

WHAT'S

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Making mobility
more sustainable

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World Champion
DOMINIQUE AEGERTER
with the bioflax fairing

Initiators Project Motonext

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Making mobility more sustainable

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It is our duty to think about the future, for ourselves but certainly also for the next generations



STEFANO MANZI
2023: 2nd World Supersport

International recognition

Project Motonext is supported by the national motorsport association KNMV. The international motorsport federation recognizes it as an official FIM Innovation Project. The National Sports Innovator Prize, an initiative of the Ministry of Health, Welfare and Sport, is awarded annually to innovative products or services in the field of (top) sports and exercise.

Innovative parts



Rear flax compartment

Plant-based substitute for gasoline

Upper flax fairing

Rear flax fender

Front fender

Brake lining

Tyres
(tyre warmers unnecessary)

Brake lining

Lower flax fairing

Engine oil (re-refining)



Development of the sustainable race engine

- A prototype race engine has been designed and built using sustainable materials and technologies.
- The engine has been optimised for performance and sustainability, with a focus on fuel efficiency and emission reduction.

Ten Kate Racing and Motonext: a step ahead

- The engine has been tested in various conditions to evaluate its performance, reliability and durability.
- Data was collected on performance in comparison to traditional race engines, including top speed, acceleration and fuel consumption.

Test results

Biobased renewable oil:
developed by our partner Putoline
in cooperation with Motonext



BLUEPRINT
FOR THE
GREEN
FUTURE

- Re-refined and re-used oil
- Carbon components will be replaced by plant-based products
- Plant-based substitute instead of petrol
- Brake pads without hazardous heavy-metals



- Organic (flax) components
-94%
CO₂-footprint
compared to carbon fiber components
- Recycled oils
-80%
CO₂-emissions
compared to classic lubricants from crude oil
- Biofuel
-70%
CO₂-emissions
compared to fossil fuel

What can be done now to make mobility more sustainable?



Wim Mulder
DIRECTOR KNMV

This race team from Nieuwleusen is unleashing a revolution by racing on plant-based fuel



RECONDITIONED OIL

-80%
CO₂ emission

BIO FUEL
instead of fossil fuel

-75%
CO₂ emission

BRAKE PADS
made of natural materials

100%
copper, nickel and antimony free

BIO (FLAX) PARTS
instead of carbon components

-94%
CO₂ emission

Innovations



Engine Oil Reco Unit

Putoline and Ten Kate Racing have developed the so-called Engine Oil Reco Unit as part of the Motonext project. This ingenious device gives engine oil a second life. After a training session or race day, the oil does not have to be discarded or destroyed. After being filtered, the oil can be reused immediately. Our challenge was to reduce engine oil consumption at Ten Kate Racing. By using it for a longer period, we ended up with a significant environmental gain. We designed a reconditioning unit that finely filters the product over a longer period of time.

