Getting a sustainable bang for your buck
Unlocking a green premium throughout the chemicals value chain

Pricing & Sustainability Practice

Content

Introduction

Sustainability has become a critical driver of business value, moving beyond a mere compliance issue. Stakeholders are increasingly advocating for environmental, social, and governance (ESG) actions, compelling companies to prioritize sustainability. This shift presents businesses with an opportunity to capture tangible value and enhance their top-line through innovative business models and green premium price markups, as well as improve their bottom-line via cost reductions driven by avoided taxes and enhanced process efficiency.

The chemical industry is no exception, with the shift towards circular products in the chemicals industry creating additional value, as demonstrated in our earlier thought leadership on 'Monetizing Circular and Sustainable Products'. This value, translated into a willingness to pay a premium for sustainable products across the value chain is propelled by legislative action and sustainable end-customer sentiments. To build further on our earlier work and better understand the value being created, we dive deeper into how to capitalize on this trend. This, by adopting a holistic approach to understand the intricate sustainability needs of downstream customers, through a pricing strategy that accurately reflect the value sustainability generates, while incentivizing enhanced collaboration across the value chain.

Unlocking this sustainable value entails a shift from the current cost structure, rooted in virgin fossil-based materials, to a circular model, while incorporating a green value margin. To accurately quantify this green value margin, the willingness to pay a green premium at end-consumer and brand-owner level needs to be assessed, and serve as a basis to cluster direct clients. For client clusters who potentially serve pockets of value, this willingness to pay of the end-customer should be brought back to that of the direct client, thereby enabling sharing of a premium across the value chain.

As Deloitte, we advise chemical companies in developing a comprehensive understanding of both the regulatory landscape within which they and their clients operate, as well as the unique sustainability needs of customers. Additionally, we support in identifying market segments with a high willingness to pay for sustainable products and assist in setting up pricing structures and partnerships to capture a green premium and scale circular solutions effectively. Through our expertise and collaborative approach, we empower businesses to navigate the complexities of sustainability pricing, thereby enhancing competitiveness in a rapidly evolving market landscape.

1. Sustainability: a catalyst for change

Stakeholders are pushing for environmental, social, and governance (ESG) actions across industries and geographies, creating a burning platform for companies to become more sustainable.

Investors find that ESG stocks currently outperform the market, and 77% of fund selectors surveyed consider ESG factor analysis to be an integral part of sound investing. Policymakers have already set global and local targets, for example a 45% global reduction in GHG emissions by 2030 (55% for Europe) with net-zero emissions by 2050. Customers and business partners want to replace products or services that don't align with their values, creating major market opportunities for businesses. Senior management recognizes sustainability as a priority, and has set, or is in the process of defining sustainability targets. Executives are aware that to realize those ambitions, sustained company- and value chain-wide actions should be taken. Finally, changing talent expectations – including demands for inclusive work environments, better work-life balance, and equitable outcomes – are leading to high turnover levels.

Deloitte surveyed over 2,000 CxOs across 24 countries and the results speak volumes.

- **Climate change** is perceived as one of the **most pressing challenges**, besides the economic outlook and geopolitical crises.
- CxOs are starting to take action by **incorporating more sustainable material, using energy more efficiently**, and training employees on climate change actions and impacts.
- Although organisations are making significant investments, **75% of CxOs say they still struggle to make a real impact on sustainability**.
- Read more on how CxOs perceive sustainability

Many value levers can be activated to increase sustainability efforts

We observe in the market that sustainability is not just a compliance story, but can also create quantifiable added value. Unlocking this sustainable value requires a holistic perspective, with a focus on both P&L impact and the broader operating environment of your company.

Profitable growth

- B2C and B2B customers are increasingly prepared to pay more for sustainable, ethical and environmentally friendly products. Sustainability also enables innovative business models, such as Everything as a Service (XaaS), that bring new solution-oriented product and service offerings to market that enable more predictable, recurring revenues. This also allows you to move from a commodity provider to a solution-based company, increasing pricing power and differentiating yourself from competitors. Based on what we see in the market and confirmed by research, companies that bring purpose within the core of their company, are able to on average double their market value 4 times faster[1]

Cost reduction

- Operational performance correlates strongly with improved sustainability performance, reflected in metrics such as reduced raw material input and lower waste generation. Moreover, sustainability actions can also reduce environmental taxes and extend the lifespan of products. This correlation is reflected in the fact that 64% of companies with product sustainability programs achieving lower logistics and supply chain costs[2]

