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**“WE HAVE TO KEEP
ON MODIFYING
OUR HABITS”**

Jordi Salas, Technical
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MANY LITTLE EFFORTS

Improvement | Sustainable products are very popular. Not least the coronavirus pandemic has accelerated this rethinking among customers. But where does sustainability begin and how much is possible? Jordi Salas knows how to make a difference here with new technologies and a spirit of innovation.



► **Jordi Salas,**
Technical Manager, Virospack, Barcelona, Spain, www.virospack.com

COSSMA: How do you personally define sustainability and how important is it for you?

Jordi Salas: Sustainability is essential, it is basic that environmental and social responsibility is present in all our

actions and decisions. Both in our personal life and professional projects. Our company is managing its commitment with the environment in its new developments and manufacturing processes. This determination towards sustainability has created a

green awareness in the factory, where a continuous improvement in our production processes – considering emission, waste, energy savings and projects – make industrial processes more sustainable.

As a result of the last developments, in our facilities we have:

- 100% renewable energy for all facilities and processes
- a regenerative catalytic oxidiser to reduce the volatile organic compounds (VOC) emissions
- solar thermal panels on every site
- zero spill in residual water thanks to our water depositions system

Faithful to our commitment to the environment and to our employees, and always in search of continuous improvement and the constant motivation and involvement of our staff in each one of the actions and objectives of the company, two years ago we launched an **internal competition of environmental proposals**. It is a contest led by the company's environment committee, which is a working group composed of employees recruited from the entire organisation, from the production plant to senior management and reporting directly to the CEO. It is an annual competition that has been created to promote staff awareness of environmental issues, and to encourage new improvement projects.

Also with this objective, the company promotes different types of actions such as the event organised on **"Environment Day"**, in which we award the best actions to take care of the planet that each participant declares to have launched.

Another action included in our CSR plan, also for solidarity purposes, is the participation in the **"Trailwalker"** organised by Oxfam International.

As the daily lifestyle is concerned, we have to keep on modifying our habits by reducing the impact (environmental footprint) on the earth. This involves the responsible use of the resources we have, how we eat, reducing meat consumption, eating local and seasonable products; recycling at home, re-thinking how we move, trying to use public transport or travelling by bicycle, and reconsidering

how we use our possessions, how long things can last and trying to repair things instead of buying new, buying from local shops, and many more. There are a lot of small things we can do, and all are important.

Where do you think a company should start if it wants to produce more sustainable products and to act more sustainably overall?

The first step is to think about the components a company manufactures: What materials can be used that are more sustainable? Can they be recyclable? Are there post-consumer recycled (PCR) materials available? Is there any grade of bioplastic materials?

We have to extend considerations and study **all the packaging material**, for the packaging we are using for final products as well as for the packaging we are using in our productive processes. In a second step, we must set out the **industrial processes**. How can we modify them to make them more respectful? We have to figure out if there is more sustainable and efficient machinery.

Companies need to consider their philosophy and prioritise the commitment to protecting the environment. In many cases, being more sustainable

implies the improvement of processes, and the best use of resources, which will mean an improvement in revenue as well.

Which new product forms are more sustainable compared to conventional ones?

Overall, there are products with the **minimum number of components, and/or materials** that can be easily recycled. Another important feature is that all components have the same recycling category.

In our case, we are going back to the basics, our regular droppers can be manufactured with fully with PCR materials, produced with the same material category and they are 100% recyclable.

One example of new product development is our dropper using wood for the cap. This is the one with the best life cycle assessment. This item was redesigned to eliminate the plastic cap inner and any glue and, as a result, a much more sustainable product was achieved.

Also, we must consider that there are products with specific characteristics and functionality that make them unique and irreplaceable. In these cases, we must rethink them to study whether it is possible to remove ▶



A functioning circular economy is made up of many small building blocks.



To achieve a good ecological footprint, many different factors must come together.

components. We did it with the launch of a patented design of metal shell with inner plastic without glue. We re-developed it to have a mechanical assembly, and glue was removed.

