



UNIC

CONCERIA ITALIANA



TALES OF ITALIAN LEATHER

SUSTAINABILITY REPORT 2017

UNIC (THE ITALIAN TANNERS' ASSOCIATION), THE SECTOR'S MOST IMPORTANT ASSOCIATION WORLDWIDE, HAS BEEN WORKING SINCE 1946 TO ASSIST ITS ITALIAN MEMBER COMPANIES AND REPRESENTS A STRATEGIC INDUSTRY FOR THE ITALIAN ECONOMIC AND MANUFACTURING STRUCTURE.

UNIC IS A MEMBER OF CONFINDUSTRIA, COTANCE (THE EUROPEAN CONFEDERATION OF TANNERS) AND ICT (THE INTERNATIONAL COUNCIL OF TANNERS).



UNIC

CONCERIA ITALIANA

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THE ITALIAN TANNING INDUSTRY
CONSIDERS SUSTAINABILITY
THE NATURAL EXPRESSION
OF AN INNOVATIVE VISION
COMMITTED TO EXCELLENCE
AND CONTINUOUS IMPROVEMENT.

A daily, intense focus on cutting energy consumption off. Improvement in the use of water resources and reduction of pollution. Continuous technological advancement to improve the efficiency of production processes. Compliance with international standards, requirements and regulations relating to the management of chemicals, product safety, and the traceability of the supply chain. The ability to have a presence in the territory as an instrument of economic and social development, guaranteeing welfare, and enhancing the professionalism and skills of its human resources.

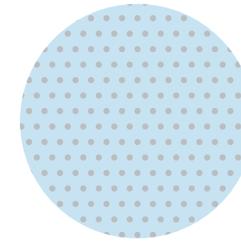
Sustainability, for the Italian tanning industry, is an investment that requires a **solid, responsible vision of business and a significant and increasing financial commitment**, as confirmed even during particularly critical economic phases and restated in 2016, as shown by the data published in this **Sustainability Report, which is now in its 15th edition**.

THE SUSTAINABLE DEVELOPMENT
OF THE ITALIAN TANNING INDUSTRY
IS THE ENGINE THAT DRIVES
ITS INTERNATIONAL LEADERSHIP.
IT IS A DOCUMENTED MODEL
OF EXCELLENCE, WHICH NOT ONLY
ADDS VALUE TO THE INDUSTRY,
BUT ALSO STANDS AS
A GUARANTEE OF QUALITY
FOR THE ENTIRE VALUE CHAIN.

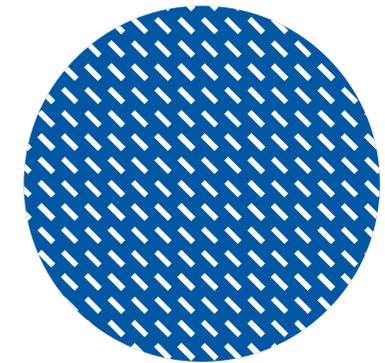
THE SUSTAINABILITY
OF THE ITALIAN
TANNING INDUSTRY
IS MORE
THAN A FACT.
IT IS THE CONCRETE
AND COMMON
DENOMINATOR OF
ALL ITS PRODUCTIVE,
COMMERCIAL AND
CREATIVE ACTIVITIES.
IT IS THE
DECISIVE AND
DYNAMIC FACTOR
THAT EXEMPLIFIES ITS
GLOBAL LEADERSHIP.

SHARE OF SUSTAINABILITY COSTS TO TOTAL TURNOVER

1.9 %
IN 2002



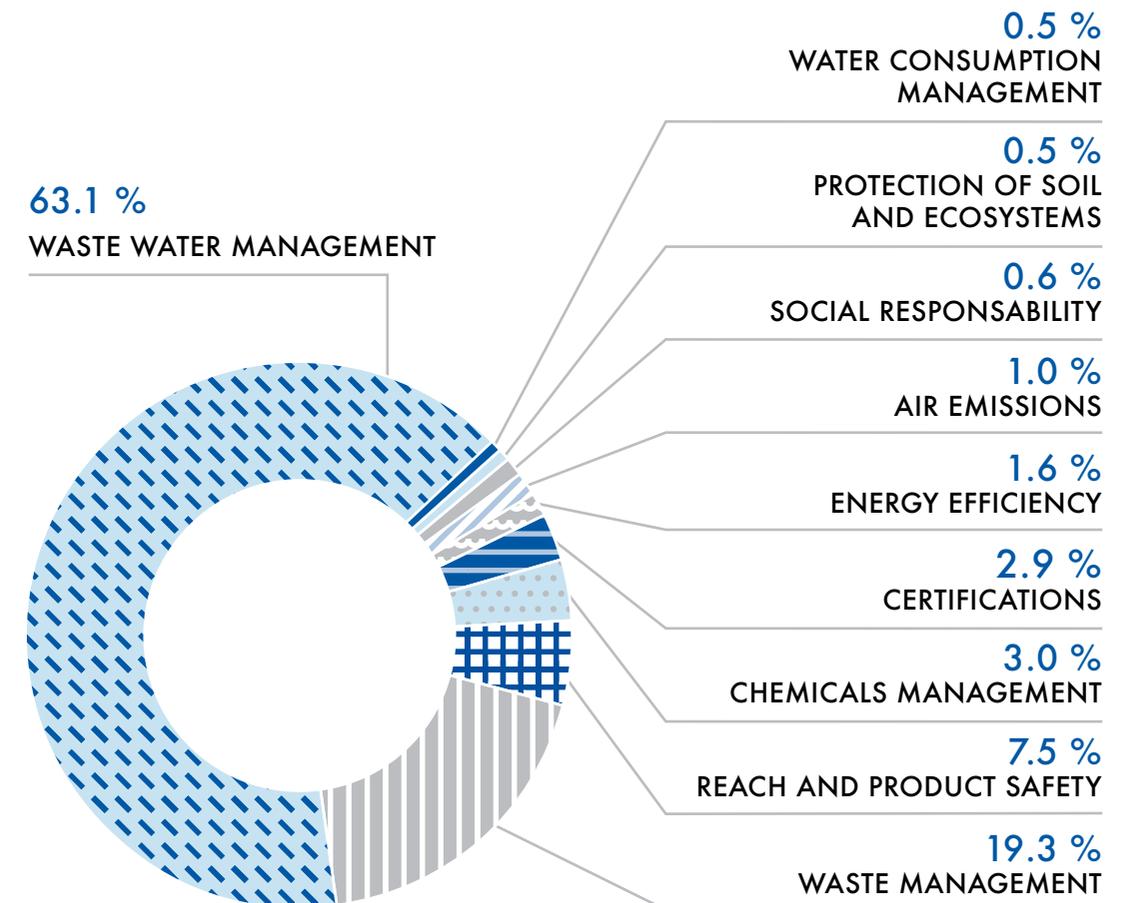
4.4 %
IN 2016



EVEN IN 2016, THE SUSTAINABLE EXCELLENCE OF THE ITALIAN TANNING INDUSTRY WAS ALSO SHOWN BY THE SIGNIFICANT INVESTMENTS IN IT, HIGHER THAN THOSE OF 2015 AND BACK TO THE LEVELS OF PREVIOUS YEARS.

ENVIRONMENTAL OPERATING COSTS, WHICH EXCEED 85% OF THE TOTAL EXPENSES FOR SUSTAINABILITY, ARE STILL THE MAJOR ISSUE, SPECIFICALLY, THE IMPORTANCE OF WASTE WATER TREATMENT PROCESSES ON WHICH THE SECTOR FOCUSES MOST OF ITS ATTENTION.

PERCENTAGE BREAKDOWN OF SUSTAINABILITY COSTS



Sustainability is the common denominator of Italian tanneries' business strategy. It is a necessity that requires the development of a smart, **innovative model of approach** that is oriented towards **effective simplicity**. This is a need we share with our international clients.

This framework is confirmed by a **study commissioned by Lineapelle** and presented in New York on January 2017, which examines **the motivations behind the sustainability vision** of a significant sample of international brands and Italian tanneries. The mapping, which is based on the main instances of sustainability contained in the ISO 26000 standard (human rights, working conditions, correct management practices, end-customer issues...), reveals that nowadays an understanding of sustainability represents a watershed from a variety of standpoints: regulatory, managerial, productive and reputational.

International brands believe that developing a sustainable business strategy is a **necessary choice** for them and their suppliers. This is an **irreversible decision** that calls into question, in different ways and according to geographical locations, the correct practice of production processes, attention towards the end-customer, working conditions of employees and environmental impact.

8 **LINEAPELLE'S RESEARCH HIGHLIGHTS ITALIAN TANNERIES' CONSIDERABLE MATURITY AND THEIR INSPIRATIONAL CAPACITY TO GET THERE BEFORE ANYBODY ELSE. FOR THE ITALIAN LEATHER INDUSTRY, EVERY IMPORTANT TOPIC RAISED BY THE CLIENTS HAS ALREADY BECOME AN OPERATING PRIORITY FOR A LONG TIME.**

The need now is to **explore a new dimension** in which complexity gives room to cooperation, collaboration becomes reality and sustainability becomes an innovative path leading towards a common and continuous improvement.

THE ITALIAN TANNING INDUSTRY HAS TRANSFORMED ITS SUSTAINABILITY INTO A COMPETITIVE ADVANTAGE AND HAS EVEN ESTABLISHED AN INTERNATIONAL CERTIFICATION BODY WHICH LEADS THE WAY GLOBALLY: ICEC.



ICEC is the Quality Certification Institute for the leather sector. It offers the market voluntary certifications attesting the quality, reliability, credibility and sustainable commitment of companies in the leather sector. Its operational scope is divided into three certification areas.

ENVIRONMENTAL

Environmental Management System, EMAS Declaration and Eco-Leather.

ETHICAL AND SOCIAL

Occupational Health and Safety Management System, UNIC Code of Conduct (Social Responsibility).

COMMERCIAL/PRODUCT-RELATED

Quality Management System, Finished Leather Product, Innovative Corporate Processes, Made in Italy for Leather and Leather Manufactured Products, Traceability of Raw Materials upstream of Tannery and Leather Products Sectors, REACH Management and Chemicals System, Leather Sector Workshops.



Sustainability is at a significantly higher level. The **ICEC Certification of Corporate Sustainability** can be obtained at one condition only: securing at least one certification in each of the three areas above mentioned. This supports the notion that being sustainable cannot be a choice of pure convenience, nor happen by chance, but requires a sincere desire to be fully sustainable.

www.icec.it

1.1

QUALITY AND STYLE

Historically, leather is the **distinctive element** of the fashion industry. And not only. Italian tanneries interpret their mission by transforming into reality the **highest standards of aesthetics research and style in the world**. The ability to anticipate trends up and transform them into an infinite variety of products - aimed at satisfying each customer's specific needs - makes the Italian tanning industry sustainable also from another point of view: the **guaranteed reliability** in developing products, which are **beautiful** to look at, exciting to touch, **stimulating** in the way they generate emotions, **safe** and **unbeatable** for their capacity to keep their characteristics unaltered over time. And there is still more: leather as a material not only distinguishes a fashion accessory or a product but it helps to define the identity of those who wear and use it.

ITALIAN LEATHER IS A LIVING MATERIAL THAT INCREASES IN VALUE OVER TIME AND PROVIDES A COMPREHENSIVE QUALITATIVE GUARANTEE TO ALL THE COLLECTIONS AND PRODUCTIONS DEVELOPED BY ITS CUSTOMERS.

In 2016, despite a difficult economic situation, **footwear** and **leather** goods continued to confirm themselves as main clients for the Italian leather industry. About two-thirds of domestic leather production is destined to shoes, handbags and accessories manufacturing, due to its natural ability in satisfying the high and top market range in particular. Italian tanning industry is the ideal partner for high end, premium and affordable luxury. Not to mention, its ability in also providing quality to other product ranges.

Italian tanning industry is also a global benchmark for **car interiors' production**, a destination sector that at the moment confirms to be more dynamic when comparing it to the other industries that keeps growing by eroding international competitors' market shares. In 2016, the amount of leather used by the automotive industry has seen further increases, driving forward the total tanning production. The **furniture** sector has proven to be quite versatile, enhancing design's particular requirements. The **garments** segment has been stable, while usage in other sectors, such as that of high-end **yachts/boats**, is growing.



THE LEADERSHIP OF ITALIAN LEATHER CAN BE BOTH SEEN AND TOUCHED. LEATHER STIRS EMOTIONS BECAUSE IT IS AN EXTRAORDINARY STYLISTIC TOOL, OF WHICH LINEAPELLE, THE MOST IMPORTANT FAIR OF THE SECTOR, PROMOTES FUTURE TRENDS.

Even the world's most important trade show for leather and the related industry is Italian: **Lineapelle**. Two edition held each year in **Milan** (at Fieramilano Rho). Over 1,200 exhibitors. More than 42,000 visitors in total. Two previews (twice a year, in January and July) growing constantly: **Lineapelle London** and **Lineapelle New York**. The presence at other international exhibitions through collective missions and workshops. Through its Fashion Committee, Lineapelle (the trade show conceived and promoted by the Italian tanning industry) anticipates the market's creative needs by developing the stylistic trends that each tannery interprets accordingly to its products and customer base.

Lineapelle is the trade show of reference for collecting, presenting and sharing this extraordinary stylistic imprint. Fashion seminars for developing and sharing style guidelines. Highly popular trend areas showcasing the tanneries' best products for the season.

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CERTIFICATIONS



UNI EN ISO 9001 CERTIFICATION

Quality management systems

ICEC Accreditation Accredia nr. 034A

The certification of a Quality Management System, which guarantees compliance with product-related requirements, is a valid tool both in continuous improvement and in providing quality services to the customer. Costs and risk factors decline drastically through the proper organization of operations and production processes over time.



PRODUCT CERTIFICATION BY DESTINATION SECTOR

Footwear, leather goods, furnishings, garments, car interiors

ICEC Accreditation Accredia nr. 034B

Certification is granted according to UNI (Italian Institute for Standardization) specific standards or other international standards for the leather industry or to technical specifications developed by the interested party. The certification provides customers with information concerning a product performance. It includes an assessment of the company system of quality assurance and the primary standards regarding the safeguarding of consumers' health and safety. Testing is conducted in accredited or qualified laboratories. The certification of "Innovative processes", that is still not accredited, is also available.

