



Interview Kai Miller

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Bert Beyers: What is your job at Kuehne+Nagel?

Kai Miller: At Kuehne+Nagel, we take care of all issues related to energy emissions. Both in conventional energy consumption and in solutions to make it climate neutral. For this, we have developed various accounting mechanisms, work a lot with index providers and offer solutions for our customers.

One option for low-carbon transport is bio-fuels for shipping. Where do they come from at Kuehne+Nagel?

We have set ourselves the goal of using truly sustainable fuels. They are all waste-based. With bio-fuels, for example in road transport, there is a certain amount of ethanol, mostly derived from grain. And we don't think that's so good. We think that in the context of a sustainable supply chain, it should be a raw material or feedstock that you can't really use for anything else. The EU has issued a list that clearly defines the feedstocks for these bio-fuels. The first generation was mostly based on cereals, i.e. wheat, rapeseed or maize. And the next generation is based on waste, such as tallow or leftover cooking oil, sunflower oil or nutshells. The next generation will also use algae or sawdust. In Scandinavia, for example, there is a lot of waste from sawmills that can be reused.

You don't want biomass that can be used as food – the so-called plate-tank problem.

That is simply our maxim. We don't want to burn any edible raw material here. That must not happen. I don't think we would be doing anyone any favours with the sustainability approach. Our fuels, which we offer with partners, are based purely on waste materials.

Where do they come from? Where are they produced?

At the moment we use Used Cooking Oil or so-called Brown Grease. It's a little different in the collection of these raw materials. It comes from restaurants or crisp factories or commercial kitchens directly from the fryers. In the next technology step, that is then extracted by grease separation, which is already used in sewer systems. This is available in even larger quantities.

In what quantities does Kuehne+Nagel use these bio-fuels in maritime shipping?

At the moment they are still very small quantities. So container shipping uses about 75 million tonnes of fuel per year. That corresponds to about 230 million tonnes of CO₂. And bio-fuel technology will probably not be able to replace that completely. But it is a first step towards making individual quantities that are currently transported carbon neutral. And the technology is still developing. In the case of bio-fuels, there will be economies of scale in production, new feedstocks will be found, it will be correspondingly cheaper and also available in larger quantities. And the other thing is that the total fuel requirements of container shipping will be solved with other technologies.

I gather from this that we are talking about quantities of less than 1 per cent for the current bio-fuels.

We are at the very beginning of the technology, also the acceptance in the market, and the trend is increasing. This technology can definitely be expanded even further. And then it is definitely a fact that there will not be just one type of fuel in container shipping in the future. Different trade patterns will also support different energy sources - also in the landside infrastructure. There will be certain clusters that rely on one technology or another. But it also depends on the size of the ships. You won't be able to run a very large container ship with a battery. For smaller container ships over very short distances, it may be a solution.

Let's stay with bio-fuels. Are they really climate-neutral? How do you define that?

This is all laid down in great detail in the legislation. The EU's Fuel EU Maritime stipulates a very narrow framework for how such a fuel can be produced and also how the CO₂ savings are calculated. The collection of used cooking oil or sunflower oil, of course, consumes fossil energy. The truck goes to the restaurant, collects that, takes it to a refinery. There, energy is consumed to clean it up and turn it back into a usable fuel. Normally, this results in a CO₂ saving of 85 to 90 per cent. After all, the energy source is not a fossil fuel, but what energy is consumed to produce that is calculated very precisely and passed on to our customers in the documentation.

Kuehne+Nagel not only offers bio-fuels, but also compensation for conventional fuels. How great is the interest of customers in CO₂-free or -reduced transport?

We are surprised about the demand. We had bought certain quantities of bio-fuels and they were sold out in a very short time. Companies from the consumer goods industry in particular see this as a great advantage for communicating with their customers. After all, society is asking for climate-neutral solutions. Individual manufacturers have already come up with certain ways of communicating, for example via social media or logos printed on the packaging, or in direct communication via the internet. For example, they communicate: This product is climate-neutral in itself and also in its transport throughout the supply chain, this is an all-round ecological solution. There are, for example, car manufacturers who say: our e-mobile should not only run on a battery, but all suppliers will be obliged to do everything they can to produce a truly CO₂-neutral vehicle. Then, of course, one or the other will be forced to use the corresponding climate-neutral transport solution.

What percentage of your customers want this climate-neutral transport?

It depends on the industry. In the automotive industry or in the consumer goods industry, there are high double-digit figures, even with increasing growth, which we would not have expected. In other sectors, for products with low prices or large volumes, the demand is lower. But where you are close to the end customer, demand is rising steadily and is in the higher double-digit range.

What does climate-neutral transport cost the customer at Kuehne+Nagel?

It will definitely be a premium to the current standard of energy costs. The benchmark at the moment is the price for Very Low Sulphur Fuel Oil. That was the first regulation that was implemented in 2020. And I would say, at the standard available fuel, we are talking about a doubling or maybe tripling of the cost of fuel. Everybody can read about that in the usual indices that are used in the oil business. So this is a very transparent market and this uptake can then be broken down to the individual container.

Could you perhaps explain this with an example of container transport?

Of course, it is always difficult to name a fixed amount in a very volatile market. The oil business depends on the daily price. At the moment, we use a certain amount of bio-fuel that is subsidised by the Dutch government. To give you an example: A transport from Bremerhaven or Hamburg to New York costs an additional 100 US dollars on top of the regular fuel, which serves as a benchmark.

Per container?

Yes, for a 20-foot unit.

Bio-fuels are one thing, e-fuels, i.e. electricity-based fuels, are another. There are currently two technologies in the running: Methanol-based fuels and ammonia. How do you see it?

Any technology that helps reduce greenhouse gases is welcome. It's not just about the technology on the ship, but also about the infrastructure on land. There are different solutions for different ship sizes with different energy sources. And there is not only ammonia or methanol, there are also battery solutions. There is wind technology, so sails that are reinstalled. That might work better for bulk carriers than for container ships. In the future, it depends on the mix. There will not be one technology. Over time, different technologies will become established in different trade or trade areas. And we want to support all our shipping partners in all these technologies. We are able to present a relatively transparent pricing model for complete supply chain solutions. And our customer can then choose whether he wants to load on one technology or the other.

What is Kuehne+Nagel's goal in terms of climate protection?

As a company, we are aiming for 33 per cent CO₂ reduction of our total emissions by 2030, including suppliers and customers. That is our goal as a service provider. And we use the tonnage from our shipping partners and want to do everything we can to ensure that investments in new technologies are also communicated transparently. So that the customer then pays a possible surcharge with a good feeling. The fight against climate change will certainly not happen in vain. And we want to offer transparent solutions on our [Seaexplorer](#) platform. Today this can be bio-fuels and in the future alternative energy sources that help these technologies to establish themselves on the market.