



Reliable. Sustainable. Resourceful.

Tracing the relevant KPIs along the value chain The example of PVC and chlor-alkali products

Christophe André | Chief Executive Officer | Vynova Group

Reliable. Sustainable. Resourceful.



6 production sites in key European markets



PVC



Vinyl Intermediates



1,300 employees



Caustic Soda



Hydrochloric Acid



€1.3 billion turnover (2021)



Potassium Derivatives

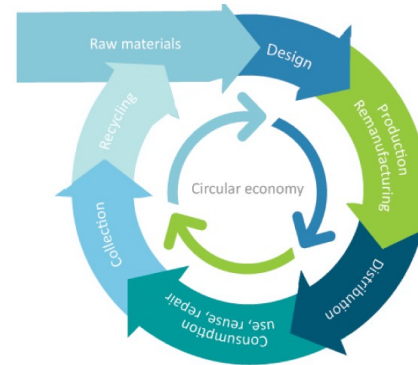


Sodium Hypochlorite

Towards a net zero emissions industry along the whole value chain ...



- Regulatory and NGO pressure
- Consumer expectations
- Voluntary industry commitments
- Investors pressure
- Individual company initiatives
 - VynoEcoSolutions
 - Sustainability ambitions



The use of PVC in Building & Construction



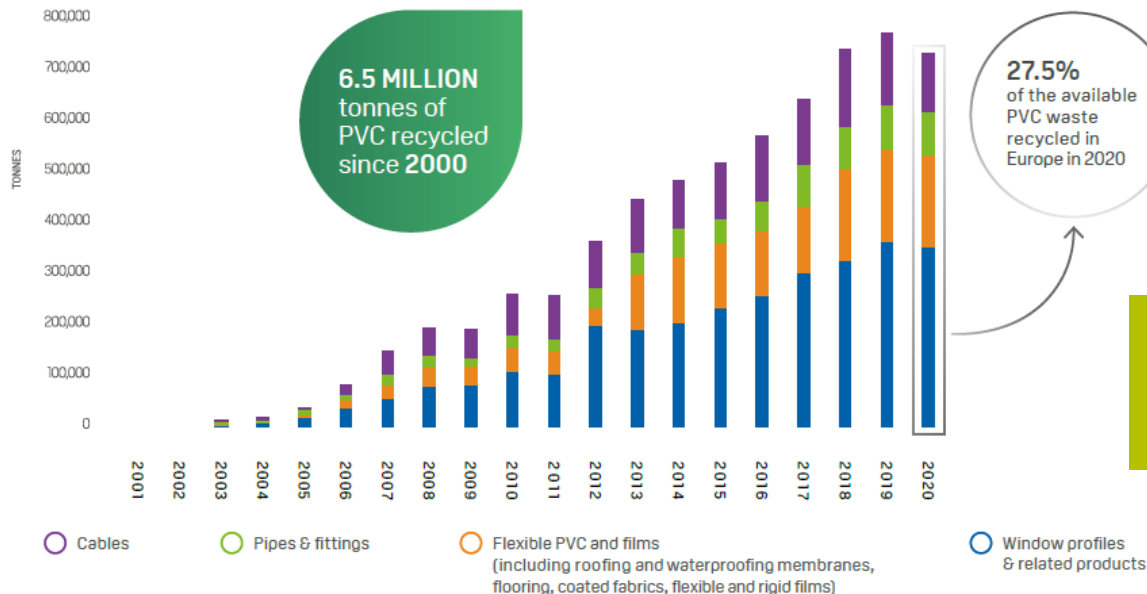
- Low carbon footprint
- 50% fossil feedstock
- Long application life

- Recyclable multiple times
- Physically or chemically
- ...without loss of performance!

