



Three steps to sustainability

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Triple F, a research & innovation (R&I) programme of the Swedish Transport Administration, has been launched to aid Sweden's transport industry in its transition towards fossil-free operations. By enabling and facilitating comprehensive cooperation between the various stakeholders, it is expected to deliver actionable knowledge thanks to which in-country transport-related CO₂ pollution will go down in line with the nation's ambition of becoming, by 2045 at the latest, one of the world's first welfare countries with no net greenhouse gas (GHG) emissions. Changing the face of transportation is key in hitting that goal.

It'll be a balancing act – to bring about a relatively fast transformation that doesn't undercut Sweden's competitive position. It'll require putting in place an all-embracing transport system in which functionality takes centre stage. Challenges will be numerous and specific for different modes and regions. A common target, cross-sectoral collaboration, science-based grit work, and strong leadership will be what it takes to turn ambition into reality.

Two goals

The vision behind Triple F is to gather Sweden's top experts under one banner to work towards an agreed-upon goal. Their work, in turn, will serve as the basis for politicians to pass new legislation that facilitates the transition. Moreover, as the country is respected as a reliable partner, it can become a role model for others who also think conscientiously about the importance – and urgency – of reaching the global climate

goals as agreed in Paris a few years ago. Exchanging experiences and sharing best practices will be instrumental in combating global warming.

As such, the programme has set two targets for itself. First, to foster, through research & development, innovative solutions – improving existing as well as helping to create entirely new ones – that will make it possible to establish a fossil-independent transport system. Second, to set up a platform for building and disseminating competence among stakeholders. To do so, Triple F will PhD-train future experts by engaging them in solving challenge-driven projects that will encourage cross-disciplinary know-how as well as personal mobility. The programme's works are divided into three focus areas: policy, technology, and logistics.

Policy

This area is tasked with producing knowledge and tools to be used to hammer out a

roadmap to reach Sweden's climate target in a cost-effective way. The country sets out from its already agreed aim of decreasing domestic CO₂ emissions by at least 70% in the 2010-2030 period.

It'll be of paramount importance to provide both the private and public sector with incentives in order for them to implement, in succession, sustainable transport solutions, either by decreasing their dependence on fossil fuels or making a U-turn altogether. Measure types include administrative (regulations), economic (taxes, fees, subsidies), informative (info campaigns, support with procurement), R&I (research financing strategies), and social ones (infrastructure planning, public consultations). The tricky part will be to thoughtfully assess how these measures, taken alone as well as in combination, should be designed to help in reaching the climate goal without bringing about significant unwanted side effects, also Europe- and global-wise.

is statutory in the legal framework. As such, another task will be to ensure that well-researched solutions that deliver on their eco-promises can be legally implemented, so that private and public stakeholders won't have to make their way through a grey area – or not to advance at all out of fear of being suddenly cut short from the technology in which they invested.

Logistics

However, sometimes completely transparent to the general public, smoothly operating logistics is one of the backbones of a functioning welfare state. If Sweden wants to become a country independent of the use of fossil fuels, then new effective and secure transport solutions, that meet the demands of both the industry and the society, need to be put in place.

Logistics is, in fact, the end result of the two aforementioned focus areas – policies that take into account the challenges and opportunities of the 21st century make it possible to develop technologies that address the former and make the most of the latter, i.e., enable the introduction of innovative logistic solutions, both on the IT and hardware operational front as well as how these two interconnect for added supply chain value. That said, the relation between the three resembles more of a spider's web instead of a strict linear line, as research into logistics can give valuable input on what is needed technology- and policy-wise. In detail, this focus area will pay particular attention to the development of sustainable transport chains and, accordingly, to the rollout of new business and employment models.

Bringing it to the port

Triple F is a broadscale and multidisciplinary consortium that draws together expertise from all of Sweden, representing the society, industry, academia, and research institutes, all of which gives us a unique chance to tackle all the complex issues associated with making the country's transport system fossil-free. It won't be an easing task, but through cooperation, we'll – as the Swedish saying, used to describe an ultimately successful undertaking, goes – bring it to the port. ■



Photo: Markus Spiske/Pexels

Technology

It will be impossible to make the transport system fossil-free without eco-friendly technology, including ways that will decrease transport work, make available new fuel sources, and increase energy efficiency. This focus area will examine the possibilities, solutions, and the societal impact of new types of vehicles, infrastructure, energy carriers, all coupled with the increasing digitalisation of the transport & logistics business. That said, Triple F experts will also look into opportunities how to make better use of what is already in place, e.g., increasing infrastructure capacity by better planning transport flows, i.a., through increasing vehicle utilisation rates. The overarching goal is to surface knowledge, thanks to

which tech-solutions can be implemented faster, in a more cost-effective manner, and in a sustainable fashion.

What's important to fathom is that Triple F does not finance technological development – its task is rather to publicise the effects thereof and to put the spotlight on what technology can do in Sweden's pursuit of becoming a net-zero GHG country. In addition, the development and uptake of new technologies is heavily-reliant on what

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Triple F is the Swedish Transport Administration's research and innovation initiative contributing to the transition to fossil free freight transport in Sweden. Triple F's headquartered in the Lindholmen Science Park in Gothenburg, with local offices also in Stockholm, Linköping, and Lund. The project's partners are always welcome to visit us and discuss ideas. We also welcome anybody who'd like to take advantage of our facilities to meet and work. For more info on the initiative, its partners, and projects please head to <https://triplef.lindholmen.se/en>