

Energy Cost Saving Opportunities in Leather Industries



Presented by:

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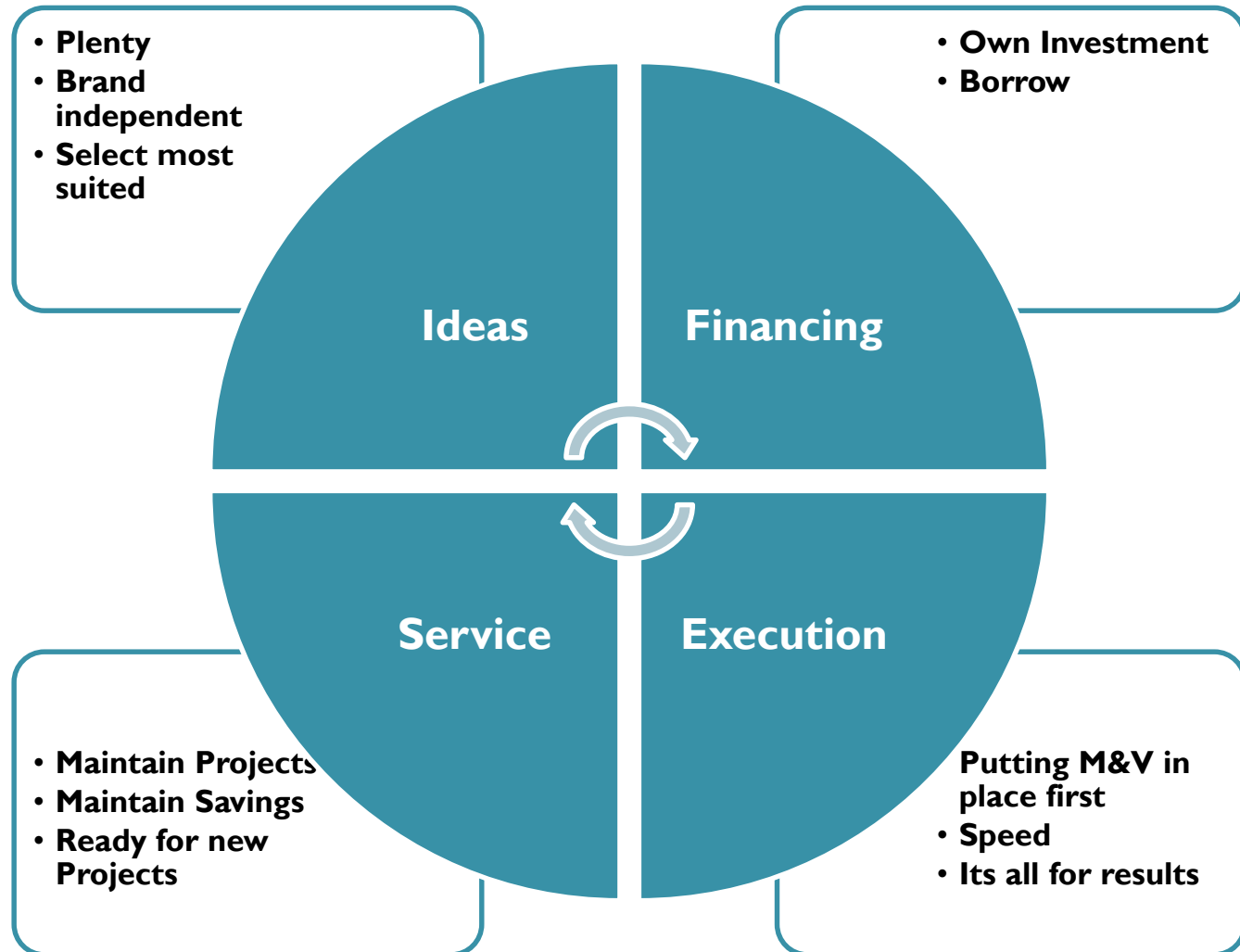
About SEE-Tech Solutions

- An ESCO, Accredited By Bureau Of Energy Efficiency (BEE): as “Grade-1”
 - Carried out more than 500 Assignments in the field of energy conservation since last 20 years
 - Award for excellence in energy conservation and management, AEE-USA, BEE, EESL, MEDA, MSME
 - Operating all over India (based in 10 cities)
- ✓ **2012 onwards, on mission to deliver 20% savings in overall Energy Cost**
 - ✓ **No product/brand representation**
 - ✓ **One stop solution**
 - ✓ **Delivered overall savings of 25,000 Mwhr & 25 Crores INR**

How to go about Saving Energy Cost?

- Has to be top driven approach
- Start with & ensure proper Energy Monitoring – know your numbers
 - Overall Plant Level
 - Major Processes/Equipment Level
 - Discuss SEC & Energy Cost in daily meeting
- Allocating separate budget (being proactive – it helps)
 - Target 15 to 30% reduction in Energy Cost
 - 6 to 18 months payback period (A few may go for 24 months)
 - Work it out backwards
 - Has to be continuous exercise
- Make small team – representation from top to bottom
- Energy Audit could be starting point but not end point, implementation and monitoring of savings are two important subsequent steps

Energy Cost Reduction - Challenges



Where & How to Look for Energy Cost Saving Opportunities

- Its not just about ideas, its about selection and execution
- Areas:
 - Thermal:
 - Steam: Boiler, Steam Distribution, Utilization (Tunnel Drier)
 - Technology change (Electrical/Direct Gas fired)
 - Boiler Efficiency Improvements (Retrofit, new boiler, right sizing)
 - Distribution efficiency (Insulation & Steam Traps), condensate recovery
 - Renewable Energy Options (Solar Hot Water, Biogas Thermal)
 - Hot water: Generation, Distribution, Utilization
 - Electrical:
 - Understanding tariff and ensuring utilization of all tariff based measures
 - Tariff Type, CD, MD, PF, TOD, Voltage control, Standby Transformer Losses ...
 - Renewable Energy Options (Wind, Solar PV, Biogas Electrical)
 - EE Motors, Pumps, Lighting, Ventilation systems, Compressed Air System, Process equipments

Electrical Equipments

- EE Motors (IE-1 to IE-4 & PM5)
 - Many options: which one is right?
 - RPM goes up and hence load on motor
 - Pulley change/VFD necessary
 - VFD brings more saving opportunities
- Compressed Air System
 - Pressure setting
 - Drying method/requirement
 - No load power consumption
 - Recovering waste heat to generate hot water
 - Leakage losses
 - Centralized utility versus dedicated or small groups

Electrical Equipments

- Pumps
 - Right selection of head & flow
 - EE Pumps
 - VFD with automation
- Lighting
 - Natural
 - LED
- Fans
 - BLDC

Thank you....



SEEtech
Good Ideas, Better Results