Brand recognition

- Improving a company's brand image has a positive impact on its value, employee satisfaction and retention, customer perception, and investor sentiment. We observe that brand perception from the perspective of the end-customer increases between 15-30% when sustainability becomes one of the core values of a company[3]

Risk mitigation

- Proactivity on sustainability ensures compliance with emerging regulations, while sustainable substitutes strengthen the resiliency of your supply chain, protect against shortages due to scarce resources, and protect against brand damage linked to environmental and ethical scandals. Research even shows 32% of companies would have their EBITDA reduced by 25% or more if accounting for the environmental damage they caused[4]

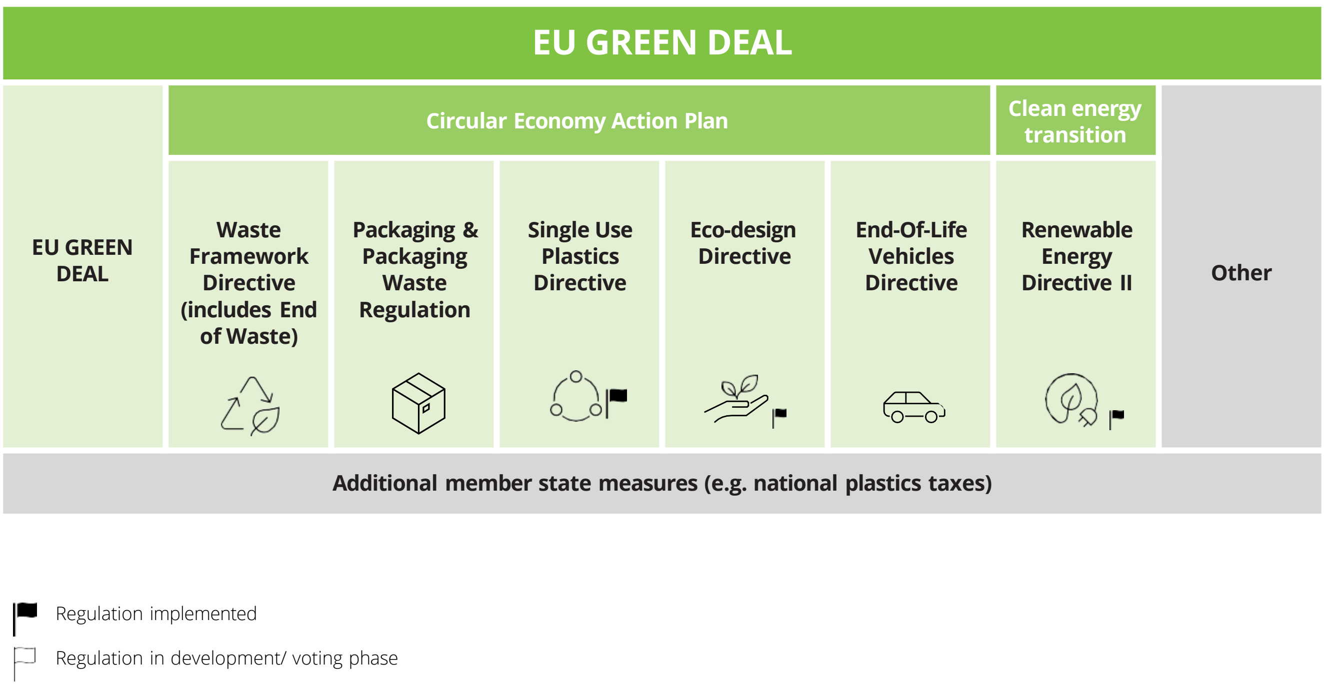
1. CECP, The Return on Purpose: Before and during a Crisis, 2020
2. Pure Strategies, The Path to Product Sustainability, 2014
3. Deloitte market survey (2023)
4. Deloitte, The chemistry of trust (2023)

Regulations push action on sustainability, while customer concerns create an increasing demand for sustainable products and services

As part of the EU Green Deal, the European Union has set up regulatory frameworks such as the Circular Economy Action Plan, and proposed as well as adopted a wide range of regulations and directives to address sustainability and promote a circular economy. The next legislative term will serve as an excellent opportunity to drive further implementation of these initiatives, make adjustments where necessary, and create supporting and complementary policies.

