Live Labs Lessons Learned

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The Live Lab programme

- **£1.975m** ADEPT funding+ over **£600k** leveraged internally and across the Kent Lane Rental Fund, with investment ongoing
- Over **15** partners, including **3** universities and **10** start-ups
- Over **16** individual projects in delivery, ranging from **£15k** to **£400k**
- Projects ranged from **data-science**, through to **intelligent materials** and **remote highway defect detection**
- Live-labs provided an innovation catalyst, drawing in other parts of the Kent business to align strategy and delivery of technology and innovation

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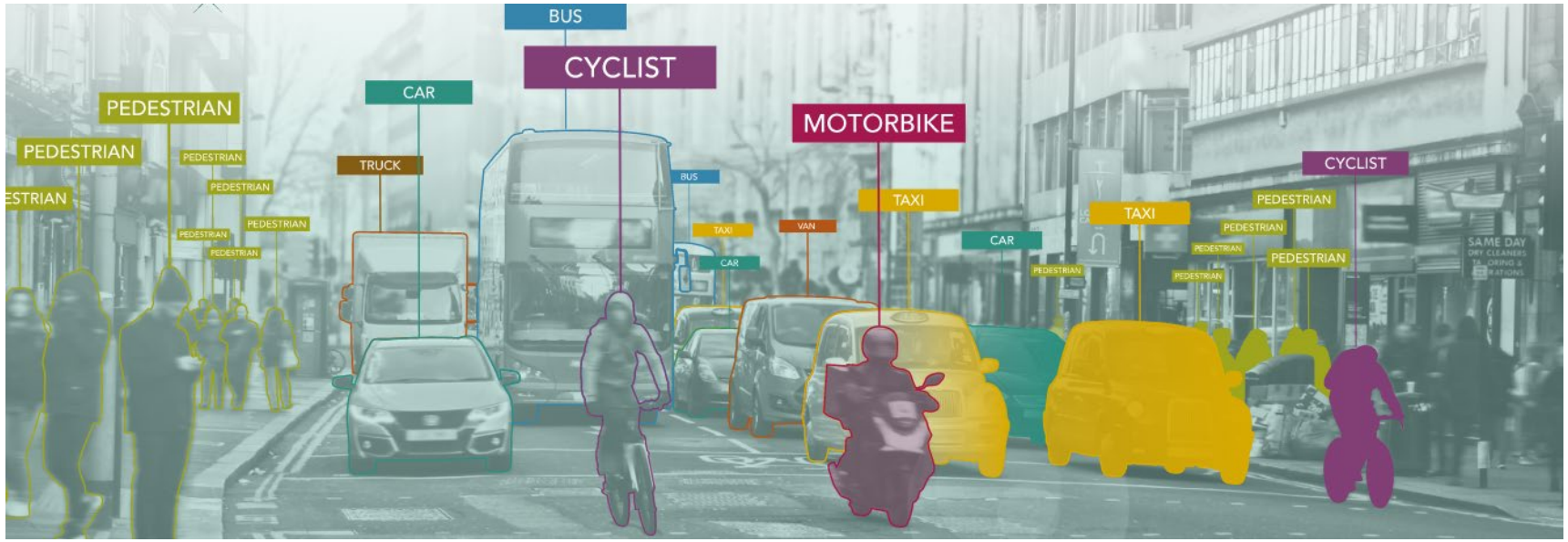
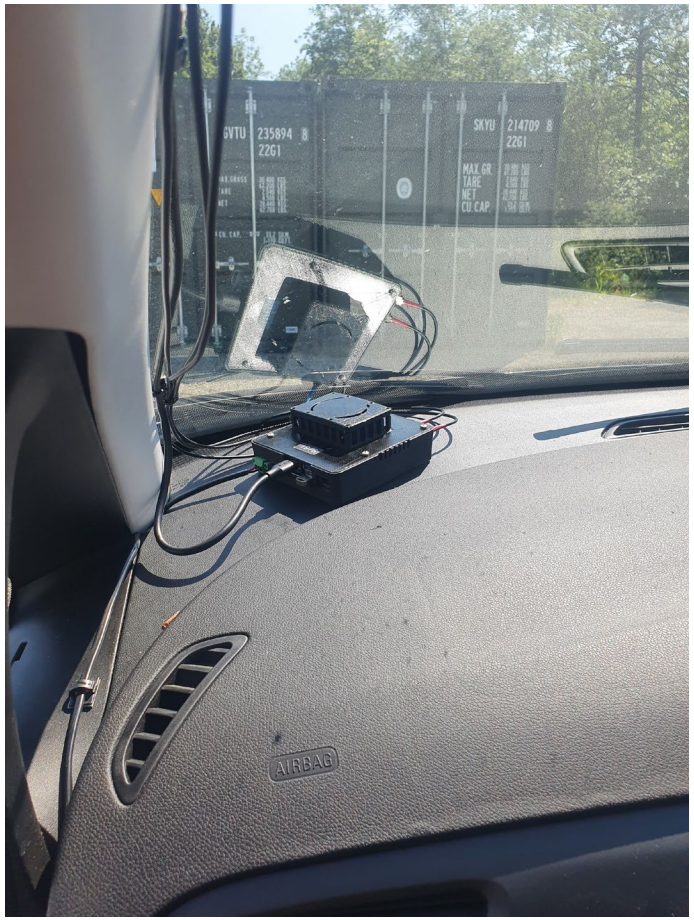
Vivacity

