STRATEGIC BUSINESS PLAN
ISO/TC 120

EXECUTIVE SUMMARY

ISO/TC 120 Leather, under the auspices of ISO was formed as early as 1966. ISO/TC 120 deals with standardization in the field of raw hides and skins including pickled pelts; tanned hides and skins and finished leather and leather products including methods of test for leather products. Methods of test in the field of raw hides and skins including pickled pelts, tanned hides and skins and finished leather are excluded which is the field of the International Union of Leather Technologists and Chemists Societies (IULTCS). Footwear, which is the field of work of ISO/TC 216 and Protective clothing and equipment, which is the field of work of ISO/TC 94 are also excluded from the work.

The objective of ISO/TC 120 is to facilitate better understanding and promote international trade in leather. Leather - hides and skins, tanned leather and leather products have diverse applications in human civilization.

Interested parties in the standardization process are industries at national and international level, tanneries and intermediate industries of final products. Public authorities, institutes, laboratories, consumer representatives and other non- governmental organizations also are among the interested parties. All of them are interested in having a set of standards that establish a common terminology for the sector, describe the tests that define the characteristics of the material and lay down the requirements to be followed. The work of this committee helps to provide the same.

The standards are/will be useful for traders, manufacturers, purchasers etc. in view of the globalization of the market. It is expected that the standards would be immensely useful in overcoming arbitrations that often happen in this industry as hides, skins, leather and leather products are highly traded commodity in global trade.

The main objective of Business Plan of ISO/TC 120 Leather is to provide information about the work of the committee along with the priority areas in standards development work. An analysis of technological, environmental and social trends is also given in the Business Plan. The Business Plan of ISO/TC 120 Leather covers the activities of the subcommittee ISO/TC 120/SC1 Raw Hides and skins including Pickled Pelts, ISO/TC 120/SC2 Tanned Leather and ISO/TC 120/SC3 Leather products under the technical committee.

Leather manufacturing has remained as a tradition interwoven technological activity, predominantly driven by market forces and consumer preferences. Usage pattern of leather thus keeps dynamically changing. Though it is a byproduct of the meat industry, the trade value of leather is almost five times that of meat.

Leather is currently predominantly used for production of footwear, garments, bags, wallets, belts, upholstery, heavy luggage and gloves. In developing economies, leather plays an important role of creating high volume employment for low capital investment, leveraging the strength of their raw material base.

1. INTRODUCTION

1.1 ISO technical committees and business planning

The extension of formal business planning to ISO Technical Committees (ISO/TCs) is an important measure which forms part of a major review of business. The aim is to align the ISO work programme with expressed business environment needs and trends and to allow ISO/TCs to prioritize among different projects, to identify the benefits expected from the availability of International Standards, and to ensure adequate resources for projects throughout their development.

1.2 International standardization and the role of ISO

The foremost aim of international standardization is to facilitate the exchange of goods and services through the elimination of technical barriers to trade.

Three bodies are responsible for the planning, development and adoption of International Standards: ISO (International Organization for Standardization) is responsible for all sectors excluding Electrotechnical, which is the responsibility of IEC (International Electrotechnical Committee), and most of the Telecommunications Technologies, which are largely the responsibility of ITU (International Telecommunication Union).

ISO is a legal association, the members of which are the National Standards Bodies (NSBs) of some 164 countries (organizations representing social and economic interests at the international level), supported by a Central Secretariat based in Geneva, Switzerland.

The principal deliverable of ISO is the International Standard.

An International Standard embodies the essential principles of global openness and transparency, consensus and technical coherence. These are safeguarded through its development in an ISO Technical Committee (ISO/TC), representative of all interested parties, supported by a public comment phase (the ISO Technical Enquiry). ISO and its Technical Committees are also able to offer the ISO Technical Specification (ISO/TS), the ISO Public Available Specification (ISO/PAS) and the ISO Technical Report (ISO/TR) as solutions to market needs. These ISO products represent lower levels of consensus and have therefore not the same status as an International Standard.

ISO offers also the International Workshop Agreement (IWA) as a deliverable which aims to bridge the gap between the activities of consortia and the formal process of standardization represented by ISO and its national members. An important distinction is that the IWA is developed by ISO workshops and fora, comprising only participants with direct interest, and so it is not accorded the status of an International Standard.

