

Disruption – the way to Net Zero and Individualization of beverages



Like other industries the beverage industry is going to miss its greenhouse emission reduction targets 2030 and 2050 and is far away from solutions to meet the megatrend individualization.

Please read where the beverage industry currently stands in terms of emissions in the individual scopes, how far it is from the 2030 and 2050 targets and what influence current market trends have. We refrain from pointing out measures that are the same for almost every industry, but instead show disruptive solutions that make it more likely that the 2030 and 2050 targets will be achieved.

1. Lets start with key messages:

(source: [Kearney.com](https://www.kenyon.com))

Given the financial and regulatory stakes, beverage companies—currently on track to miss their 2030 and 2050 emission reduction targets.

— In 2021, beverage companies emitted 1.5 billion tons of CO₂e, or 3.8percent of all global CO₂e emissions.

— To reach their GHG targets, the beverage industry needs to **improve** its current reduction **rate 11-fold**.

— The lack of progress is not a reflection of the industry’s reticence to change, but rather is **evidence of exactly how tough a problem is** to solve, if **market trends counteracting**.

2. Status Quo of GHG

The beverage industry needs to **improve its current reduction rate 11-fold**. The failure to achieve these goals can negatively **impact** the industry in the form of drastic **regulation, decreasing stock prices and a loss of credibility**.

In **2021 beverage companies emitted 1.5 billion tons of CO₂e**, or **3.8 percent of all global CO₂e emissions** (scope 1 -3) (see figure 1).

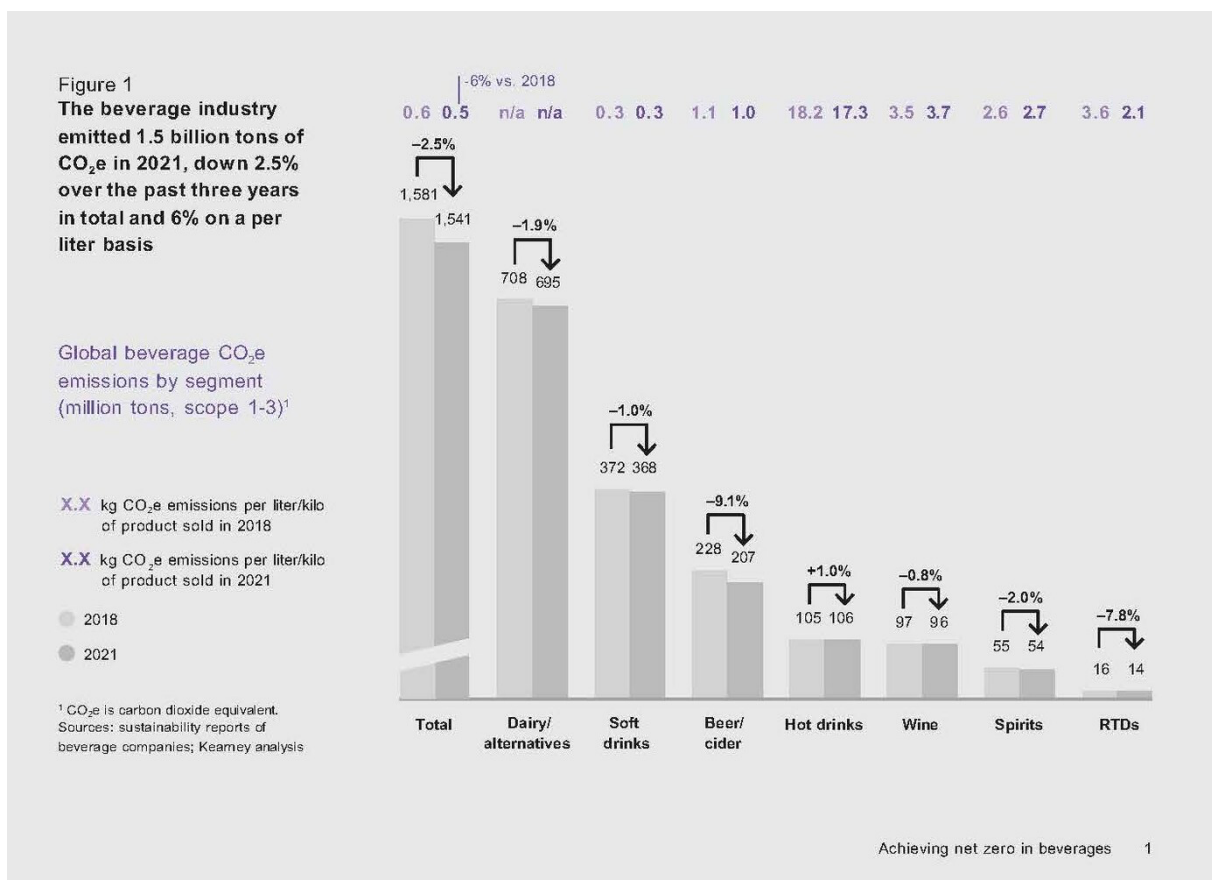


Figure 1 - source Kearney.com

Emissions per liter have declined over the past few years. But again, the **6 percent decline in kg CO₂e per liter from 2018 to 2021 is still short of target goals**.

