

Opening Address for the 113th Annual Convention

by David Peters

Leather is the ultimate result of managing an inconsistent raw material with applied technology. All of us, no matter what position in the value chain understand the challenges we face in order to bring this wonderful and subjective raw material to market.

The ALCA for the 113th time is providing the forum for participants in this charismatic industry, to explain, promote, discuss and educate all of us towards self-improvement.

Mike Bley has assembled a diverse and accomplished group of speakers that will provide all participants with thought provoking presentations and that will stimulate discussion.

The product that we ultimately produce provides a sensory experience that is unique and keeps us all connected. It is noteworthy to also mention that our core, whether through our presenters or from the participants, is the passion associated with our industry.

So, as we enjoy the next two days “Feel the Love”

Thank you.

The product that we ultimately produce provides a sensory experience that is unique and keeps us all connected.

Introduction to the 58th John Arthur Wilson Lecture

by David Peters

Ladies and gentlemen. My name is David Peters and it's my honor, as President of the ALCA, to present this year's John Arthur Wilson Lecture.

The John Arthur Wilson Lecture was initiated in 1959 in memory of the late John Arthur Wilson, who was acknowledged as a world leader in the field of leather chemistry and was an esteemed member of our association.

The process for selecting the recipient of this prestigious award was conducted by the committee chair, Alex Campbell, together with Andy Rhein and Elton Hurlow and their selection followed established guidelines prescribed by our association.

For the past 57 years this procedure has been followed resulting in the ALCA receiving a wide spectrum of leather industry experts, aficionados and icons and this year the committee accomplished yet another successful mission in the selection of its 58th award.

I would like to also thank the Stahl organization for their support and commitment in having been the main sponsor of this lecture for the past few years.

The recipient of the John Arthur Wilson award has consistently demonstrated his pledge not only to the leather industry but equally to sustainable business management, Life Cycle Assessment and research and development. In 2008 he founded SPIN 360, a company that promotes new sustainable business models, technological and organizational innovative solutions in fashion and other high- end industries worldwide.

His current partnerships comprise of international luxury groups, tanning and fashion companies. The most recent alliances cover the chemistry sector and focus on integrated sustainable supply chain management in the fashion industry.

His company, SPIN 360, is a partner of Synesis, an international R&D consortium, whose members include the CNR (Italian Research Council) and the Fraunhofer Gesellschaft (Europe's largest application-oriented research organization).

He is a native of Milan Italy, and graduated with honors in 1997 in Environmental Sciences from the University of Milan.

Ladies and gentlemen please acknowledge this year's John Arthur Wilson Lecture recipient Mr. Federico Brugnoli.



Mr. Federico Brugnoli presents the Wilson Lecture.

Sustainability in the Leather Value Chain: Global Overview, Regional and Sectoral Peculiarities

by
Federico Brugnoli

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Executive Summary

The concept of sustainable development has been growing in importance going back to the 1987 release of the report “Our Common Future” (also known as the Bruntland Report), by the United Nations World Commission on Environment and Development.

At that time, the industrial world was not paying much attention to this novel concept, and the main drivers guiding the development of the global industrial world continued to be in line with the past: productivity, efficiency, minimization of costs.

Since then, determining drivers of change have grown in importance and have increasingly influenced the strategic choices of globalized production systems: rapid legislative evolution in some parts of the world, growth in importance of international NGOs focused on Environmental protection and Social compliance, and growth of the speed of information flows to and from consumers.

Some industrial sectors are acting more rapidly than others: Food and beverage, Automotive, Design and Fashion to name a few. Corporations and brands can no longer run the risk of being found guilty of non-sustainable practices along their supply chains.

The leather industry, as key supplier of at least three of these sectors, is being asked to rapidly evolve and develop strategies and techniques to face the new sets of requirements developed by its customers. These involve: Respect of Human Rights, Health & Safety on the workplace, Environmental protection, Fair trade and operating practices, Consumer safety, Chemical management, traceability of raw materials and animal welfare.

This proliferation of requirements along with the inherent complexity linked with proper Global control measures are creating a potential for increased costs in the whole leather supply chain and a parallel drop in effectiveness of the proposed strategies.

In this context, the lecture will propose and share an innovative outlook on the entire subject at hand and provide a number of viewpoints for responsible supply chain management by means of new operational tools and innovative models of business relationships in the global leather supply chain.

1. Introduction

Sustainability is a topic of growing importance in the leather supply chain. The birth of the concept of sustainability is rather old. It is in fact in March 1987 that Mr. Bruntland published his Report “Our common Future”, issued in response to a request of the World Commission on Environment and

Development. It was an urgent call by the General Assembly of the United Nations:

- to propose long-term environmental strategies for achieving sustainable development by the year 2000 and beyond;
- to recommend ways concern for the environment may be translated into greater co-operation among developing countries and between countries at different stages of economic and social development and lead to the achievement of common and mutually supportive objectives that take account of the interrelationships between people, resources, environment, and development;
- to consider ways and means by which the international community can deal more effectively with environment concerns; and
- to help define shared perceptions of long-term environmental issues and the appropriate efforts needed to deal successfully with the problems of protecting and enhancing the environment, a long-term agenda for action during the coming decades, and aspirational goals for the world community¹.

¹Report of the World Commission on Environment and Development: Our Common Future

At the end of his dissertation, Mr. Bruntland developed a very important concept, that from then has influenced the international political debate and that from the recent past is also influencing the international market: “**Sustainable development**” is the development that meets the needs of the present without compromising the ability of future generations to meet their own needs. The following figure perfectly represents the concept: Sustainable development can be achieved only when the three most important spheres of interest of humans (Economy, Environment, Social Community) are taken in due consideration.

Now, in 2017, 30 years after the first development of the concept, Sustainability is on the other hand a concept that is often misused. As the brilliant report of the WorldWatch institute, issued in 2013 has tried to demonstrate, with class and humor, that the number of times in which the word is used, seldom corresponds to concrete policies and business choices that are really going in the direction of sustainable development.

