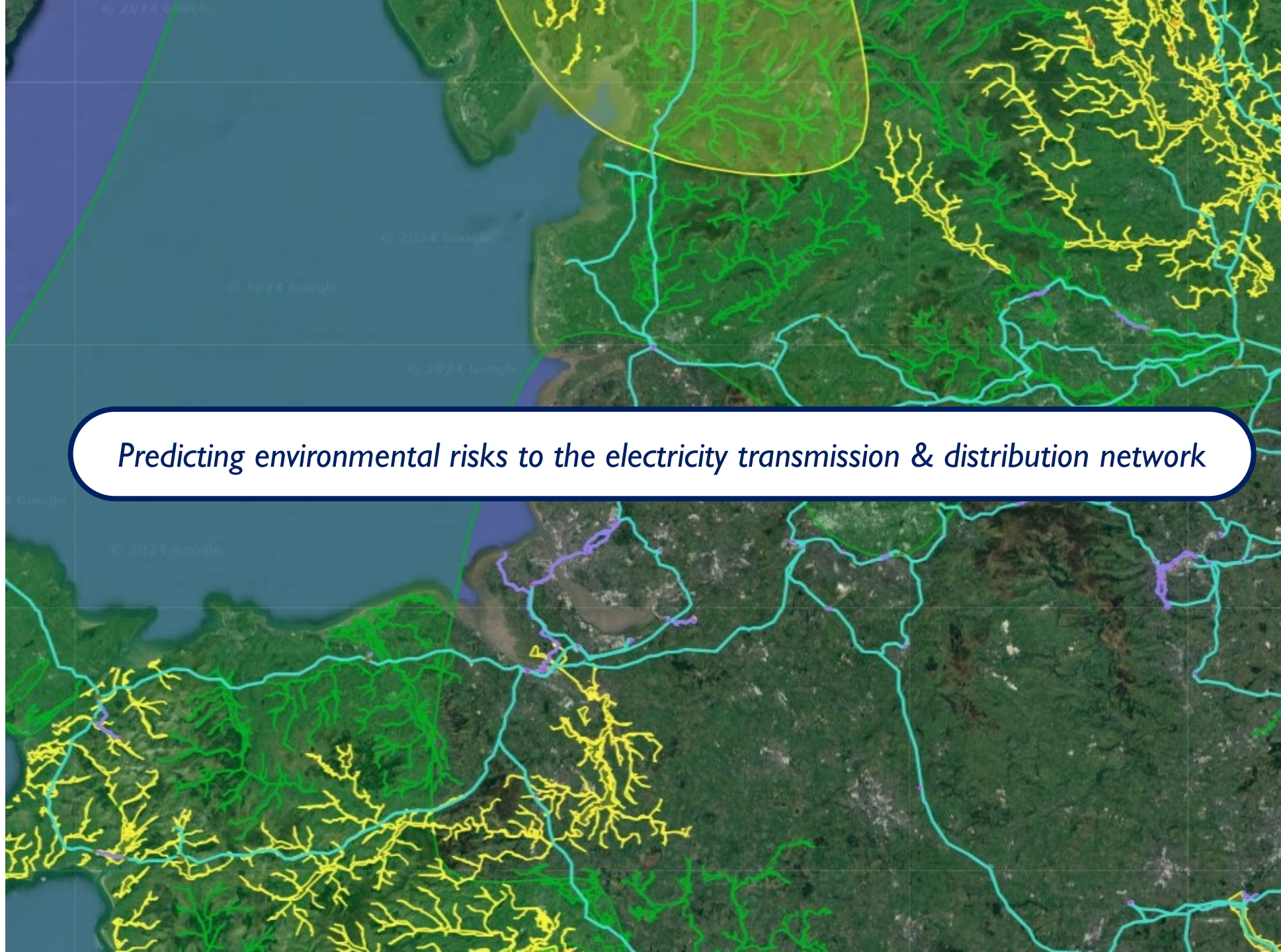




UNIVERSITY OF
LIVERPOOL

Predicting environmental risks to the electricity transmission & distribution network



The challenge

The increasing number of extreme weather events exposes assets to a greater risk

At present, all risk notifications, are manually reviewed by National Grid Electricity Transmission (NGET)'s Control Room, this process is time consuming and resource intensive.

Increased pressure could limit NGET's ability to recognize escalating environmental risks. Failure to do so could result in additional pressure on the network and its ability to maintain electricity supply.

Project Overview



Problem Statement

- ◆ NGET uses multiple sources of information for assessing environmental risks to assets
- ◆ Frequency of alerts and current practice is time consuming and resource intensive
- ◆ Limited ability to recognise escalating environmental risk

Solution

- ◆ Display NG assets
- ◆ Display flood data from the FFC, Met Office & Environment Agency
- ◆ Display flood sensor values from Previsico
- ◆ Display projected erosion data from UoL
- ◆ Display now casted & forecasted risk to assets

Vision

- ◆ Trial the prototype tool alongside current practice in the control room
- ◆ Evaluate performance and benefits
- ◆ Creation of a backlog for functionality development
- ◆ Potential integration with NGET systems working towards BaU

Project Overview



Weather Alerts Tool - Prototype nationalgrid FRAZER-NASH CONSULTANCY

Alerts | Erosion Force refresh live data | Reload with dummy data | User icon

The map displays a satellite view of a rural landscape with yellow and green erosion contours. A red circle highlights a specific area, and a white circle highlights another. A timeline at the bottom shows a play button at 16:00 on Tuesday, followed by Wednesday, Thursday, and Friday.

Left Panel: Zoom in (+), Zoom out (-), Layers, Filter

Right Panel: Warning icon, Refresh icon, Print icon

Bottom: Leaflet | Satellite imagery: Google | Icons by icons8 | Charts by Chart.js UNIVERSITY OF LIVERPOOL | PREVISICO

Previsico solution attributes



Previsico solution attributes



nationalgrid

Benefits

SMART Maintenance enables NG to do more with less

Minimises the likelihood of hazards and environmental risks.

Reduced false alarm dispatch costs



UNIVERSITY OF
LIVERPOOL

Apprentice: [Apprentices](#)

Graduate schemes: [Graduates](#)

Jobs: [National Grid Jobs](#)

GB Innovation Projects | [ENA Innovation Portal](#)

Electricity transmission innovation | [National Grid ET](#)



Thank you for listening.

Our LinkedIn Page
box.NG.ETInnovation@nationalgrid.com