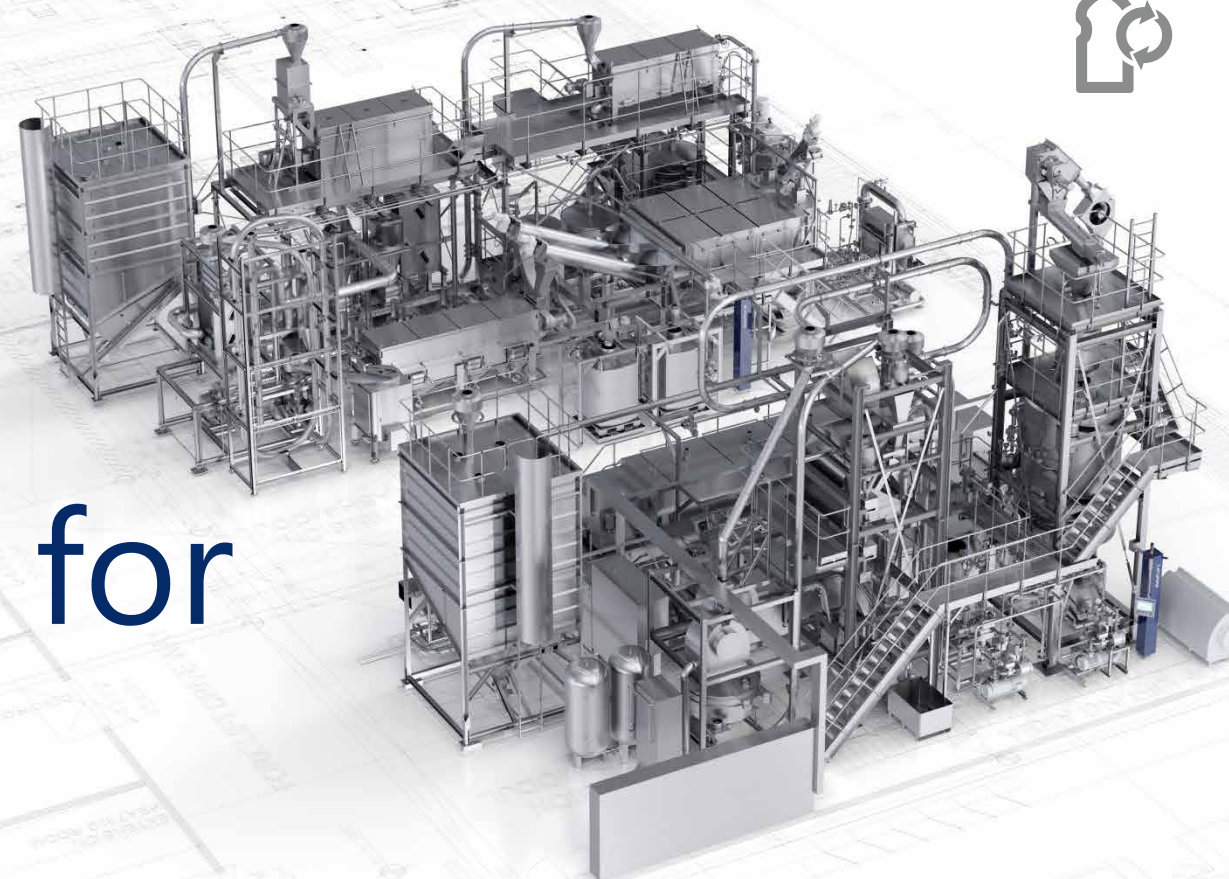




Krones solutions for PO recycling

MetaPure W-PO



Sustainability and economic efficiency

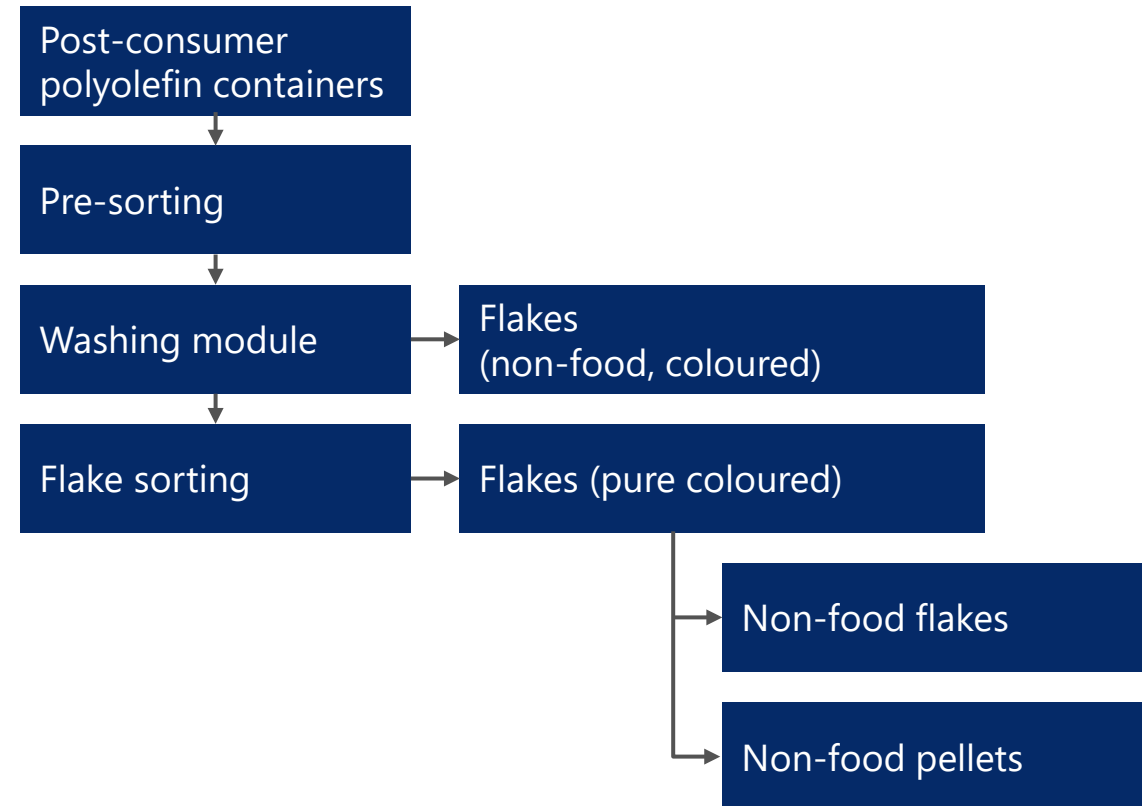
Our contribution to circular economy



When one compares the recycling of containers made of polyolefins (PO) and those made out of PET, PO containers present numerous challenges: On the one hand, the material is lighter than water which calls for a different procedural approach. On the other hand, the containers can take on the odour of the products they contain. Krones approaches all of these issues with a recycling technology which has been modified to precisely suit the processing of polyolefins.

At a glance

- Recycling of PO containers into flakes
- MetaPure W-PO washing module
 - Intensive pre-washing
 - Hot post-washing for an excellent washing result
- Thanks to our cooperation with partners: Krones can also supply complete solutions with systems for the subsequent further processing of the PO flakes



Two system types for PO recycling



System type	MetaPure (complete system)	MetaPure W-PO
Field of applications	Recycling of containers – to form PO flakes for non-food use – extrusion optional	Recycling of containers to form PO flakes for non-food use
Output	1,000 kg/h to 4,500 kg/h	1,000 kg/h to 4,500 kg/h*
Space requirement	600 – 3,500 m ²	250 – 1,000 m ²

* Several modules can be combined with each other in order to achieve higher outputs.