Illustrative examples of (upcoming) taxes, penalties and bans

- **Europe calls for banning of most harmful chemicals in consumer products**, only allowing their use where essential, in its chemicals strategy. The Commission is currently revising its REACH regulation to realize this and encourage innovation to develop safe and sustainable alternatives.[5]
- The Carbon Border Adjustment Mechanism is currently being introduced, with a price on the carbon footprint of in-scope imported materials as of 2026. **Chemicals are expected to be one of the first sectors added to the CBAM scope** (between 2026-2030).
- **The EU has restricted certain single-use plastic to be placed on the markets of EU member states**. This, to take action against plastic pollution.[6]
- **National governments are also introducing plastic taxes**. The Netherlands impose a tax on disposable plastic cups and food packaging ranging between €0,05 – €0,50 per plastic article put on the market[7]. The UK has put in place a Plastic Packaging Tax if you have manufactured or imported plastic packaging components which contain less than 30% recycled plastic. This tax is charged at a rate of £217,85 per tonne as of 1 April 2024[8].



5. European Commission (2024)
6. European Commission (2022)
7. Food Packaging Forum (2023)
8. UK GOV (2024)

Meanwhile, end-customers are demonstrating a willingness to pay green premiums of 10 to 15% for products incorporating sustainable attributes, particularly in specific market segments[9]. For around 70% of European customers, a prerequisite, though, is more transparency about companies' sustainability efforts[10]. Trustworthy independent certificates can play a key role in providing this transparency and unlocking premium value.

Unlocking value through data transparency

- **Internal audits and external verification contribute to the credibility of green claims**. Illustrative examples of tools and frameworks to credentialize the sustainability aspects of your company and product portfolio are EcoVadis, ISCC+, Recyclass and LCA.
- **An increasing amount of (digital) tools is under development to automate data collection and reporting for sustainability**: SAP modules for plastics taxes, Salesforce net-zero cloud to monitor CO2 emissions, Anaplan to track various sustainability KPI, Circulor and Circularise for supply chain traceability...
- Putting into place **the right processes and tools to collect, assure and transparently communicate data is critical** to support and successfully roll out your sustainable product portfolio, and capture a green premium.

9. Statista (2024)
10. Amcor (2023)

2. Activating the value chain to scale circular solutions and generate a shared green premium

Understanding sustainability needs downstream in the value chain helps you identify pockets of premium value for specific customer segments.

It's crucial to cultivate an overall understanding of the intricate dynamics and sustainability needs of the end-markets served by your downstream customers. This allows you to tailor your green product offerings to the sustainability potential across different market segments. A first overview (see table below) can serve as a preliminary scan
based on some key metrics, but should be followed by a deeper analysis to pinpoint specific pockets of value in sub-segments and client clusters.

These client clusters consist out of direct customers, but to assess the viability of pricing a green premium to a specific cluster, their downstream clients and respective sustainability requirements should also be examined. This, because the sustainability requirements and willingness to pay for a green premium for your direct customer is inherently linked to the needs within the industries they serve. This exercise will allow you to accurately price the sustainability value generated for your key customers, or partners in your distribution channels serving those customers.

Illustrative zoom-in on plastics: direct exposure to sustainable materials in the end-product[11],

	DIRECT EXPOSURE TO SUSTAINABLE MATERIALS IN THE END-PRODUCT						
CUSTOMER SEGMENTS Metrics	**FOOD & BEVERAGE**	**COSMETICS, PERSONAL & HOME CARE**	**HEALTHCARE, MEDICAL**	**CONSUMER ELECTRONICS**	**TOYS**	**FURNITURE & HOME ACCESSORIES**	**AUTOMOTIVE**
Use lifetime (years)	<1 🟢	1 – 3 🟢	1 – 5 🟢	1,5 – 13,5 🔴	10 - 20 🔴	7 - 20 🔴	10 - 13 🔴
Plastic purchase / manufacturing cost	10% – 40% 🟢	10% - 13% 🔴	20% - 50% 🟢	20% - 30% 🟡	60% - 70% 🟢	60% - 70% 🟢	5% - 15% 🔴
Global plastic consumed	35 - 40 Mt 🟢	<10 Mt 🔴	<40 Mt 🟡	25 - 30 Mt 🟡	25 - 30 MT 🟡	25 - 30 Mt 🟡	30 - 35 Mt 🟢
EBITDA margin	10% - 35% 🟢	10% - 30% 🟢	15% - 20% 🟡	20% - 30% 🟢	10% - 20% 🟡	5% - 15% 🔴	10% - 25% 🟡
Regulation	Addition: 25% of recycled content in PET by 2025	• Waste Framework Directive • Packaging & Packaging waste directive • Singe Use Plastics Directive					Addition: 25% closed-loop recycled plastics by 2030 proposed (EC)