- The aim of this trial was to install cameras to monitor traffic, before, during and after schemes. The cameras use AI technology to pick up different vehicle types and can pick up crashes and collisions.
- We purchased 32 cameras out of the Live Labs money, and these are now part of BAU funded by the business



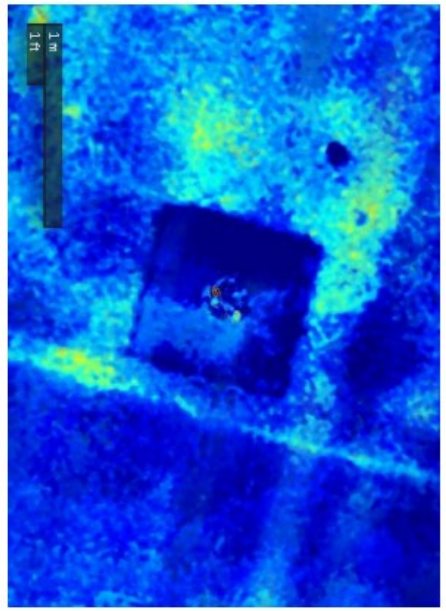
Route Reports

- This was our remote pothole detection trial, working with Route Reports, a fairly new company to market. We placed sensors into highway inspector vehicles to pick up road defects while they are going about their daily business
- We worked in collaboration with Medway Council on this trial, they installed a number of sensors in bin lorries
- This trial is still ongoing and Route Reports have increased functionality as the system continues to learn and develop
- One of the aims of this trial was to compare the data with another, to confirm reliability and accuracy. We will be comparing the data with sensors from Vaisala which was installed alongside the Route Reports system



Drones

- Phase 3 commenced July 2023 – high speed roads
- We have completed 2 phases of this trial so far which were both a success in collecting the data we intended to.
- Phase 1 we were looking at pothole and road degradation in a car park at the Kent Showground.
- Phase 2 was completed over a section of the A20 near Lenham, looking at road degradation, markings, utility assets and tree canopy coverage.
- This trial was in collaboration with Amey VTOL, Collins Aerospace and Aviat Drones and a local drone company



Drainage

- This trial was made up of two parts, a sensor trial and asset management systems.
- We have completed an evaluation on the sensors and have found they are unlikely to be good enough to be used across the field.
- The Kaarbontech trials have been a great success, they started in Maidstone, then expanded to Gravesham and will be rolling to other locations across Kent over the next few years.
- Kaarbontech asset management system now in use in KCC as BAU

Gipave

- This was a trial working in collaboration with Iterchimica, to trial the Gipave asphalt in Dartford
- Following testing done by the University of Nottingham, a further 3 trials rolled out across Kent this year.
- Decision taken not to add this to our list of materials

  due to costs

Biofuels

- This trial is working with a company called New Era Fuels, looking for a more sustainable and greener way to fuel our vehicles
- We now have two interceptors at the Ashford depot
- We were planning to trial the fuel on our gritters. Stalled for now