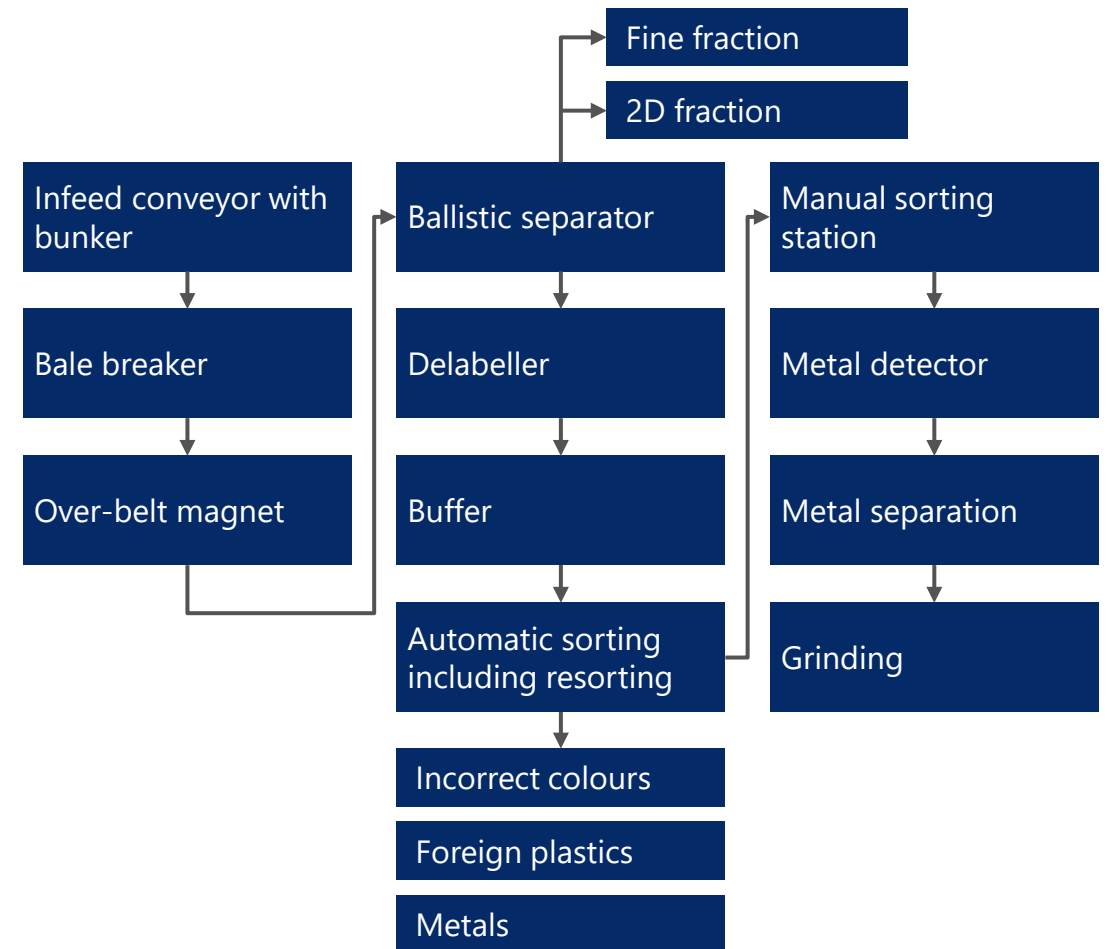
The front end

Pre-sorting of the incoming material

Separation of foreign matter and impurities and sorting of the input material

- Separation of the containers
- Removal of undesired foreign matter and impurities such as wood, sand, glass and metal, as well as coloured plastic materials and foreign polymers
- Removal of labels
- Grinding into flakes

The pre-sorting system can be individually adjusted to the quality of the infeed material, the local conditions and the required levels of purity.