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Hundreds of samples that, as soon as Lineapelle is over, become part of a broad-based project, which is not just sector-related but also cultural: **LP Fashion Studio**. Located in Milan (Via Brisa 3), it is the only archive in the world both physical and digital, developed continuously and updated every six months with the materials displayed at Lineapelle.



Find out more at



Over 16,000 catalogued samples, each accompanied by a technical specification sheet and identified by a code, which allows tracking their "identity card" in real time. **A library of products and styles**, of paramount importance for the footwear, the leather goods, the garments and the furnishing industries. An evolving hub that aims at triggering active sharing between Italian tanneries' know-how, ongoing experimentation and creativity of stylists and designers. A captivating place, where visitors can let themselves be fascinated by the immensity of the stylistic innovations promoted by Lineapelle exhibitors.

“

LEATHER IS AN AUTHENTIC
AND SUSTAINABLE EXAMPLE
OF CIRCULAR ECONOMY.

THE ITALIAN TANNING INDUSTRY
INTERPRETS THIS APPROACH
THROUGH A MODERN
INDUSTRIAL MODEL THAT IS SYSTEMIC
AND HISTORICALLY "CUTTING EDGE".

”



ITALIAN LEATHER
IS NATURAL

2.1

THE CIRCULAR MODEL

Even before its production processes begin, **the tanning industry is, by definition, sustainable**. Because it vastly reduces the amount of waste that needs disposing, thereby reducing the impact on the environment.

EVERY YEAR, IN THE WORLD, THE TANNING INDUSTRY, AS A WHOLE, RECOVERS APPROXIMATELY 1,700 SQUARE KILOMETRES OF RAW HIDES AND SKINS IN TOTAL. ITALIAN TANNERIES' SHARE IS EQUAL TO 8%, APPROXIMATELY 125 SQUARE KILOMETRES.

The Italian tanning industry is a global reference model. **A qualitative model**, for the way it transforms a waste product into a material of extraordinary excellence, necessary to fashion products and accessories, all while giving the materials the highest levels of technical features and long-lasting performances. **A model of circular economy** that has learned to manage its own waste virtuously. By recovering a precious organic material, Italian tanneries have historically set themselves the goal of developing and managing its transformation into a high added-value material, by adopting an integrated circular approach.

Explaining how it works is easy. The Italian tanning industry has created the conditions for which its production scraps, instead of being thrown away, become raw materials for other industrial chains. This has been achieved thanks to the **industry's foresight**, which has anticipated by decades the European bio-economy strategy, which promotes the sustainable and integrated use of biological resources and waste flows to produce food and bio-products. In fact, production processes can be conceived by paying special attention to the potential for re-using products and raw materials, but also to the regenerative capacity of natural resources.

¹ http://ec.europa.eu/research/bioeconomy/pdf/201202_innovating_sustainable_growth_en.pdf

LEATHER IS NATURAL AND RENEWABLE.

IT IS THE HIGH VALUE-ADDED RECOVERY OF AN ACTIVITY THAT IS FUNDAMENTAL FOR HUMAN FOOD NEEDS.

The goal has always been, and still is, very ambitious. It cannot be achieved without **a vision that goes beyond the one-sector horizon**. To achieve it, the Italian tanning industry has devised a "system". It has started **a synergic industrial symbiosis** with the entire value chain (helped by the concentration of production into specific areas). Not only with regards to leather, but also to the secondary cycles of recovery and recycling of waste and all the related service activities. For example, the wastewater treatment.

76% OF WASTE IS DESTINED FOR RECOVERY. MOREOVER, THIS PERCENTAGE RISES TO 84%, WHEN CONSIDERING ALL PRODUCTION WASTE.

This percentage includes **Animal By-Products (ABPs)** and **Secondary Raw Materials (SRM)**, which are not introduced into the waste cycle, due to their biological nature and the existence of industrial activities that use them as raw materials.

In the tanning industry, most of the waste is peculiar to the production process. Crosscutting and auxiliary activities (for example, maintenance) presents a non-significant share.

In order to determine the circular nature of this whole process and define the environmental footprint of leather, both the use of waste as raw materials for other production processes (such as leather fiber board or small leather accessories) and their transformation into fertilizers (with a high agronomic value), proteins and collagen for food use play a significant role.

By using various recovery processes, **biological tannery waste** is decomposed into simpler molecules (peptides and amino acids) and becomes **precious nourishment for plants**. Part of the carbon and nitrogen, that has been absorbed by the animals and used to form the collagen of the hide, returns to the environment in the form of **vegetable biomass**, a source of food for farm animals. It is a "closing of the circle": the cycle of the elements is complete and limits the loss of precious natural micronutrients.

The Italian tanning industry's approach is, therefore, **structurally integrated and multi-tiered**. It is **consistent** with the logic of the circular economy because it is able not only to transform waste into resources, but also (and perhaps, above all) to generate efficiency and bring about environmental and economic benefits. It is **highly contemporary**, because it is actively involved in the transitional path to the "high circular" economy, which is an objective of the Europe 2020 Resource Efficiency Agenda for smart and sustainable growth². It is **virtuous** because resources remain within the economic system, creating new value.

² <http://eur-lex.europa.eu/legal-content/it/ALL/?uri=CELEX%3A52010DC2020>

2016: THE COMPOSITION OF WASTE AND ITS BREAKDOWN BY TYPE

The main categories in which scraps and waste of tanning industry are divided as follows:

SPETCHES, TRIMMING AND DUST, which represent the residue from the chemical stabilization process of hides (tanning) and are largely recovered and transformed into fertilizers and soil improvers.

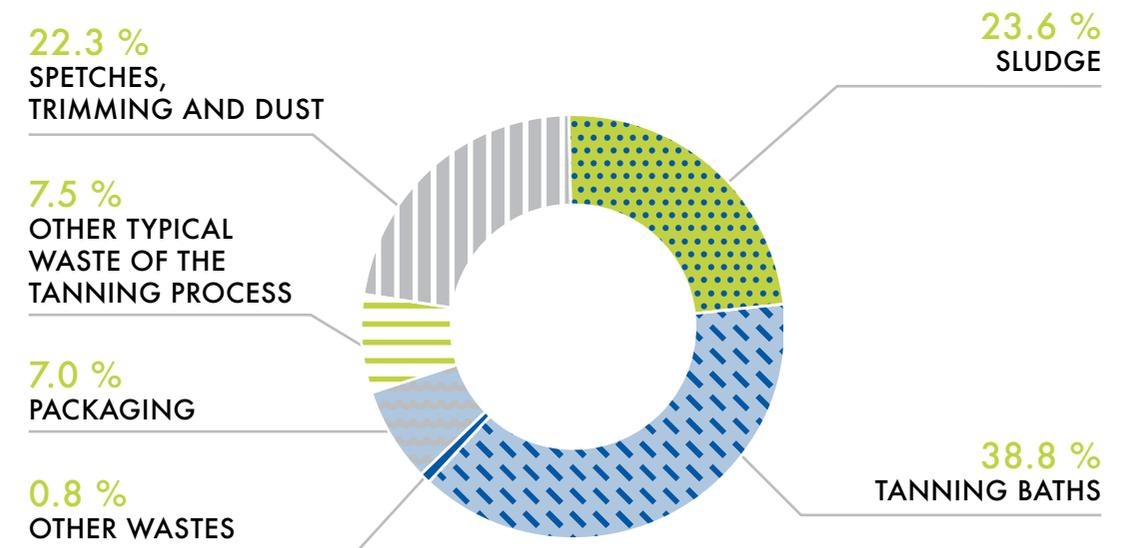
TANNING BATHS, deriving from the activity of those tanneries (in Tuscany in particular) that separate tanning baths for the recovery of chromium salts.

SLUDGE, waste from refining activities, tank cleaning and wastewater treatment.

OTHER TYPICAL WASTE OF THE TANNING SECTOR, such as salt, absorbent materials, filters and process residues that are widely disposed of.

PACKAGING, from paper, plastic, wood and mixed materials packaging, mostly forwarded to recovery.

OTHER WASTES, generated from service activities.



In order to fully define the sustainability excellence of leather in general, and above all the leather produced by Italian tanneries, one final detail is missing. **Durability**. In industrial systems characterized by a clear and strategic propensity towards circular economy, a further excellent winning quality is the capacity of the products to **keep their added value as long as possible**. The more long-lasting they are within a virtuous production circuit, the more sustainable they are. And leather is in fact, just that. This is not a mere expression. It is history.

Just think about the countless archaeological discoveries where leather shoes and clothing have been discovered. The most famous and significant example of this is indeed Italian: Oetzi, the Similaun Man, emerged in 1991 from the glacier of the Venetian Alps on the border between Italy and Austria. From a DNA study of nine samples of leather stored at the Alto Adige Archaeological Museum in Bolzano, it was found that "the man from the ice" used to tan hides and skins from cattle, sheep, goats and wild animals to make clothes, leggings, quivers and headgear, whose remains have lasted till today. Oetzi lived **5,300 years ago**, he did not use modern tanning techniques, yet the remains of his "manufacturing" **are still there today**, for us to see.

FERTILIZERS AND BIOSTIMULANTS

From fleshings, treated using appropriate technological processes, some companies obtain protein hydrolyzate (amino acids and peptides) from which they produce special fertilizers (biostimulants), that are totally biodegradable and pose no hazards to the public health or the environment. High-quality and agronomically efficient fertilizers can be produced from **other wastes**, even if they have already been tanned, (shavings, trimmings and spetches), which undergo thermal or enzymatic hydrolysis processes. From the

proteins derived from these by-products, "clever" fertilizers are obtained, which can modulate the transfer of nitrogen (already in protein form, and therefore more bioavailable) based on plant requirements; are biostimulant able to act on plant metabolisms; are natural organic compounds that improve the chemical, physical, biological, and mechanical properties of the soil. The regular use of these fertilizers enables to maintain or increase the fertility of agricultural soil and to improve its structure, similarly to what mature manure does.

COLLAGENS, GELATINES AND FOOD PROTEINS

Certain products suitable for the food chain are produced using **splits, splits in lime and scraps** (collagen, artificial casings, gelatine and food proteins). All material intended to human consumption must be certified as suitable, appropriately traced and prepared in full compliance with the applicable hygienic

regulations, in order to guarantee food safety. Other by-products that are not suitable to human consumption can be processed into technical gelatine, glues, pet food and edible pet toys.

FROM SLUDGE TO THE PRODUCTION OF FERTILIZERS

Since the 1980s, **Consorzio Cuoio-Depur** has devoted considerable resources to studies and researches aimed at identifying **possible forms of re-using in agriculture the protein sludge** resulting from the treatment of wastewater, thus anticipating requirements and directions from local authorities, national agencies and the European Community. The idea originated from an analysis of its own peculiar characteristics: the considerable presence of organic substances from natural vegetable extracts (tannins), a large amount of organic protein substances derived from hide processing and the presence of residues from

materials such as hair, fleshing, skin and the like, which are already individually recognized as fertilizers. Recently, some Mixed Fertilizers (N-P) have also been developed by mixing integrated leather meal with other animal by-products (meat meal, bone meal, etc.), previously appropriately treated to make them suitable for use. In 2016, 20,500 tons of organo-nitrogenous fertilizers originating from sewage sludge were produced and sold.

greenLIFE: GREEN LEATHER INDUSTRY FOR THE ENVIRONMENT

The project, started in June 2014 with a total investment of 2.3 million Euros (approximately 50% of which was funded by European Commission's **LIFE Program**), involved five companies representing the "wider" Arzignano tanning district: Dani Group and Gruppo Mastrotto (tanneries), Ilsa (biotechnology and technical products for agriculture), Ikem (chemical industry) and Acque del Chiampo (a water treatment provider). The purpose of the project is to develop a new operating process to reduce the environmental impact of the tanning industry through different lines of research. Starting from a trial of oxidative calcination on an industrial scale, the project aims to achieve on the one hand the recovery of the baths, and

on the other the recovery and exploitation of tanning process by-products in industry. The results obtained after three years of trials are of the utmost importance. The industrial-scale development of **oxidative liming** has brought a reduction in pollutants, an 18% of water saving per cycle and a reduction of odorous emissions both inside and outside plants (sulphide reduced by 19%). At the same time, hair was recovered (18-20%) by collecting it before it melted, and its technical-agronomic reuse was evaluated. A tannic polymer that can work at pH values above 7 has also been developed to reduce odorous emissions. The properties of the resulting leather are unaltered. www.greenlifeproject.eu

INERT GRANULATES FOR BUILDING AND BITUMIN CONGLOMERATES

The technological and mechanical innovations adopted by **Aquarno** at a purification level have significantly reduced the volumes of sludge resulting from waste and aimed to disposal treatments, which have gone from 180,000 down to 15,000 tons per year in twenty years (1995 – 2005). This was made possible by a specific recovery process, which starts from a sludge dehydrated, and dried, through a pyro-

sintering process ends with the production of a Sintered Granule (referred to as KEU). After being mixed with calcium carbonate, KEU is used to produce inert granules for building and bituminous aggregates for asphalt, thereby closing a virtuous circle with the reuse of sludge as a secondary raw material.

“

A TRULY CIRCULAR INDUSTRIAL PROCESS,
SUCH AS THAT OF TANNING,
IS BY NECESSITY CHARACTERIZED
BY LINEAR ELEMENTS,
BECAUSE IT USES RESOURCES
SUCH AS WATER AND ENERGY,
IT PRODUCES WASTE FLUIDS,
EMISSIONS AND WASTE.
IT REQUIRES THE OPTIMIZATION OF
LEATHER ENVIRONMENTAL FOOTPRINT,
AND THE CREATION OF SYNERGIES
WITHIN A SUSTAINABLE CHAIN.

”



ITALIAN LEATHER
IS CLEAN

3.1 WATER, ENERGY AND CHEMICAL PRODUCTS

The transformation from a raw or semi-finished to a finished state involves the use of chemicals, water resources (from groundwater and aqueducts) and energy sources. As **most of the processes in a tannery take place in aqueous baths**, the use of water is clearly a critical factor both from an environmental and economic point of view. Costs linked to the management of water resources are the largest in the environmental balance of the tanning industry.