Dots represent the importance of circular plastics in customer segments: 🟢 Positive 🟡 Average 🔴 Negative

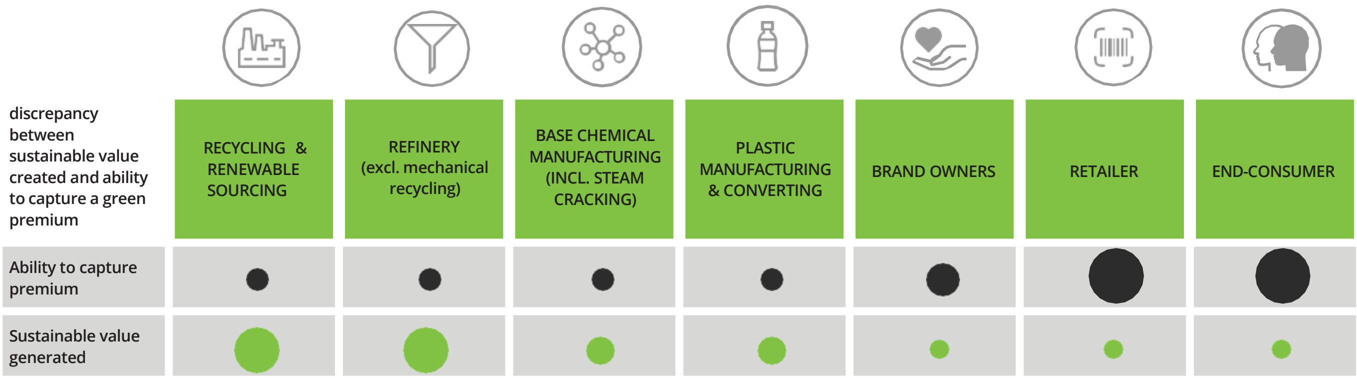
11. Deloitte Analysis (2023)

Vertical collaboration enables a shared green premium by bridging the divide between upstream sustainable value creation and downstream value capturing.

Once you have identified premium pockets of sustainable value within specific client segments, you should focus collaboration along the value chain on generating the circularity characteristics your clients are willing to pay a premium for. A significant portion of this green-product premium is, however, generated at the end-customer level, while investments in upstream value-chain activities are critical for sustainable production.

To manage this discrepancy, chemical companies must develop a thorough understanding of the sustainability needs throughout the value chain, beyond those of their direct customer. Through innovative collaborations, they can build partnerships along the chain, increasing vertical integration and allowing for a fairly shared green premium. In addition, chemical companies should initially focus on greening their specialty chemicals serving high-quality and specialised segments. By doing so, they can increase pricing power and enable an enhanced premium for sustainable products. Unlocking this for specialty chemicals can then boost the business case for green products generally, serving as a catalyst to further green the remaining product portfolio.

Illustrative zoom-in on plastics: best practices to share a premium across the plastics value chain