VinylPlus: An enabler of a more circular B&C industry with clear KPIs to trace progress and industry commitment

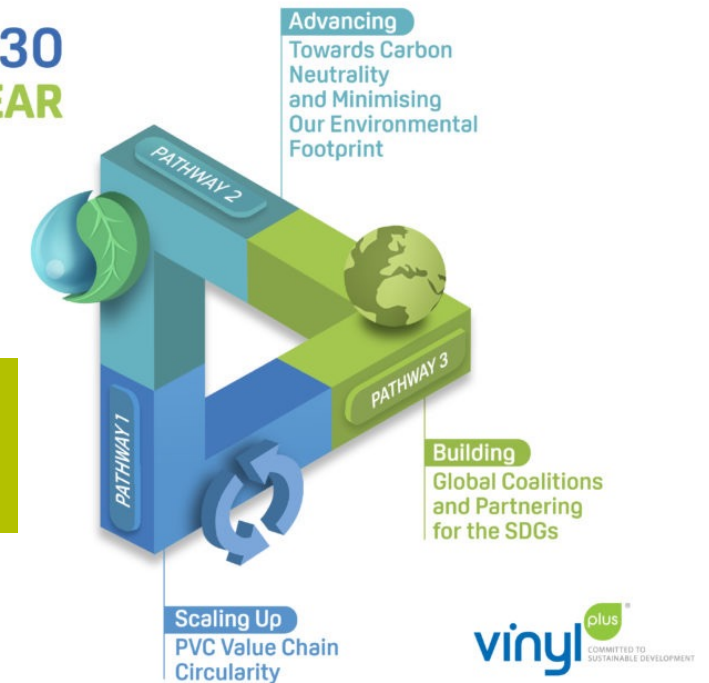


PVC RECYCLED WITHIN THE VINYLPLUS FRAMEWORK



VinylPlus 2030
THE NEXT 10-YEAR COMMITMENT
OF THE EUROPEAN PVC INDUSTRY TO SUSTAINABLE DEVELOPMENT

33% of post-consumer PVC waste from construction recycled in 2020



PVC is uniquely compatible with mechanical, physical and chemical recycling options, yet fundamental challenges remain:

- Characterization and sorting can be further improved through innovation and collaborations
- Policy incentives are needed to drive higher recycling rates and support technology innovation
- Economic attractiveness for all players in the value chain

Measuring for impact: the window profile example



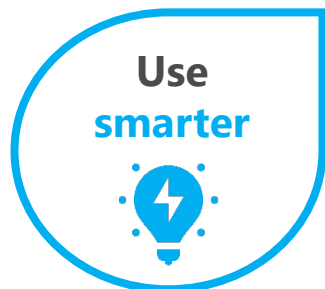
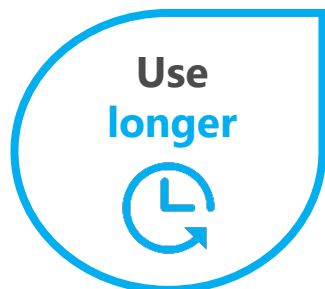
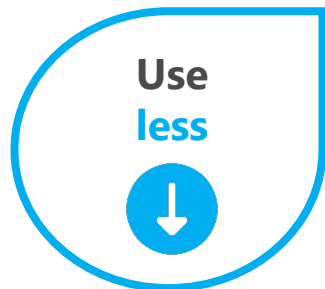
KPI