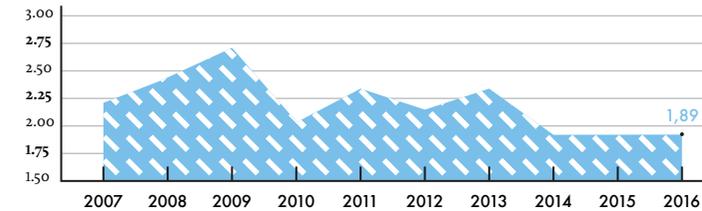
Processes require **electric energy** for machinery and thermal energy to heat the "process water" and for heating plants (such as drying tunnels). Electricity is mainly taken from the grid, while heat is generated by the combustion of natural gas and, in smaller percentages, from other fossil fuels. The thermal energy quota also includes the (diesel) fuels that are required for the company's forklift trucks. In any case, the tanning productive process **is not considered as a highly intensive one** from an energy perspective and, in some companies, part of the electricity is self-produced by using **cogeneration** or **photovoltaic systems**, thus reducing costs and wastes.

Finally, **basic chemicals'** (which are fundamental in the various processing stages), provide the aesthetic and chemical-physical properties that characterize its final use, that is to obtain rot-proof and long-lasting durable leather. They are used in aqueous solution – that is, in baths – in the early stages and applied to the surface during finishing. Both the development of new products and the ongoing stylistic research encourage tanneries and their chemicals' suppliers to constantly update their offerings, in order to achieve a higher level of environmental compatibility.

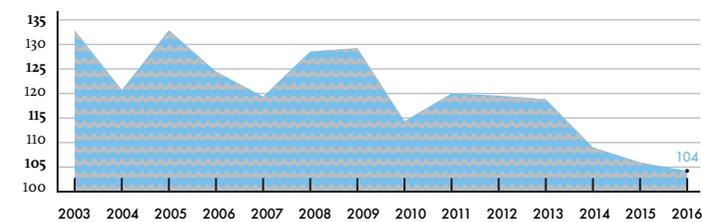
Italian tanneries' investments in technology and research to reduce the use of natural (water and methane) or transformed (electricity, chemicals) resources are ongoing. In 2016, just for example, **new cogeneration plants** were put into operation, **heat recovery systems** were installed, and **devices for the optimal dosing of chemicals and water** were adopted.

A progressive improvement, with less decisive variations in recent years. The consumption indicators per unit of production (per square meter of leather), calculated over a sample of tanneries which work either on a full production cycle or starting from a semi-finished product, reveal different trends for the three main input items. The reasons for this are internal, linked to the efficiency of the processes or related to the sample variability over the years under examination.

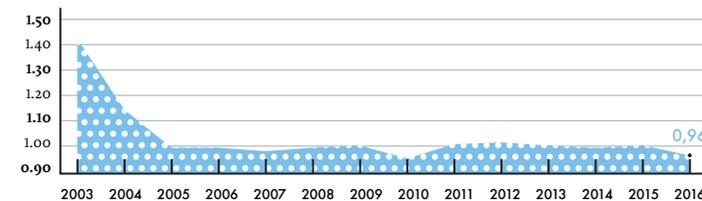
CHEMICALS PER PRODUCT UNIT (kg/m²)



WATER PER PRODUCT UNIT (l/m²)



ENERGY PER PRODUCT UNIT (TEP/1,000 m²)



PERFORMANCES PER PRODUCT UNIT (2003-2016)

-20.0 %
USE OF
WATER

-32.3 %
USE OF
ENERGY

+112.6 %
ENVIRONMENTAL
COSTS

COGENERATION IN TANNERIES

In a manufacturing process such as that of the tanning industry, which uses both electrical and thermal energy, installing a cogenerating plant can bring significant economic and environmental benefits, by exploiting all the energy produced at best.

The efficiency of the thermal energy utilization fosters an improvement of the production processes performance, which require steam and hot water, by means of heat exchangers and heat recovery, which bring benefits to company's profits too.

3.2

WASTEWATER, EMISSIONS AND WASTE

Wastewater

WASTEWATER TREATMENT REPRESENTS THE MOST SIGNIFICANT ENVIRONMENTAL COST, ACCOUNTING FOR MORE THAN 60%. WATER IS THE MATRIX IN WHICH MOST OF THE PROCESSES ARE CARRIED OUT, BUT IT IS NOT TRULY "CONSUMED" IN THERE. FROM A QUANTITATIVE STANDPOINT, DISCHARGES REPRESENT 93% OF THE WATER USED IN THE PROCESS. YET, ITS QUALITY FEATURES CHANGE, SINCE THEY MUST BE RESTORED THROUGH AN APPROPRIATE PURIFICATION TREATMENT BEFORE WATER ENTERS THE ENVIRONMENT AGAIN.

Almost all the tanneries located in manufacturing districts discharge their wastewater to **specialized water treatment plants consortia**. Before this happens, one or more preliminary treatments are carried out in-site, to eliminate coarse wastes, and in some cases (if there are separate piping systems), to recover some of water. The efficiency of the wastewater treatment in the districts eliminates nearly 100% of suspended solids, nitrogen, trivalent chromium, and organic loading (COD) from industrial wastewater. Purified water **enters the environment with qualitative characteristics** that guarantee it safe reintegration into natural biological cycles.

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2016: REDUCTION OF POLLUTANTS IN WASTEWATER (MEAN VALUES, TREATMENT PLANTS CONSORTIA IN TUSCANY AND VENETO)

96.6%
COD

99.4%
SUSPENDED
SOLIDS

93.5%
TOT. NITROGEN
(TKN)

99.3%
CHROME III

Atmospheric emissions

Atmospheric emissions is an important environmental issue that must be monitored and constantly improved. Tanneries provided themselves with **advanced technologies**, following the development of rigorous national and European regulations (for example, the IPPC 3). This commitment has made possible various air-quality improvements in the industrial zones and Municipalities where tanneries operate and have their industrial roots.

Tannery production is associated with emissions into atmosphere generated by leather tanning and auxiliary processes involved in the energy production. The emissions change according to different types of production, with variations that depend significantly on the type of article manufactured. This is not the whole story, however. VOC (Volatile Organic Compound) emissions, for example, are significantly affected by leather's final use. Filters and control systems installed in plants minimize polluting emissions and allow compliance with the required authorization parameters.

Emissions from boilers and energy generators release a series of gases into the air that can contribute to the greenhouse effect (such as CO₂ and nitrogen oxides). For these, the equivalent corresponding CO₂ **content** calculated on the basis of energy consumption is considered to be an impact indicator, taking into account both direct (gas, diesel and other fuels) and indirect (consumption of electricity generated off-site)⁴ contributors.

³ <http://eur-lex.europa.eu/legal-content/IT/TXT/?uri=celex%3A32010L0075>

⁴ Source ISPRA - Factors of emissions to air of CO₂ and other greenhouse gases of the electric sector. Report 257/20017 - Table of national standards [2016]

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ATMOSPHERIC EMISSIONS 2016 - SIGNIFICANT PARAMETERS

VOC EMISSION FACTOR

54.1 g/m²

GREENHOUSE EMISSIONS

1.97 kg CO₂ eq/m²

THANKS TO THE MEASURES IMPLEMENTED TO MAKE PROCESSES MORE EFFICIENT, THE GREENHOUSE GAS EMISSIONS OF THE TANNERIES PARTICIPATING IN THE REPORT ARE SUBSTANTIALLY LOWER (-27%) THAN THE EUROPEAN BENCHMARK CALCULATED WITH RESPECT TO THE 2015 INDECO PROJECT (2,7 KG EQUIVALENT CO₂/M²)⁵.

The introduction of **sulfides in the air from processes and treatment plants**, which is particularly evident under certain atmospheric conditions, deserves a further comment. Sulfides, even at infinitesimal concentrations, are perceived as unpleasant smells, although they are absolutely harmless. The technologies in use involve segregating the plants and the structures where sulfides are generated, limiting the emissions and using chemical scrubbers. In recent years, interesting projects to eliminate sulfide have been promoted, using alternative depilation processes such as oxidative calcination (GreenLIFE project) or new biological filtration systems (Biosur Project).

Waste

The tanning process generates **scraps and wastes** resulting from leather processing and related activities. The latter's activities (maintenance, service and related activities) count only for a minimum part. Waste production, which is the second, regarding costs, for Italian tanneries' environmental-balance, is influenced, both in quantity and in quality, by the type of process used to treat hides and skins. Even the final destination of the waste (recovery or disposal) depends, beside from the type of waste, on the presence of specialized treatment facilities in the districts. Recovery rates are very high on average. Only a minimal amount of waste –packaging contaminated with chemical products, exhaust filters and used oils – is classified as hazardous.

⁵ <http://www.ind-ecoefficiency.eu/>

WASTE - SIGNIFICANT PARAMETERS 2016

2.6%
HAZARDOUS
WASTE

76.1%
WASTE
DESIGNATED
FOR RECOVERY

1.85 kg
OF WASTE/m²
OF LEATHER
PRODUCED

0.95 kg
OF ABP/m²
OF LEATHER
PRODUCED

THE BIOSUR PROJECT

Through the BIOSUR project, which is co-funded by the European Union under the LIFE+ (ENV/IT/075) program, pre-industrial trials have been carried out on the application of innovative technology for the treatment of odours using a RBBTF (Rotating Bed Biotrickling Filter). The reduction in energy and chemicals used for the sulphur-hydrogen removal process was significant and was combined with a lower overall environmental footprint of the tannery wastewater treatment. The BIOSUR project is the result of experimental activities and

ongoing research carried out in the CER₂CO (Centro Ricerca Reflui Conciari), the joint university-business laboratory created out of a collaboration between the University of Florence and the CuoioDepur S.p.A Consortium and a synergistic collaboration among the Project partners, namely the CuoioDepur S.p.A. Consortium, Italprogetti Engineering S.p.A., the Department of Civil and Environmental Engineering at the University of Florence and the Department of Biology at the University of Pisa.



3.3

THE ENVIRONMENTAL FOOTPRINT

The **Product Environmental Footprint** (PEF) indicates how well a product or service is doing during their life-cycle, in regards to environmental matters; (the PEF is based on many different criteria). The information is self-given to the PEF assessment to better understand and then reduce the environmental impact of both products and services, keeping in mind the different activities of the supply chain, (from the extraction of raw material, to production, usage and final handling of waste as a byproduct) ⁶.

PEF IS A SELF ASSESSMENT TOOL FOR COMPANIES THAT PROVIDES A CRITERION TO IDENTIFY THE ENVIRONMENTAL IMPACT OF OF THEIR PROCESSES AND PRODUCTS. IT OFFERS A VALID SUPPORT TO PLAN OPERATIONS FROM A PERSPECTIVE OF CONTINUOUS IMPROVEMENT OF COMPANIES' SUSTAINABLE PERFORMANCE.

The analysis must be carried out for **15 categories relative to environmental impact**, by using the most reliable calculation method for each one. The PEF methodology allows companies to examine the source of the environmental impacts of their products more deeply, and to plan possible improvement actions. These actions concern only those stages over which the tannery has, or could have, direct control. Impacts deriving from agriculture or breeding attributable to raw hides and skins are excluded, since these are considered as a meat and dairy co-product.

⁶ Recommendation 2013/179/UE



THE TANNING INDUSTRY HAS JOINED THE PILOT PHASE OF THE EUROPEAN COMMISSION'S PROJECT TO DEFINE PRODUCT ENVIRONMENTAL FOOTPRINT CATEGORY RULES (PEFCR), CALCULATED PER SQUARE METRE OF FINISHED LEATHER.

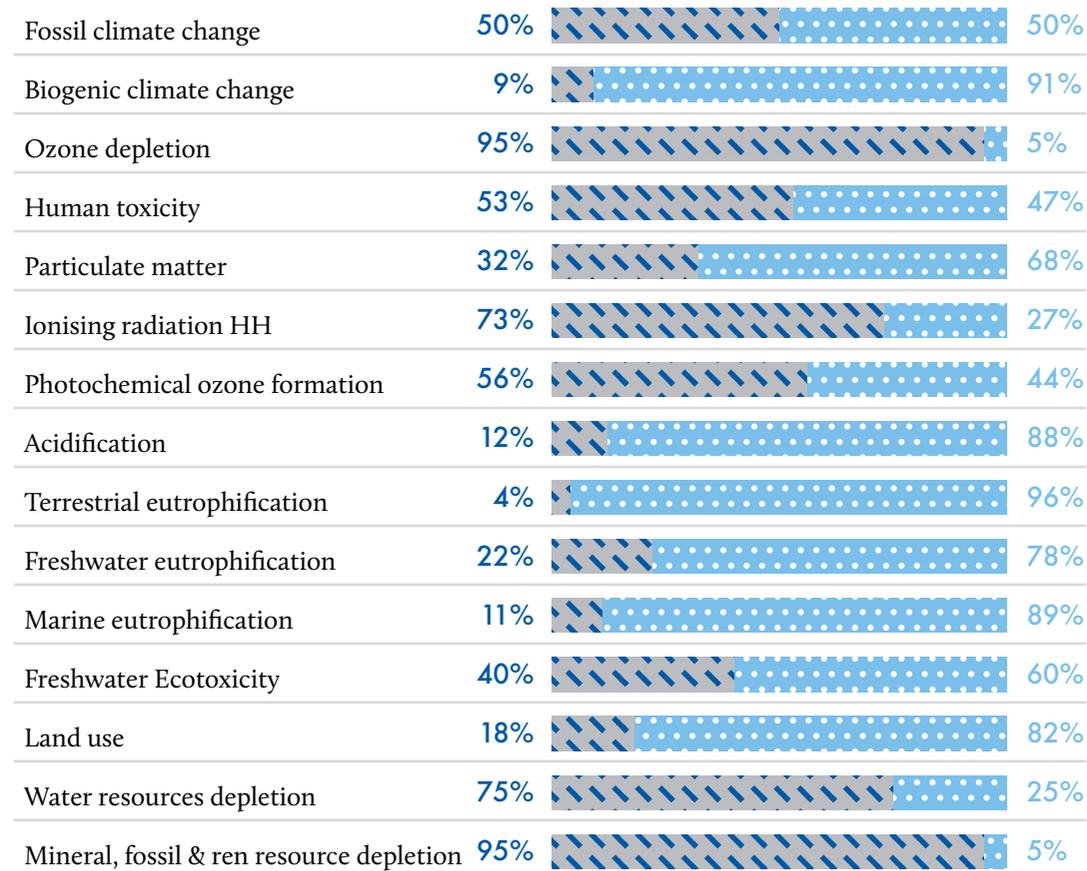
This task ensures **clear and timely modelling** of all possible industrial scenarios. Specific elements for each final use of leather enables the calculation of the environmental footprint of the finished article. The PEF assessment requires **an analysis of the entire production chain**, for which, above the "core" tanning processes, all the upstream steps must be taken in consideration, starting from breeding. Part of their impact therefore needs to be allocated to the various resulting products, following predefined rules based on a variety of criteria, starting from economic and physical considerations.