A very simple survey carried out by the WWI has in fact shown that the frequency of use of the word “Sustainable” in US English text (as a percentage of words, by year) has constantly been increasing over the past 50 years. Projections (and here comes the humor) show that, if the trend remains unchanged, in 2109, all the sentences will be “just the word Sustainable”, repeated over and over again. The risk of “green washing” for businesses and governments is in other words concrete and increasing, as it is the confusion in international supply chains, where we are witnessing a rapid increase of specific requirements on the subject, included in contracts, special purchase specifications, ethical codes and other documents of contractual relevance. In the following paragraphs the specificities of the leather supply chain will be analyzed under this perspective.



Figure 1. The concept of Sustainable development.

2. Sustainability and Leather: Evolution of Market Requirements

After the publication of the Bruntland Report, the international market started to recognize the value of sustainable practices in businesses. In 1996 ISO (the International Standard Organization) published its first Standard on Environmental Management. Its requirements allowed companies (among which many tanneries) to better manage their interaction with the environment, at local level. Since then, we have witnessed a very rapid evolution of market requirements on sustainability, not only referring to the local level (site of the factories), but also to be transferred upwards the leather supply chain. Brands and Retailers have in parallel developed auditing procedures to control their implementation by suppliers. If in 1996 tanneries

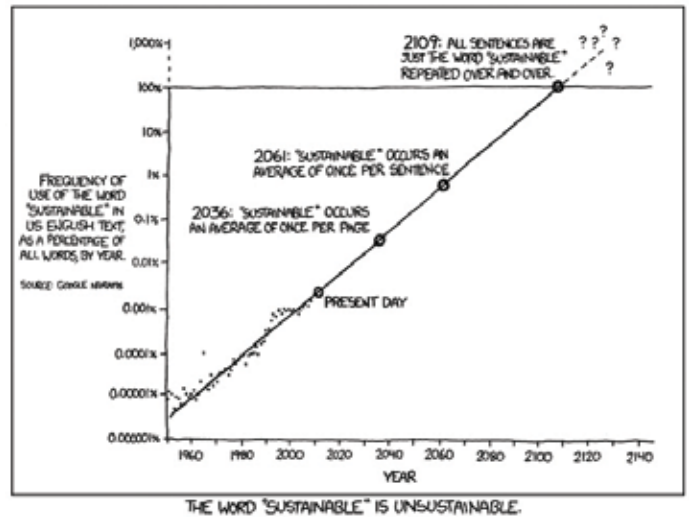


Figure 2. The word “sustainable” is unsustainable.



Figure 3. Evolution of Requirements on Sustainability in the leather supply chain.

²2013 Report: “state of the World” – The World Watch Institute

(to be honest, only the more evolved ones) were asked to certify that their local environmental impacts were under strict control, law compliant and properly managed, in 2017 sustainability in the leather market requires an Integrated Supply Chain Approach.

Again, from the perspective of a tannery, the Integrated supply chain approach means the need to control multiple requirements at different levels of the supply chain.

Apart from the obvious commitment of all the different actors of the leather business toward more sustainable model of economic development, the reasons behind this very rapid evolution of requirements from brands and Retailers are fundamentally two: the speed with which information and facts are shared around the world and the consequent Reputational Risk to which the various actors in the supply chain are exposed. This risk increases as media market exposure increases and hence, in the leather value chain, it is high for big brands and retailers, regardless of the sector they belong to. Already in several cases there have been instances where a great deal of media coverage was given to unsustainable practices identified in the manufacturing chains of large companies by various subjects such as non-governmental organizations, committees, journalists. Well known are also the economic and capital consequences associated with some of these cases.

This evident market evolution has since long been intercepted by specialists in the standardization and certification sectors, which have produced a set of standards, certification schemes, trademarks and “Ecolabels” that today has reached a number that is disproportionate. International sources² report that the number of these schemes has come close to 500. Three are the main consequences of this fact:

- Lack of market recognition: in presence of almost 500 different labels and certification schemes dealing with sustainability no one can have the strength and the communication potential to be internationally and widely recognized
- Lack of comprehensiveness: the proliferation of Ecolabels and certification schemes is going toward a high specialization on sectors and products, with the consequence that companies must adopt a number of them in order to cover the most important sustainability requirements
- Difficulty to orientate efforts: the two consequences described above lead de facto companies (and tanneries in particular) to confusion, with an inherent difficulty in choosing one or the other standard and the potential additional damage of not optimizing the use of resources.

In addition to this, customers of the tanneries (and in particular by the bigger ones) are still in the process of developing “self-created” set of sustainability requirements, linked to contracts and other legally binding documents (such as ethical codes and special addendums to the contracts) and of implementing auditing procedures to be applied along their supply chains, with the consequence that their suppliers (tanneries in particular) are faced with very similar but customized questions to each of these, with a consequent increase in the effort required both in terms of man hours and work organization.

This “Command and Control” approach has proven its effectiveness in the early stages of implementation of Sustainable practices along the leather supply chain. The proliferation of requirements and the inherent linked with proper Global control measures are on the other hand creating a potential for increase of costs along the supply chain and a parallel drop in effectiveness of the proposed strategies.

It is therefore our opinion that, at this stage the leather supply chain is in the urgent need of globally shared control requirements and schemes based on harmonized international standards.

3. Sustainability in Leather: Proposals for Market Evolution

It is in this context that we have developed the idea to promote an innovative and solid sustainability approach that is based on recognized international standards, which meets the needs of safer supply chains for customers, including all potential risk factors without favoring the proliferation of new standards and certification schemes.

An extensive market research has therefore been conducted, in order to identify the most important requirements that need to be addressed. With the support of two leading organizations (Lineapelle and The Micam), we have analyzed more than 110 among Brands and Retailers, over 50 Shoe Manufacturers and a similar number of tanneries. Results show that interest, commitment and activities are focused on two sets of requirements: the ones that we define “generic” (that are not applicable only to the leather industry” and the ones that we can define “sector specific”. Results of our research show that the most important “generic” requirements are the ones that deal with the most important and widely accepted topics of Sustainability and of Corporate Social Responsibility: from Human rights, to the protection of consumer Health, to decent working conditions, to environmental protection.