GHG emissions need to be reduced across the entire value chain

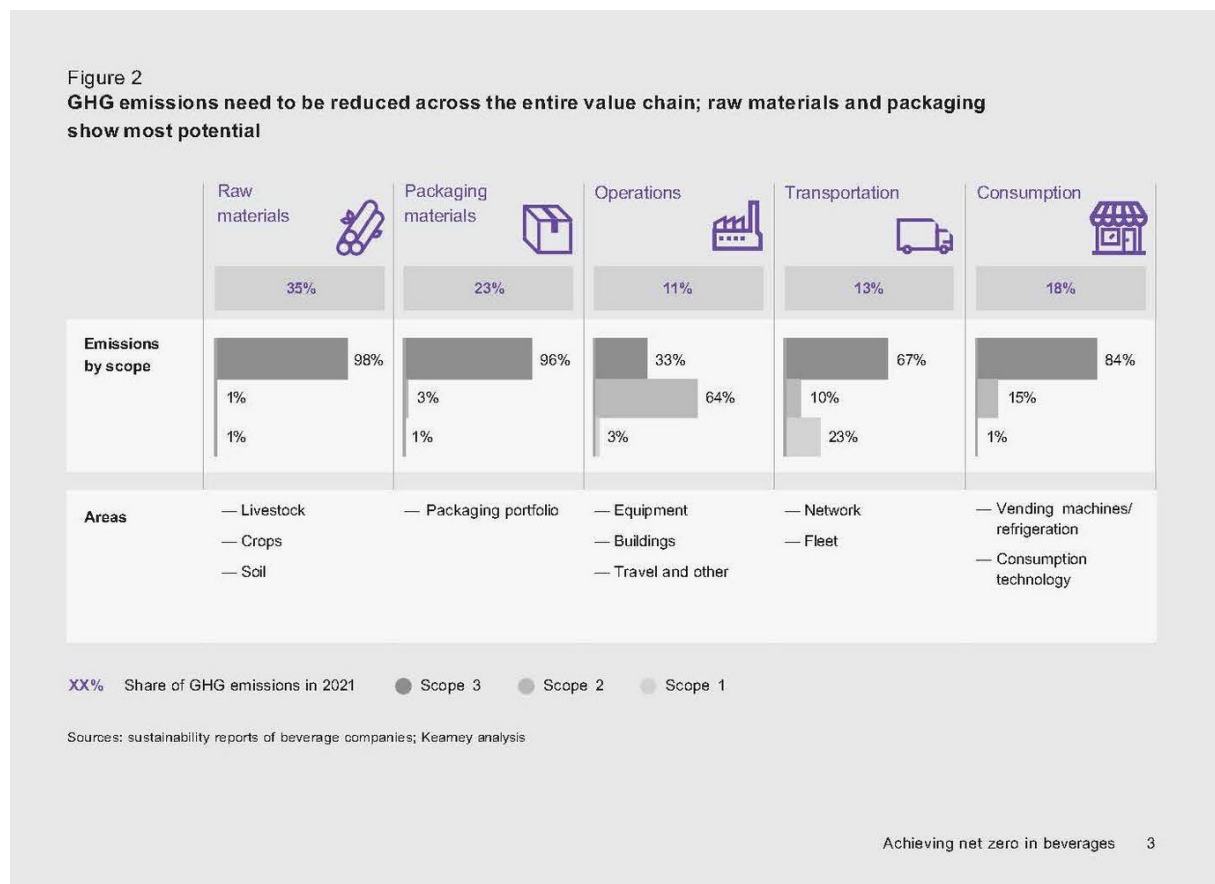


Figure2: Source Kearney.com

Followed by Scope 2 GHG **Scope 3** show the **biggest need for improvement through the whole value chain.**

Exkurs: Scope 1 covers direct emissions from the company's own or controlled sources. Scope 2 includes indirect emissions from the generation of purchased electricity, steam, heat and cooling that the company consumes. Scope 3 covers all other indirect emissions that arise in the value chain of a company.

The consultant company **Kearney estimated** in their White Paper „ **Achieving Net Zero in Beverages**“ that the beverage industry **will miss the 2030 GHG target by 13%** (1.4 bn tons instead of 1.2 bn tons) and **by 87%** (1.2 bn tons instead of 0.2 bn tons) **in 2050**, if they **don't change their behavior** and **increase dramatically the actions for environmental issues.**

3. Market trend „Individualization“

A **Megatrend** is „**Individualization**“. And this Megatrend is **capturing more and more the beverage industry.**

The **megatrend of individualization** in the beverage industry is a **significant shift that's shaping consumer preferences and product development**. The individualization trend in the beverage industry is **driven by the growing consumer demand for products that cater to personal tastes, health needs, and lifestyle choices**. This trend is **underpinned by advancements in technology, increased health consciousness, and changing consumer behaviors**.

Here are some key insights from the most relevant resources:

3.1. Personalization as a major trend:

Euromonitor International identifies **personalization** as a **key megatrend** across various industries, including **beverages**. Over **50% of consumers globally prefer goods or services uniquely tailored to them**. This **trend** is driven by **increased access to personal information through wearables, monitors, and AI-based tools, allowing consumers to** make more informed choices about their **individual needs**.