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THE TANNING SECTOR HAS SUPPORTED THE SO CALLED "ZERO ALLOCATION" FOR RAW HIDES AND SKINS, AS THEY ARE SUB-PRODUCTS RECOVERED FROM ANOTHER PRODUCTION PROCESS.

The EU Commission, however, has set that any product with an economic value cannot be treated as waste, thus rejecting the zero allocation proposal and forcing the industry to be responsible for **a portion of the environmental impact of the upstream phases**, which, although very small in percentage terms, **weighs a significant amount** for certain categories of environmental impact.

LIFE CYCLE RELEVANT INDICATORS



LEGEND



Furthermore, **the calculation of an environmental footprint** is heavily influenced by the availability of primary data or, alternatively, by the quality and the specific type of data contained in the commercial databases specialized in environmental analyses. These factors lead to significant approximations, especially for the upstream phases (breeding and farming).

The only easy way to overcome this obstacle is **the collaboration** among everyone involved in the value chain through data sharing, with significant mutual benefits in terms of reliability, reproducibility and comparability of results. This has been particularly noticeable when using datasets for modelling some of the major chemicals used in tanning.

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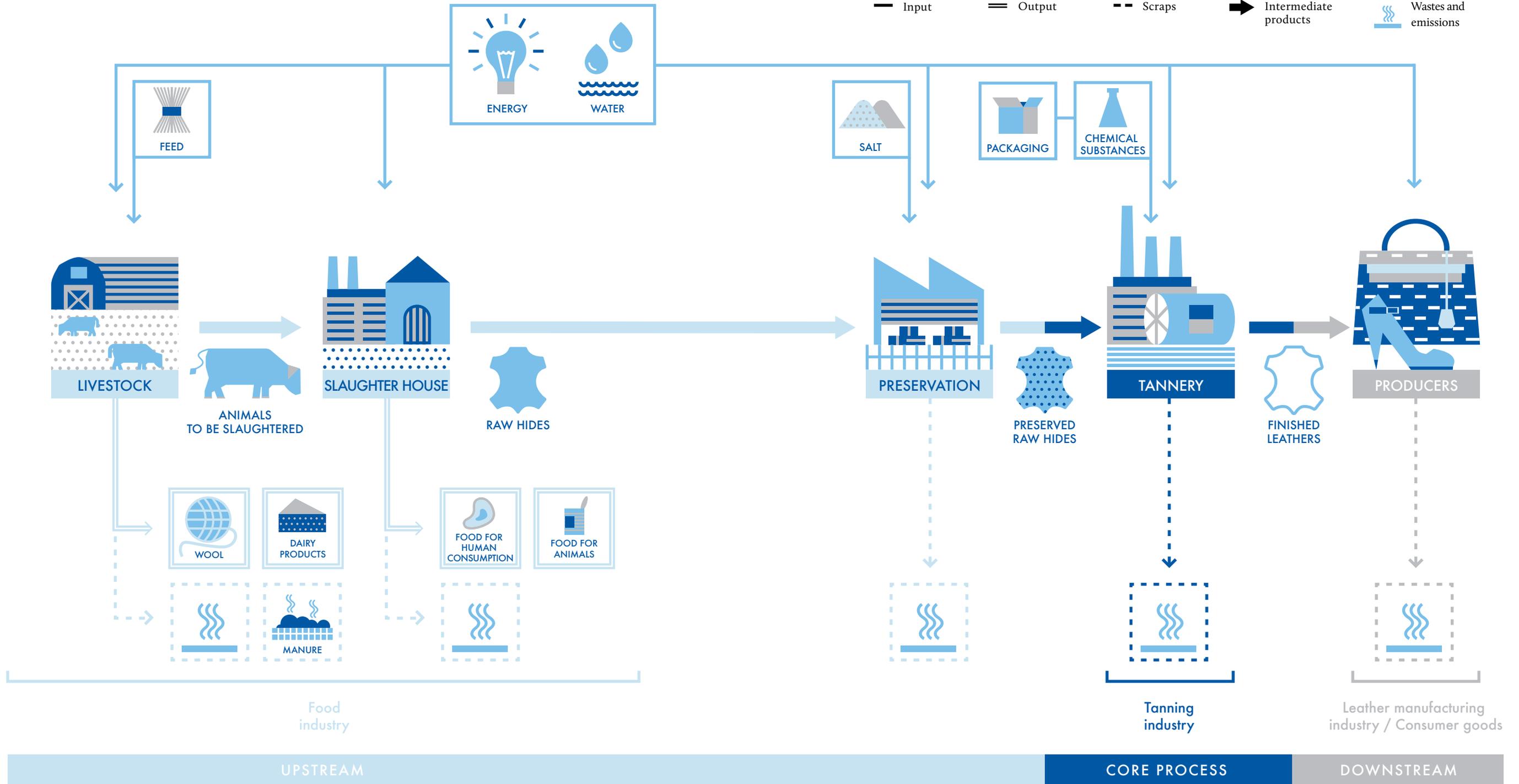
3.4 LEATHER'S LIFE CYCLE

Leather is an intermediate product. Its life cycle starts at the breeding phase and ends when it leaves the gates of the tannery. All resources consumed, emissions and wastes deriving from the processes that compose this cycle determine the environmental impact of finished leather. Breeding and slaughtering are

multi-product processes, whose impact must be allocated to the various goods they generate, based on economic, physical or biophysical criteria. Impacts relative to downstream operations, use, recovery or disposal of leather final articles (shoes, leather goods etc) are concerns for downstream industries.

LEGEND

- Input
- Output
- Scraps
- Intermediate products
- Wastes and emissions



A COLLABORATION WITH SOME IMPORTANT CHEMICAL SUPPLIERS WAS LAUNCHED IN 2016, AIMING AT DEFINING THE IMPACT OF TANNING PROCESSES, STARTING FROM RELIABLE PRIMARY DATA.

THIS HAS CAUSED A RESIZING OF THE IMPACT OF CERTAIN SUBSTANCES AND A COMPETITIVE BENEFIT FOR THE ENTIRE CHAIN.

CERTIFICATIONS



UNI EN ISO 14001 CERTIFICATION

Environmental Management Systems

ICEC Accreditation Accredia nr. 019 D

The certified company's management system is adequate for keeping the environmental impact of its activities under control and is systematically improved in a consistent, efficient and sustainable way.



EMAS REG. 1221/09 VALIDATION

Eco-management and auditing system

ICEC Accreditation Accredia nr. IT-V-0016

EMAS is mainly focused on improving the environment and offering to the market, control authorities and citizens a useful tool to be informed about a company's environmental performance, through the Environmental Declaration.



UNI 11427 PRODUCT CERTIFICATION

This standard establishes the minimum environmental performance requirements and the functional features characterizing eco-leather, as certified by the eco-leather logo.

THE SINGLE MARKET FOR GREEN PRODUCTS

The three-year PEF test period (2014-2017) is part of the "Single Market for Green Products" initiative launched by the European Commission. The purpose of this initiative is to standardize the methods for assessing the environmental footprint of products, in order to ensure an analysis of the production processes that is recognized at a Community level, which can be used for strategic business planning.

The final draft of the PEFCR (the rules for calculating the environmental footprint of leather), was delivered to the Environment DG of the European Commission at the beginning of 2017. The document includes the improvements that have been implemented on the basis of the comments received during the public consultation held in mid-2016 and those received by the review committee, which is composed of an expert in environmental assessment, a consultant from the tanning industry and a representative of an NGO.

The methods (labels, websites, reports, etc.) that might be used to communicate the environmental footprint of leather have also been planned and tested. The results have been sent to the European Commission, which will establish the most appropriate rules and systems for communicating the environmental footprint of products, also taking into account the results obtained from the pilots of other products.

The European Commission is now engaged in the so called remodelling phase, which involves the re-elaboration of data and it's based on the changes made to the PEFCRs in 2016. The end of the pilot phase, which will coincide with the publication of the final PEFCRs, is scheduled for **November 2017**.

PEF FOR FERTILIZERS FROM LEATHER PRODUCTION WASTE

ILSA is a leading company in the production, research and development of **fertilizers** and **biostimulants** obtained from raw materials of animal and vegetable origin. It has produced a PEF study that has enabled the measurement and evaluation of the environmental footprint of processes, products and cultures obtained by using "fertilizers with organic nitrogenous matrices with a high level of agronomic efficiency, characterized by a slow release of their active ingredients, a high protein and amino acid content, alternatives to fertilization with mineral and synthetic fertilizers, obtained from tannery by-product waste subjected to controlled thermal hydrolysis and enzymatic biocatalysis". From an environmental point of view, the greater agronomic efficiency of the fertilizers studied means fewer in-field applications and lower product dosages. But this is not all. The use of organic matter on soil reduces the nitrogen leaching phenomena, contributes towards further reducing the environmental

footprint of the products and therefore towards further enhancing a sustainable agriculture.

The study has therefore provided guidance on environmental performance associated with fertilizer production processes, analysing all the impact categories foreseen in the PEF methodology set out in Recommendation 2013/179/EU. These have been compared with other synthetic fertilizers obtained from non-renewable sources.

A comparative analysis of possible scenarios for the disposal of waste derived from leather processing has been carried out: both as a fertilizer and as energy recovery through waste-to-energy production.

The benefits associated with the recovery of leather processing waste as an organic fertilizer product outweigh the benefits of waste-to-energy production in almost all categories of environmental impact.

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ITS AESTHETIC QUALITIES ARE UNIQUE.
ITS TECHNICAL PERFORMANCE
IS EXCEPTIONAL.
THE QUALITY OF ITALIAN LEATHER IS
UNDISPUTED AND RECOGNIZED AROUND
THE WORLD FOR THE ABSOLUTE ADDED
VALUE IT OFFERS TO CUSTOMERS.

AND NOT JUST THIS.

IT IS A FORMIDABLE MODEL
OF COMPLIANCE WITH THE HIGHEST
SAFETY STANDARDS THAT PROTECT
EVEN THE END CONSUMER.

”



ITALIAN LEATHER
IS SAFE

4.1

THE PRODUCT

It is a safe product. It complies with regulations, which rule the entry of products in the consumer-goods' market. It is obtained through high-performing processes that reduce the use of substances harmful to health and environment.

ITALIAN LEATHER GUARANTEES
THE END USER WITH THE HIGHEST STANDARDS
OF SAFETY REQUIRED BY EUROPEAN
AND NATIONAL LEGISLATION,
WHICH IS WIDELY APPLIED
AND STRICTLY CONTROLLED.

The use of chemicals in accordance with **REACH**⁷ and **POP**⁸ regulations, which are mandatory in Europe, would already in itself guarantee compliance to the requirements imposed by the main export markets. However, the Italian tanning industry goes beyond by implementing a series of checks over its finished product to further ensure the proper management of chemicals during the process.

CO-OPERATION WITH FASHION BRANDS,
OFTEN FOCUSED ON OBJECTIVES
MORE RESTRICTIVE THAN THE LAW ITSELF,
HAS ENHANCED THE TANNERIES' NEED
OF RAISING THE LEVEL OF ATTENTION
TO THE SUPPLY OF RAW MATERIALS
AND THE USE OF CHEMICAL PRODUCTS.

Sample management, reliability of analysis, development and validation of test methods applied to leather and laboratory performance testing. These are some of the most current issues, which are the focus of **an active cooperation** among suppliers, tanneries and customers, especially national and international fashion brands.

Collaboration along the whole supply chain (and further) has become the key step for establishing the minimum requirements applicable to leather, as well as the drawing up of practices and guidelines on specific issues. **This sharing is necessary.** Sensitivity on the potential presence of chemicals subjected to restrictions in leather has increased over the years and has grown exponentially since **2008**. That is the year the first list of **SVHCs** (Substances of Very High Concern) was published⁹, but is also the time when began to be a proliferation of lists of prohibited or restricted substance (**RSLs** – Restricted Substance List), varying by typology, maximum permissible concentration, test method, relevance to leather matrix, rather than just coatings. The worrying result of this is a **great confusion**, which has prompted Italian tanneries to act in order to provide customers with adequate responses, as well as to ensure consumer safety.

⁷ REGULATION (EC) No 1907/2006 of the European parliament and of the council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH)
<https://echa.europa.eu/en/regulations/reach/legislation>

⁸ REGULATION (EC) No 850/2004 of the European parliament and of the council of 29 April 2004 on persistent organic pollutants.
http://ec.europa.eu/environment/chemicals/international_conventions/index_en.htm

⁹ Substances of Very High Concern on the Candidate List for Authorisation, periodically updated by ECHA.
<https://echa.europa.eu/en/regulations/reach/authorisation/the-candidate-list>

UNIC SPECIFICATIONS SERVICE

In order to better support its associates, UNIC has launched a **service to monitor the international chemical legislation** applicable to leather articles, and publishes a semi-annual document (at the time of the periodic updates to the SVHC list), "**Leather and Chemical Substance Specifications**". This is a compendium of the **major restrictions** on the content of substances relevant to leather. It includes the principal international legal thresholds applicable to leather matrix, depending also on the type of article: dyed or non-dyed vegetable tanned leather, non-finished leather including aniline, and finished leather.

On this subject, UNIC has also launched a consultancy service for the evaluation of the specifications (chemical, performance, ethical-social and contractual requirements), which only in 2016 reviewed and commented on 157 different standards and documents, for a total of about 450 consultations.