³www.ecolabelindex.com

Informative Box: Six Relevant ISO 26000 Core Subject Areas

Human Rights

Human rights are the basic rights to which all human beings are entitled. There are two broad categories of human rights into which highly detailed analysis has been undertaken. The first category concerns civil and political rights, including rights such as the right to life and liberty, equality before the law and freedom of expression. The second category concerns economic, social and cultural rights and includes rights such as the right to work, the right to food, the right to the highest attainable standard of health, the right to education and the right to social security.

Labor Practices

The labor practices of an organization encompass all policies and practices relating to work performed within, by or on behalf of the organization, including subcontracted work. Labor practices include the recruitment and promotion of workers, disciplinary and grievance procedures, the transfer and relocation of workers, termination of employment, training and skills development, health, safety and industrial hygiene, and any policy or practice affecting conditions of work, in particular working time and remuneration. Labor practices also incorporate the recognition of worker organizations and representation and participation of both worker and employer organizations in collective bargaining, social dialogue and tripartite consultation to address social issues related to employment.

The Environment

Environmental matters at local, regional and global level are increasingly interconnected requiring a comprehensive, systematic and collective approach whilst organizations are increasingly encouraged to adapt an integrated approach to take into consideration the direct and indirect implications of their decisions and activities. Environmental issues within this definition include the prevention of pollution, sustainable resource use, climate change mitigation and adaptation, protection of the environment, biodiversity and the restoration of natural habitats.

Fair Operating Practices

Fair operating practices concern ethical conduct in an organization's dealings with other organizations.

These include relationships between organizations and government agencies, as well as between organizations and their partners, suppliers, contractors, customers, competitors, and the associations of which they are members. Fair operating practice issues arise in the areas of anti-corruption, responsible involvement in the public sphere, fair competition, socially responsible behavior, relations with other organizations and respect for property rights.

Consumer Issues

Organizations have significant opportunities to contribute to sustainable consumption and development through both the products and services they offer and the information they provide, including information on use, repair and disposal. UN guidelines for consumer protection and the International Covenant on Economic, Social and Cultural Right, legitimize the needs of consumers. These include: safety; being informed; making choices; being heard; redress; education; and a healthy environment. Issues around consumer issues include, fair marketing, factual and unbiased information and fair contractual practices, protecting consumers' health and safety, sustainable consumption, consumer service, support, and complaint and dispute resolution, consumer data protection and privacy and access to essential services.

Community Involvement

It is widely accepted today that organizations have a relationship with the communities in which they operate. This relationship should be based on community involvement so as to contribute to community development.

Organizations that engage in a respectful manner with the community and its institutions reflect and reinforce democratic and civic values. Issues around community involvement include education and culture, employment creation and skills development, technology development and access, wealth and income generation, health and social investment.

The sector specific requirements that shown the most important results during our research are 4: Traceability, Animal Welfare, Chemical Management, Life cycle Assessment. We herewith provide brief description of each of them, including consideration on their potential application in the leather supply chain.

In order to identify and propose to the leather market a complete and exhaustive set of “Generic” requirements, we have also carried out an extensive research on existing qualified international standards that include the requirements described above, identifying ISO 26000 “Guidance on Social Responsibility” as the most suitable reference, for several reasons:

- It is developed by the world’s leading recognized standardization body
- It has been developed in a multi-stakeholder process, by experts from over 90 countries from around 40 organizations including Consumers, Governments, Industry, Trade Unions, NGOs, Service Providers, Research Organizations.
- It Provides a holistic and comprehensive approach to sustainability, with requirements covering all major sustainability-related spheres of interest identified during our market research (See informative box n° 1 for details):
 - Human Rights
 - Labor Practices
 - The Environment
 - Fair Operating Practices
 - Consumer Issues
 - Community involvement and development



Figure 4. ISO 26000 “Generic” Requirements.

LEATHER TRACEABILITY can be defined as “**the ability to verify the history of leather (and raw hides), by means of documented recorded identification**”. Our research shown an increasing trend by brands and retailers in requiring traceability from the finished product up to the farm(s) where animals have been raised. The most important reason for this is again the avoidance of risks related to unsustainable practices in animal rearing, such as for example deforestation or animal bad living conditions.

From a Legislative point of view, Except for CITES³ (that is applicable only to a limited selection of endangered species), there is no international regulation on the traceability of raw hides and skins. There is moreover no sanitary need to trace up to the farm single hides and skins and therefore few investments have been made by different actors of the supply chain until now. From an operative point of view, the topic is not simple, due to:

- a) specific structure and characteristics of the supply chain
- b) unsolved technical problems

Taking in consideration the structure of the leather supply chain, there are at least three points in which the traceability can be lost: in slaughterhouses, in warehouses and in tanneries producing semi-processed material. Animals in fact enter the slaughtering process with all relevant information on their history: the farm where they were born, the one in which they have been raised, in some cases also the kind of feeding they have been provided. At the very beginning of the slaughtering process (flaying), this information follows the carcass of the animal and at present no industrial system is widely spread to link them also to the raw hides and skins that are separated from the animal. In addition to that, in one shift of work, an abattoir can slaughter animals coming from different suppliers (farms), requiring some additional effort in case homogeneous lots are requested to be kept separated by farm. Raw hides are then sold by the slaughterhouses to different market actors. In case of traders, sometimes it happens that the different lots coming into their warehouses are graded by quality, therefore mixing different inputs from different abattoirs, with the result that traceability is lost. Same sorting process and same consequences happen in Beamhouse tanneries, that can create lots with specific quality requirements mixing different sources. In time, some technological attempts have been made to overcome these problems, all of which at the moment without a significant market application. Examples of these include: Tags (that then need to be removed during mechanical operations), Bar codes (destroyed during the process), RFID (destroyed during the process), Chemical Identification H ID (difficult to detect,

³Convention on International Trade in Endangered Species – www.cites.org

possible constraints in application). In conclusion, at present, the Leather supply chain is not ready for full traceability beyond the slaughterhouse level, further organizational and technological innovations are needed to fully accomplish the market requirements.