Unit

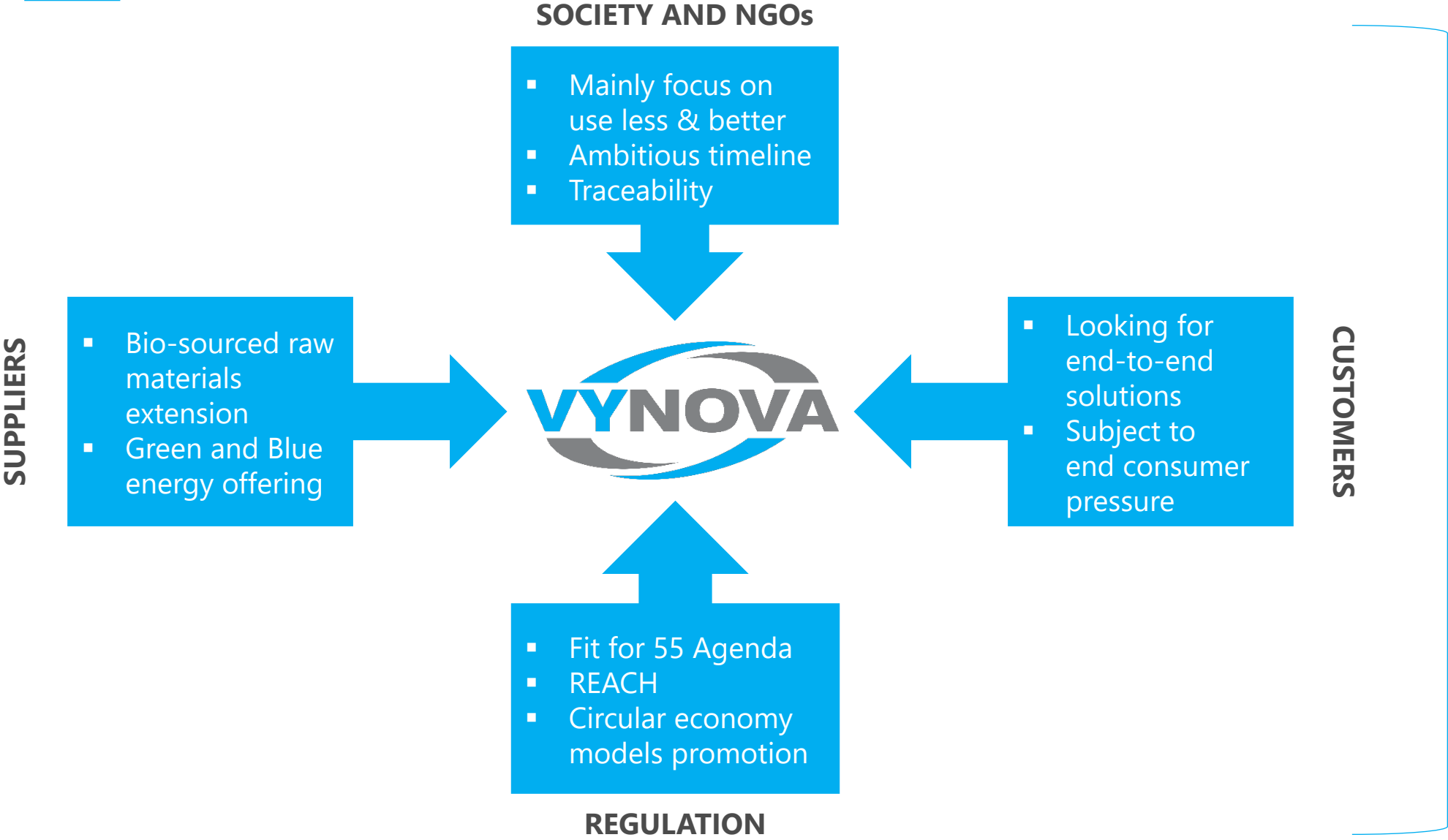


Path forward

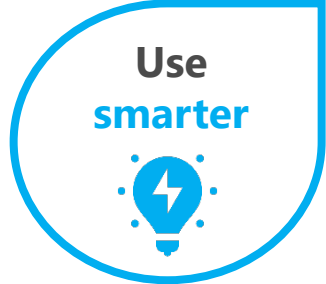
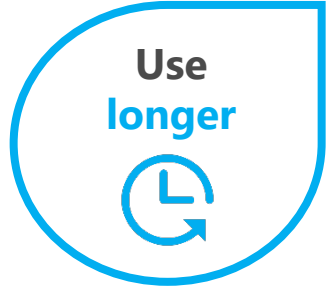
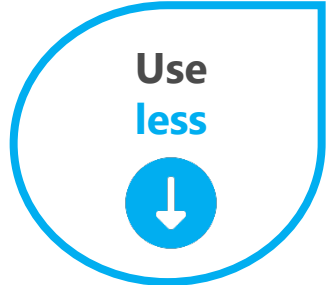


