RESULTS
Most of the targets were reached. The pilot managed to organise and collect GPS data, and created a way to collect maintenance data correctly. A dashboard page was developed where users can visualise maintenance reports and cost summaries.

IMPACT
In terms of impact, the pilot has reached TRL6. This means that the company has developed a working prototype that users can interact with. This prototype is a minimum viable product (MVP) with the core features needed to validate the business concept.

ABOUT
BikeSquare is an innovative startup with a social vocation that has developed high expertise in the cycling sector and has defined a model of cycle tourism circuit that contemplates the networking of public and private entities. Predictive maintenance is a novel research topic that not only allows e-bike users to ride bicycles safely but also helps e-bike renters to save money and time. For this pilot, BikeSquare would like to implement a predictive maintenance system for the e-bikes and an alert system that provides the status of the bicycles and IoT devices.

CHALLENGE
The pilot needed to assess the correct algorithm to perform the prediction of damages and failures and the detection of abnormal behaviour in the bikes. It needed to verify if the technical infrastructure was able to execute the selected algorithms and find the optimal evaluation methods.

HOW THEY USED EOSC SERVICES
The pilot used and tested the EGI-ACE cloud computing and online storage services to develop and test services for: developing a pipeline that collects, processes, and predicts possible damages or failures in the electric bikes, and collecting the information produced by the platform. A system was developed to detect abnormal behaviour in the rented bicycles, and to evaluate the performance of the algorithms.