21. **Mottrix**

An Invention that is up and rolling

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Gilles Falisse © Muriel Thies

When you arrive at Gilles Falisse's, you immediately enter a world apart: in the centre of a forest of statues assembled from stone and metal, stands the AutoMottrix. The solar prototype of the pedal-driven vehicle, the 'cuistax', is awaiting its great departure to the Alps, a regular destination for the artist when he's seeking out raw materials for his works and wants to test his new Mottrix models. The man himself has oily hands, but his face lights up when he starts to talk about the link he has woven between the two facets of his activities. What possible relationship can there be between his work as a sculptor and as inventor of ecological mobility solutions? Creativity, of course! But also a deep love of nature... "I've always been inspired by mechanics and nature. As a child, I often spent time in the Ardeche, running wild among the sheep looking for fossils... At that time there were still abandoned car bodies left to rust in the fields and often used as hen houses. At nightfall, you would also see strange contraptions used by the farmers to load their crops into the trailers: kinds of pipes which looked like dinosaurs from a distance." It was partly this, no doubt, that inspired the artist in the design of his first metal creatures, whose silhouettes - long before Speilberg's Jurassic Park – capture the imagination of visitors to the Musée Royal des Sciences Naturelles in Brussels, young and old alike.

What possible relationship can there be between his work as a sculptor and as inventor of ecological mobility solutions?

His ideas for mobility solutions go back a number of years: it was at about the age of 14 that the young Gilles mounted a moped motor to the rear of a child's scooter for the first time. "When I tested it, I went backwards! But I then sorted the problem out. So that was my first test..." And the first forerunner of the Mottrix was once again a scooter that inspired the inventor's ideas and was to take its place, reworked, in the development of the bicycle

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motor. “In my work as a sculptor, I rework objects, transform them and give them new life. That’s how the Mottrix came into being.” When he got to know a cycling enthusiast, Gilles Falisse tried to cycle with him. Discouraged by the efforts needed to cycle with his cycling fanatic friend and with painful memories of every single hill struggled up during that outing, Gilles Falisse decided to invent a machine that could be adapted to bicycles, and to which the motor of a cordless screwdriver could be connected! “That’s what I did in my workshop: Straight away, I was able to ride round the garden with my screwdriver attached to my bike!” While visiting a friend, he came across an electric scooter. Eureka! “As soon as I saw it, I realised it was just what I needed: by cutting a similar scooter in two, I had the beginnings of a universal arm and elements of a motor which could be adapted to any bicycle... A scooter disassembled and reassembled backwards!”

The kit essentially consists of a light motor, easily fitted to almost any type of bicycle in less than 30 minutes.

On the market since 2007, today the Mottrix is in its third improved embodiment. While the first was manufactured completely in China, Gilles Falisse was determined to site production in Europe as far as possible. That is now the case, because the chassis, bodywork, springs and fastenings of the Mottrix are manufactured in Germany while the wheels, carrier, electronics and motor are made in Taiwan.

The kit essentially consists of a light motor, easily fitted to almost any type of bicycle in less than 30 minutes. After installation, Gilles continues, the Mottrix can be removed from the universal arm in 1 minute if the ordinary screws are replaced by quick-connect screws. Used with a ‘standard’ bicycle, this system offers a no-pedal range of approximately 20 kilometres with its pair of lead batteries.