To what extent do manufacturing processes play a role? What kind of rethinking is necessary here?

One point is more efficient machinery, which allows reducing consumption and waste of materials. We also have to explore the benefits of new technologies. For example, we have renewed all the glass pipette machines, this not only increases our production capacity but also allows us to reduce our produced waste and increasing efficiency. At the end that means a lower carbon footprint.

It is also essential to take into account the transport of materials and components from the factories of origin. All of our components are manufactured and assembled in the same factory – except for the metal shell, of which most of the suppliers are European – reducing CO₂ emissions due to transport to a minimum.

How long does this change take before the first successes become visible and measurable?

Changing materials or introducing new manufacturing processes can be a challenging task. Most of the material changes must pass the relevant homologation processes both at the compatibility and functional level, but the results are immediate.

With processes it is difficult to say, it can include changes in machinery, in plant layout and in other process involved, it is quite clear that these kind of changes requires more time, and sometimes you can measure the improvements after a couple of weeks, but most of the time results are not speedy, and it takes **some time to develop the process.**

It might be necessary to make modifications until the expected result is achieved.

As an example of the process changes, in the metallising section we have made several improvements; some with fast results, as a new design of tools to increase the number of metallised parts on each part. And on the other hand, we have acquired a new sputtering metallising line, part of the two high vacuum system lines, which have a much lower consumption and, in this case, have been taking us several months to see the results because of the implications of the new technology.

What role do the machines and technologies play? Are there already pioneers here from whom the cosmetics industry can possibly benefit?

Machinery and technology are key, in the plastic section we have replaced all the old moulds with new high-tech moulds incorporating a hot runner with a valve in all of them, which has meant a reduction of plastic in runners to zero and better-quality parts.

Another example of the importance of machinery for responsible production is the new arrival of tubular manufacturing glass bottle machines, which apart from increasing the productivity, reduce the environmental impact. Two machines share one oven each, so that production can be carried out with less impact of the machine on a piece and the environmental impact is reduced. This, together with the light weight of tube bottles, makes it a more sustainable packaging option.

As always, the automotive car is pioneer in materials, technology, and automation. Not everything can be imported, but overall this is a big advantage because there are solutions that can be adapted to the requirements of the cosmetic industry improving our industrial processes.

Materials also play a major role in sustainability. How do you rate the importance of recycled and recyclable materials?

From my point of view, the use of PCR is key, the increase in the use of these kind of materials will lead to more demand and more need for the use of materials that can be recycled. It is important to design products with **recycled and recyclable materials** from the beginning of the project. There are many aspects to consider, functionality, finish, ease of recycling for the final consumer.

We are creating our droppers from the development conception with sustainable materials and the most efficient manufacturing technologies and creating designs that

allow the recyclability of the manufactured items.

Is there a need for a fundamental rethink when it comes to materials? Which materials do you think will continue to play an important role in the future?

PCR must be the future. We have a resource in all the materials that have already been processed and being able to recirculate and to give them a second life is essential.

We think that the use of so-called bioplastics is another alternative, although we believe that we are in danger of causing an increase in the prices of basic consumer foods. Most are made primarily from flour or starch from corn, wheat, or other grains. We still find very few bioplastics derived from agricultural waste.

We also have to work with secondary packaging, and it is essential to think of the most suitable one while finding the balance between sustainability and security. A redesign is necessary in most of the cases to optimise the number of pieces per box and to avoid sending air.

According to the product characteristics, bulk could also be an option. Sometimes it is necessary to do some extra tests to evaluate if it is possible to send the product in bulk with special conditions.

We have worked hard for PCR materials. All our packaging trays are made of R-PET and new boxes with FSC cardboards and separators.

How can materials that are currently produced less sustainably achieve a better balance in the future?

In the future, the less sustainably materials are going to be reduced and replaced gradually by new ones. In some cases, because of the new regulations. For example, in 2025 in France all the materials with styrene base (SAN, ABS) will be forbidden, unless that they can be recycled.

