

# Towards the genetic and genomic improvement of British Texel sheep

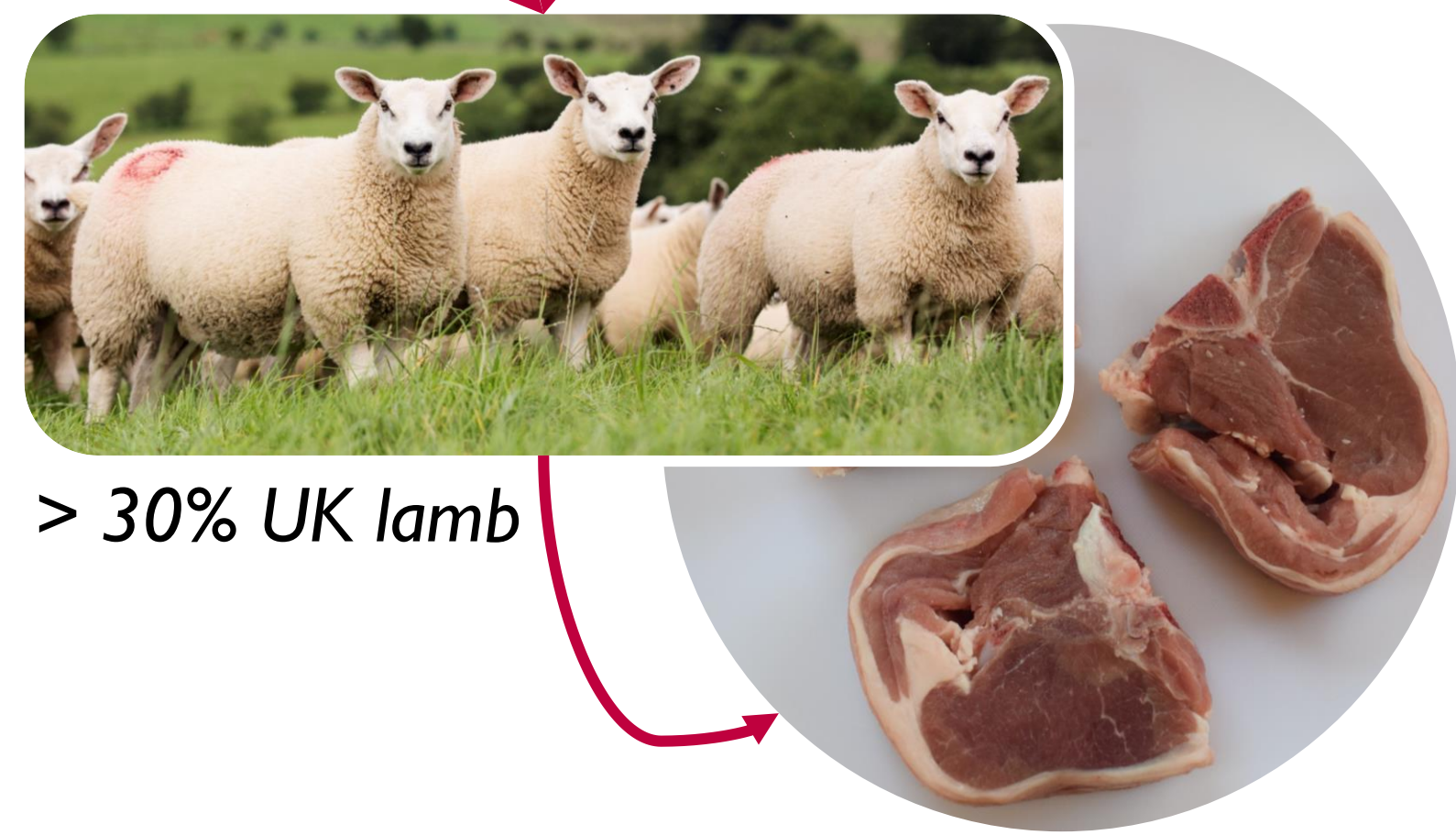