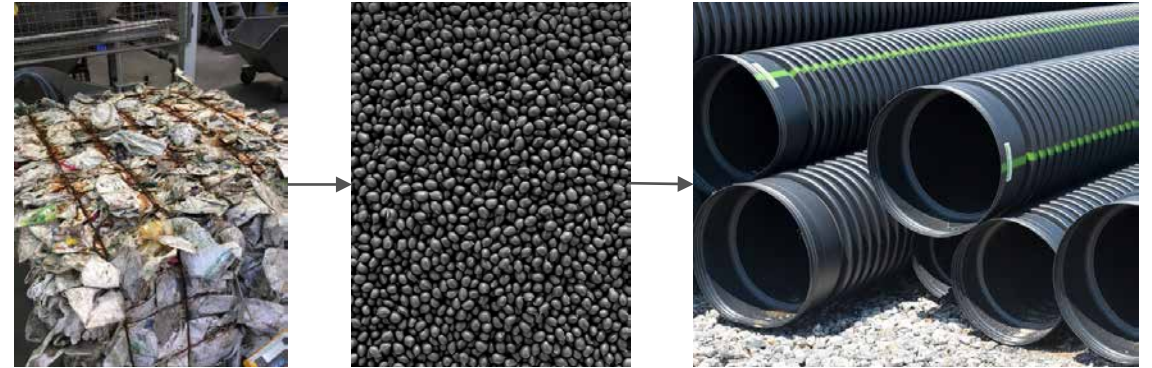
MetaPure W-PO

Upcycling instead of downcycling



Generally speaking, the washing process is the most crucial process step for determining the quality of the recyclate: Poor washing cannot be compensated during the further processing of the washed flakes. The solution is therefore often to add colour and then produce downcycled plastic products.

However, nowadays there is also a demand on the market to recycle polyolefins (e.g. polypropylene and polyethylene) and to make high-quality recycling accessible. With numerous tests in the company's own washing system, Kronos has been able to provide proof that the high-quality processing of such polyolefins is indeed possible – and that it makes both ecological and economic sense to do so.