Regarding ANIMAL WELFARE, again the problem in the leather supply chain is linked with the non-homogeneous interpretation of the topic by the market. The topic is highly regulated in different areas of the world (Es. Europe - Dir. 93/119, Reg. 1099/2009-, US, Australia, New Zealand, Switzerland, Norway) and there are also important international references (OIE - World Organization for Animal Health and FAO - Food and Agricultural Organization). In general, we considered the international standards on animal welfare issued by OIE⁴ as the most applicable ones for international harmonization purposes. The standard in fact provide details referring to the “5 freedoms” to be guaranteed to animals, during different phases of their life (Es. Production systems, Transport, Slaughter):

- freedom from hunger, malnutrition and thirst
- freedom from fear and distress
- freedom from physical and thermal discomfort
- freedom from pain, injury and disease
- freedom to express normal patterns of behavior.

It has to be said that the most important interlocutors and the most active organizations in animal welfare policies implementation are at present within the food industry. Several brands and retailers of the leather supply chain are currently actively discussing with them possibilities of cooperation. From the leather perspective, animal welfare can only be verified if the source of the raw hides is known, but here we go back to the problems described on Traceability...

CHEMICAL MANAGEMENT in the leather supply chain is implemented through 2 main pathways:

- **Product Restricted Substances List (PRSL):** to guarantee the respect of specified limits for a list of Hazardous substances in the product (Leather)
- **Manufacturing Restricted Substances List (MRSL):** to guarantee the respect of specified limits for a list of Hazardous substances in the manufacturing processes leading to Leather.

PRSLs are mainly meant to guarantee compliance of the final products when traded worldwide (customs in different countries have specific requirements to allow products in) and for protection of consumer health (limits can be in fact different for goods destined to children). Their compliance is verified through laboratory tests on finished product, both by customers and by tanneries. The market is still debating on some limitations related to this topic:

- Detection limits of the test methods applied are not enough for limits imposed by customers
- Possibility of indirect creation of harmful substances (i.e. Amines, Cr VI), that are not dosed as such by tanneries but that are then found in leather
- Difficulties in identification of the source of the Hazardous Substance, linked with the impossibilities for tanneries to know the exact composition of the chemicals they use.

Also in this case, the market witnesses a proliferation of different PRSLs from brands and retailers, with different substances included, different limits and in some cases different test methods to be applied. Several initiatives are in place to overcome such limitations and constraints, such as joint working groups including chemical producers, tanneries, brands and laboratories, revision of the test methods research and innovation.

Manufacturing Restricted Substances List (MRSL) recently started to be spread in the leather supply chain. Also in this case there are different documents issued by different brands and retailers, including or excluding specific substances and referring to different limits. Compliance is verified both through declaration of the different suppliers and by laboratory tests on chemicals, both by customers and by tanneries. This approach also has several structural limitations:

- Detection limits of the test methods applied
- Possibility of having Hazardous Substances present as impurities
- Difficulties in identification of the source of the Hazardous Substance
- Reliability of the information shared along the supply chain.

In this case, a leading role in the international market is played by ZDHC⁵ (Zero Discharge of Hazardous Chemicals), a program that, according to their web site: “takes a holistic approach to tackling the issue of hazardous chemicals in the global textile, leather and footwear value chain. Our goal is to eliminate the use

