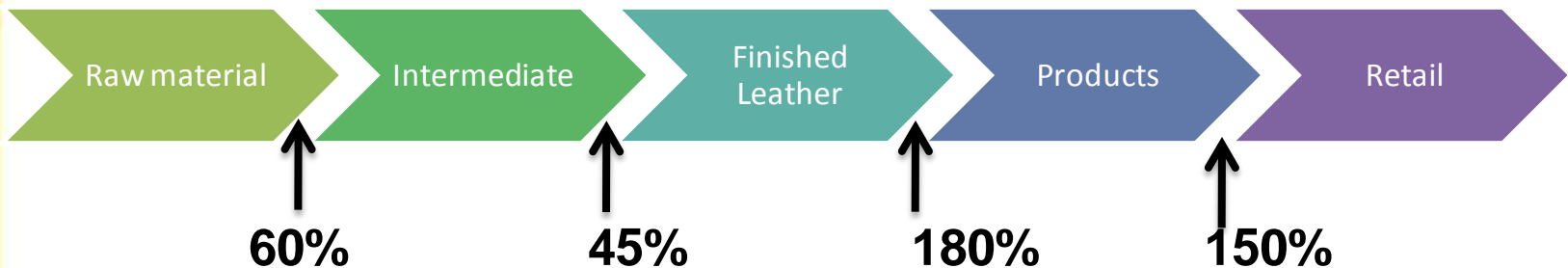
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Indian Leather Sector: Targets Ahead

- From the present 3.75 billion \$ to 14 billion dollars by the end of 12th Five Year Plan
- How to achieve this target?
 - ☞ Increased productivity
 - ☞ Value addition



India needs to move from Incremental value chain to leap frog approach to meet the target



Present Trends in Leather Market

Consumer today: Fashion and quality conscious

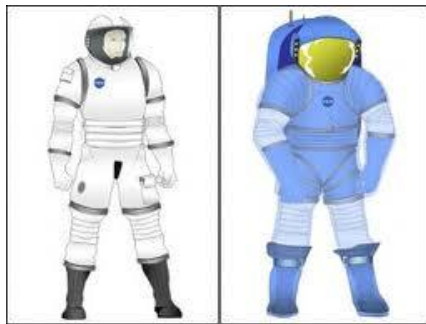


Treading into hitherto unexplored territories



Smart Leather: Potential Areas of Applications

Space suits



Military suits



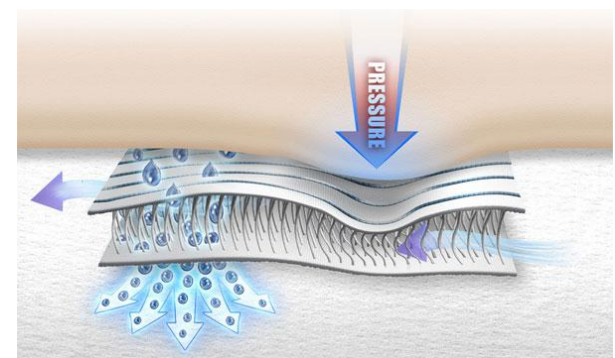
Diving suits



Suits for Construction workers



Rescue workers suits



Therapeutic suits – self healing



CSIR-CLRI Initiatives for 12th Plan

- **Value engineering** both through molecular level understanding of the process steps as well as providing physical chemistry and chemical engineering inputs for smart functioning of skin matrix
- **Value enhancement**
 - ☞ New texture addition, surface profiling, property enhancement for new applications
 - ☞ Developing chemicals, which can provide customer desired properties such as thermochromic effect, fire retardance, stain resistance etc
 - ☞ Technologies and engineering aspects towards improving the diffusion of chemicals, enzymes through nanoparticulate carriers
 - ☞ Tools and techniques for in process fault diagnosis and objective grading
 - ☞ Smart leather products such as children footwear, therapeutic footwear for diabetic and obese and smarter leather upholstery and garments



Way Forward

Value enhancement through innovative technologies is the focus of the CSIR-CLRI 12th Five Year Plan



Thank you all