



Balancing innovation with commercial reality

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In today's commercial world, innovation usually results from a 'what if' or 'can we get rid of a problem' discussion. Innovation for innovation's sake is a luxury that many major companies, with multiple stakeholders, simply cannot afford, although it won't necessarily prevent an individual pursuing an idea.

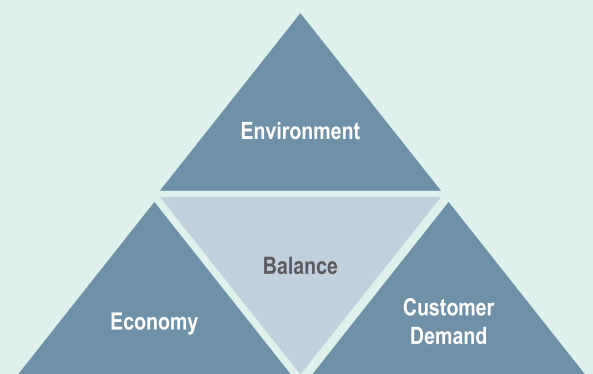
Innovation has become much more a case of balance. Even when a new chemistry is developed it has to be analysed to ensure that it meets the needs and demands coming from different angles.

The balanced innovation formula is based on three principal pillars — its effect on the environment, its economic impact and viability, and the demands of the customer or consumer. This is described in *Panel 1*.

Three objectives have to be met:

- In terms of the environment, innovation needs to produce a high yield with a minimum use of resources.
- In terms of economy, there is a need for increased process efficiency in production.
- In terms of customer demand, the desired quality needs to be achieved at a reasonable cost.

Panel 1: Getting the innovation balance correct



Marrying these requirements is by no means easy and in some cases there has to be a sensible compromise.

It is important to examine these fundamentals. It allows a company to concentrate its research and development efforts on products that will provide maximum value for both customers and the company itself.



Innovation in leather manufacture

In trying to achieve high yield with the least use of natural resources, it is essential to keep water use at a minimum as well as chemical usage. If achieved, the new product will keep chemical and wastewaters at a low level, which means less waste to treat. At the same time the objective must be to keep leather waste to a minimum while maximising leather yield from the process. This has been the objective in developing the EasyWhite tanning process, and the environmental benefits are given in *Panel 2*:

Panel 2: Environmental benefits of EasyWhite Tan

Chemical / Process	Conventional (Chrome and Chrome-free) Tanning	EasyWhite Tan
Water Addition	12,000 litres	6,000 litres
No. of Chemicals	6	1
Addition of Sodium Chloride	1,000 Kg	0 Kg
No. of Controls	7 to 8	2
Running Time	14 hours	8 hours

Based on 1000 Wet Salted Hides

When innovation results in faster processing and lower production costs, with less chemical and water consumption while providing higher yield from the raw material, the concept has an excellent chance of commercial success. If at the same time high quality can be achieved at a reasonable cost with a product that meets all legislative and public health and safety requirements, that innovation will demand attention — especially if the product meets tanners customers' needs in terms of function, fashion and comfort.

Achieving innovation with balance

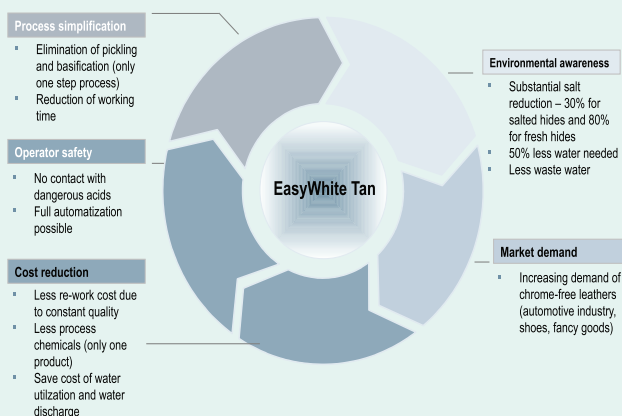
The major challenge is a tanning process that is quicker and more efficient than the current chrome or wet white processes. The limitations of veg-tanning should be avoided, fewer chemicals would be used, and the process would not be based on metals, aldehydes or phenols to meet environmental standards. The finished leather would need to have the advantages of chrome tanned leather, with the same feel and handle. It would need to meet the demands of the automotive sector and others that increasingly move towards wet white tanning.

The process improvement that has resulted — known as EasyWhite Tan — is based on Clariant's Granofin Easy F-90, described as an organic product that has self-reactive hybrid performance and comes in liquid form. An overview of its advantages and potential is set down in *Panel 3*.

Matching the innovation definition

When compared with the existing tanning procedures the definition of innovation is matched. Environmentally, it reduces the water required, the chemical demand is reduced, and consequently treatment of wastewaters and chemical residue. Of considerable importance, no additional salt is added during the process. For those tanners working with green hides, it means they have no need to bring salt into the tannery at all. This minimises the risk of corrosion that salt is

Panel 3: Overview of advantages and benefits of EasyWhite Tan



known to trigger in tanneries, and the wider environment is exposed to less salinity.

In terms of economy within the balance/innovation equation, two or three stages of tanning are removed, and production time is reduced. It still provides the highest yield from the raw material with the lowest waste. Production costs are also reduced through low chemical and water consumption and the process removes opportunities for error.

Quality leather is generated, risks are minimised, and customer demands are met in terms of fashion, function and comfort.

An example of balanced innovation

The process has been on trial with major tanneries around the globe. The results have matched expectations and cover the needs of just about every sector. It works for automotive upholstery and furniture leather, for footwear, and in those sectors that would be expected to prefer vegetable tanned type leathers. It's also recommended for garment leathers. 🌱

Panel 4: Comparison of article versatility of different tanning systems

Article	Chrome Tanning	Glutaraldehyde Tanning	EasyWhite Tanning
Automotive	●	●	●
Upholstery	●	●	●
Vegetable Types	●	●	●
Sports Shoe	●	●	●
Garment	●	●	●
Waterproof Shoe Upper	●	●	●
Shoe Upper	●	●	●

● Excellent ● Recommended ● Not recommended