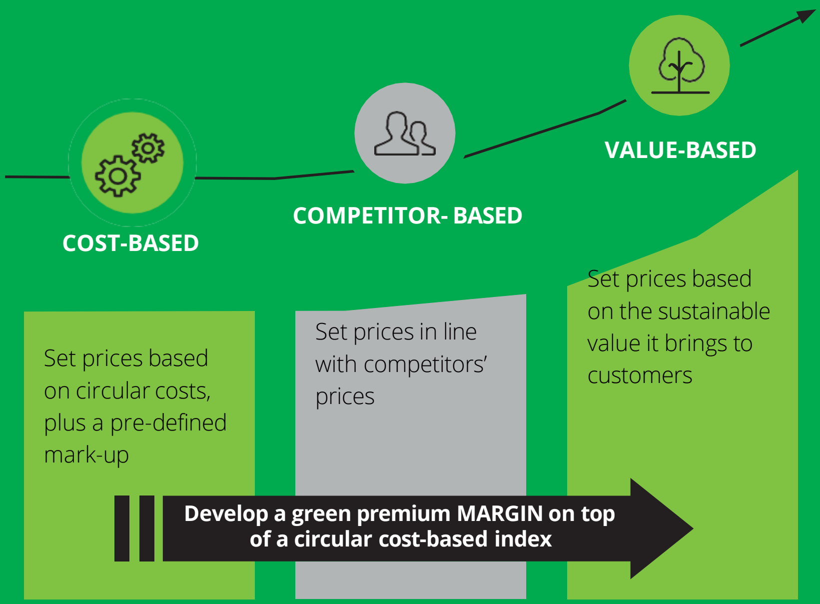
- **Recycling & renewable sourcing**
  Partner with waste management companies to enable qualitative and efficient sourcing of waste streams, ensuring high-quality grades at reduced prices.
- **Refinery (excl. mechanical recycling)**
  Develop renewable and recycled solutions supported by standards and certification, enabling chemical companies to position circular products.
- **Base chemical manufacturing (incl. steam cracking)**
  Leverage mass balancing methodology to connect recycled and renewable feedstocks to circular polymers.
- **Plastic manufacturing & converting**
  Certify pellets as circular, and work together with converters and brand owners on fit-for-purpose solutions meeting the technical specs and regulatory requirements of end-markets through circular products.
- **Brand owners**
  Provide stability of offtake to upstream actors and build brand narratives around the circularity characteristics to end-customers.
- **Retailer**
  Increase transparency & credibility towards end-customers on circular aspects of products (e.g. through eco-score).
- **End-customer**
  Take climate-conscious purchasing decisions.

Practical illustrations

- **We support companies within the chemicals value chain in setting up partnerships with upstream actors to secure feedstocks and downstream parties to align offerings towards brand-owners and end-customer**. This cooperation is exemplified by major chemical companies orchestrating joint go-to-markets of customer products with brand owners. Such partnerships strengthen relationships and ensure a more seamless alignment between material characteristics and marketing needs. **By prioritising enhanced collaboration**, companies can place circularity at the forefront of their products, thereby crafting a compelling sustainability narrative for their brands.
- An illustrative example lies in the **divergent product specifications stemming from the use of mechanically recycled feedstock**, often perceived as a hurdle. These differences could, however, be reframed as strengths, with aesthetic imperfections becoming distinctive features within the marketing narrative of the new product.

3. If sustainability has value, shouldn't you price for it?

Unlock sustainable value through a hybrid approach based on circular cost parameters, complemented with a value-based green premium.



- Current pricing in the chemicals industry is based on the marginal production cost of virgin fossil production, supplemented with an agreed upon margin (Cost-plus method)
- To accurately reflect fluctuations in circular feedstocks, circular production costs should be taken into account in cost-plus pricing
- Sustainability characteristics create additional value for customers, which should be reflected through a value-based markup

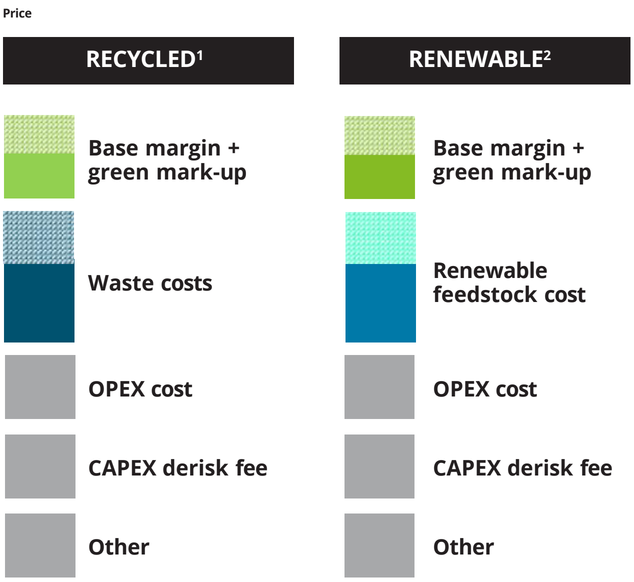
Sustainability is no different from any other product or service feature. Becoming more sustainable or transitioning to net-zero carbon emissions has a cost, but it also brings value. To quantify this, you need to look at it through the eyes of your direct customer.

Current pricing in the chemicals industry is based on the marginal production cost of virgin fossil
production, supplemented with an agreed-upon margin (cost-plus method). Prices of circular products are currently based on the same cost-structure as virgin fossil production, but are of course subject to different market dynamics. We observe in the market companies often struggle with developing a well-structured methodology for a (green) margin to charge on top of costs (the 'plus'). Sustainability characteristics however create real additional value for customers, which should be reflected through a value-based green premium charged on top of the base margin.