2. BUSINESS ENVIRONMENT OF THE ISO/TC

2.1 Description of the Business Environment

The following political, economic, technical, regulatory, legal and social dynamics describe the business environment of the industry sector, products, materials, disciplines or practices related to the scope of this ISO/TC, and they may significantly influence how the relevant standards development processes are conducted and the content of the resulting standards:

Leather is tanning sectors' fundamental output. Leather is a natural material with unique properties. It has existed since the beginning of mankind and has marked modern life with a touch of style. It is an intermediate industrial product that finds numerous applications in downstream sectors of the consumer product industry.

Leather is often the major material input which is cut and assembled into footwear, garments, leather goods, furniture and many other items of daily use for a large section of users. These different applications require different types of leather with specific technical and fashion characteristics, which add value to products. The tanning industry fulfills the needs with a variety of hides and skins available as by-products from meat industry. Bovine hides and ovine and caprine skins as well as many other animal hides and skins are recovered from dead animals and are processed to useful, value added and fashionable objects. The technical requirements for a particular type of leather are met through the use of diverse range of leather auxiliaries.

Tanning is at the base of an extensive chain of industries forming a dense network and activities all related to the valorization of hides and skins. The sector often constitutes the principle source for the generation of wealth and employment at local and regional level.

The global leather market has been reported to be growing at a CAGR of 4.47% and expected to reach USD 121 billion by 2022. While North America continues to be one of the biggest markets for this industry, other nations such as China, Taiwan, Korea and European countries have reported increasing import of leather products.

Asia is by far Leather sectors' most important location in the world. Africa has been fast emerging as one of the future markets for sourcing quality leather and hides for the global market. Africa's abundance of livestock represents a natural strength for the sector. Human capital is another essential requirement of the leather industry, which is available in these continents.

Upholstery is emerging as an important end use of leather. The demand for use of leather in automotive upholstery is likely to increase several folds. Increased focus on developing product portfolios based on leather beyond conventional applications in footwear, garments, bags and luggage would bring in drastic changes in the consumption pattern for leather.

The major factors which may impact the global market in Leather are economics related, material related, process related, technology related, customer related, and society related, details are described below :

- **Economics Related**

In the overall food chain, the positive economic importance of the industry taking care of one of its major waste products should not be underestimated or marginalized. The tanning industry is often criticized on environmental

grounds. However, the alternative hazard of millions of dumped, putrefying hides and skins has been taken care of by this industry by preserving hides and skins and thereby a tremendous service has been done to mankind.

The total value of global leather trade is estimated at about $100 billion. If the by-product of the meat industry, hides and skins, was not used to produce this quantity of leather, then, for example, leather products would be manufactured from alternative, non-renewable raw materials such as plastics and other petrochemical based products. Developing countries now produce over 60% of the world's leather, and this proportion is growing. The transition from a by-product of meat industry to that of an industry making value added products, in economic terms comes with challenges. The industry now requires to improve on its carbon footprints. Forward and backward linkages will have to be established to ensure low carbon wastage. Value added products from solid wastes and adoption of zero liquid and gaseous discharge would be essential to reduce carbon footprint.

The value of leather products at retail level would be commensurately higher and the value of products containing leather, if one counts automobiles and aircraft, would be substantially greater than a straight proportion of the footwear value. The automotive upholstery market is likely to touch $7.74 billion by 2025. Though synthetics occupy a large percentage of this market, there is an increasing trend moving towards leather.

At the same time inadequate coupling between market demand and supply in the case of leather sector has made leather vulnerable to several economics related challenges. The inadequate supply of leather to meet the demands of conventional usages of leather have led to new materials entering the market and commanding a price which leather would now have to meet. In the event leather is unable to meet the price thresholds set and commanded by the non-leather replacements, leather would have to yield and price itself out of the market. A significantly large part of the consumers in developing countries are already using non-leather footwear, owing to various factors including cost.

The cost of raw hides and skins is a perceived price. If the price of the raw stock is lower than an optimum percentage of the meat price, there would be tendency for the farmer to neglect the hides and skins. This leads to quality loss. Therefore, referencing of the prices of hides and skins to the prices of meat become important at the generation stage. At the final market level referencing of the leather product prices to those of synthetic substitutes and supplements becomes important. These parameters are likely to subject leather to greater challenges.

- **Environment Related**

Significant steps have been made by the global leather industry with regard to environmental matters. In the manufacturing stages, a high level of quality control ensures that the best use is made of hides and skins and the chemicals required in their conversion into leather. Overall chemical and water use has thus been reduced, reducing the level of waste for treatment.

