EPIC scientists are dependent on access to high-quality, up-to-date data from animal identification records on livestock locations and movements. These data underpin a broad range of research conducted by EPIC scientists to support Scotland’s livestock industries:

**Combining livestock data and environmental data**

Movement data are used to identify the role of climate and the environment on disease risk. For example, EPIC scientists combined animal movement data, abattoir records and satellite data to identify the environmental risk factors associated with liver fluke.

**Scientific evidence informing policy**

“The information on the location of cattle in Scotland contained in the ScotMoves system provides greater reassurance to government and keepers that Scotland is well placed to prevent and control exotic diseases such as Foot and Mouth and endemic diseases such as Bovine Viral Diarrhoea.”

Fergus Ewing, Rural Economy Secretary, 2018

**Disease surveillance, testing and control**

Understanding livestock locations and movements is essential in designing effective disease surveillance and control programmes. For example, EPIC scientists track movements of Scotland’s sheep to slaughter to better understand surveillance coverage, and EPIC’s work on BVD helps monitor progress of the eradication programme.

**Animal movements and disease spread**

Knowing animal movements helps track disease spread quickly in a disease outbreak. EPIC’s work on pig movements highlighted the degree of connection between different parts of the pig industry, which is important for resilience to diseases such as African swine fever, classical swine fever & porcine epidemic diarrhoea.

**Using Bovine Viral Diarrhoea virus genome to fight disease**

The EPIC BVD Biobank combines virus genome information with ScotEID BVD testing records to inform the BVD eradication programme and game. Mapping BVD Biobank records shows the transmission links between regions inferred from sequence data, highlighting long range transmission links as well as cross border links.

**Where movement data come from**

Keepers of cattle, sheep and pigs must register for each species with APHA. Cattle, sheep and pigs are identified and their movements traced by notification and recording on ScotEID. The role of the marts and abattoirs is very important in the collection of movement data which are transferred directly to ScotEID. ScotEID records, researches and provides guidance on tracing farm livestock through the Scottish livestock supply chain.