Engagement Showcase

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Real-World Industry Project Introduction

Employability

Employability is currently an important focus for universities

It influences the rankings of universities which drive student recruitment in the UK

Teaching and assessing real-world skills, are undoubtedly important for future employability

Why engage with industry for teaching and assessment purposes?

- Improving employability of our students

- Increasing student engagement and enthusiasm for topic

- Demonstrating relevance to practice

  - Students as 'consultants' or 'experts'

- Enabling teaching-based research?

  - Students as 'researchers'

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Real-World Industry Project
ORTEC Project

We leverage data & mathematics to create value for businesses and society at large

ORTEC

Real-World Industry Project
ORTEC Project for MSCI517

Project-based assessment tends to be fairly large scale, covering all aspects of the identified learning outcomes, with a fairly generous maximum timeframe set for completing them

For MSCI517, the project tasks were designed such that they can be solved by the majority of the students but generate challenges for more advanced students

The project included open-ended elements to encourage students

Real-World Industry Project Pros

The students were operating in an environment that is close to reality

The project gave the students a strong sense of accomplishment as they have generated a real application

The students were motivated to complete the work for grade, in addition to the fact that they appreciated the opportunity to connect their creativity with programming

Real-World Industry Project Cons

Students are penalised if they are unable to spend enough time completing the tasks

Project-based assessment is more vulnerable to plagiarism than other assessment methods

Knowledge Transfer Partnership

- The Knowledge Transfer Partnership scheme helps businesses in the UK to grow

- The academic partner will help to develop the project, provide academic input and recruit an associate

- The scheme can last between 12 and 36 months

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Knowledge Transfer Partnership Optrak

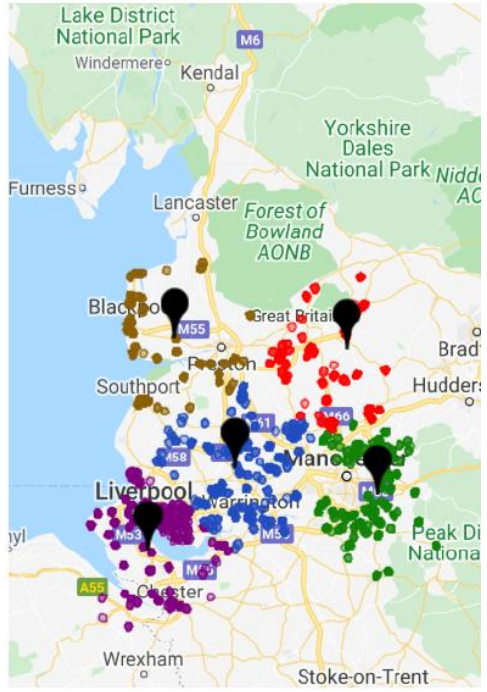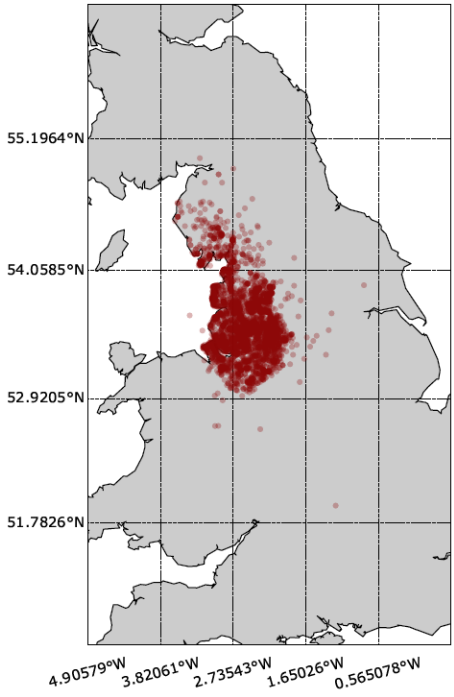- Developing and implementing techniques for routing problems

Consultancy Service

- Consultancy is the provision of expert advice based on existing knowledge

- The University provides a managed service for consultancy, supporting pricing, negotiating, contracting and invoicing
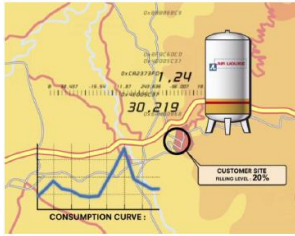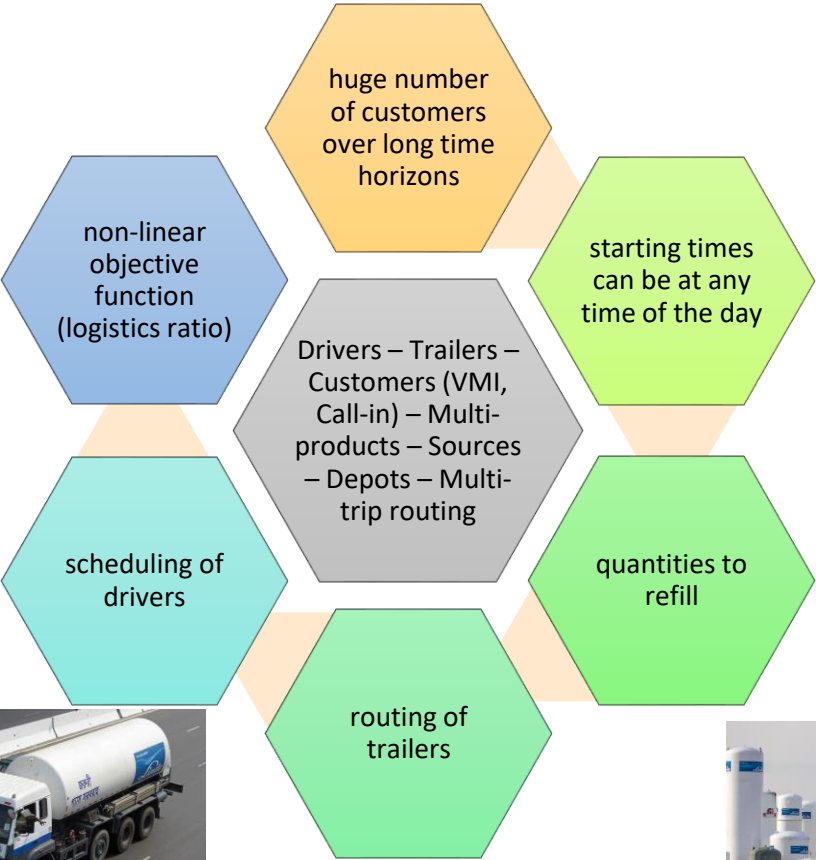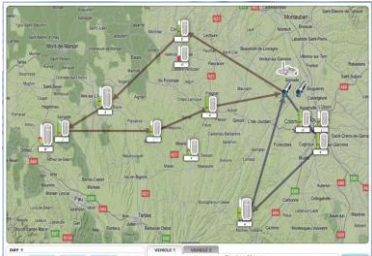
Consultancy Service
NWAA – Project 3

Consultancy Service Linde

huge number of customers over long time horizons

starting times can be at any time of the day

non-linear objective function (logistics ratio)

Drivers – Trailers – Customers (VMI, Call-in) – Multi-products – Sources – Depots – Multi-trip routing

scheduling of drivers

quantities to refill

routing of trailers

Benefits

- Knowledge exchange

- Creating impact

- Research publications

- Extending networks

- Informing new research ideas

References

- https://www.gov.uk/guidance/knowledge-transfer-partnerships-what-they-are-and-how-to-apply

- https://www.lancaster.ac.uk/research/research-enterprise-services/consultancy/

Thank you for your attention!