Downcycling approach



Creation of clear and odourless PO flakes

MetaPure W-PO

Upcycling instead of downcycling

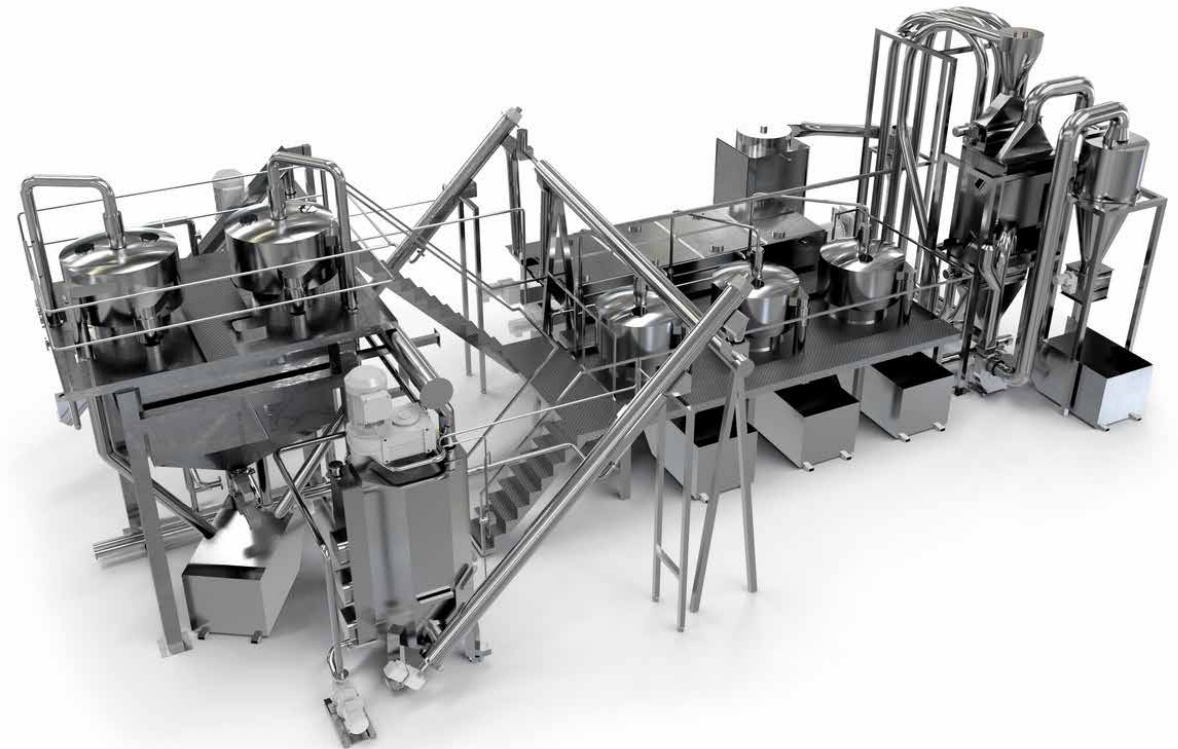


In the MetaPure W-PO, well proven individual units were adapted to suit conditions specific to PO while keeping the process-related attributes of the Kronos washing technology unchanged.

Excellent cleaning results with the Kronos washing technology

- Pre-cleaning sequences (optional)
- Caustic cleaning with caustic renewal
- Multi-stage post-washer
- Drying
- Automatic waste management system reduces the operator's workload (optional)
- Reliable removal of the sinking fraction and labels

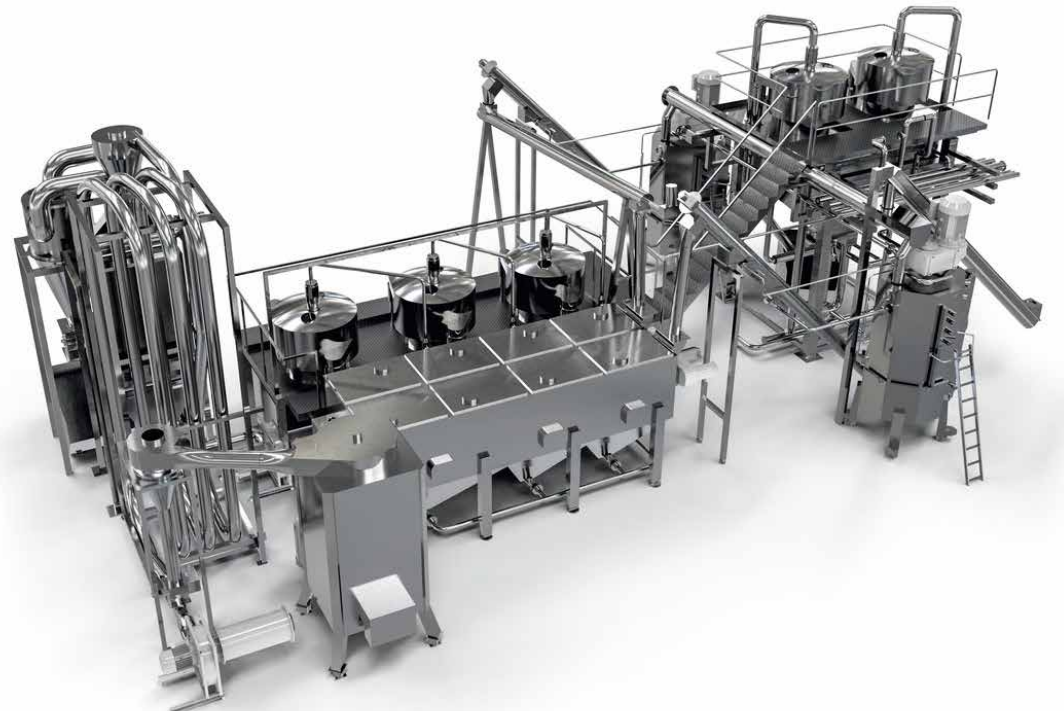
The Kronos washing process with pre-treatment, caustic washing and hot washing ensures clean flakes which can be ideally used for the manufacture of high-quality applications (fibre, film, injection moulding).