⁵www.oie.int/animalwelfare

⁶www.roadmaptozero.com

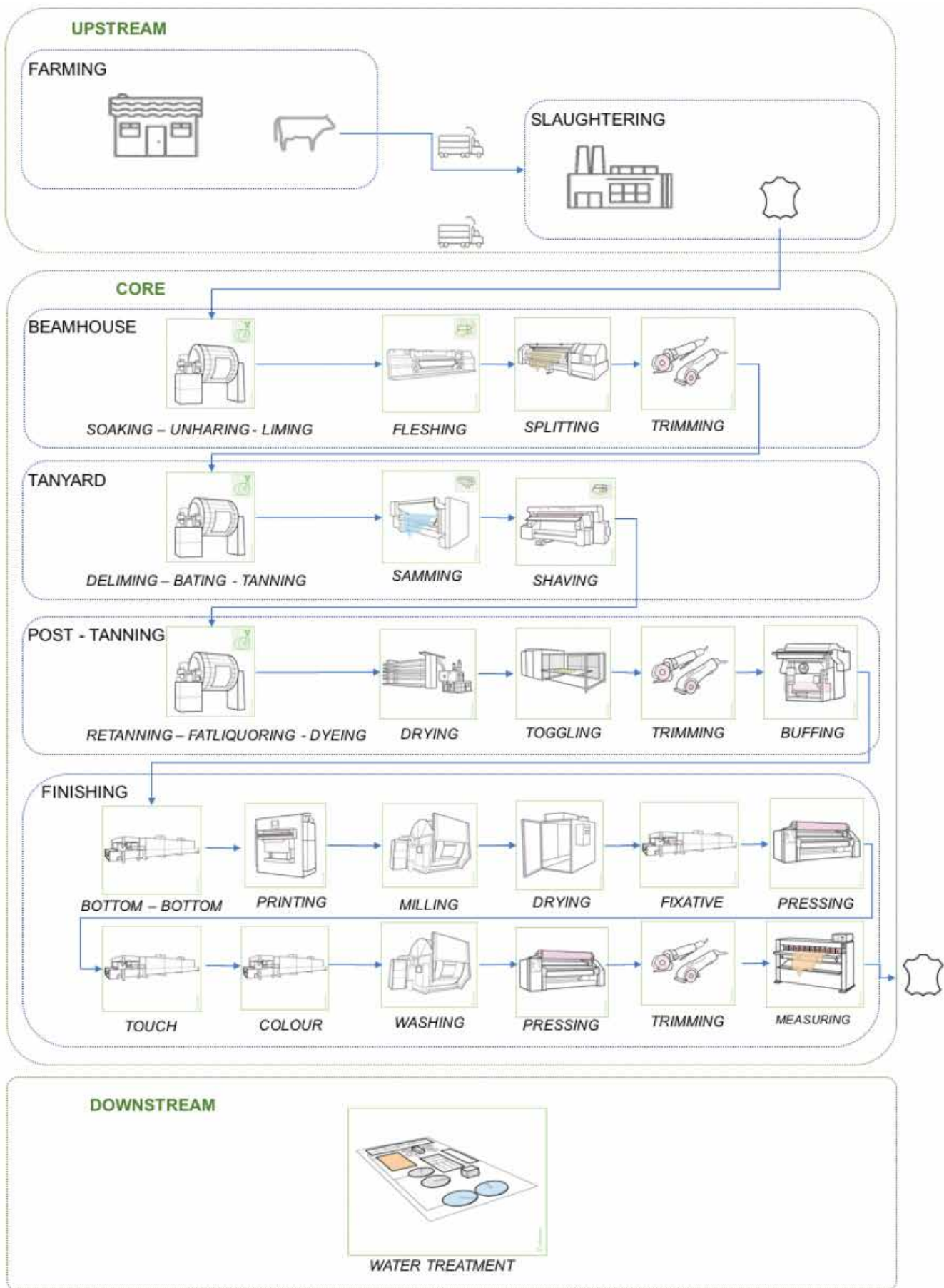


Figure 5. LCA – Examples of Leather System boundaries.

of priority chemicals by focusing on the following areas: *Manufacturing Restricted Substances List (MRSL) & Conformity Guidance, Wastewater Quality, Audit Protocol, Research, Data and Disclosure, and Training*". The introduction of leather in the program is quite recent, but the market is welcoming such a structured approach toward harmonization.

Life Cycle Analysis or Assessment (LCA) is the basic method used in product environmental foot-printing. LCA "studies the environmental aspects and potential impacts throughout a product's life cycle (i.e. cradle-to-grave) from raw material acquisition through production, use and disposal" (ISO, 2006). More in detail, LCA is a technique to assess the environmental aspects and potential impacts associated with a product, process, or service, by:

- compiling an inventory of relevant energy and material inputs and environmental releases;
- evaluating the potential environmental impacts associated with identified inputs and releases;
- interpreting the results

Life Cycle Assessments have been done on a huge variety of products and processes. For a typical product, LCA takes into account the supply of raw materials needed to produce the product, the manufacturing of intermediates and finally the product itself, including packaging, transportation of raw materials and intermediates.

There has been a long debate in the leather scientific community on one important issue, related to the so called "System Boundaries" that represent the Life cycle stages that have to be included in the calculations for a specific product. The industry long stood for the start of the life of leather at the gate of the abattoir (therefore excluding Animal rearing), being it a by-product of the meat industry, while, according to the most recent scientific developments, the Life Cycle Stages to be considered in leather production (System Boundaries) start at the Farm and end at the exit gate of the tannery. This debate is of outmost importance for the leather industry, since the impacts related to Animal farming are by far more important and more relevant than the ones generated in leather making.

LIFE CYCLE ASSESSMENT AND LIFE CYCLE DESIGN are indeed a very powerful tool to assess the current situation regarding environmental impact of different processes and implement corrective actions. Correlation between Environmental Impact and costs is leading to the so called "Life Cycle Costing".

One of the most important results of an LCA study is to allow tanneries to prioritize actions for environmental impact improvement along their supply chain. This is possible thanks to a

technique developed, called Hotspot Analysis. It provides tanneries with a quick, easy way to identify the main contributors of the environmental impact their supply chain and identify concrete projects towards improvement, with concrete results on their impact.

Cases of cooperation between Chemical companies, Tanneries and their customers in advanced projects, developing together Low Impact leathers are more and more frequent and LCA techniques are showing their important contribution in guiding the efforts and evaluating the results.

4. Sustainability in Leather: Proposals for Harmonisation

In the previous paragraphs, we have reached some important conclusions:

- *Sustainability is growing in importance within the leather supply chain, and it is an irreversible trend*
- *The sustainable leather supply/market has far too many green labels, making it difficult for brands and for tanneries to orientate*
- *Unsustainable practices within the supply chain create high reputation risks for brands*
- *The traditional "Command and Control" approach has to be radically innovated, and new Risk management practices seems to be the most appropriate tool to address these topics*
- *There are possibilities for harmonization of sustainability requirements, represented by the ISO 26000 for Generic requirements and by currently available and internationally recognized standards for other sector specific requirements (Traceability, Animal Welfare, Chemical Management, LCA)*
- *There are still some difficulties in the broad application of some sector specific requirements, particularly referring to Traceability*

In this contest, for the first time, we would like to introduce the concept of "Proactive Transparency". It represents a new management and business model, relying on the capability of suppliers (tanneries) to interact with their customers, making it evident that the risks related to their relationship are well identified and taken in consideration in the management choices of the tannery. To do this, a common approach to risks related to sustainability has to be developed and discussed, creating opportunities for engaging customers and consolidate supply chain relationships. Sustainability as a market opportunity, the challenge for the near future.

THE AMERICAN LEATHER CHEMISTS ASSOCIATION

The leather industry's technical center for prospective development founded on a platform of peer review and discussion



113th Annual Convention — June 13-16, 2017 Pinehurst Resort, Pinehurst, North Carolina, USA

Technical Program starting Tuesday, June 13

John Arthur Wilson Memorial Lecture

**“Sustainability — Opportunities and Threats in the Global Leather Supply Chain”
by Federico Brugnoti, CEO of SPIN360 and COO of Synesis, Italy**

Other Papers Presented on Tuesday, Wednesday, and Thursday:

Recent Findings in Acetaldehyde Emission from Leather by Jochen Ammann, BASF SE, Ludwigshafen, GERMANY

Probiotic Biochemicals in Beamhouse by Joan-Carles Castell, Proviera at Stahl, SPAIN

Biological Unhairing - An Alternative to Existing Curing and Beaming Technologies? by Jurgen Christner,
TFL Ledertechnik GmbH, GERMANY

CRC: Innovation in Drying and Conditioning by Karl Flowers, Authenticae Ltd, UK

VOC and Smell in Automotive Leather by Michael Franken, LANXESS Deutschland GmbH, Leverkusen, Germany