3.2. Impact on the beverage industry:

The beverage industry is experiencing a **strong push towards individualization**. **Consumers, especially younger generations, are focusing on individuality and seeking personalized products** made specifically for them. This trend is particularly evident in the **growing demand for wellness, health, and lifestyle-oriented beverages**.

3.3. Customization and functional beverages:

There's an **increasing market** trend towards **functional, sporty, and healthy drinks**. Consumers are shifting to **healthier options** like sugar-free drinks, fruit juices, sports drinks, and **functional beverages with added nutrients**. **The global beverage flavoring systems market is projected to grow significantly**, driven by this demand for personalized and healthier options.

3.4. Consumer Engagement and Feedback

Brands are using social media platforms to **engage with consumers directly**, soliciting **feedback on new products and flavors**. This helps companies **quickly adapt to consumer preferences and trends**.

Some beverage companies are turning to **crowdsourcing to develop new products**. By **involving consumers in the creation process**, brands can ensure that the **final product aligns closely with consumer desires**.

3.5. Challenges in meeting demand:

While the demand for individualization is high, **the current market struggles to fully meet consumer expectations.** The **optimal level of customization is not yet available**, with most offerings limited to predefined selections or DIY mixing solutions. **This gap presents an opportunity for innovation in the industry, because there is the need for multiflexible filling solutions** (*Note: KTW Technology close this gap*).

3.6. Technology enabling personalization:

Companies are investing in technologies to enable greater personalization. For example, Ball Packaging developed Dynamark printing technology to allow brand owners to create unique, personalized designs on beverage cans. This type of **innovation helps** brands tap into the **individualization** megatrend.

3.7. Future outlook:

The individualization trend is expected to continue shaping the beverage industry. **Companies will need to focus on developing more flexible production models, improving distribution methods, and investing in technologies that allow for greater customization to meet consumer demands.**

In conclusion, the individualization megatrend is significantly impacting the beverage industry, driving demand for personalized, functional, and health-oriented products. While challenges exist in fully meeting this demand, it presents numerous opportunities for innovation and growth in the sector.

4. The effect of the megatrend „Individualization“ on the GHG targets

The biggest dilemma in the beverage industry is that current production methods and the market no longer match and will exacerbate the issue of resource waste and GHG.

Without new technological innovations the need for multiflexible filling processes will prevent the successful reduction of GHG!

Why?

Because **filling technology designed for high volumes** is being used to produce an ever-expanding product portfolio with small batch sizes. Actually in a lot of **filling lines the time for changing-over and cleaning is higher than the time for filling, which is a utilization disaster!**

The result is that production is becoming increasingly inefficient and resources such as water and chemicals are being wasted to a greater extent. This will be further exacerbated by the megatrend individualization.

The procedural and technical challenges of meeting these market trends are, on the one hand, **to enable bottling plants to make their bottling more technically flexible and thus more economical**, while at the same time **saving energy, emissions and resources.**

To meet the megatrend of "individualisation", **new bottling technologies for small lot sizes are needed that largely replace the supply chain from the bottler to the end consumer and back.**

„Individualization by Bottling on Demand" can only be realised in a meaningful way if we bring the filling process "as close as reasonable" to the end consumer. Combined with intelligent packaging, such solutions will save enormous amounts of GHG and resources at all levels of the value chain (raw material, packaging, production, transport and consumption).

This disruption is the most important leverage for the beverage industry to achieve the 2030 and 2050 GHG targets.

5. KTW Technology has the technical solution

KTW Technology, is committed to ensuring that **multiflexible filling technologies** are no longer just a topic for the future, but **are already in existence and being developed.**

KTW has **developed retrofittable dosing systems that separate additives such as flavours, vitamins, etc. from the normal filling process** and dose them at high speed before the container is closed. The positive effects are:

- **Higher utilization due to less cleaning and changing over time** (in average 50%)
- **Less water and chemical consumption** (up to 95%) and less **energy**
- **More flexibility in product portfolio**
- **No Aroma carry-over**

Please see the customer use case of Romina Mineralbrunnen:

<https://www.youtube.com/watch?v=cnX7aRFO9HI>

(For English speaker please use the native YouTube translation functionality)

And **KTW** is still working on the **biggest disruption in the beverage industry**

KTW in **Cooperation with Schneider Electric**, a leader in automation systems, combining their strengths to **develop multi-carrier dosing lines, controlled by AI**. The innovation **enables bottlers to fill a wide range of small batches of liquid products economically, multi-flexible and individually**. In future, this will also **enable liquid products to be filled "just in time"** according to the end customer's individual selection.

This innovation will have a **hugely positive impact on sustainability, efficiency and customer individualisation** and will fundamentally disrupt sectors such as the beverage industry.

If you would like to find out more about the future of the beverage industry, we look forward to hearing from you. **Contact us via wt@ktwtechnology.de**

#beverages #foodandbeverages #filling #bottler #fillingondemand
#bottlingondemand #scope3 #GHG #impact #impactthatmatters #greentech