

FEATURE ARTICLE

From Brown to Green

Heading into the future





Innovative solutions for supply chain decarbonization

The future calls for a drastic reduction in the volume of CO2 emissions. New fuels such as hydrogen, LNG and ammonia can help us to achieve this ambitious goal. Even so, their storage, transportation and declaration requires a profound level of expertise – otherwise, the much-vaunted journey from brown to green, as it can be described, could quickly spiral out of control.

Even now, energy companies are struggling to get to grips with the obstacles and challenges associated with the production and distribution of green fuels. This is especially the case in the face of ever-changing laws and regulations. In addition to complex **compliance rules** and uncertainties with regard to **customs clearance**, there are **new risks** associated with handling unfamiliar commodities.

To expand on products and benefit from this, it is essential to work with specialists that have **decades of experience** in mid-stream and downstream operations and that can use **end-to-end solutions** to maintain a strong overview of the entire supply chain.



The **digitization of all business processes** facilitates the complete synchronization of all players in the supply chain – with the only remaining question being how to physically handle these new energy sources. In terms of IT, all findings from mid-stream and downstream operations for fossil fuels need to be taken into account and integrated accordingly into the resulting solutions.



Fully charged and ready to go.

In addition to green hydrogen, electric mobility has a major role to play when it comes to the change in climate policy. However, ensuring the widespread availability of e-mobility solutions means that **fuel stations increasingly have to provide two different services:** as a provider of liquid fuels and as an electric charging station. Even now, modern IT systems can be used to bring about the **complete integration of all electric fuel stations** into an energy company's accounting services system. In other words, there is no need for additional cost-intensive investments.

Reducing CO2 throughout the supply chain.

Independent of the fuel being transported, companies in the mid-stream and downstream segment are tasked with **massively reducing their own CO2 emissions** – which they can use using **automated processes** that speed up all operations and minimize downtimes. From ships to trucks and more, modern solutions make sure **all loading and unloading processes are optimally synchronized**, so that distribution can occur with maximum efficiency.

Cutting-edge Terminal Management Systems are now turning the concept of "green tank farms" into a reality. They manage **all processes – from ordering and processing through to settlement**. Such systems can also be expanded via cloud services to incorporate functionalities such as trip planning, quantity conversion, customs communication and more.

Everything is traceable.

Traceability from production to end customer is a key aspect of the journey towards green fuels. This calls for data exchange portals where all data and software formats can be consolidated to create a consistent data standard.

In the future, only those companies with an optimum network encompassing the entire mid-stream and downstream sector will be able to ensure complete **data transparency** for sustainable fuels and take on responsibility for **tracking and tracing**. Through this, energy companies can rest assured that the certificates of proof are correct and fully documented for the audit authorities.

ESG reporting is all-important when it comes to this documentation. All ESG criteria have to be measured, managed and ultimately integrated into the external reporting process.

Data first, everything else follows.

Much has been said about climate footprint targets and how to achieve them. Now is the time to act – and data is the place to start. The fact is that the right data combined with the right applications **can be just as beneficial in terms of climate policy as using the new green fuels themselves**.



About Implico

Implico Group is a leading provider of digitalized business process solutions for the supply chain of energy and natural resources. The company set its sights on this sector 40 years ago and therefore has unique industry expertise when it comes to meeting even the most complex challenges in this field.

Not only does Implico's portfolio comprise the full supply chain spectrum – from refinery to retail – it also includes the full scope of services, ranging from consulting to software solutions to managing entire operational processes.

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