How Basicity in Basic Chrome Sulfate Affects Wet Blue Tanning Processing
by Jose Luis Gallegos, Elementis LTP Inc., Milwaukee, WI

Leather Mechanical Properties Estimated from Airborne Ultrasonic Testing of Hides by Cheng-Kung Liu,
United States Department of Agriculture, Eastern Regional Research Center, Wyndmoor, PA

**Development and Characterization of Genipin Cross-Linked Gelatin Based Composites Incorporated
with Vegetable-Tanned Collagen Fiber (VCF)** by Jie Liu, United States Department of Agriculture, ERRC, Wyndmoor, PA

**Efficacy of Citrilow™ and Cecure™ Spray Wash on the Levels and Prevalence of Aerobic Bacterials
and Enterobacteriaceae Bacteria on Cattle Hides** by Wilbert Long III,
United States Department of Agriculture, ERRC, Wyndmoor, PA

Amphoteric Retanning Polymers: Enabling Approach for Mineral-Free Tanning by Ed Nungesser,
The Dow Chemical Company, Collegetown, PA

Conditioning of Leather after Vacuum Drying by Marc Oomens, IM Innovating, Dongen, THE NETHERLANDS

Sustainability as a Competitive Advantage by Vikrant Pratap, Xeros Ltd, South Yorkshire, UK

Preservation of Hide Using Less Salt with Environmentally Friendly Low Concentration of Antiseptic by Majher Sarker,
United States Department of Agriculture, Eastern Regional Research Center, Wyndmoor, PA

Thermal and Antioxidant Stability of Keratin Hydrolysates Prepared from Leather Waste by Jan Sedliacik,
Technical University in Zvolen, SLOVAKIA

SprayLab: Full Automated Finishing Unit for Samples by Giulio Tandura, Fratelli Carlessi, ITALY

Determining Accuracy in the Comparison of Environmental Assessments of Leather through Meta-Analysis
by Kathryn L. Thudium, Eagle Ottawa by Lear, Rochester Hills, MI

The US Tanning Industry: 1917-2017 and Beyond by John Wittenborn, Leather Industries of America, Inc., Washington, D.C.

Mold on Leather: Essay on the Visible and Invisible by Luis Zugno, Buckman, Memphis, TN

Presentation and Acceptance of the 2017 Fred O'Flaherty Service Award by Beat Schelling and Steve Lange

Beat Schelling

Mr. President, Vice-president, Council members, ALCA members and guest. I believe that is the proper way to start a speech – but please allow me to do it, how I see you all: Friends!

Lori, Joe and myself were asked to nominate this years Fred O'Flaherty service award recipient. I would like to thank Lori and Joe for their work and help in the nomination committee. It was a hard and easy task. You will say this contradict, but let me explain:

Hard, because we have so many outstanding members in our organization, which would deserve the recognition

Easy, because Lori, Joe and myself quickly agreed, that this year award should go to: Steve Lange!!!

We all know Steve, but let me still tell you all about him:

Steve Lange graduated from Heidelberg College in Tiffin Ohio with a Bachelor of Science degree in Biology with a strong concentration in Chemistry. His professional career started as an Analytical Chemist with a medical device testing firm followed by a six-year term as the Analytical Chemist for Chrysler Motors Chemical Division in Trenton, Michigan. His entry into the fascinating world of leather started when he joined Seton Company in 1990 as Quality Assurance Manager. Over the course of 21 years with Seton, he worked in Quality in areas from the tannery to finishing, cutting and wrapping operations. His responsibilities included investigating and resolving customer problems and creation and maintenance of the ISO/TS 16949 quality system. From April 2011 to December 2013 He served as the Corporate Laboratory Manager for GST Autoleather based in Livonia, Michigan. He joined the Leather Research Laboratory at the University of Cincinnati as Director in December 2013. In this capacity, he has expanded the capabilities of the laboratory by increasing staffing and acquiring a GC/MS with a dynamic head space sampler. He also restarted the very popular general leather technology and customs educational courses which have since been attended by many people.

His memberships:

- ASTM D31 Committee on Leather member (2003 to present)
- ASTM D31.07 Sub-Committee Chair for Physical Testing (2004 to present)
- SAE Task Force Member – Soiling & Cleanability of Interior Trim (2006 – 2007)
- American Leather Chemists Association – Councilor (2007 – 2010), became
- Vice President Elect in 2011, followed by Vice President in 2012 and President 2013.
- Since 2015 his on the Editorial Board for the Journal of our Association (JALCA).

I'm sure you all knew this already, so let me tell you a little story:

Steve and I worked both for Seton and when I was transferred from NJ to PA, my son Dave needed a new Boy Scout troop to join. Steve was the Scoutmaster of the Troop in Hollidaysburg, so I decided Dave will join this troop. Because it was summer, the troop had no regular troop meeting, they had fun outdoor activities.

We are bound together by a desire to do our best to make use of a raw material that nature has given us and that, because of science and art, we it can turn into some pretty amazing articles.

The first of these activities Dave attended was a water-gun battle in the near state park and the boys had a blast! All in a sudden, a local fire truck pulled up, Steve grabbed the fire hose and engaged in the battle. Other scout fathers and moms around me must have seen my surprised face impressing and sad: Yes, that's Steve – he is the biggest child in the troop!

That's how I meet the "other" Steve. Sorry Steve, but I had to!

It is a great honor and pleasure for me to me to present this years Fred O'Flaherty service award in the name of the ALCA and its members to Steve Lange!

Steve Lange

Thank you very much Beat for the kind introduction! Mr. President, honored guests, fellow members of the ALCA and the O'Flaherty selection committee, I am grateful and humbled that you would think me worthy of this award.

After Beat called me and gave me this news, I reflected back on how I got into this wonderfully crazy industry. To make a long story short, I got in because of a lie. At the time, I was working as a Supplier Quality Specialist for Chrysler Motors responsible for all fabric and leather used by Chrysler. When first hired at Chrysler, I was the one and only analytical chemist at their Chemical Division. That only lasted about 5 years until the whole division was closed due to union and environmental issues. I ended up in SQA only because there was very little need for analytical chemists within Chrysler at the time, late 80's and Chrysler was pinning its future on the K car, and I thought I could use this position as a holding place until I could get into the Industrial Hygiene group.