A 50-MICRON FILTRATION ELEMENT

A 60-LITRE STORAGE TANK FOR RACE-USED ENGINE OIL

A LIQUID PUMP

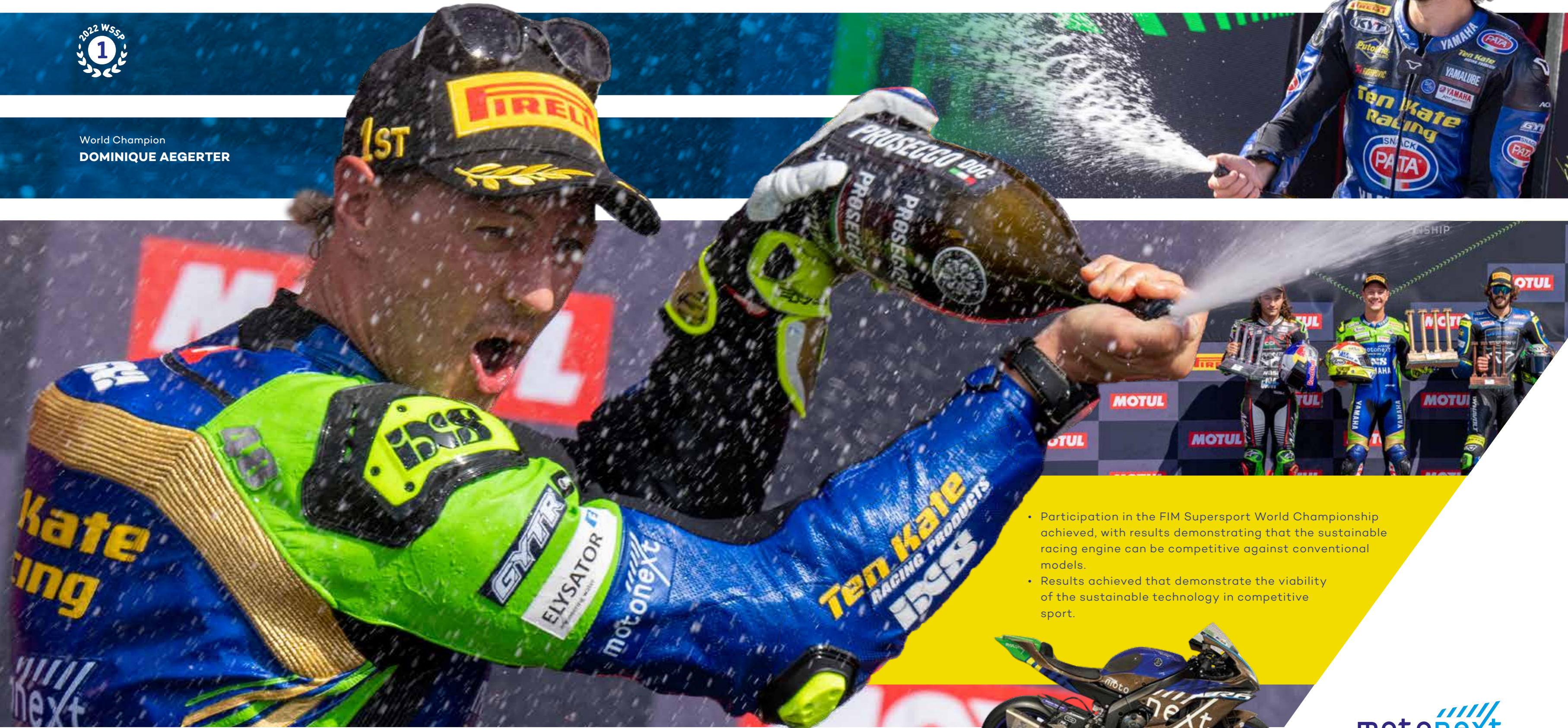
A MICROFILTER OF TWO MICRONS ABSOLUTE

THE MACHINE'S STRENGTH LIES IN MAKING IT EVEN CLEANER THAN IT ORIGINALLY WAS

Competitive participation



World Champion
DOMINIQUE AEGERTER

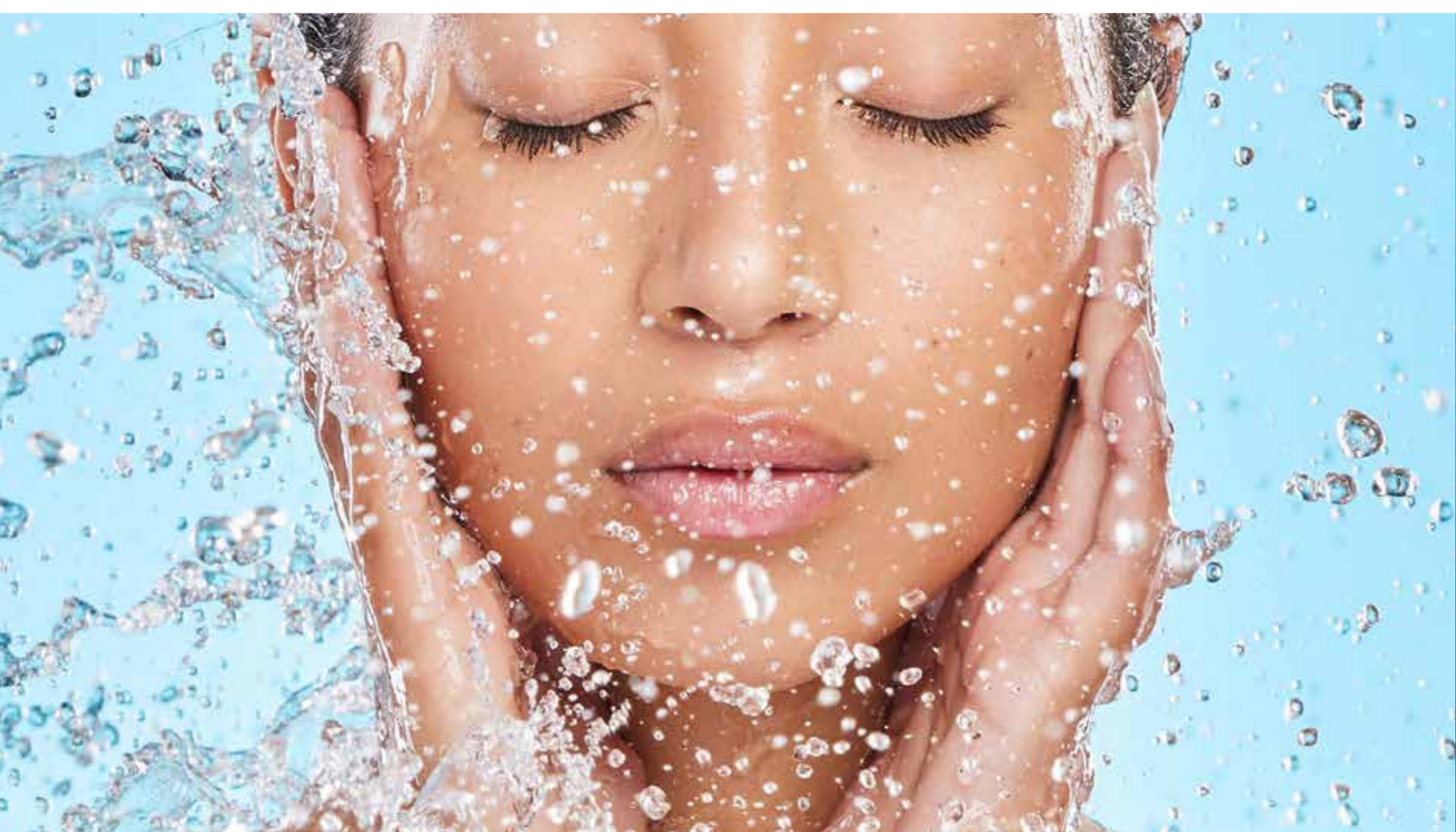


- Participation in the FIM Supersport World Championship achieved, with results demonstrating that the sustainable racing engine can be competitive against conventional models.
- Results achieved that demonstrate the viability of the sustainable technology in competitive sport.





From project to product



Brake pads
made of
natural
materials

- ISO GEL-COATED LAYER OF 800-900 μ M
- 1 LAYER OF FLAX OF 422 G/M²
- 1 LAYER OF FLAX FOUR-AXIAL OF 783 G/M²
- 6 MM CORECORK NL-200KG/M³ WITH PERFORATION



Bio based
shower tray

Plant based
fuel

Re-refined
and re-used
oil



Identification of potential spin-offs for industrial applications, such as the use of sustainable materials in the construction sector or improved mobility solutions.

Collaborations and partnerships have been developed with industry partners to further commercialise the innovations.

Dissemination of knowledge



Impact on racing

- Publications and presentations have been carried out to share the knowledge and experiences gained with a wider audience, including scientists, engineers and the general public.
- Workshops or seminars have been organised to inspire other industries to implement sustainable technologies.

First steps have been taken towards a cultural shift within motor racing towards greater sustainability, including involvement of teams, sponsors and fans. Each of these results contributes to the wider objective of the project: the sustainability of global motor racing and the development of valuable industrial applications.

ARE YOU READY

FOR THE NEXT STEP?



MORE INFO