As for painting and metallising, the search for more sustainable materials continues. We were one of the first

to introduce water-based lacquers in its painting section, and high-solid lacquers in metallisation. Currently, we are working to introduce water-based and bio-based lacquers in the metallisation process.

Another example can be again the tube glass production section, currently the majority part of thread vials are made of neutral glass (type I), and despite the fact that depending on the chemical requirements and required dimensions, it will be necessary to use this type of glass, the use of AR glass (type III) will increase for its ease of recycling. We have already started to use it in several instances and gain experience in it.

Currently, it is still quite complicated and therefore hardly implemented to use reusable packaging. What could change here in the future?

There are already some solutions for reusable packagings, but the trend will be a further increase in supply. All the packaging sector is currently working to provide clever solutions with reusable packaging. I guess

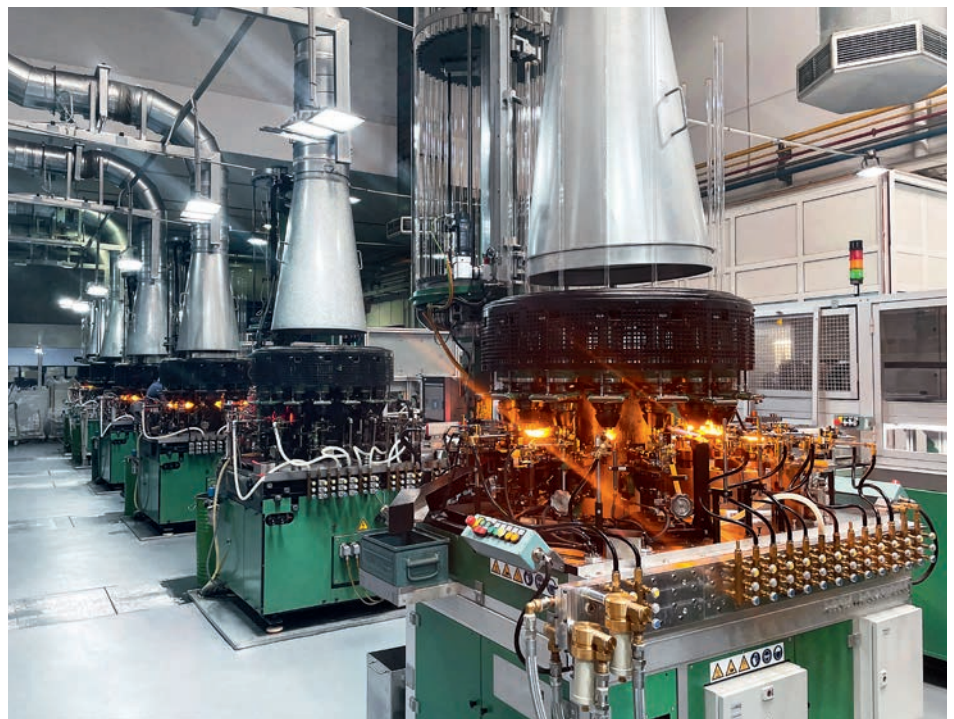
that in the next years there will be a lot of options to choose from. The final consumers are more and more interested in reusable packaging, so brands and packaging suppliers will have to work side by side to solve this demand.

In your opinion, how sustainable is the cosmetics industry already and where can it develop further in the medium and long term?

I would say that currently the cosmetic industry is not sustainable enough, but it is rapidly shifting towards a commitment to protecting the environment. This, together with the new regulations – according to the 94/62/CE, by 2025 65% of the packaging has to be recyclable, and by 2030 it increases until 70% – boost the change.

We all know that aesthetics is important, but we have to be able to find the balance with sustainability.

And we all hope that the final consumer will adopt a sense of environmental and social responsibility that will lead the industry to offer sustainable packaging that helps preserving our planet. □



By using new machines to produce glass tubes, a lot of energy and material can be saved, and waste can be reduced.