After being in SQA for almost a year, I found out that an opening had occurred in Industrial Hygiene but my supervisor had told them I was no longer interested and they had since filled the job from outside. In my auditing travels, I apparently made a good impression on Marjorie Hanson at Seton Company because she had asked if I was interested in moving to Newark, NJ a few months after I did an audit there. Shortly after hearing about this lie and realizing that it effectively blocked me from the career advancement I had planned, I called Marjorie up to see if she was still in need of a QA manager. As luck would have it, she was and so started my leap into the leather industry. Of course, working at Seton was a huge cultural change from Chrysler. Ethnically, at the time, Chrysler was predominately Canadians & Americans of distant polish descent. Seton's tannery in Newark was a veritable United Nations of people in comparison. Of the fifteen people in the quality group there were only two of us that were native English speakers. So, I quickly found that any attempt at subtle humor could end up unintentionally offending someone. I remember in High School hearing the phrase *See the World, Join the Navy* and I found that, due to Seton's global operations, I was able to do just that without all the physical fitness requirements that military service would entail. Of course, leather making operations are never in scenic locales, but it was an opportunity for world travel and meeting many people that shared a love of producing the beautiful product that is leather.

Seton also introduced me to the ALCA and generously allowed me to participate. Over the last few days I have heard several people refer to the ALCA as a family and I have to agree. Even if some of us are competitors, we still care and respect each other. We are bound together by a desire to do our best to make use of a raw material that nature has given us and that, because of science and art, we it can turn into some pretty amazing articles.

This is our 113th annual meeting. Please heed David's words at the end of the business meeting today and encourage others in the industry to join the ALCA so our strong history can continue.

Thank you again for this award.



Steve Lange received O'Flaherty Award from Beat Schelling.

Presentation and Acceptance of the 2017 Alsop Award

by Nicholas Latona and Okey Abara

Nicholas Latona

Mr. President, members of the American Leather Chemists Association, and honored guests. The ALSOP Award was established in 1939 by the ALCA council and is given in the memory of the late W.K. Alsop. The LANXESS Corporation has generously sponsored this award for outstanding scientific or technical accomplishments to the leather industry. This year's ALSOP committee consisting of Prasad Inaganti, Andreas Rhein, and Nick Latona, and with the approval of Council has selected Okey Abara to be the recipient of the 2017 ALSOP Award for his technical accomplishments and many contributions to the ALCA methods and specifications committee through ASTM Internationals' D31 committee on leather.

Okey Abara, of Tyson Foods Laboratory Services, is a long-time member the ALCA and has actively served as a member of the Committee on Methods and Specifications. As a current member of the Committee on Methods and Specifications, the duties of the committee include: 1) To make available to the Association, official and currently relevant methods for the testing of leather, materials and process liquors used in leather production, and products containing leather; 2) To make available to the Association official specifications for leather and leather products that are technically relevant, valid, and attainable by current industry practices; and 3) To coordinate the development and maintenance of the official test methods and official specifications of the Association with the ASTM D31 Committee on Leather.

He has previously served as Vice Chairman of the ASTM D31 Committee on Leather and since 2004 has served as the Sub Committee Chair for D31.02 on Wet Blue. Okey was one of the original members when the ASTM subcommittee D31.02 was created in 2001. The scope of ASTM subcommittee D31.02 is to develop standards for the manufacture and performance of Wet Blue and Wet White. He has spearheaded the standards development activities of ASTM subcommittee D31.02 to produce viable testing methods for the intermediate products used by tanneries to process natural hides and skins into leather. Since the ALCA methods were no longer being updated, part of the development process included review of pertinent ALCA methods for conversion/update to the current ASTM format, on an as needed basis. There are now 20 standards under the jurisdiction of ASTM subcommittee D31.02, with more work items in progress. His work with ASTM subcommittee D31.02 was featured in the March/April 2011 issue of ASTM's Standardization News.

Okey has served as the technical contact and initiated 54 work items relating to the Wet Blue subcommittee and Leather. He also spearheaded a project to update the statistics of reproducibility and repeatability for the wet blue/wet white methods using the different labs around the world in order to simulate the variability seen in real world production. This includes his participation in more than a dozen Interlaboratory Study Programs (ILS) over the years with ASTM, resulting in new or revised precision statements in ASTM D7674 (RR: D31-1013), ASTM D7477 (RR: D31-1011), ASTM D7476 (RR: D31-1010), ASTM D2868 (RR: D31-1014), ASTM D7816 (RR: D31-1015), ASTM D7817 (RR: D31-1016), ASTM D7819 (RR: D31-1018), ASTM D7674 (RR: D31-1019), ASTM D6656 (RR: D31-1020), ASTM D6657 (RR: D31-1021), and ASTM D7674 (RR: D31-1022).

On a personal note, Okey currently resides in Sioux City, Iowa with his beautiful wife, Barbara. They have been married for over forty years, have two children and five grandchildren. His son who is currently serving with the US Marine Corps has been deployed



Okey Abara receives Alsop Award from Nick Latona.

to several locations around the world. Okey is an enthusiastic soccer fan, a soccer referee instructor and assessor, in addition to being certified to officiate youth to college-level games.

Please join me in honoring the 2017 ALSOP recipient, Okey Abara.

Okey Abara

Mr. President, members of the American Leather Chemists Association, and honored guests.

Nick, thank you for the kind introduction. Thank you also to the other members of the ALSOP committee and the ALCA council.

When I was informed that I had been selected to receive the 2017 ALSOP award, my first thought was team work. I recalled the first ASTM meeting I attended. There was lot of discussion and work being done on leather. But I realized at the time that not much was said about the raw material from which the leather was produced! As a result, my work with ASTM Subcommittee D31.02 on Wet Blue has been to fill that gap. The entire endeavor has been a great example of team work! I applaud the efforts of members of the committee and all the analysts, for the vast amount of work that has gone on behind the scenes. It takes sustained effort and focus to obtain usable and relevant check sample data. This has allowed us to update all the methods within the scope of ASTM subcommittee D31.02.