Discover UNIC
Specifications Service

THE CLeAR PROJECT (Confidence In Leather Analysis Results)

How is an analytical result to be managed so that it is acceptable to both customers and suppliers? Since the way an analysis is run influences its results, how can disputes be resolved? In order to clarify and compare these and other critical points (interpretation of the results of laboratory analysis), **CLeAR project** was launched in the spring of 2016, becoming a permanent benchmarking working group for tanneries, customers and other players throughout the supply chain over time. The primary aim of CLeAR is to **reduce analytical errors** due to the complexity of the leather matrix as far as possible, by providing a vademecum entitled "Guidelines for the Management of Chemical Analysis". It identifies sampling procedures, the correct practices to prepare and pack leather samples, recommendations for the proper preservation of leather and, last but not least, the information that an analytical laboratory must provide on its performance, in order to be reliable and accredited.

The hope is to get at a **final shared text of the Guidelines** in the near future. This objective would provide fashion system players with a unique guide among the galaxy of chemical analyses on leather, where only some of the existing test methods are

specific for leather matrix and standardized, while (unfortunately) many others are not. The entire supply chain needs clarity on the information a laboratory must provide in order to demonstrate its methods are reliable, on the identification of possible margins of error and on the procedures (sampling and sample shipment, for example) that will help avoid interferences. CLeAR works in close synergy with Camera Nazionale della Moda Italiana, with which UNIC is organizing proficiency tests to assess the reliability of certain non-standardized analytical methods. This calls for the submission of the same sample to several laboratories to test the reproducibility of an analytical method and the level of acceptable error. The first trial will involve PFOS, regarding which a specific method for leather is being drafted by the CEN/TC 289-Leather Committee.



For information:
clear@unic.it

THE ZDHC (Zero Discharge of Hazardous Chemicals) PROJECT

To attest the tanning industry's sensitivity and commitment to sustainability throughout the supply chain, since October 2016 **UNIC has been associated with the ZDHC**, an initiative launched in 2011 by a number of brands, mainly in response to Greenpeace's Detox campaign. The aim of the ZDHC program is to eliminate certain classes of hazardous substances from textile and shoe production chains by 31 December 2019, by using an integrated approach. The numerous working groups participating the program (MRSL, wastewater control, training, data management and confidentiality, audit protocols and research) have so far focused on textiles. From autumn 2017, a specific section will be organized for leather, with dedicated working groups, of which UNIC, as delegate of the Italian tanneries, will be the referent. UNIC

will therefore share with ZDHC the experience it has gained in these areas, and will make its specialists available in order to provide optimal support to the Working Group on leather. The program envisages **the definition of a chemical management system** (possibly to be proposed as an ISO standard) that is valid for all sectors of the fashion system. There will be then some Guidelines dedicated to the different supply chains. From January 2017, ICEC has entered the ZDHC project too.



www.roadmaptozero.com

CERTIFICATIONS



CERTIFICATION TECHNICAL SPECIFICATIONS ICEC TS 406

Certification of laboratories for leather testing

This approach was created for the validation of laboratories that work with leather by controlling the management of all aspects, in line with the principles of quality and of the specific ISO 17025 standard, such as personnel training, the test environment, instrument management, and the preparation of test reports. These aspects are verified periodically in order to ensure the utmost reliability of the test conducted on leather, including physical, chemical and fastness tests.



CERTIFICATION TECHNICAL SPECIFICATIONS ICEC TS 416

Chemicals management in tannery

Operational needs and UNIC or customer's specifications provide information to companies wanting to certificate themselves on the substances to look for, the national limits in force among the main destination markets, testing methods and control procedures, with regard to the type of leather article and the raw material used.



CERTIFICATION OHSAS 18001

Occupational Health and Safety Management Systems

Accreditation ICEC Accredia nr. 031F

The implementation of an OH&S Management System helps to identify and keep under control all the risks related to health and safety in the workplace, to reduce the number of possible accidents, to be compliant with the legislation in force and constantly improve performances. Its application provides companies with tax breaks from INAIL (Italian Institute for Insurance against Work Accidents).

4.2

THE WORKPLACE



Safety and health in the workplace are key elements of Italian tanneries' social responsibility. In Italian tanneries, work processes are conducted in compliance with applicable safety standards, analyzed and evaluated to identify short and long-term risks. By adopting preventive technical organizational and management measures, the likelihood of their occurrence is mitigated.

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**2003 (FIRST REVIEW): 1,406 ACCIDENTS RECORDED BY INAIL (THE NATIONAL INSURANCE AGENCY FOR INJURIES IN THE WORKPLACE).
2015 (LAST AVAILABLE INAIL REVIEW): 568, A 60% REDUCTION.
THIS IS AN EXCELLENT RESULT, BUT IT SHOULD NOT BE VIEWED AS AN END RESULT.**

The attention Italian tanneries pay to safety in the workplace **is a further step towards continuous improvement** and constant optimization. Not only because every injury entails costs and loss of productivity, but above all because it affects the overall well-being of workers.

The trend regarding injuries in the workplace over the course of time shows continuous reductions from 2003 to 2014. This trend was halted in 2015, which registered a slight increase in the number of accidents. Their severity index was lower however, as was the average duration of the injuries. An analysis of the **nature of the injuries** emphasizes this aspect, with an almost equal distribution between bruises (25%), wounds (23.5%) and dislocation and distortion (22.8%). Among the total number of accidents reported, a little less than 80% (77.8%) occurred within the working environment. The others occurred **"outside the company"** on the way from home to work, between two places of work, from work to meals and during business trips. 92.6% of the events that occurred while travelling, took place whilst using means of transport.

The **monitoring of companies** mainly focuses on the trend of injuries in the workplace, because it is during events that occur "on the inside", and because then investments that directly focus on those aspects can be made in order to reduce accidents by enhancing employee safety at work. The work started by Italian tanneries involves several fronts: the use of certified machinery equipped with the necessary safety measures, the safe handling of chemical products (storage, dosage and waste management), the use of aspiration systems near machines or equipment that produce emissions (dust or solvents, for example), operational procedures to minimize risks, periodic information and the continuous training of employees. The results are excellent, but there is still room for improvement.

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MANY COMPANIES HAVE ADOPTED TRAINING PLANS TO IMPROVE THE SAFETY CULTURE AMONG WORKERS, INCREASING THE AWARENESS AND SENSITIVITY OF ALL OPERATORS, NOT ONLY FOR THE BENEFIT OF THEIR OWN SAFETY, BUT ALSO THAT OF THEIR COLLEAGUES.

The companies participating in the Report deserve special mention; in 2016, they performed excellently, as attested by significantly lower values for all indices. An analysis of the trend of **occupational illness** completes the injury scenario. The trend is stable in terms of incidence (42 cases recorded in 2015) with slight annual variations relating to pathologies. The incidence rate for the tanning industry (INAIL database, last available data: 2015) is in line with that of other manufacturing industries.

TO BE ABLE TO ASSESS THE PHENOMENON CORRECTLY (WHICH IS SOMETIMES EXAGGERATED BECAUSE OF OUTSIDE CONVENIENCE REASONS), IT IS IMPORTANT TO PAY ATTENTION TO THE ACTUAL CAUSE AND EFFECT CORRELATION WITH THE WORKING ACTIVITY, WHICH HAS BEEN ASCERTAINED IN 50-60% OF REPORTED CASES.

The illnesses detected by INAIL also contribute to **debunk the image of tanneries as an unhealthy environment**, with workers heavily exposed to toxic and harmful products. Over 70% of cases (equivalent to 73.8%, with 31 cases) belongs to the category of "Diseases of the musculoskeletal system and connective tissue". In 2015, there were only 2 cases involving respiratory diseases or skin sensitivities related to the use of chemicals.

INJURY INDEXES RELATING TO 2015 INAIL DATA AND 2016 UNIC SAMPLE

	2015 INAIL	2016 SAMPLE
Frequency rates (accidents per 1,000 workers)	25.4	11.4
Gravity rates (days cost/total workers)	0.70	0.31
Average duration of injuries (days)	27.5	27.1

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MACHINE AND PLANT SAFETY IN TANNERIES

Certain risks to worker health and safety deriving from the use of machinery and technology peculiar to the process are associated with tannery work. Tannery-specific machines are subject to harmonized European legislation (the Machinery Directive) which are supplemented by specific standards for types of machinery developed by the 200 CEN Technical Committee (European Centre for Standardization) under the coordination of ASSOMAC, the Association of Italian

Manufacturers of Leather Machinery (tannery, footwear and feather Goods). To support this process, ASSOMAC has developed specific **Tannery Technology Documents**, which describe the main equipment used in tanneries and include a section dedicated to safety, ergonomics and maintenance.

“

OVER 1,200 COMPANIES.
MORE THAN 17,000 EMPLOYEES.
AN INDUSTRY MADE UP OF SMALL
TO MEDIUM ENTERPRISES AND GROUPS
INTERNATIONALLY INTEGRATED.
A PRESTIGIOUS MANUFACTURING
TRADITION, THE CROWN JEWEL
OF THE MADE IN ITALY.

THE ECONOMIC MODEL OF THE CLUSTER,
WHICH CREATES UNIQUE SYNERGIES
IN THE TANNING SECTOR AT GLOBAL LEVEL.
AN INDUSTRY THAT CREATES
VALUE AT AN ECONOMIC,
SOCIAL AND CULTURAL LEVEL.

”



ITALIAN LEATHER
IS VALUE

5.1 THE ECONOMIC CONTEXT

The main district for both production and employment is located in **Veneto** region, in the province of **Vicenza**. It is specialized in the production of large bovine leather for car interiors, furniture, footwear and leather goods, and this is the place where the industry's large industrial groups have developed in recent decades.

The second tanning area in terms of production is in Tuscany, concentrated in the area of **S. Croce sull'Arno and Ponte a Egola** (province of Pisa). Its prestige is closely linked to the craftsmanship of the production, which is mainly aimed at the luxury fashion. Local tanneries work mainly on medium-size calf and bovine leather, some of which are used for producing sole leather.

The typical products of the Campania district, which is located in the area of **Solofra** (Avellino), present nearby **Naples**, are sheep and goat leather for clothing, footwear and leather goods.

Finally, the Lombardy district, which is mainly located in the **Magenta** area; it is mostly specialized in the production of sheep and goat leather for the high fashion industry.

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ITALIAN TANNERIES GENERATE A TOTAL TURNOVER OF APPROXIMATELY 5 BILLION EUROS A YEAR, MORE THAN 70% OF WHICH COMES FROM EXPORTS.

CLIENTS ARE GLOBAL AND BELONG TO THE WORLD OF LUXURY FASHION, DESIGN, AND THE AUTOMOTIVE INDUSTRY.

Production focuses almost exclusively on the process of **bovine hides** (around 80% of the total) and **sheep and goat skins** (about 20%), mostly destined to fashion goods manufacturers (footwear, bags and clothing), upholstered furniture (sofas, armchairs and furnishing accessories) and car interiors (seats, steering wheels and dashboards). Our customers belong to very diverse product areas. The presence of tanneries with high levels of versatility in terms of craftsmanship and others with highly standardized production allows **the entire "market pyramid"** to be served, from top-of-the-line leather goods to lower priced sofas for mass distribution. The districts, where more than 90% of domestic production is concentrated, represent the great industrial strength of the Italian tanning industry.