Kent

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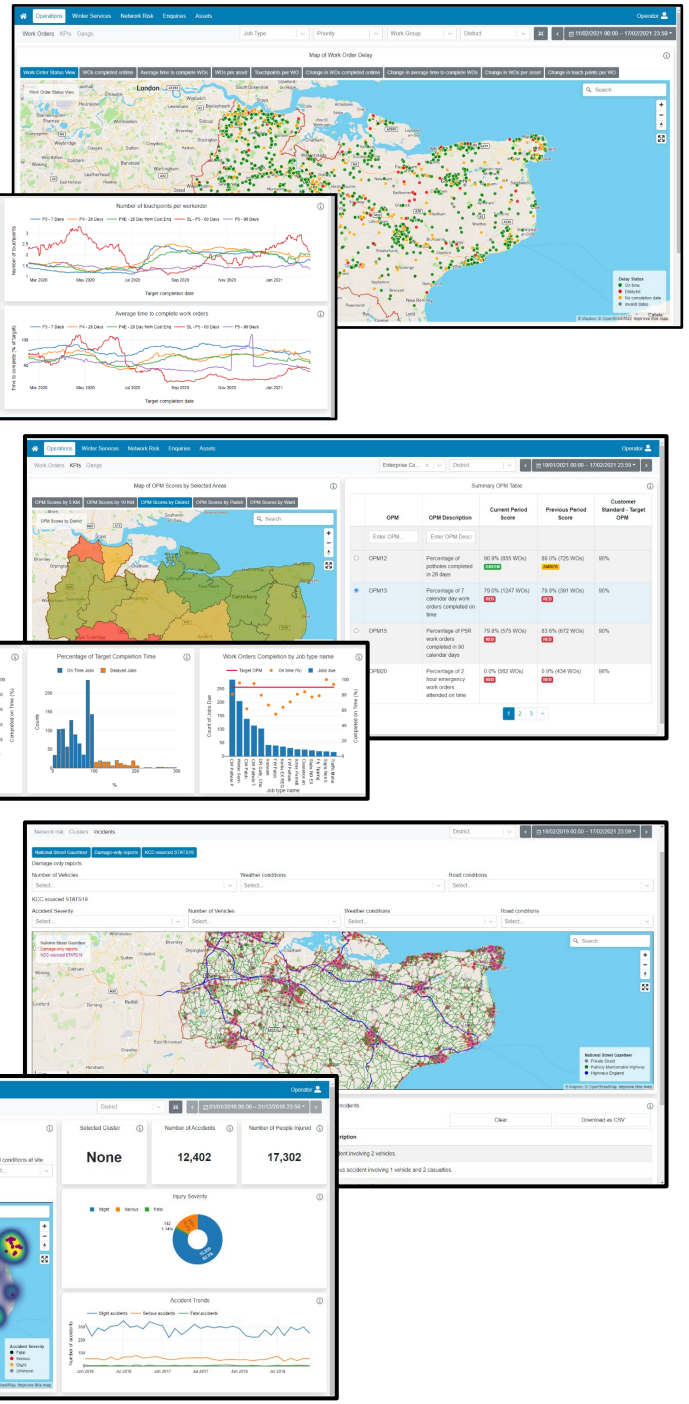
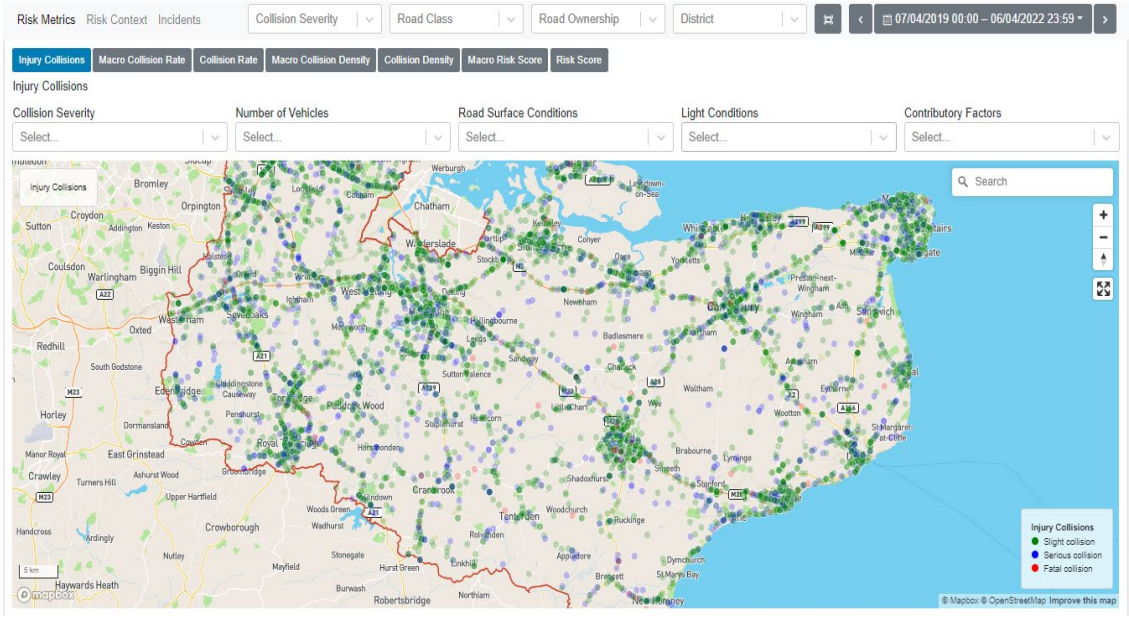
Highways Assets Data Management System (HADMS)