Benefits to you with the MetaPure W-PO



- **Gentle treatment** of the material as the units operate with a slow rotation
- **Reliable removal** of dirt, organic residues and adhesives using a caustic washer
- **Less cleaning and more safety** for the line operators thanks to the clean design and automatic waste management system
- Possibility to **reuse the process water** with the integrated water cascade
- **Very good washing results** achieved with a hot post-washing process
- **Reliable removal** of the sinking fraction and labels
- **Constant concentration** and **low consumption** of caustic, additives and defoamers thanks to the automatic dosing equipment
- **Robust construction** and design of many parts in **stainless steel** to protect your investment



Requesting a new machine

You can easily send a request for a non-binding quotation in our Krones.shop.

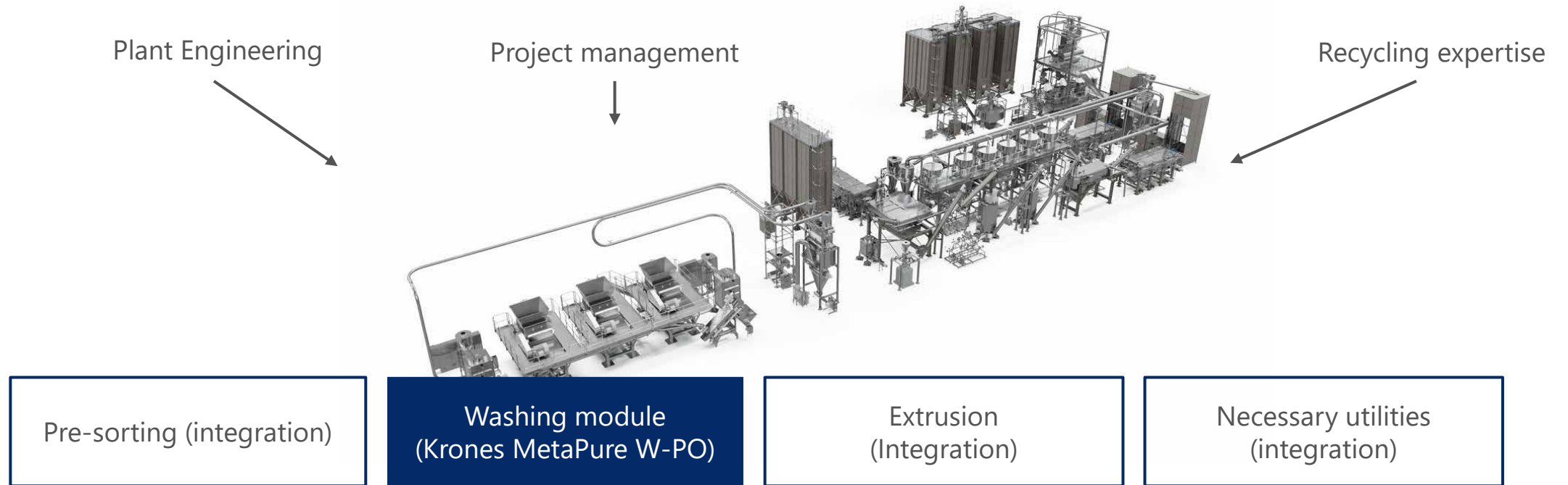


Benefits to you: our complete-system expertise

Krones as turnkey supplier and integrator



Complete recycling plant from a single source



Benefits to you: one single contact partner and fewer interfaces

Everything from a single source



KIC Krones colclean optimise the PET washing process

Only if the process and processing and operating materials fit together perfectly, the result is right. This is ensured by KIC Krones additives.

Krones Lifecycle Service – Partner for Performance

It goes without saying that also after the purchase of new machines, Krones takes care of your lines: The Krones LCS experts are always there to help you reaching your goals and turn your wishes into optimal LCS solutions.



**SOLUTIONS
BEYOND
TOMORROW**