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STRUCTURAL DATA OF ITALIAN TANNING INDUSTRY IN 2016



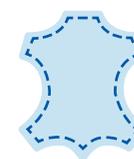
1,218
COMPANIES



17,612
EMPLOYEES



122
MILLION SQM
LEATHER



12*
THOUSAND TONS
SOLE LEATHER



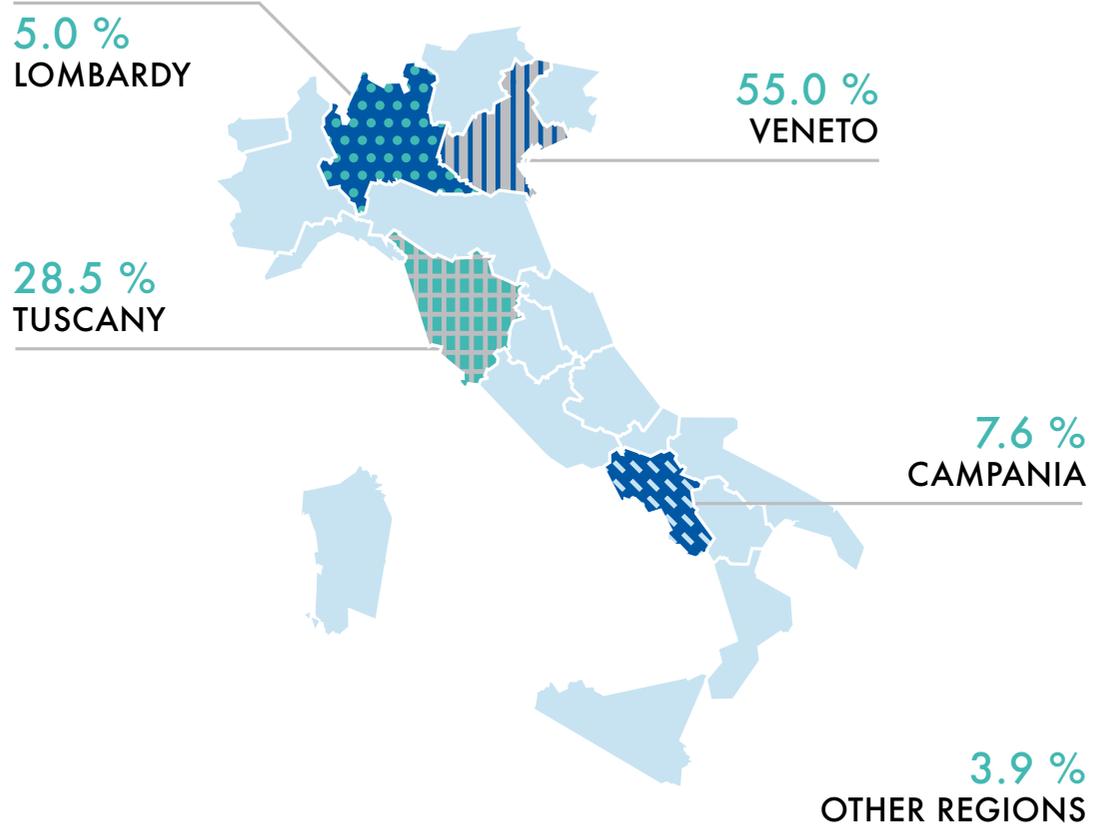
5.0
BILLION €
VALUE OF
PRODUCTION



3.8
BILLION €
EXPORT

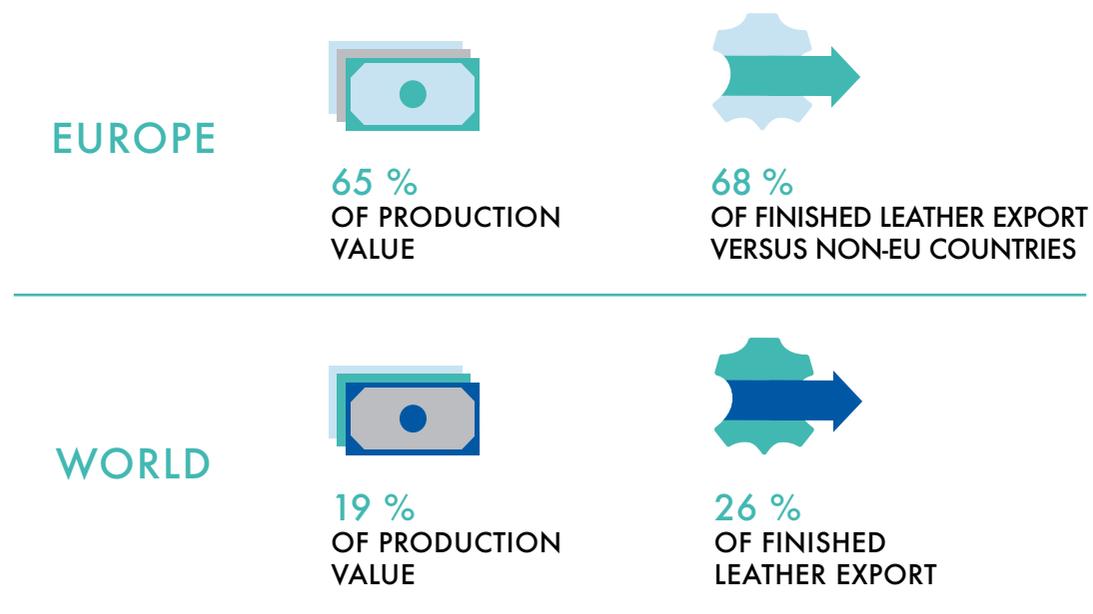
* A review of structural data of sole leather production was carried out in 2016, based on new statistical surveys.

DISTRICTS OF ITALIAN TANNING INDUSTRY



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THE INTERNATIONAL LEADERSHIP OF ITALIAN TANNING INDUSTRY



5.2

INTERNATIONAL LEADERSHIP AND COOPERATION

ITALIAN LEATHER HAS HELD A GLOBALLY RECOGNIZED RECORD OF EXCELLENCE FOR MANY YEARS. A STRONG AND CONSOLIDATED LEADERSHIP BASED ON QUALITY, TECHNOLOGICAL INNOVATION, STYLE RESEARCH AND SUSTAINABILITY.

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These factors reflect in the overall production value and in the international commercial influence of Italian tanneries, both of which have been at the top of European and global rankings for many years.

The globalization of companies is expressed both in terms of export of tanned leather and of import of raw material (raw hides/skins or semi-processed leather). **Exports**, with a total value of **3.8 billion Euros**, reach more than **110 countries** each year (114 in 2016): from A for Albania to Z for Zimbabwe. UN-WTO data certify that **26.1%** of the world trade in finished leather originates from Italy. Annual **imports** of raw materials stand at about 800 thousand tons (with a value of 2.3 billion Euros) and come from 119 countries. Trade relations with our suppliers are also of primary importance globally. Italy is the final destination of **20.6% of the international trade** in raw hides/skins or semi-finished leather.

FOR ITALIAN TANNERIES,
GLOBALIZATION HAS NEVER
JUST MEANT DELOCALIZATION.

INVESTMENTS ABROAD,
ALWAYS ON A LIMITED SCALE,
HAVE BEEN DRIVEN BY THE NEED
TO GUARANTEE A SIMPLER ACCESS
TO RAW MATERIALS, WHICH IN MANY
NON-EUROPEAN COUNTRIES SUFFER
FROM PROTECTIONIST RESTRICTIONS ON EXPORT.
FOR DECADES, OVER ONE-HALF OF GLOBAL
PRODUCTION OF RAW HIDES/SKINS HAS BEEN
EXCLUDED FROM FREE INTERNATIONAL TRADE.

56

UNIC represents an authoritative and attentive “travel companion” for the Italian tanneries in the development of their internationalization strategies. The association is a key member of the main international sectoral representation bodies: **Cotance** (for which it currently holds the Vice-Presidency, after its two-year Presidency from 2012 to 2014) at a European level, and **ICT** (the International Council of Tanners, with an Italian Presidency between 2014 and 2016) at global level. It actively participates in numerous working groups dedicated to specific technical aspects of the sector and the whole value chain, going from standardization (**CEN, ISO**) to chemicals and environment (**ZDHC**), from traceability and animal welfare (**RESP, SARCA**) to more commercial aspects (**GLCC**).

UNIC has also developed highly **collaborative relationships** with representatives of foreign businesses, trade promotion institutes and international organizations, such as the **EU Commission**, the **FAO** and other **UN agencies**. Joint cooperation projects, both technical (quality improvement, industrial know-how transfers, best practices sharing on sustainable processes and style research, etc.) and commercial (b2b meetings, trade missions and roadshows) have frequently developed thanks to these collaborations, with the common purpose of **supporting the virtuous development of Italian tanneries and their partners**.

5.3

HUMAN RESOURCES

The **enhancement of human resources** is one of the main criteria for measuring the sustainability of the Italian tanning industry. Leather processing has traditionally presented artisanal connotations that stand alongside the introduction of innovative technologies into the production process.

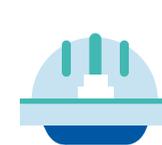
WORKERS PLAY AN ESSENTIAL ROLE
IN THE TRANSFORMATION OF WASTE
INTO A MATERIAL OF VALUE.

The manufacturing vocation of the industry are shown in the contractual framework offered to its employees. The majority of them, most of whom are highly specialized, works in the technical-operating area. The amount of personnel with administrative or managerial functions is increasing.

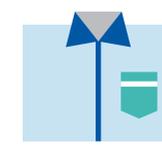
57

Despite the strong seasonal peaks and significant market fluctuations, **the preferred organizational structure of tanneries is that of stable relationships** (permanents contracts) as a mean of protecting the wealth of know-how gained and developed by employees within the company. The use of flexible contractual terms (fixed-term and temporary contracts) is limited, guaranteeing experienced skilled workers to work even in the wider district context.

ORGANIZATION STRUCTURE 2016



85%
BLUE-COLLAR
WORKERS



13%
WHITE-COLLAR
WORKERS



1%
OTHER
CATEGORIES



1%
MANAGERS

The amount of overtime done by employees is limited: an average of 116 hours per year per employee, well below legal limits. The labour market is evolving constantly and, in recent years, it has undergone major changes, mainly linked to the migratory and demographic phenomenon. By working in the tanning industry, **immigrants** have integrated into local communities, and now represent **24% of the current workforce**.

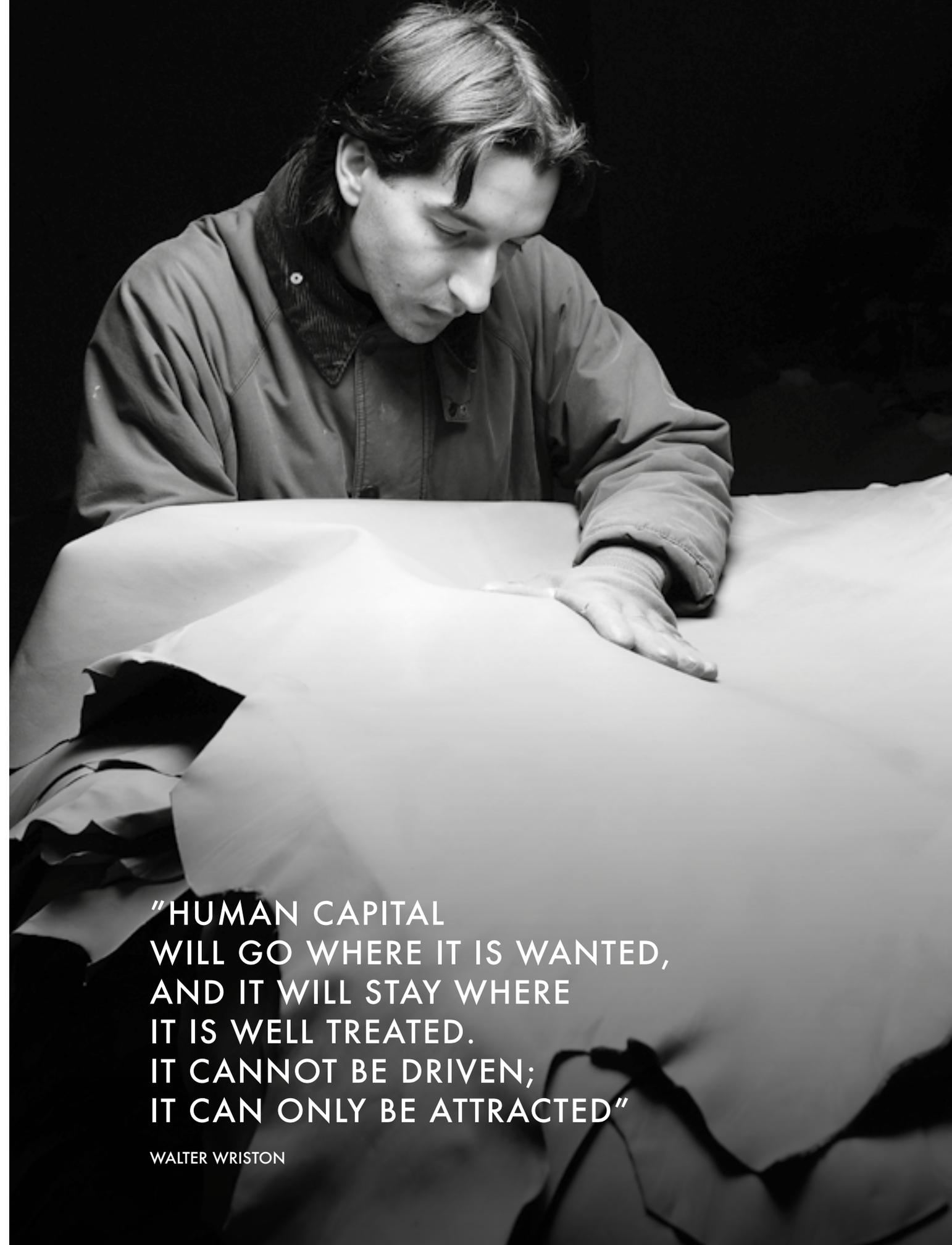
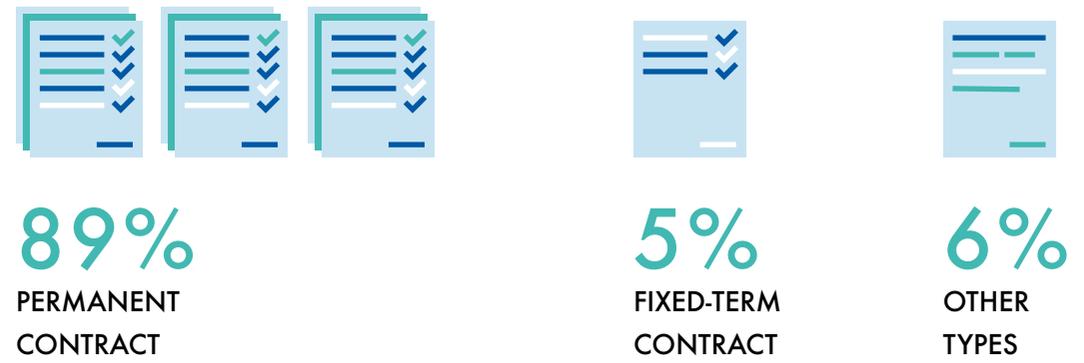
The share of young people under the age of 30 employed in the sector (13%) is still limited however.¹⁰ The largest number of employees falls within the 30-45 (36%) and 45-55 (32%) age bands, while 19% are over 55. More than one-third of the total workforce is female.

**ITALIAN TANNERIES
HAVE SET OFF
ON A PATH WHICH FAVOURS
A GRADUAL HAND-OVER
FROM GENERATION TO GENERATION,
PROMOTING ACCESS
TO YOUNGER WORKERS,
ALSO INCLUDING THE USE
OF WORK-SCHOOL INITIATIVES.**

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¹⁰ In the breakdown by age group, the “young people” group includes employees up to 29 years old, because this is the maximum age established by apprenticeship contracts.

TYPES OF CONTRACTS



**"HUMAN CAPITAL
WILL GO WHERE IT IS WANTED,
AND IT WILL STAY WHERE
IT IS WELL TREATED.
IT CANNOT BE DRIVEN;
IT CAN ONLY BE ATTRACTED"**

WALTER WRISTON

5.4

INDUSTRIAL RELATIONS AND SOCIAL DIALOGUE

“THE TIMES OF IDEOLOGICAL CONFLICT HAVE ENDED AND ANYWAY, IN OUR COMMUNITY, DISPUTES HAVE ALWAYS BEEN RESOLVED BY USING COMMON SENSE”.

This is how UNIC described the conclusion of negotiations for the **renewal of the national collective agreement** of the tanning industry, which was signed on **5 April 2017** after more than six months of heated discussions. The agreement represents a milestone and a new starting point: "Patterns of development and consumption are changing, social and environmental sensitivity is high and a new attitude on the part of the owners and new functions and attitudes on the part of the workers are being demanded". The new agreement enhances industrial relations and strengthens the **role of "Osservatori di Settore"** (Sector Monitoring Units), which are important cognitive and comparative tools, tasked with monitoring matters such as legality, corporate social responsibility and the promotion of good practices for the development and dissemination of second-level agreements.

Concrete answers were provided to protect **workers' incomes** and **contractual welfare**: "the defense and progress of work for families and companies were the real shared priorities." Contractual provisions regarding rights, safeguards and the reconciliation of home and work times have been improved, particularly regarding female workforce.