KPI	Unit	Path forward
Buy-to-use	% industrial loss by weight from base material to installed window	Production yield loss reduction, pre-consumer waste recycling, take-back schemes
% recycled material	% recycled content in window frame	From 25-50% to 50-75%+
End-of-life recycling	% weight recovered and recycled vs. total waste	Leverage all recycling options (mechanical, physical, chemical)
Energy	CO ₂ eq emissions/tonne of window profile	Decarbonization, renewable energy usage and process efficiencies.
Product Lifetime	Years of possible use	Extend window lifetime + Multiple recycling of window components
Resale price	Residual value of window or window components per Kg/Ton	Design for circularity
% innovative material	% by weight	Greener and more circular materials, innovative extrusion/assembly processes
Product performance	Insulation performance vs. cumulative production carbon footprint	Design: lower material usage Increase low-carbon recycling
Overall product usage	% of time product is used vs. total available time	Windows used 100% of the time

Use less, better, smarter: a rapidly changing ecosystem



KPIs Tracability

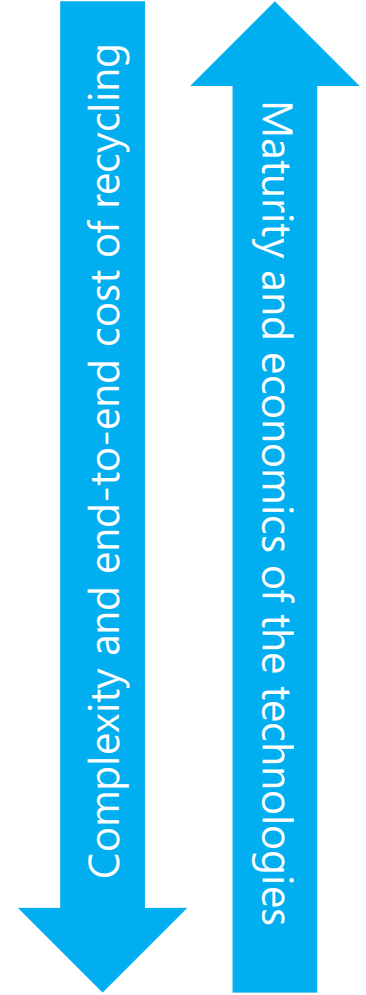


Use less, better, smarter: the challenge of efficient recycling

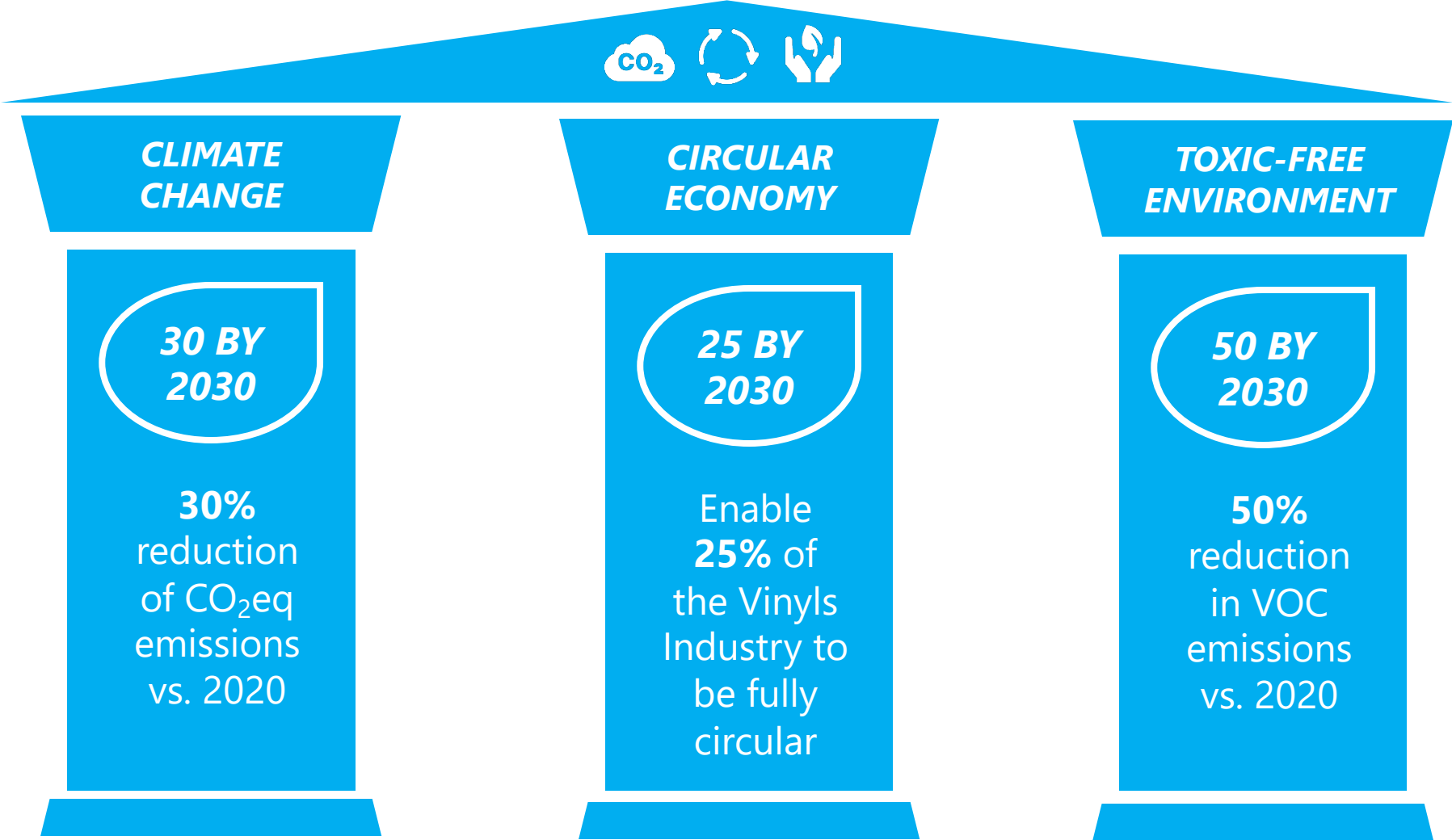


0% < - PVC purity - >100%

- | | | |
|---|---|--|
| ■ PVC monostreams: pre-consumer | → | ■ Mechanical / SBR |
| ■ PVC monostreams: post-consumer | → | ■ Mechanical / SBR |
| ■ Intentionally selected PVC | → | ■ Mechanical / SBR |
| ■ Light waste fraction after segregation of other value materials (rest fraction rich in PVC after segregation of other plastics) | → | ■ Chemical recycling
■ Gasification |
