

# Tyromer turns old tires into new tires in Arnhem

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Turning old tires into new rubber and then make tires again. The Canadian company Tyromer is enabling this with their technology. Their circular formula is a solution to the four million tons of waste amassed annually in Europe by used car tires. Tyromer will start its European branch in Arnhem and open a factory where 'compounders', or companies that mix and sell materials, can see how they can apply the recycling method themselves. Oost NL supported Tyromer in setting up operations in Arnhem and, as fund manager from MKB Kredietfaciliteit Gelderland (Topfonds Gelderland), provided financing for the company.



The factory is located at Industriepark Kleefse Waard (IPKW) in Arnhem and is now being furnished. 'We expect to be able to start early in the summer,' says Jos van Son, managing director of Tyromer Europe. The establishment of the Canadian company in the Netherlands was a bit of a challenge: 'Simply because Canadians do not have a network here', says Van Son. 'Oost NL put us in touch with municipalities where we could possibly settle and helped us find the location for the factory. We also received help from Oost NL and the Netherlands Foreign Investment Agency (NFIA) in setting up a Dutch branch. This involved all sorts of paperwork, including applying for a bank account number. Quickly arranging these matters was essential to Tyromer because we were eligible for a DEI subsidy for processes with a positive CO2 impact. Our recycling formula meets all the requirements, but you can only receive a subsidy if you are officially a Dutch branch, with a Dutch bank account number, among others. Oost NL and the NFIA know the banks, the regulations and the subsidy providers in the Netherlands and that was very convenient for us as a Canadian company.'

#### Investment

Through fund manager Oost NL, an investment followed from MKB Kredietfaciliteit Gelderland (MKG), which is part of Topfonds Gelderland. The province of Gelderland opened this fund last year to support innovative SMEs that have difficulty in finding capital due to Covid-19. The fund focuses on Gelderland SMEs that innovate in food, health, energy and environmental technology, manufacturing, circular economy, and smart industries. The investment involves a group of Dutch co-investors in addition to MKG. This investment finances the machines for the pilot plant with which we will demonstrate our recycling method,' says Van Son.

René Brama, investment manager Tech at Oost NL, is enthusiastic about Tyromer's role in the circular economy: 'Tyromer has a unique solution to a big problem: mountains of car tire rubber that cannot be reused. Companies like Tyromer, which have smart tech solutions for the world's challenges, are a welcome addition to the East Netherland's ecosystem. The fact that Tyromer is establishing itself at IPKW, where many companies are working on energy and circularity issues, is good news for business activity in our region.' About 12 people will be employed at Tyromer's factory.

#### Product of Mother Nature

'Much of the 'waste' rubber is a product of Mother Nature. It is a wear-resistant and strong material. That should not be destroyed,' says Van Son. 'Tyromer, led by Canadian professor Costas Tzoganakis of University of Waterloo, has figured out how to turn the rubber from used car tires (and any other rubbers) into new rubber. As inventor of the process, Tyromer now sells licenses to compounders, who can then use it themselves. The more companies that recycle rubber, the greater the environmental benefit.

It's not just the reuse of the material that is environmentally friendly. 'This method also saves 94 percent energy compared to making 'virgin' rubber,' Van Son emphasises.

The reason this did not happen before is that until recently, recycling rubber was a puzzle, even for scientists. 'Making rubber, also called vulcanization, can be compared to boiling an egg. Once it is boiled, it is extremely solid and you can never reduce it to a raw, liquid egg again. With our formula, now you can finally do that with rubber,' explains Van Son.

### Cooperation in the region

In the factory in Arnhem Tyromer can convert three rubber streams into new rubber: natural and synthetic rubber can be extracted from car tires, and there is also industrial rubber extracted from seals, among other things. Van Son: 'To be able to recycle other types of rubber in the future and thus save them from the waste mountain, there is still a way to go in development. We are going to collaborate with the University of Twente and Windesheim University of Applied Sciences, both with a reputation in the field of polymers and rubbers in particular.'











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