Moving away from a crude-oil cost structure towards circular cost-parameters

Currently, prices of both virgin and circular chemical products are based on the production cost of the marginal required capacity to satisfy market demand. This cost is heavily influenced by crude oil prices. A circular approach shifts the cost build-up of circular chemical products away from virgin fossil production, to directly include circular production costs and corresponding feedstock fluctuations. An independent party can facilitate this approach, bringing actors together throughout the value chain to define standardised indices for circular products.

Circular cost-plus build-up
(incl. green premium)



Incorporating a green value margin

The additional margin charged on top of circular costs should include the base margin complemented with a green mark-up based on the value generated for the identified clustered client sub-segments as discussed on page x. By doing so, we should identify the willingness to pay of end-customers and retailers for sustainability features completely downstream of the value chain. This identified value can then be translated back to the willingness to pay of direct clients, enabling sharing of part of the green premium generated at the end-customer.

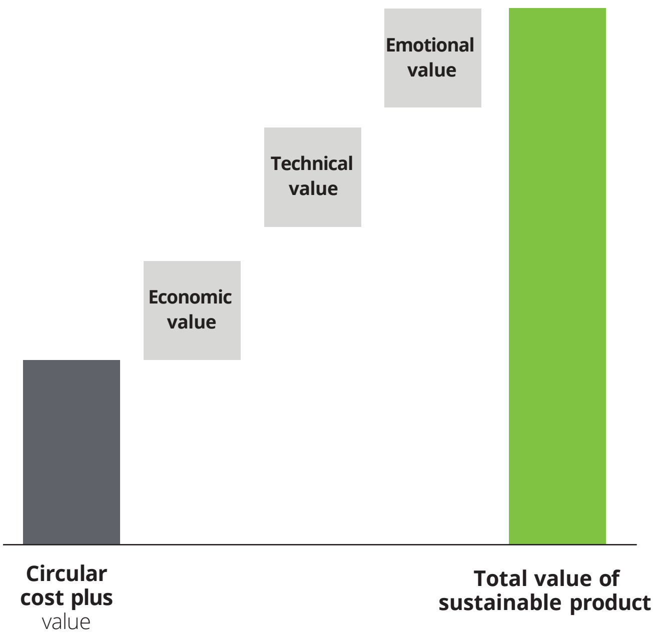
The value estimation principle aligns prices with the customer's perception of the product or service value. By quantifying the incremental benefits for customers, more accurate prices can be set and better defended. This creates a cost-plus margin on top of the cost-structure, complemented with an additional green premium for the product based on the Willingness To Pay depending on the cluster the specific client sits in.

Currently, many companies however focus exclusively on the emotional value of sustainability in their customer communication. As a result, the willingness to pay is underestimated. To increase customer willingness to pay, it is key to also point out potential savings, especially in times of inflation.

In fact,
three value drivers can be identified.