| ■ Mixed waste streams with <5% PVC (municipal solid waste) | → | ■ Gasification
■ Incineration |



Our 2030 sustainability ambitions: built on 3 pillars



Employees | Suppliers | Customers | Industry associations, NGOs, General public, etc.

Vynova's circular, renewable and low-carbon portfolio : The role of innovation to bring quantified improvement

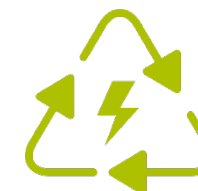


VYNO ECO SOLUTIONS

GROWING SUSTAINABLY TOGETHER



Bio-attributed
PVC



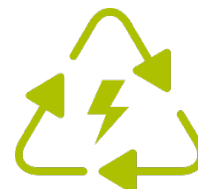
Renewable
Caustic Soda



Circular-attributed
PVC



Low-carbon
Potassium
Derivatives



Renewable
PVC



Key take-aways on the role of KPIs along the PVC value chain



PVC material : a solution to the use less, better and smarter

- A unique, proven performer in durable building & construction applications
- A versatile material, offering an infinite number of unique design opportunities
- A natural enabler of increased sustainability and circularity



PVC industry commitment to drive progress and innovation across its value chain

- A leading example of successful recycling schemes over several decades
- Committed to continuously increasing the sustainability and circularity along its value chains
- Actively and transparently engaged in its transformation process



Vynova leading participation in this sustainable journey

- A leading player in the European PVC industry, with a full portfolio of more sustainable products
- Committed to reach its 2030 sustainability ambitions
- Constructively embracing win-win collaborations to innovate and make it happen... together!





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www.vynova-group.com