At a European level, representatives of employers and trade unions both participate in the **Social Dialogue** initiative aimed at defining the EU social policies. The sector is supported through the implementation of joint actions and negotiations on all social, ethical and environmental aspects, and continuous development and improvement are promoted. Priority is given to initiatives for raising both the **attractiveness of the sector** toward the young people ("Leather is my Job!" project) and the awareness on **health and safety in the workplace** ("Due Diligence" project, which began in May 2017).

5.5

THE CODE OF CONDUCT

SOCIAL RESPONSIBILITY, WHERE EFFICIENTLY IMPLEMENTED, CONTRIBUTES TO THE PROMOTION OF GOOD WORKING CONDITIONS, THE GROWTH OF HUMAN CAPITAL AND THE IMPROVEMENT OF ALL RELATIONSHIPS.



View the UNIC Code of Conduct

The **UNIC Code of Conduct** is a tool for "creating social responsibility" in tanneries, which goes beyond the standard subject and their perspective levels. Companies that adhere to the Code must guarantee over time what they have put into effect, also including an annual on-site inspection carried out by ICEC.

In order to support companies, specific **Guidelines** have been developed alongside the Code that offer useful methodological and application guidelines for the interpretation and fulfillment of each requirement. The UNIC Code incorporates the contents of the most important International Conventions for the protection of workers' rights (**ILO**) and the principal voluntary standards regarding social responsibility (**SA 8000** and **ISO 26000**).

CERTIFICATIONS



CERTIFICATION

UNIC Code of Conduct and Social Accountability

The certificate of compliance with the Code and the related license to use the figurative mark "UNIC Social Accountability" is issued following an on-site inspection by ICEC.

5.6

TRAINING IN TANNERY

“THE COMPETITIVE WEAPON OF THE TWENTY-FIRST CENTURY WILL BE TRAINING ACCOMPANIED BY THE EXPERTISE OF OUR WORK FORCE”

LESTER THUROW

Growing as a business means affording people the **opportunity to grow** through different pathways and tools for **professional training** and **updating**. In addition to being important for the purposes of acquiring knowledge and skills, training has the advantage of rewarding employees, who see their company investing in their professional future.

THE TRAINING CARRIED OUT IN 2016 INVOLVED 61% OF WORKERS FOR AN AVERAGE OF 8 HOURS PER EMPLOYEE. TRAINING ON HEALTH AND SAFETY IN THE WORKPLACE ACCOUNTED FOR ONE-THIRD OF THE TOTAL HOURS (28%).

Other activities touched upon certain issues relating to sustainability (environment, social responsibility, product safety, etc.) and some on the implementation of management and control systems. UNIC also promoted **management training** by organizing meetings with professionals from the banking and financial sectors and from the business and fashion consultancy.

5.7

LEATHER TRAINING AND COUNSELING FOR YOUNG PEOPLE

ITALIAN TANNERIES PROMOTE COMPREHENSIVE TRAINING PROJECTS. OVER 70 COURSES WERE OFFERED BY UNIC/LINEAPELLE IN 2016 TO FASHION SCHOOLS (ITALIAN AND FOREIGN), PROFESSIONAL INSTITUTES IN THE FOOTWEAR, LEATHER GOODS SECTORS AND CLIENT BRANDS. MORE THAN 300 LEARNING HOURS AND OVER 1,400 PARTICIPANTS IN TOTAL.



[View Course catalogue](#)

Counseling For Young People

"Teaching young people what a tannery is, in all its facets, is an investment in the future: they will be the ones who will carry on what has been built so far." The objective that drives tanneries, schools and institutions locally, nationally and at a European level, is to provide counseling to young people to **help them understand the cultural wealth of their territory, and to transmit the desire to choose a professional career in fields linked to the leather industry.**

"Le Belle Lettere della Pelle"

Attention for new generations begins at school. Combining teaching with games and telling stories on the world of tanneries and leather to primary school children. This is the context of "**Le Belle Lettere della Pelle**" ["The Beautiful Letters of Leather"], a project promoted by UNIC with the support of local schools and governments, which is now in its fourth edition. **300** children from **8** different sections of Tuscan primary schools have been involved, and **32** projects have been completed. The initiative has been replicated in Campania, with over **300** participants.

"Amici per la Pelle"

"**Amici per la Pelle**" ["Friends for life"] is a competition reserved for middle school students from the tanning districts. Approximately **1,100** children from **12** schools took part into it. The aim of the initiative is to create a work of art following the chosen topic. The competition is now in its **sixth year** and culminates with awards for the most voted works and a visit to the International Lineapelle trade show.

Open Factories

Adhesion to the **Open Factories** project is a proof of the tanneries' constant commitment to promote and spread the leather-culture. Through **guided tours of tanneries**, high school students are shown not only **the application of chemistry to industrial processes**, but also the various professional skills required in the workplace, with the aim of supporting their professional choice.

Leather is my Job!

Improving and increasing awareness of the job opportunities offered by the industry is the main objective of the initiative promoted under the European Social Dialogue, which is sustained and supported by UNIC. The testimonies of men and women who proudly tell their career stories in tanneries have been collected in a brochure distributed to students in order to inspire the new generations and eradicate the misconceptions and prejudices that sometimes surround the tanning industry. A **photographic competition** has also been launched in the context of this project. The objective here is to involve European tannery workers in **recounting the spirit of their work through images**.

5.8

CULTURAL INITIATIVES

"Tutto quello che sto per dirti è falso"

The industry is increasingly active in **countering infringements of trademarks**, which ensure Italian origin and consumer confidence in the authenticity and quality of the products. In this regard, UNIC, in collaboration with local associations and institutions, has promoted a theatrical play in the tannery districts entitled "Tutto quello che sto per dirti è falso" ["Everything I'm about to tell you is untrue"]. The play investigates the counterfeiting business in all the areas where "fake goods" thrives, a social drama often overlooked by the media and whose dangers are not perceived by consumers.

Manzoni Cultura

The collaboration between UNIC and the **Manzoni Theater in Milan** in recent years has been extensive and consistent. Through the Manzoni Cultura events, UNIC takes the opportunity to introduce its initiatives via **sponsorships and meetings dedicated to leading players in the leather, fashion and design world**. On the eve of the 2017 Salone del Mobile, at an encounter dedicated to creativity, UNIC set up a space with leather samples to show the value of the use in interior design and furnishing.

The Perfect Tannery

This is a top-level photographic project. It is a contemplation on the identity of the tanning industry in Vicenza, an area where industry, technology, people, environment and the Italian working culture have learned to live in harmony. "The Perfect Tannery", which involved two masters of the art of photography, members of the historic Magnum Photos agency, **Stuart Franklin and Mark Power**, was promoted by eight of the most important tanneries from Veneto. UNIC was its main sponsor, and it crafted a book, an exhibition (at Atipografia in Arzignano at the end of 2016,) and a further exhibition during the 92nd edition of Lineapelle at Fieramilano Rho from 21 to 23 February 2016.

“

COMPANIES, STAKEHOLDERS
AND CONSUMERS EXPRESS
A SIGNIFICANT AND GROWING INTEREST
IN THE ETHICAL ASPECTS
OF THE MANUFACTURING VALUE CHAINS.

ITALIAN LEATHER IS A GUARANTEE
OF THE HIGHEST LEVELS
OF TRANSPARENCY
AND COMMITMENT IN THIS AREA.

”



ITALIAN LEATHER
IS ETHICAL

6.1

TRACEABILITY

The Italian tanning sector places particular emphasis on the upstream dynamics of its industry, and is heavily committed to achieving **the highest standards of traceability of raw materials**.

THE OBJECTIVE IS TO OBTAIN AND COLLECT DOCUMENTABLE INFORMATION ON THE SUPPLY PROCESS IN ORDER TO GUARANTEE THAT RAW HIDES AND SKINS COME FROM SOURCES BOTH ETHICALLY ACCESSIBLE AND SUSTAINABLE.

Gathering information is complicated: operators in the food chain have no legal obligation, (in Italy or elsewhere), to pass down identification data about the slaughterhouses, the breeding facilities or the animal of origin for each individual hide.

The only regulatory constraint is the compulsory commercial documents for the transport of European animals' by-products and the veterinary certificates for non-EU by-products entering the EU. These often allow Italian tanneries to document the facility and the location where the animals were slaughtered for every batch of raw hides and skins.

It is far more difficult, however, to obtain additional and detailed information on the supply chain, for example, those regarding to breeding. Voluntary collaboration from suppliers is of highest importance.

Awareness-raising activities at a trade association level and in individual tanneries are intense, with appreciable results, including the ever-increasing number of certifications that enable the continuous monitoring of sources and the commitment to transparency.

6.2

ANIMAL WELFARE

IT IS ESSENTIAL FOR THE ITALIAN TANNING INDUSTRY THAT THE UPSTREAM PRODUCTION CHAIN GUARANTEES THE HIGHEST POSSIBLE LEVEL OF WELFARE FOR THE ANIMALS.

In this context, breeders and slaughterhouses are directly responsible for ethical efforts, and it is important to recall that tanneries treat only a by-product of these businesses, and hence have **limited power when it comes to commercial persuasion**. The level of attention paid by the Italian leather sector is however very high, with constant monitoring of practices and problems.

UNIC wished to demonstrate its commitment by preparing and distributing a **manifesto of public support for the guidelines** developed by the reference international organizations (such as the OIE, the World Organization for Animal Health) and the state-of-the-art national regulations in this area. On this topic, the European Union has one of the most structured, attentive and controlled legislative systems internationally (Directives 93/119, 95/29, 1255/97, 98/58, Regulation 882/04, Regulation 1/05 and Regulation 1099/09). And this is not an isolated case. There are similar standards in the US, Australia, New Zealand and many other countries.



Find out more about the UNIC Animal Welfare Manifesto

UNIC has shared the manifesto with international partners. Cotance (the European Confederation of the Leather Industry), ICT (the International Council of Tanners) and GLCC (the Trade Committee that includes the global representatives of tanneries, tanning chemical companies and raw hides traders) have decided to adopt it or include it in the preparation and distribution of joint declarations.

In addition to the various health and sanitary aspects, the most common provisions of rules, codes and standards for animals during breeding and transport include: veterinary checks, medical records, adequate environmental conditions in terms of space, light, air and temperature, healthy and adequate nutrition, the prohibition on prodding, beating and maltreatment. Slaughtering must take place in a way that minimizes the risk of anxiety and suffering, using the most scientifically and technically appropriate methods. The impact on leather production dynamics is diversified. Ethics are often associated with a better quality of raw materials, but usually also come with an increase in supply costs. If there is a real effect however, this is **an important investment** for achieving the quality demanded by manufacturers.

Reptile leather

The **reptile leather** segment, which is a niche in the tanning industry (less than 1% of total production), has peculiarities that require a **particular form of guarantee**. The first is CITES (the Convention on International Trade in Endangered Species of Wild Fauna and Flora), which is a system of certificates and licenses that controls the international trade of more than 30,000 animal species, including crocodiles, snakes and lizards.

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UNIC PROMOTES THE COLLABORATIVE DEVELOPMENT OF A BIOMETRIC RECOGNITION SYSTEM BETWEEN TANNERIES AND CUSTOMERS. A PROTOCOL ON ANIMAL WELFARE HAS ALSO BEEN AGREED WITH THE AIM OF IMPROVING SUPPLY PRACTICES.

With over 100 million Euro in annual turnover, Italy is the world's largest consumer market for reptile skins. This **highly selected group of specialized domestic tanners** has adopted the increasingly demanding requests of the luxury customers: it offers excellent quality leather and commits to meeting the criteria of a virtuous supply at an ethical level. UNIC works to foster the effective management of international trade in these materials. It participates actively in the work of the Secretariat-General of CITES at international level and collaborates with the relevant national authorities. Together with the Italian tanneries involved, it is a participant in the **RESP** (Responsible Ecosystem Sourcing Platform) and **SARCA** (Southeast Asian Reptile Conservation Alliance) projects on traceability, animal welfare and the socio-environmental impact of reptile skins.

6.3

TRANSPARENCY AND THE "MADE IN ITALY"

FOR ITALIAN LEATHER, THE BEAUTY, CREATIVITY, TECHNICAL PERFORMANCE AND ARTISANAL TRADITION THAT ARE A FEATURE OF THE "MADE IN ITALY" ENTAIL A WIDER CONCEPT OF QUALITY.

In the leather sector, "Made in Italy" means selecting the best raw materials in terms of quality and origin, internal checks on the strategic phases of the production process in order to ensure that the product attains the most appropriate performance levels in line with the different destination sectors, and applying the most advanced industrial technology to artisanal know-how.

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"Italianness" is therefore synonymous with a **sustainable quality** that must necessarily be a factor for bags, shoes, clothing, sofas, car interiors and all those products that want to be recognized as prestigious.

THE ITALIAN TANNING INDUSTRY SUPPORTS THE VALUE OF A CLEAR AND TRANSPARENT INDUSTRY FOR CONSUMERS AND FOR ALL THE PLAYERS IN THE MARKET. AN INDUSTRY WHICH PROVIDES CLEAR INFORMATION ON THE ORIGINS OF A PRODUCT THROUGHOUT ITS PRODUCTION PROCESS.

6.4

THE TERM "LEATHER" AND COLLECTIVE TRADEMARKS

Many parties, including well-known domestic and international brands, have been warned about the **improper use of the word "eco-leather"**. This is a misleading term that harms businesses in the sector and deceives consumers. It uses the term "leather" because of its powerful commercial attractiveness, associating it with synthetic products that are considered to be "ecological" because, by exploiting the "eco" suffix, a green dimension is (mistakenly) assumed.

THE TERM "LEATHER" CAN ONLY BE USED TO DEFINE THE MATERIAL TAKEN FROM ANIMALS, WHICH HAS BEEN SUBJECT TO TANNING TREATMENTS, SOAKED IN ORDER TO KEEP ITS NATURAL FIBRE STRUCTURE UNALTERED. THIS IS STATED IN ITALIAN LAW NO. 1112/66 AND CONFIRMED BY DIRECTIVE 94/11/EC. NOTHING ELSE CAN BE DEFINED AS "LEATHER".

