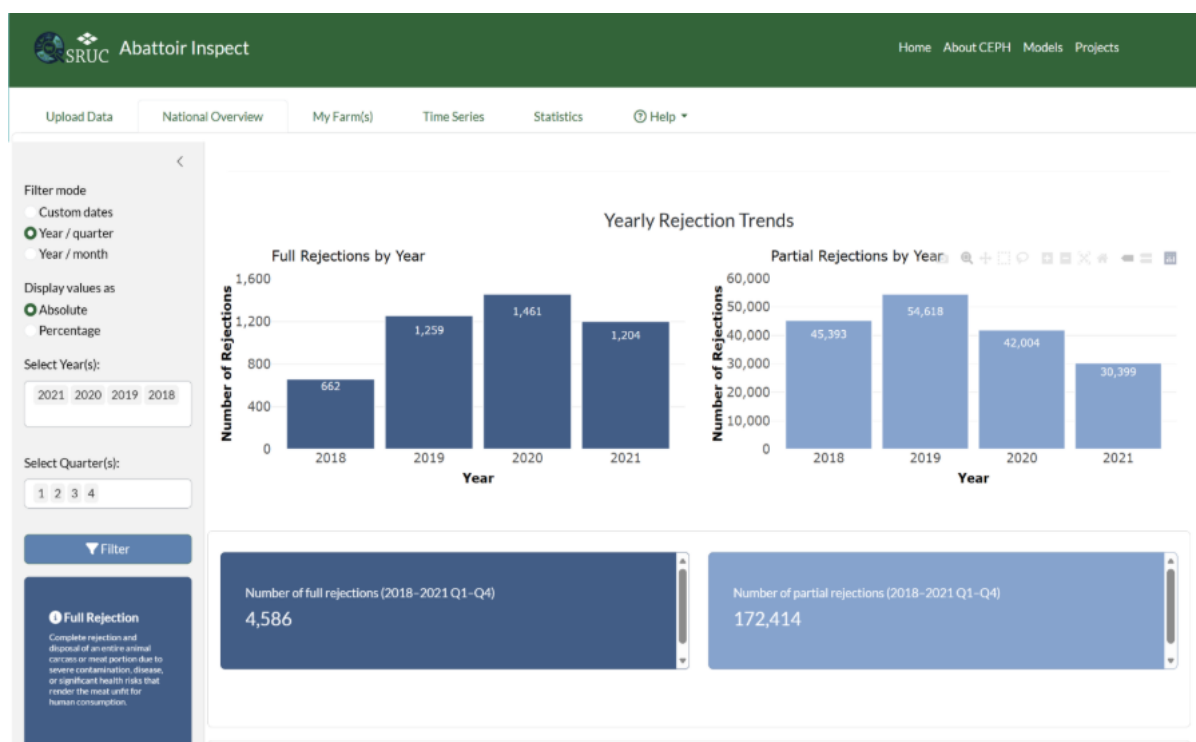


Additional practice abstracts: AbattoirInspect

Routine meat inspection data collected at slaughterhouses provide valuable information on animal health, welfare, and food safety. However, these data are often difficult for farmers, veterinarians, processors, and policymakers to access and interpret. As a result, important trends and early warning signals can be missed, limiting opportunities for disease prevention, benchmarking, and informed decision-making.

To address this challenge, we developed **AbattoirInspect**, an interactive data visualisation and surveillance platform that transforms raw abattoir inspection data into actionable insights for the pig industry. The tool uses slaughterhouse rejections data collected through routine veterinary meat inspections and presents them through intuitive dashboards and automated reports. Users can explore trends in whole carcass and partial condemnations over time (Nationwide tab), compare farm performance against industry benchmarks (My Farm(s) tab), and investigate specific rejection categories in greater detail (Time Series and Statistics Tab).



AbattoirInspect includes advanced analytics and monitoring capabilities. Interactive time-series visualisations help identify long-term trends and seasonal patterns, while a built-in alert system combines Holt-Winters, CUSUM, and EWMA algorithms to detect unusual increases in condemnation rates. Customisable filters allow users to analyse data by farm, abattoir, time period, or condemnation type, supporting both national-level surveillance and farm-specific investigations. The platform can also generate downloadable reports tailored to user requirements.

The tool was co-developed with the Scottish pig industry and is designed for use by pig producers, veterinarians, abattoirs, and other stakeholders. By converting routinely collected data into meaning-

ful information, **AbattoirInspect** supports earlier disease detection, improved herd health management, benchmarking, and evidence-based decision-making. This can help reduce production losses, improve animal welfare, strengthen food safety, and enhance national disease surveillance.

AbattoirInspect is built using open-source technologies (R and Shiny), and its code is freely available to facilitate adaptation to other livestock species, countries, and surveillance systems. The approach demonstrates how existing data streams can be leveraged to improve animal health monitoring and support more sustainable and resilient livestock production systems.

More Information

AbattoirInspect (public demonstration, pre-loaded with a mock dataset): https://epidemiology.sruc.ac.uk/shiny/apps/abattoir_inspect/

Users can also upload their own data. Instructions on how to do it can be found in the Upload tab, with further instructions in the Help tab.

DECIDE Project: <https://decideproject.eu/>

Code and Documentation: Access <https://zenodo.org> and search: “DECIDE project AbattoirInspect”

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