The industry is proactive in addressing environmental issues and in investments in clean technology. The use of best available technology continues to reduce the use of water, chemicals and energy in process, convert waste into new raw materials, and treat residual waste as per international standards. Converting waste to wealth by way of value addition to waste has also become a norm for this industry. There is a growing recognition that in-plant control strategies are required to keep the cost of end-of-pipe treatment low.

- **Material Related**

Leather is unique in its viscos elastic and comfort properties. The 21st century is likely to throw open many new materials. Material science and technology is poised for high degree of innovations. Advanced and smart materials are likely to swamp the consumer market products. A traditional product like leather is likely to face stiff challenges, particularly because of some current limitations. With growth rate of some of the raw material species like cow and sheep on the decline, leather industry will have to adopt strategies for manufacturing products from raw materials whose fibre characteristics are not favorable. Innovation in process methodologies is required for such conditions.

Leather being a product of natural fabric, there are some process and product related limitations against which the synthetics exercise leverage. Cost of leather has to be referenced against synthetic materials challenging the application of the natural fabric. Aesthetics are no longer a unique strength of leather. Synthetics can as well simulate appearance and related attributes of leather. An average customer does not know the invisible uniqueness of leather. Therefore, a serious challenge to leather is likely from new materials. Concentrating on intelligent products and niche markets such as upholstery for aircrafts, waterproof leathers for aviation industry etc. would be required, while phasing out leather usage in low value products.

- **Process Related**

Leather manufacturing process suffers from two major disadvantages viz. batch processing and environmental consequences of the wastes generated. The quantum and the type of wastes generated in leather processing pose serious challenges. The social perception of leather processing is negative. Variability in product quality and environmental constraints of the process are two limiting aspects of leather which competition can exploit.

Batch processing poses limitations in providing quality assurance and also increases the time of processing. Therefore, there is a need to adopt continuous process systems with enhanced automation. Leather industry worldwide needs to catch up to principles of Industry 4.0.

- **Technology Related**

Leather processing and product manufacturing technologies are mature. There is some degree of technology obsolesce which has not yet been adequately addressed. The turn-around time in technology is long. Intelligent process technologies that would enhance chemical uptake while reducing environmental management costs and manpower costs are likely to become prevalent.

- **Customer Related**

Leather has been used traditionally by societies. There are, however, a number of changes in customer preferences. The change in orientation is natural. Fifty years ago, nearly 75% of the soles in footwear were made of leather. A very small percentage of footwear made in the world use leather soles now. Even the quantity of leather in most of the footwear types has dropped significantly. However, the areas where leather is replaced by synthetic materials should be looked at as opportunity segments for leather to realize higher value. Thus, orientation to changes in customer preferences is vital.

Leather is likely to occupy spaces of niche consumer demand and the market for leather would be in regions where the disposable income available with the consumer is high. This would make leather products an article of choice and luxury in many of the manufacturing countries, where disposable income is likely to grow over time. There are also areas of the product industry, where leather stands to gain. This includes personalized products such as that meeting specific requirements of sports personnel, healthcare needs etc.

- **Society Related**

When the industry focuses on niche market segments, the need for it to meet environmental and ethical requirements under corporate social responsibility becomes higher. This would be challenging for the ethnic product industries, but nevertheless needs to be addressed.

2.2 Quantitative Indicators of the Business Environment

The following list of quantitative indicators describes the business environment in order to provide adequate information to support actions of the ISO/TC:

Leather is an important commodity traded extensively world-wide. There is a strong need for development of holistic standards for hides, skins, leather and leather products to avoid technical trade barriers and imbalances to free and fair trade in leather sector. ISO/TC/120 is pro-active in development of standards meeting stringent requirements of the fast changing trade environments and keeping in view emerging future trends in materials market and methods.
The leather import-export data is provided in the following tables (source: FAO) to indicate that leather trade is truly global.