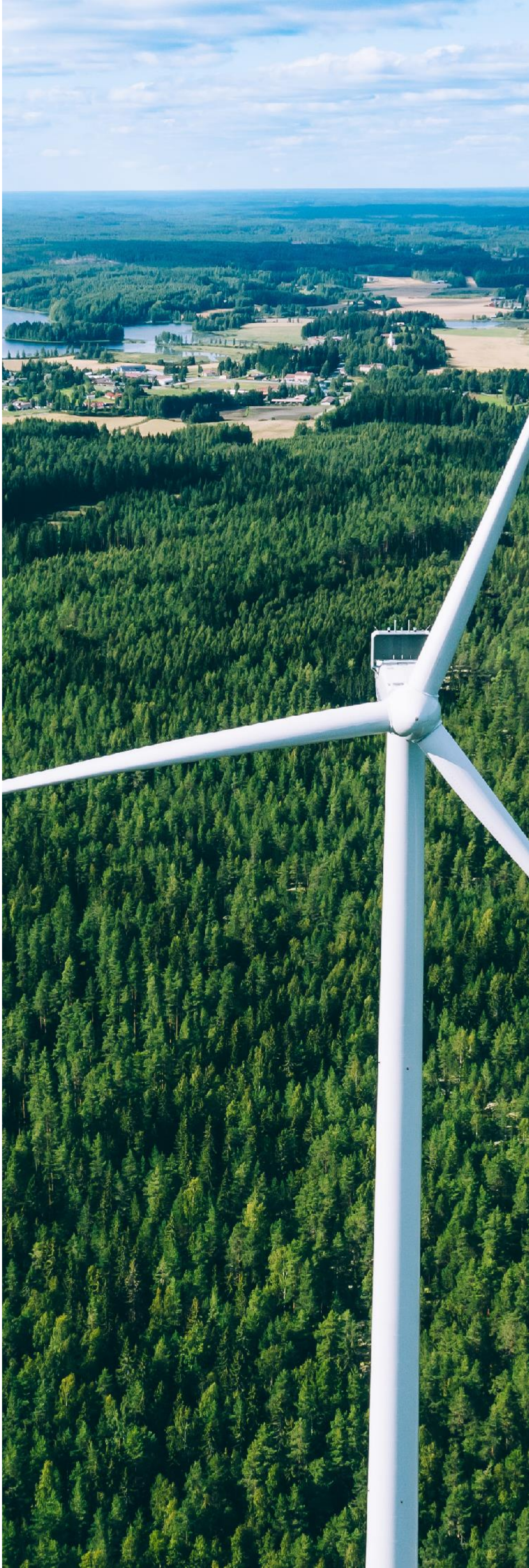
- **Economic value:** Sustainable products provide quantifiable benefits directly impacting customer profitability.
  - Revenue increase due to a green mark-up
  - Increased market opportunities due to green certifications
  - Reusability and recyclability of materials
- **Technical value:** Sustainable products ensure tangible advantages providing added value to the customer.
  - Compliance with regulations
  - Realisation of sustainability target
  - Fit-for-purpose in client production process
  - Prolonged lifespan of sustainable products
- **Emotional value:** Sustainable products provide an intangible positive connotation.
  - Branded sustainability story
  - Specific recycled characteristics giving the product a distinctive edge
  - Volume of CO_2 and raw materials saved (equivalents of number of cars taken off the road or trees saved)

Together these represent the total value of sustainable chemicals.