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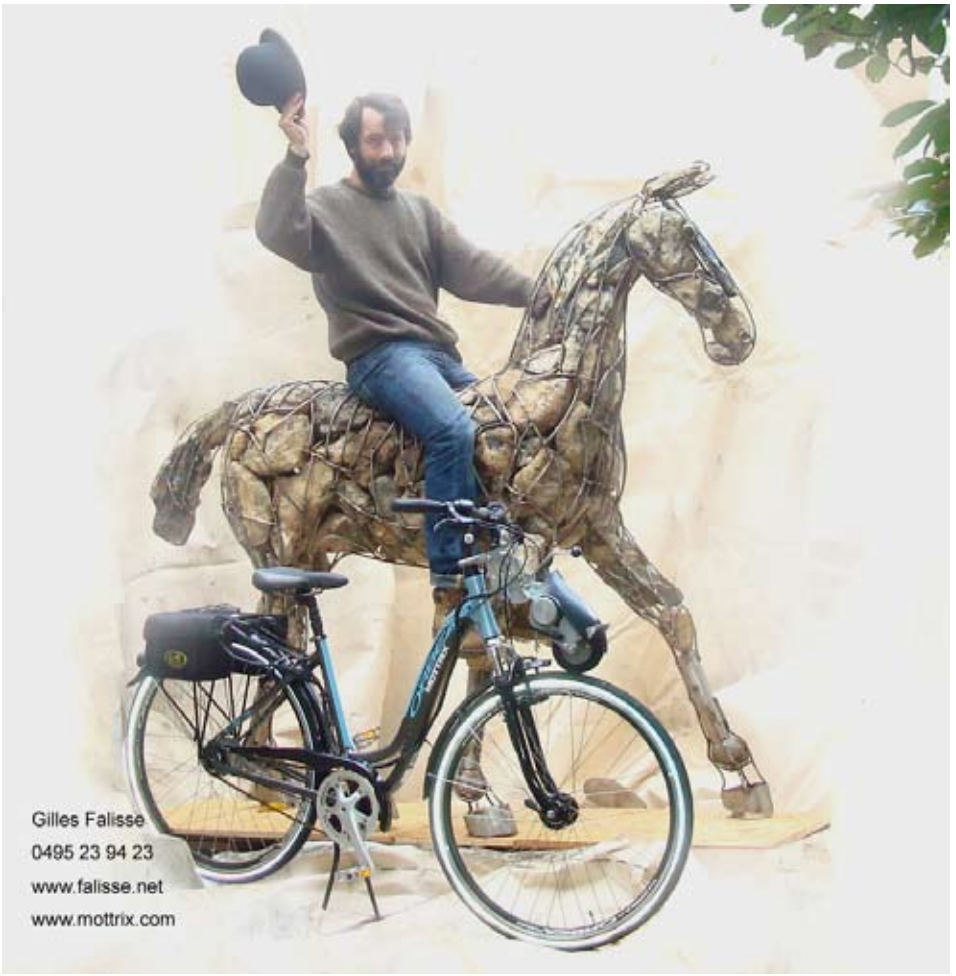
Lithium batteries are also available as an option. The Mottrix is proving an attractive solution for those who hesitate to take to their bicycles for fear of arriving hot and bothered to work, or too much exertion, up hills for example... “The Mottrix encourages cycling among people who wouldn’t normally consider it,” continues Gilles. “Last year, 115.000 electric bicycles were sold in Holland. I know that 3 years ago 15.000 were sold in France and the figure is now 60.000. So there’s a huge market in which the Mottrix has a place, because it is innovative and is completely distinctive from other systems…”.

Once I have invented something, I want to invent other things.

But it is not enough to have a good idea, the inventor notes: You have to fight every day to bring it to life and particularly to defend it from a commercial point of view. “Filing the necessary patents costs a fortune. When we needed to expand to the international phases, my lawyer told me it would cost 22.000 Euros. I asked for a list of countries and prices, to make a choice. We made a phone call to the national patent office in Munich and realised this was cheaper. So we paid for our patent filings ourselves, country by country: in this way, I was able to make significant savings, which meant that we could extend the patents worldwide. It’s good to know that there is absolutely no requirement to go through accredited patent agents (although professional help can be useful for technical writing): all you have to do is approach the Ministry of Economic Affairs, where the people are charming!”

There remained the question of finding a suitable distribution channel for the Mottrix. The 1.500 motors manufactured so far have all been sold. For now, the internet shop window is working well. Gilles Falisse sends motors by post directly to customers at the retail price (€423). He



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also sells to professionals at a special rate. It is here that finding new channels would appear to be necessary. “The problem is that the Mottrix is not expensive compared with its competitors: professionals consider that they are not making enough on them. When they sell a traditional electric bicycle, they are gaining an additional margin of 1.500 to 3.000 euro!” So this is pushing Gilles Falisse to seek out other potential purchasers. But in particular the inventor is looking for a buyout. Since he left the Gaggenau family firm, which he was destined one day to run, at the age of 26 in order to establish himself as an artist, Gilles Falisse does not plan to spend the rest of his life running a commercial undertaking... “Once I have invented something, I want to invent other things. That is something I do every day, through my system of sculptures for example: this artistic work is really my true calling.” Gilles Falisse has developed a unique sculpture technique: a multitude of small elements of recovered metal, welded together, form a double carcass, a sort of exoskeleton for his sculptures which he simultaneously fills with pebbles and stones of different sizes... Still on the artist-inventor’s design table: the AutoMottrix©, an exclusive solar electric vehicle. This is a project currently at the testing stage for a new light vehicle, ideal for tourism but also in large business premises and on large estates. Close to Gilles Falisses’ home stands the Maison Mottrix, a modulable construction made in the workshop using an innovative technique: made up of young trees of about 10 years old (like larch, Douglas fir, pine, spruce), iron and - subsidiarily - stone, this prefabricated house can be erected in a matter of hours without a foundation, and can be removed just as easily after a few days or several years to be re-erected on a site with traditional foundations, with no risk of damage. Gilles Falisse nurtures ideas that move the world, both in a concrete and figurative sense...

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Isabelle Masson for REcentre

Interviewee / Gilles Falisse, Artist-designer

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Sector • Retrofit motors for bicycles

Year of foundation • 2007

Number of employees • 1

Turnover (2009) •
71.000 EUR