In most labs, analysts routinely use referenced methods as a way to obtain results that are relevant and reliable. The goal for all of us in the standards development process is to ensure that those referenced methods within our scope of approval, are current, pertinent and up to date for their designated applications. The challenge is to keep finding ways to encourage all of us in this task to keep working at it. And that's because there is always room for improvement!

I am grateful to my employer, Tyson Foods, for giving me the opportunity to work on these standards development activities. And especially, I would like to share this moment with my beautiful wife, Barb, who has been supportive of my work endeavors since when we met 41 years ago!

Thank you!

The entire endeavor has been a great example of team work! I applaud the efforts of members of the committee and all the analysts, for the vast amount of work that has gone on behind the scenes.

113th Awards Banquet Closing Ceremony

ALCA President David Peters

Ladies and gentlemen and fellow council members welcome to the 113th ALCA awards banquet and convention here at the fabulous and famous Pinehurst resort in North Carolina. A terrific venue and beautiful setting made even more meaningful by the impressive attendance. I would like to thank our convention chair, Lee Lehman for managing this event.

It is indeed a privilege and honor to have served as the President of the ALCA these past 12 months and together with Mike Bley look forward to the next year where we will continue to be the guardians of this revered institution.

First some well-deserved thanks to all our sponsors. We appreciate your commitment, loyalty and participation, without your support we would not be able to sustain this respected association. I would like to thank Sarah Drayna for her unyielding perseverance and dedication to signing up all the sponsors and advertisers for our marquee event. After countless years of steady pricing we decided to raise the rates in 2017 and with some minor exceptions you all continued to contribute and make the ALCA viable. Thank you, thank you, thank you, for your support in helping sustain this important association.

Each year we are challenged to create a technical program that will invigorate, excite and stimulate the intellect of our attendees. This is no easy task as we each scrub our contacts and look for interesting speakers that are on the cutting edge of our industry. This year we were fortunate to have Mike Bley lead this charge and while I know from experience he had some trepidation and concern as to the prospect of putting together this program, he delivered with flying colors.

Mike has done a terrific job in providing a broad based, interesting and thought-provoking program which based on the current feedback, hit the ball out of the park. Fantastic job Mike and while this is a hard act to follow in 2018, I am confident that with the momentum generated you will achieve equal success next year.

No organization can function without participation and in this respect our board has begun to warm up to the challenge of assuming their roles and responsibilities for our future. I would like to thank my fellow councilors for their commitment to the ALCA, Jeff Miller, Andy Rhein, Joe Hoefler, Katie Thudium, Shawn Brown and Beat Schelling.

The ALCA has a remarkable history these past more 113 years. We have seen a complete revolution in not only how leather is made but also in the social and economic approach to manufacturing. While we can state that we are a matured industry we are still discovering new opportunities and technologies that are transforming the process of converting hides and skins into a wonderful raw material utilized in a wide spectrum of consumer goods.

The membership of the ALCA is a broad and diverse group of leather industry professionals all of whom have a deep understanding of the science and engineering of our product. But it is even greater in terms of diversity and culture as the ALCA is truly a global association having members from virtually every leather making region and capital.



President David Peters

While as our name indicates we are American based, we nevertheless transcend borders and nationalities and communicate to the global market in a language that is common to all local dialects, it is understood by all as we speak leather.

The ALCA convention is a forum for new ideas and discussion on the technical challenges that we are facing in this industry. The various presentations given provide a glimpse of current and future opportunities available to all leather manufacturers. This purpose is encapsulated in our new mission statement

“The leather industry’s technical center for prospective development founded on a platform of peer review and discussion.”

Our association receives the highest level of respect, integrity and credibility evidenced not only by our membership but also by your participation at this event. This attribute is further exemplified by our *Journal* and over the years under the leadership of Bob White, submissions have increased to the point of exceeding our requirements. It would be appropriate to recognize Bob’s continued commitment and contribution to the ALCA journal which remains the bench-mark publication by which all others are measured.

My comments would not be complete without the mention of the one person, who tirelessly works behind the scenes to ensure that our organization functions correctly and meets its fiscal responsibilities. Our Executive secretary, Carol Adcock is the epitome of the “go to person” that all Counselors and Officers gravitate to. She vigorously protects the integrity of our by-laws and ensures that we keep our schedules, she is the unspoken hero of the ALCA. On behalf of all my colleagues and associates I want to take this opportunity of saluting Carol for her commitment and dedication to our association. Thank you Carol.

There are also a couple of people that through their commitment and dedication have continued to contribute to the association. Doug Morrison and Nick Latona are consistently willing to help, assist and support the ALCA. Please join me in thanking both Doug and Nick for their participation in the association.

I believe that the I Phone is the most significant invention of the 21st century. It has changed or more correctly disrupted our means of communication, research, product commercialization, finance and social behavior to name but a few aspects of its influence. Embracing these changes and integrating them into the leather industry becomes our biggest challenge.

Consider the following issues that 20 years ago were not even on our radars. Traceability and animal welfare, logistical challenges in a global supply chain, environmental safeguards that are justifiable, defensible and of course sustainable. Alternative processes that break with convention and existing paradigms.

We are bearing witness to the transformation of the leather industry and the ALCA is positioned to accommodate the distribution of these ideas and concepts.

We are “The leather industry’s technical center for prospective development founded on a platform of peer review and discussion.”

Thank you again for participating in the 113th ALCA convention and I look forward to seeing you all next year at the Eaglewood Resort in Itasca, Illinois just 17 miles from Chicago’s O’Hare airport.

The leather industry’s technical center for prospective development founded on a platform of peer review and discussion.

THE AMERICAN LEATHER CHEMISTS ASSOCIATION

The leather industry's technical center for prospective development
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VILLAGE OF PINEHURST, NC
JUNE 13-16, 2017**

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*Sincere thanks from the officers, councilors, members, and speakers
attending this 113th Annual Convention*