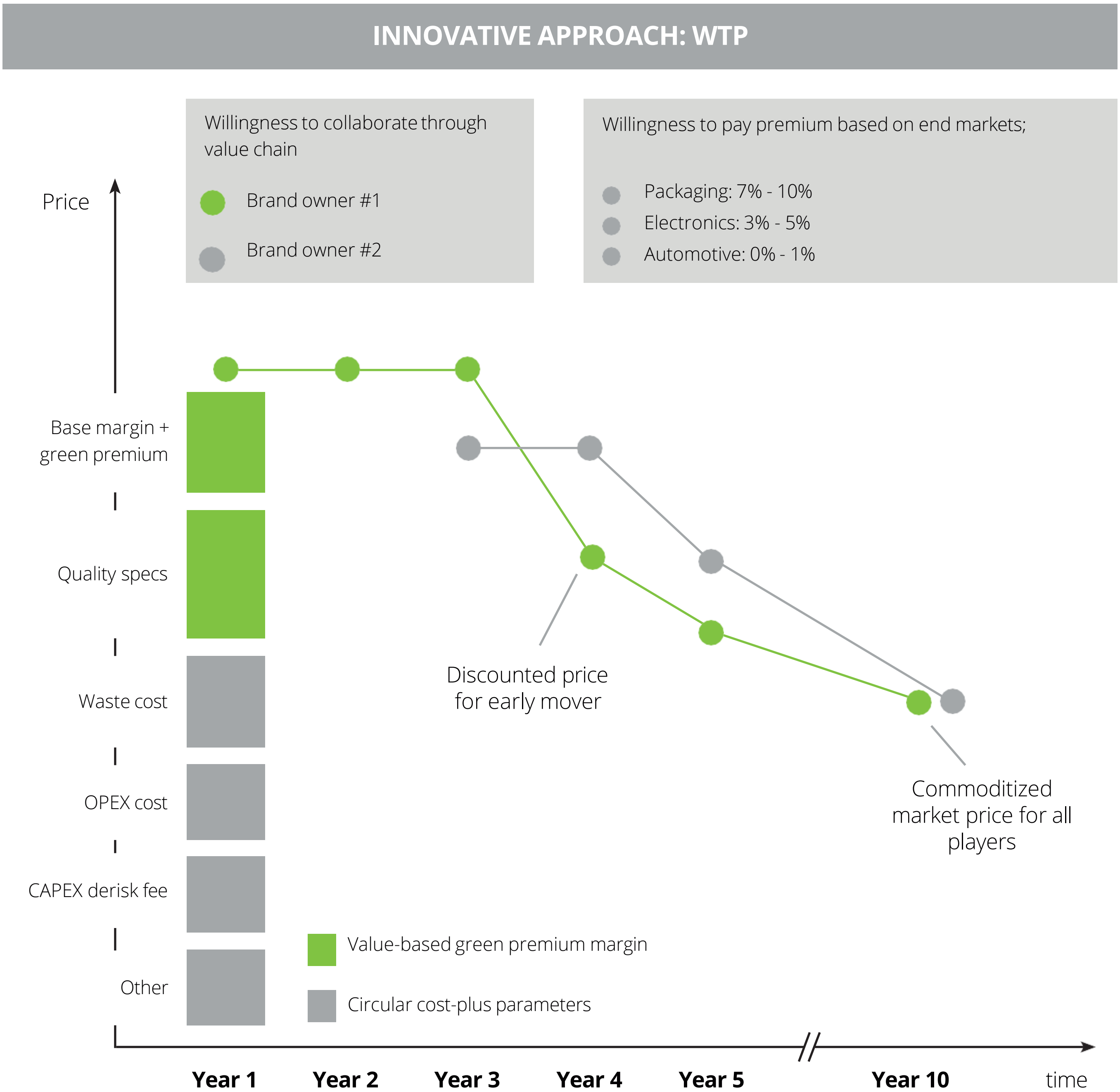


Practical illustrations

Some of the major plastics producers are setting up dynamic sustainability storefronts, enabling clients to pick-and-choose their fit-for purpose plastics solutions based on technical product specifications, but also its carbon footprint and circular feedstock. Dynamic choices also require dynamic price setting, with premiums fluctuating based on the specific solution selected by the client. To enable this offering towards customers, data accuracy, transparency through certification and seamless integration across IT-platforms play a crucial role.



Capture a green premium by exploring innovative strategic price options, bringing together circular costs and sustainable value-based margins.



When shifting from a traditional polymer+ approach to a circular cost structure, various innovative strategic pricing options could be explored to enhance collaboration across the value chain and unlock a shared green premium. The foundation of your price build-up should be circular cost-plus (incl. green premium). Long-term relationships with brand owners can, however, be incentivised by bringing variability in your green premium margin. This can be done through degressive pricing, charging a slightly higher premium in the initial phase, while giving a discount afterwards to reward customer loyalty. This allows chemical companies to scale their circular product offerings and reach critical mass, creating benefits of scale to drive down costs. Benefits of scale in turn facilitate the development of circular solutions at a lower price while keeping margins intact once circular chemicals are in a more mature market.

4. Conclusions

Innovative pricing methods incentivise concerted circular value chain efforts to generate shared green premiums

Key takeaways on green premium pricing...

- Regulations and end-customer sentiments are putting a **monetary value on circular products**.
- A significant portion of the premium for **green products is generated at the end-customer level**, but investments in upstream value-chain activities are critical to produce these products.
- **Circular production costs should be incorporated in the price of circular products**, while a green value margin should be based on the Willingness To Pay of specific end-customers.
- By setting up innovative pricing structures, green premiums from circular efforts can be shared along the value chain.

- **...and how Deloitte can support you**

- Develop a thorough **understanding of the sustainability requirements** of your downstream clients and the market and regulatory environment they operate in.
- **Identify pockets of value** within particular sub-segments, and assess Willingness To Pay for specific client clusters. This will allow you to **accurately price the sustainability value** generated.
- Put a strategic initial focus on **incorporating circularity in high-quality and specialised segments**. In these end-markets, chemical companies have higher pricing power, creating more leeway to incorporate an increased premium for circular products.
- **Explore and set up innovative pricing options**, bringing customers and suppliers together to strengthen novel partnerships, scale circular solutions, and capture a shared green premium.

Get in touch with our experts

Reach out for a deep dive on how to incorporate a green premium in your pricing.

Kristof Boodts
Chemical Sector Leader
kboodts@deloitte.com

Thomas Aerts
Green Pricing Expert
taerts@deloitte.com

Maarten Dubois
Sustainability Expert
mdubois@deloitte.com

The authors wish to thank Michaël De Groote, Cédric Martens, Mathieu Naudin, Marine Desenfans and Wouter Goossenaerts for their contributions to this article.