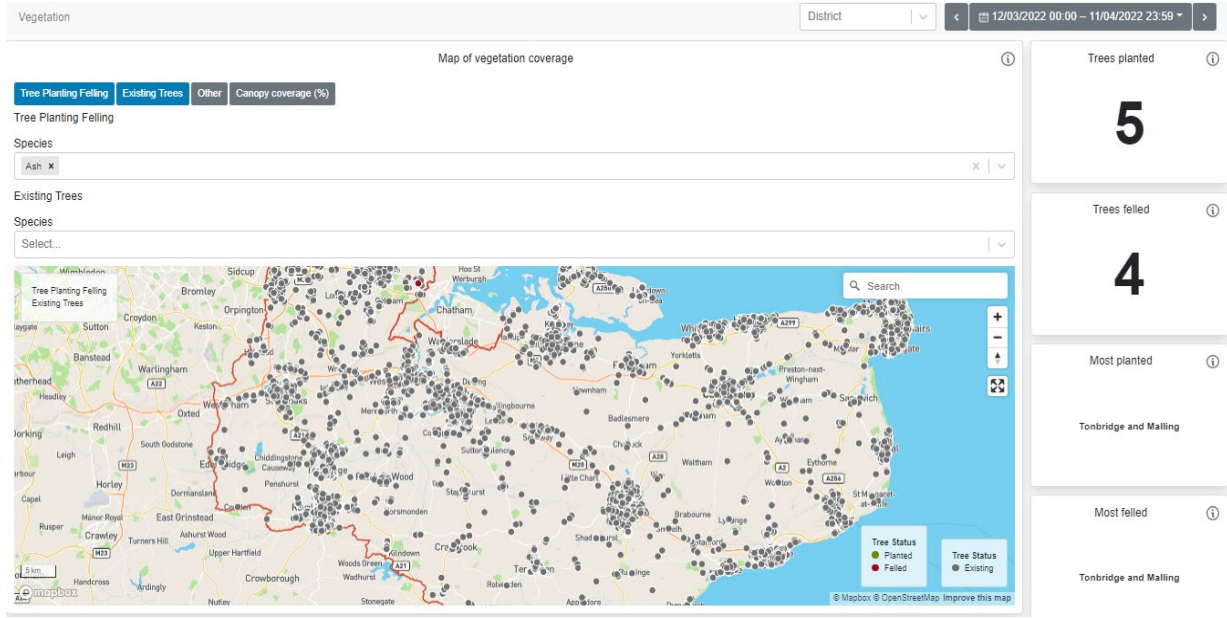
	Initiative	Summary	Status
Performance and compliance			
	Work order process, KPI performance	Performance analytics around work orders, analysis of delivery process, automated KPI reporting	Final development
	People productivity	Productivity and compliance toolsets for stewards and gangs	Mid-development
	Winter maintenance	Fully integrated client/supplier gritting performance and compliance dashboarding	Final development
	Enquiries and customer response	Trending of incoming enquiry load across county alongside response performance	Mid development
	Value for money	Metrics determining VfM within the operational business	Scoping
Integrated planning and strategy tools			
	Trees and vegetation planning	Integrating all tree and vegetation data from canopy coverage, inspections, enquiries, works orders, assets etc. into singular visualisation and planning tooling.	Mid development
	Strategic/reactive planning	Cross planning toolset between strategic and reactive delivery elements e.g. strategic programme, RSI, work-orders, enquiries etc.	Final development
	Safety scheme planning	Integrated planning toolset for assessing network factors pertaining to safety interventions	Final development
Modelling and data-science			
	Network risk	Using data-science to model network crash risk and integrating pro-active safety driven service design	Mid development
	Risk-based trees/vegetation management	Modelling risk around tree and vegetation assets to drive risk-based service design	Initial development
	Customer outcomes	Calculating customer outcome impacts for tactical workstack e.g. risk, journey time and assessing service design opportunity around these priorities	Initial development
	Smart Winter	Predictive data-science model of grit risk across Kent alongside domain-based forecasting	Complete



