



A MOBILE LABORATORY TO EXPLORE BIOLOGICAL DIVERSITY OF EUROPEAN COASTS

Press release,

In Ladon, on the 2nd of August 2023

Having started in April 2023, **Traversing European Coastlines (TREC)** is a **European interdisciplinary expedition led by EMBL together with many partners** aimed at understanding the reactions of coastal biodiversity to external factors in order to better anticipate their future impacts. To support this large-scale two-year project in 22 countries, **Touterkamion Group** was asked to **design and manufacture a mobile unit that could accommodate a high-end laboratory.**

A laboratory as close as possible to the field

As the coasts host both a lot of life and human activity, scientists have chosen to focus specifically on the analysis of samples on land and at sea along the coastline. Indeed, many external factors such as pollution, human activity, construction, agriculture and global warming have repercussions on biodiversity. **To effectively study the biological complexity, scientists need to be able to analyse samples effectively as soon as possible after they are taken from their natural environment.**

It is with this in mind that EMBL placed an order with the company from the Loiret: **Touterkamion Group to design and manufacture a mobile laboratory able to carry advanced technologies and bring them directly to sampling locations across Europe.** This laboratory on wheels close to the field will allow scientists to observe unknown data and answer new questions.

This great challenge was taken up by the French manufacturer specializing in tailor-made mobile solutions since it was able to integrate state-of-the-art equipment into a trailer: cutting-edge light microscopy, sample preparation for (cryo)-electron microscopy, and single-cell genomics as well as tools for standard measurements from soil, air, sediment, and water samples. Consequently, the analysis of ocean and coastal biodiversity at an unprecedented level of detail and precision is made possible. The links between humans and the planet and between terrestrial and marine environments still hold many surprises. **This mobile unit opens the door to new discoveries enabled thanks to the design and construction ingenuity of Touterkamion Group's teams in partnership with EMBL.**

For **Mélanie Asselin**, Sale representative on the project EMBL at Touterkamion Group: *“The context of this project immediately seduced our teams with its environmental dimension. It quickly appeared that this project, by its scale, would become a partnership. Working transparently, in contact with competent, efficient, and pleasant people, we formed a complementary team throughout the period of the mobile laboratory's manufacturing. This project is certainly one of the most enriching projects I have joined in since it combines*

Toutenkamion's know-how and the advanced equipment of EMBL. I have been learning every day about the world of EMBL and it was great!

For **Franck Neveu**, Project Manager responsible for the EMBL project at Toutenkamion Group: *“The main challenge of this large-scale project was to understand the high-tech equipment that would be integrated into this new unit, as well as to understand the extent of the jobs that would be carried out by the scientists. A visit to the EMBL site in Heidelberg allowed us to meet these people, to discover their daily work tools, to exchange and understand their interactions. The major objective: offer them pleasant working conditions in this new environment that is the mobile laboratory!”*

For **Corentin Glaume**, Technician on the mobile lab at Toutenkamion: *“I am proud to have been working on the EMBL project, first on the plans and then on the manufacturing. The most complex but also the most challenging was to find the right electrical distribution to power all the equipment integrated in the truck.”*

For **Yannick Schwab**, Team Leader, and Head of Electron Microscopy Core Facility at EMBL: *“To enable molecular and cellular analysis, we needed to bring the state-of-the-art technologies as close as possible to the environment and, to do so, we have developed, in the collaboration with Toutenkamion, an advanced mobile laboratory where state-of-the-art machines have been settled. We believe that the use of the mobile lab will go far beyond the TREC-expedition with a growing demand for this service to answer diverse questions.”*

For **Nikolaus Tobias Leisch**, Operational Manager- of the EMBL Mobile Services: *“During the last year, I've been working with colleagues from Toutenkamion to realise a mobile lab in a truck unit. Usually, we are going to stay one month on site and, together, with my team, we will then enable scientists from EMBL, from partner institutes and local institutes to do their science on the spot.”*

About Toutenkamion Group: Toutenkamion Group designs, manufactures and commercialized mobile units in more than 40 countries. With many years of experience and as the European leader, the firm develops customised mobile solutions put on light commercial vehicles, trucks, trailers, and containers. Our mobile units developed in France thanks to the knowledge of several generations are recognized worldwide for their robustness, durability, and reliability.

About EMBL: The European Molecular Biology Laboratory (EMBL) is Europe's life sciences laboratory. We provide leadership and coordination for the life sciences across Europe, and our world-class fundamental research seeks collaborative and interdisciplinary solutions for some of society's biggest challenges. We provide training for students and scientists, drive the development of new technology and methods in the life sciences, and offer state-of-the-art research infrastructure for a wide range of experimental and data services.

EMBL is an intergovernmental organisation with 28 member states, one associate member, and two prospective members. At our six sites in Barcelona, Grenoble, Hamburg, Heidelberg, Hinxton near Cambridge, and Rome, we seek to better understand life in its natural context, from molecules to ecosystems.

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