A vegetable-derived product has also appeared alongside the plastic material, which is claimed to be obtained from the "skin" of mushrooms, apples and pineapples, tea and vine leaves. It claims to have the same mechanical, aesthetic and sensory characteristics of leather, with zero impact on the environment. It is promoted through false and denigrating accusations against the tanning industry (which have been promptly denounced to the competent bodies by UNIC). Nothing is known of their production process. What we do know, because we have tested them, is that their alleged performance characteristics are far inferior from leather. Are these misleading alternatives claiming? That they come from scraps of other industries, do not cause suffering to animals, and are sustainable. **But this is what leather has always been.** The EU Commission is clear on this point: "The use of the word "eco-leather" in advertising to present products that have not been made with animal materials is misleading" (Guidelines dated 25/05/2016 for the application of Directive 2005/29/EC on unfair commercial practices).

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"Ecopelle"



UNI has registered the "ecopelle" trademark at a European level. It attests to compliance with UNI Standard 11427 "Leather - Criteria Defining The Performance Characteristics Of Leathers With A Low Environmental Impact", which regulates the use of the term "ecological leather", "ecological skin", "eco-leather" and the like. The trademark is achieved through ICEC certification.

"Vera Pelle / Vero Cuoio"



For consumer protection purposes, the trademarks "Vera Pelle" and "Vero Cuoio" have been registered by UNIC. They attest to the authenticity of the material and guarantee the safety of the products, the compliance with technical performance and the Italian origin. They are often the object of counterfeiting. UNIC has implemented a customs surveillance, with the Italian Customs Authority, for the past ten years. This is a preventative tool in the fight against counterfeiting which prevents illegally labelled products from being placed on the domestic market. Following the customs seizures and autonomous seizures by the Guardia di Finanza of merchandise unlawfully marked "Vero Cuoio" and "Vera Pelle", more than fifty criminal cases have been brought against individuals, throughout Italy. In more than 60% of them, UNIC, which is the injured party, has acted as a witness or a consultant. Since 2011, UNIC has also activated a customs surveillance application in Germany for the protection of the "Vero Cuoio" and "Vera Pelle" international trademarks; there have been over 100 customs reports.

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CERTIFICATIONS



UNI EN 16484

Certification of the leather production origin

ICEC Accreditation Accredia nr. 34 B

Product standard that indicates the country where leather is produced, according to international customs regulations. The certification of Leather articles is also available. It is granted in accordance with the rules of "Made in" in force.



TS 410 / TS 412

Tracking of raw materials (hides&skins)

These certifications attest the level of control that tanneries have over their suppliers, including knowledge of the countries of origin of the raw hides and skins and of the slaughterhouses and farms involved. According to ICEC TS 414 standard, the certification of leather articles is also available.

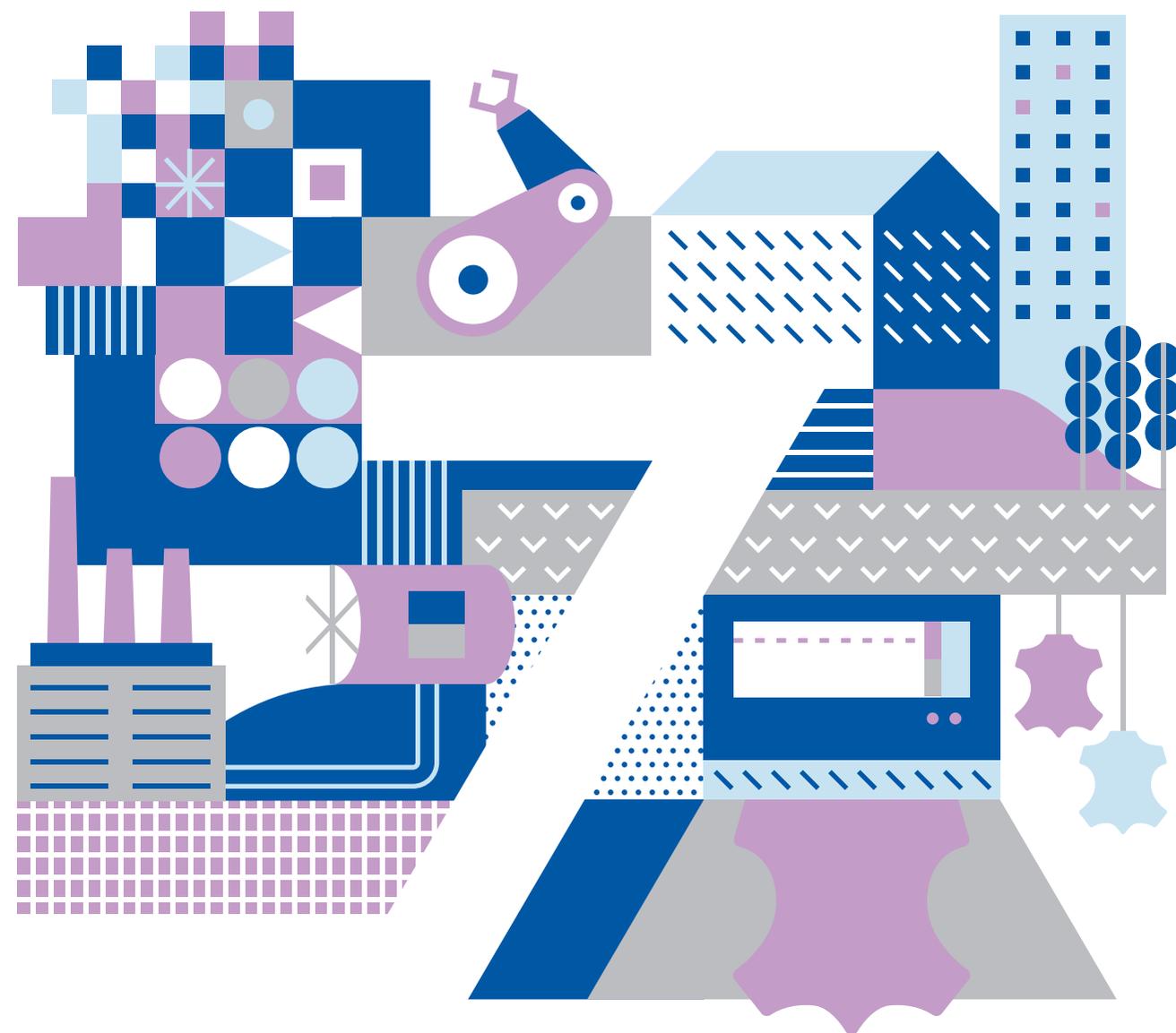
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ITALIAN TANNERIES
INVEST TO INNOVATE.

SUSTAINABILITY AND INNOVATION
ARE THE KEY WORDS
ON WHICH THE REALIZATION
OF AN INDUSTRIAL VISION IS BASED.
THIS VISION TODAY IS BEING UPDATED
IN THE LIGHT OF A NEW OPPORTUNITY
FOR DEVELOPMENT: INDUSTRY 4.0 .

ITALIAN TANNERIES
INNOVATE FOR GROWTH.

”



ITALIAN LEATHER
IS INNOVATIVE

7.1

THE TECHNOLOGICAL IMPRINT AND INDUSTRY 4.0

THE TECHNOLOGICAL IMPRINT AND INDUSTRIAL AUTOMATION HAVE ACCOMPANIED THE EVOLUTION OF THE ITALIAN TANNING INDUSTRY AND HAVE CONTRIBUTED TO THE EXCELLENCE OF ITS PROCESSES, ADDING VALUE TO THE PRODUCT AS A "LIVING MATERIAL".

In the light of the constant changes in customers' approach to the market, tanneries are facing the need to develop a **highly diverse and fragmented range of products**. The last ones require frenetic restocking and constant upgrading from the perspective of the **personalization of technological solutions** and a highly intuitive and **user-friendly human-machinery interface**. The investment areas are:

DIGITALIZATION AND AUTOMATION OF PROCESS

To manage operating information **in real time**.

AUTOMATION OF THE DRUM DEPARTMENT

To control and manage working times and water loads, including **remotely**.

AUTOMATIC SUPPLY OF CHEMICALS

To optimize the use of chemicals and consequently limit waste and reduce the pollutant load.

The benefits affect not only the **efficiency of the production process** and the optimization of costs. They are also associated with **improvements in the sustainability** of Italian tanneries and allow a more efficient use of resources (water, chemicals and energy) by avoiding waste and minimizing the environmental impact. **They permit lower levels of workers' exposure to health and safety hazards** by reducing their interaction with the process, which is more controlled.

ITALIAN TANNERIES INVEST IN INTERCONNECTION SOLUTIONS FOR THE ENTIRE PRODUCTION PROCESS OR FOR SPECIFIC PRODUCTIVE LINES, IN ORDER TO ACHIEVE CONCRETE BENEFITS IN TERMS OF PRODUCTION, QUALITY, SAFETY AND CONTROL.

In this context, the **Italian National Industry Plan 4.0 2017-2020** is a fundamental opportunity for accessing significant incentives and giving new reasons to investments in equipment and technologies and implementing new human-machine interconnection systems and software.

NATIONAL INDUSTRY PLAN 4.0: A GUIDE

UNIC, in collaboration with ASSOMAC (the Italian Association of Manufacturers of Footwear, Leather and Tanning Technologies), has prepared a guide to the incentives offered by the Italian Ministry for Economic Development (MISE) to promote access to the fourth industrial revolution also for small to medium-sized companies. There are two types of annual incentive. **Super-Amortization**, which increases the deduction value of purchases of new capital equipment to 140%. **250% Hyper-Amortization**: this covers all investments that contribute towards

the digitalization of production from an interconnection perspective. **This is the true industry 4.0.**



View the UNIC Industry 4.0 guide (in Italian)

A FABLAB FOR LEATHER

This is a place where the leather production chain can try out new solutions using digital technologies (such as laser cutters), available to those who believe in open innovation and who are interested in carrying out research.

This is the **Leather BioFabLab**, promoted by the "Stazione Sperimentale per l'Industria delle Pelli" (SSIP), which is implementing it as a network among the Italian leather districts.

7.2

RESEARCH

APPLIED RESEARCH REPRESENTS A CRUCIAL STRATEGIC INSTRUMENT FOR ITALIAN TANNERIES, A TOOL THAT PROVIDES MEANING AND STRENGTH TO ITS GLOBAL LEADERSHIP.

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The innovative horizons are extensive: bio and nanotechnology; projects to improve the performance of finished products and their aesthetic yield; solutions to improve waste recovery levels; wastewater purification; the elimination of substances of concern; and experimenting with new articles that have a reduced environmental impact providing, at the same time, better performances. This is a developmental perspective that can be summed up in the words of a well-known exponent in the Italian luxury segment, a reference brand in high-end accessories: "You can do everything with leather".

Italian tanneries carry out joint researches, supported by **renowned universities** such as the Politecnico di Milano and the Universities of Bologna, Florence, Milan, Naples, Padua and Pisa. As well as **research institutes** such as the CNR IRSA and, above all, hubs specialized in the tanning field: SSIP and Po.Te.Co ¹¹.

¹¹ Po.Te.Co. (Polo Tecnologico Conciario), founded in 2001 and based in Santa Croce sull'Arno, offers training and research to tanneries in collaboration with universities, public research centres, service centres, local government, enterprises and associations.

"Stazione Sperimentale per l'Industria delle Pelli e delle Materie Concianti"

A RESEARCH BODY OF THE CHAMBERS OF COMMERCE OF NAPLES, PISA AND VICENZA

SSIP, which was founded in 1885, offers the tanning industry and its value chain research: regulatory activities, training and skills development, laboratory analysis, advanced technical and scientific consultation. Some of the projects carried out by SSIP are:

MONITORING OF SUBSTANCES OF CONCERN IN CHEMICAL PRODUCTS

Starting from the assumption that the chemical characterization of leather is strictly related to the composition of the chemical auxiliaries used in the process, SSIP has begun a study to increase knowledge of the substances and blends used in the tanning process. The investigation will focus on the **eleven families of substances** identified as priorities in accordance with the Zero Discharge of Hazardous Chemicals Programme (ZDHC).

ASSESSMENT OF BIODEGRADABILITY OF LEATHER

The **biodegradability** and **durability** of leather are key factors for calculating the environmental footprint, especially during the disposal phase. The SSIP is carrying out a comparative analysis on different types of tanning.

THE SPECIATION OF CHROME IN TANNING WASTE

A program to characterize the organic and inorganic substances used in the various tanning cycles that may be involved in trivalent chromium complexing mechanisms has been started. Qualitative and quantitative analyses, with complexes such as EDTA, DTPA and NTA have been performed using liquid chromatography coupled to the mass, LC-MS, followed by Cr-EDTA complex kinetic studies were performed in solution using UV-Vis to verify the capacity of iron in solution to replace chromium.

PHOTOCATALYSIS OF WASTEWATER

The SSIP collaborates with a number of university research centers in the development of **photocatalysts** for the removal of the organic load from tanning consortia's purification plants, based on a study of the kinetics for reducing organic load.

SEPARATE COLLECTION OF TANNERY WATER

A study is being carried out on the **collection, transport and treatment of wastewater**. The objective is to assess the feasibility, impact and benefits for tanning districts of a separate waste system prior to introduction into the sewage collectors.



METHODOLOGICAL NOTE

The data included in the 2017 UNIC Sustainability Report relate to the most significant parameters emerging from a materiality assessment applied to all dimensions of sustainability: economic, social, environmental and product.

Analysis were carried out on the basis of information provided by participating companies which were required to complete a special questionnaire. The indicators that best show the environmental performance achieved by Italian tanneries are reported in historical series. Other indicators were considered solely for the reference year (2016).

The indicators and data reported represent a weighted average of the sample. In the case of certain specific aspects (for example, purification and economic data), data and information from other sources have been acquired and processed, thereby permitting a more complete and in-depth view of the sector dynamics.

The sample, which overall accounts for more than 20% of the entire Italian tanning industry, is composed of widely-distributed companies at geographical level and in relation to the main typologies of production, and offers a true image of the realities of the sector, which is extremely varied as to raw materials, production, finished articles and, last but not least, the availability of services.

As regards the social section, the database has been expanded with an additional aggregate of 116 companies (104 tanneries and 12 third parties).

The data collected refer to the 2016 reporting period, while the descriptive section includes significant innovations up to April 2017. In particular, some issues have been included in order to supplement and better define the operational scope of Italian tanneries with reference to the supply chain and ongoing initiatives.

WITH THE COLLABORATION OF THE FOLLOWING TANNERIES

AMBASSADOR S.P.A.	DEVICONCIA S.N.C.
ANTIBA S.P.A.	DMD SOLOFRA S.P.A.
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