HADMS (Highways Suite from 2023)

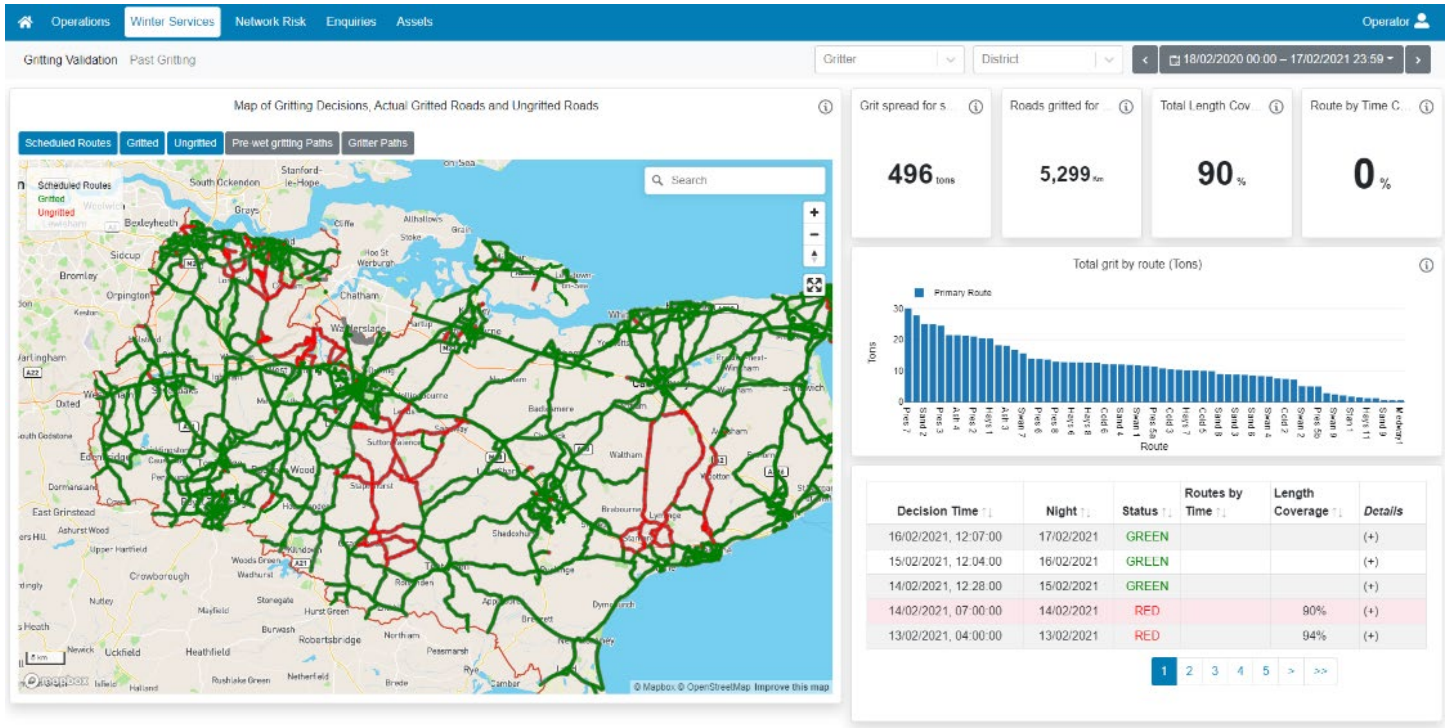
- The 'Highways Asset Data Management System' is now complete, with the Amey team now working on the maintenance and expanding the pages we already have.
- This is a legacy from LL. Recently had confirmation for funding until 2026 and further developments now being worked on





Wnter

- We have developed a successful winter page on the HADMS platform, which has been used the past two winters by on duty officers.
- The work we have done optimising routes into domains has been a great success, we are looking at further optimisation for this coming winter season.
- The work we have done around winter recently won an award at Calgary's PIARC winter conference.



Our biggest lessons

Innovation strategy

Early and ongoing engagement and buy in with the business essential

Strong partnerships and collaboration

Agile working/fail fast

Admin and ongoing costs and system integration

Thank you