Table 1 Export Indicators for leathers (2013 Data)

	Heavy Leathers Bovine (in Mill. USD)	**Light Leathers Bovine (in Mill. USD)**	**Light Leathers Ovine (in Mill. USD)**
World	**989.8**	**18989.8**	**2764.9**
Developing Countries	**591.5**	**9703.5**	**1756.2**
Latin America & Caribbean	547.6	3816.8	37.4
Africa	-	167.2	363.6
Asia	43.9	5719.6	1355.2
Developed Countries	**398.3**	**9286.3**	**1008.7**
North America	1.8	1174.6	7.6
Europe	396.4	7527.5	986.4
Oceania	0.0	364.0	11.4
Other	0.1	0.1	3.3

Table 2 Export Indicators for Shoes (all types) (2013 Data)

	Shoes (in Mill. USD)

World	**54437.4**
Developing Countries	**25750.7**
Latin America & Caribbean	1263.0
Africa	485.7
Asia	24002.0
Developed Countries	**28686.7**
North America	713.9
Europe	27840.1
Oceania developed	45.4
Other Developed	87.3

3. BENEFITS EXPECTED FROM THE WORK OF THE ISO/TC

By developing international standards on leather, hides and skins, tanned leather and leather products ISO/TC 120 promotes international trade in this sector. This is of greater relevance in view of globalization of the market.

Standardization helps to reduce trade barriers, costs and contribute towards development of leather industry.

ISO/TC 120 consists of academicians, leading researchers, economic analysts, leading industrialists including exporters and importers. Members individually communicate new proposals and need for prioritizing specific projects to the secretariat and to the committee during the meetings. The work is undertaken after analyzing the specific need for the standard(s) by the sector, minimizing subjectivity associated with the trade and the impact the standard would make on global trade, particularly in facilitating removal of bottlenecks encountered due to absence of standards.

Standards are immensely useful in overcoming arbitrations that very often happen in this industry as hides, skins, leather products are highly traded commodity in global trade.

The ISO standards are being harmonized with national standards of the major players of the global trade. Since leather is a major material input for manufacture of footwear, the standards developed by ISO/TC 120 may be cited as normative references in ISO/TC 216 Footwear**.**

4. REPRESENTATION AND PARTICIPATION IN THE ISO/TC

4.1 Membership

The list of countries that are P members and O members in ISO/TC 120 is given here.

4.2 Analysis of the participation

ISO/TC 120 comprises 57 members divided into 25 P-members and 32 O-members. Out of the 25 P members, 23, i.e., 92 % are from Asia, Europe and Africa. Similarly, out of the 32 O members, 26, i.e., 81% are from Asia, Europe and Africa.

5. OBJECTIVES OF THE ISO/TC AND STRATEGIES FOR THEIR ACHIEVEMENT

5.1 Defined objectives of the ISO/TC

The TC will develop standards on the leather sector, especially in subjects defined in the scope.

Scope of ISO/TC 120:

Standardization in the field of:

- raw hides and skins including pickled pelts;
- tanned hides and skins and finished leather;
- leather products (including methods of test for leather products).

Excluded:

- methods of test in the field of raw hides and skins, including pickled pelts, tanned hides and skins and finished leather, which is the field of the IULTCS (see Note);
- footwear, which is the field of work of ISO / TC 216;
- protective clothing and equipment, which is the field of work of ISO / TC 94.

Note:

The International Union of Leather Technologists and Chemists Societies (IULTCS) is the international standardizing body responsible for the development of International Standards defining methods of test for leather other than made-up articles.

5.2 Identified strategies to achieve the ISO/TC's defined objectives

To achieve the objectives, the following strategies have been identified:

- To develop standards that are relevant to the market, with a focus on environmental and latest technological aspects
- To have physical meetings/web meetings of the committee, its subcommittees and working groups at regular intervals to resolve issues
- To liaison with relevant committees of ISO and other external standardization organizations

6. FACTORS AFFECTING COMPLETION AND IMPLEMENTATION OF THE ISO/TC WORK PROGRAMME

Achieving the required number of experts may be difficult in case of some projects. Leather is obtained from the hides/skins of varieties of animals. The geographical distribution of animals varies. A certain species of animal may be abundant in one part of the world and extinct in another. Hence, developing a standard on the hides/skins obtained from such an animal becomes a challenge. Even though its hide/skin is traded globally, there might not be enough expertise in all member countries of the committee.

7. STRUCTURE, CURRENT PROJECTS AND PUBLICATIONS OF THE ISO/TC

This section gives an overview of ISO/TC 120's structure, scope and subcommittees. It also provides information on the standards published and the standards under development under ISO/TC 120 and its Subcommittees.

7.1 Structure of ISO/TC 120

7.2 Standards catalogue for ISO/TC 120

7.3 Standards catalogue for ISO/TC 120/SC 1

7.4 Standards catalogue for ISO/TC 120/SC 2

Reference information

Glossary of terms and abbreviations used in ISO/TC Business Plans

General information on the principles of ISO's technical work