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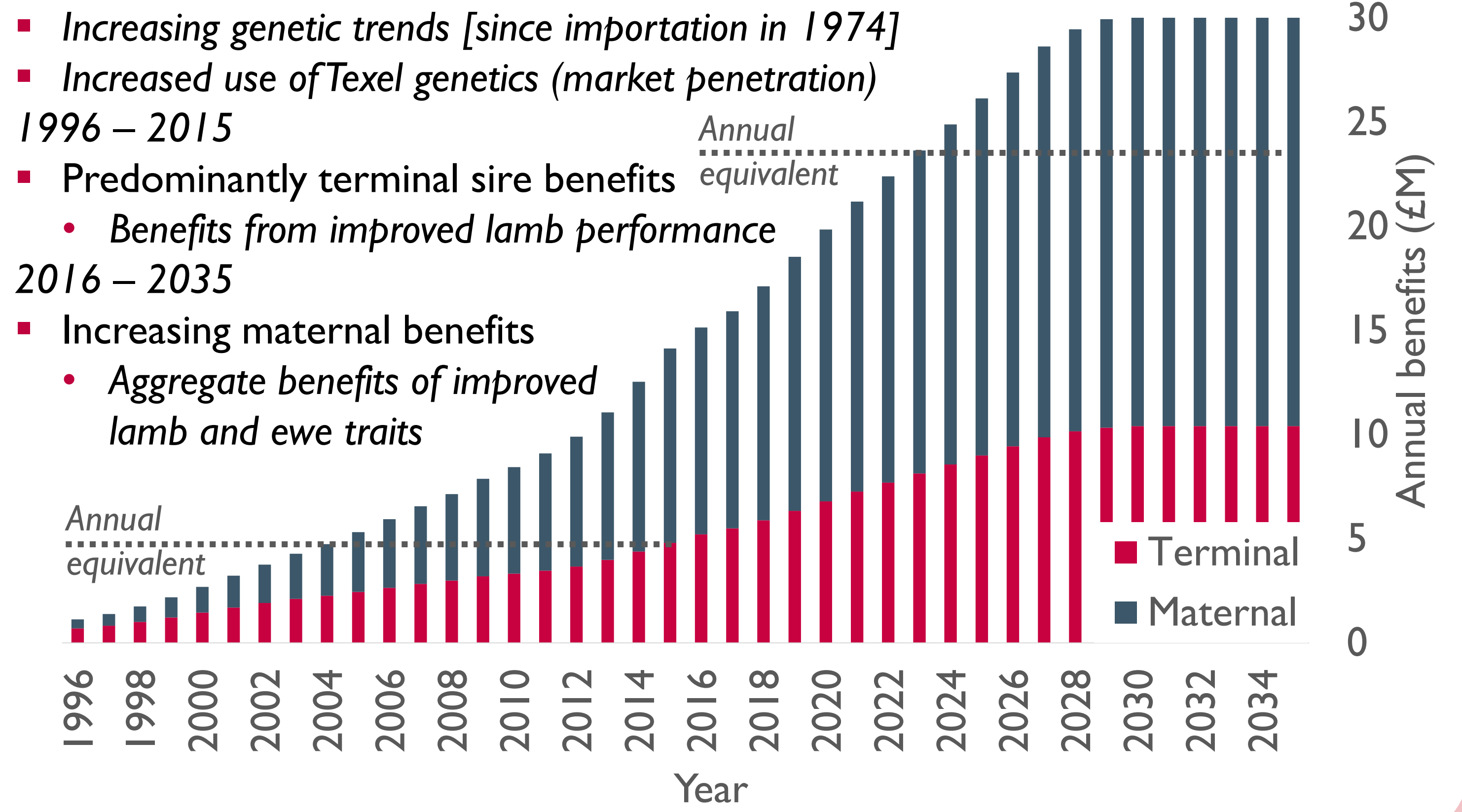


## TEXELS IN THE MARKETPLACE

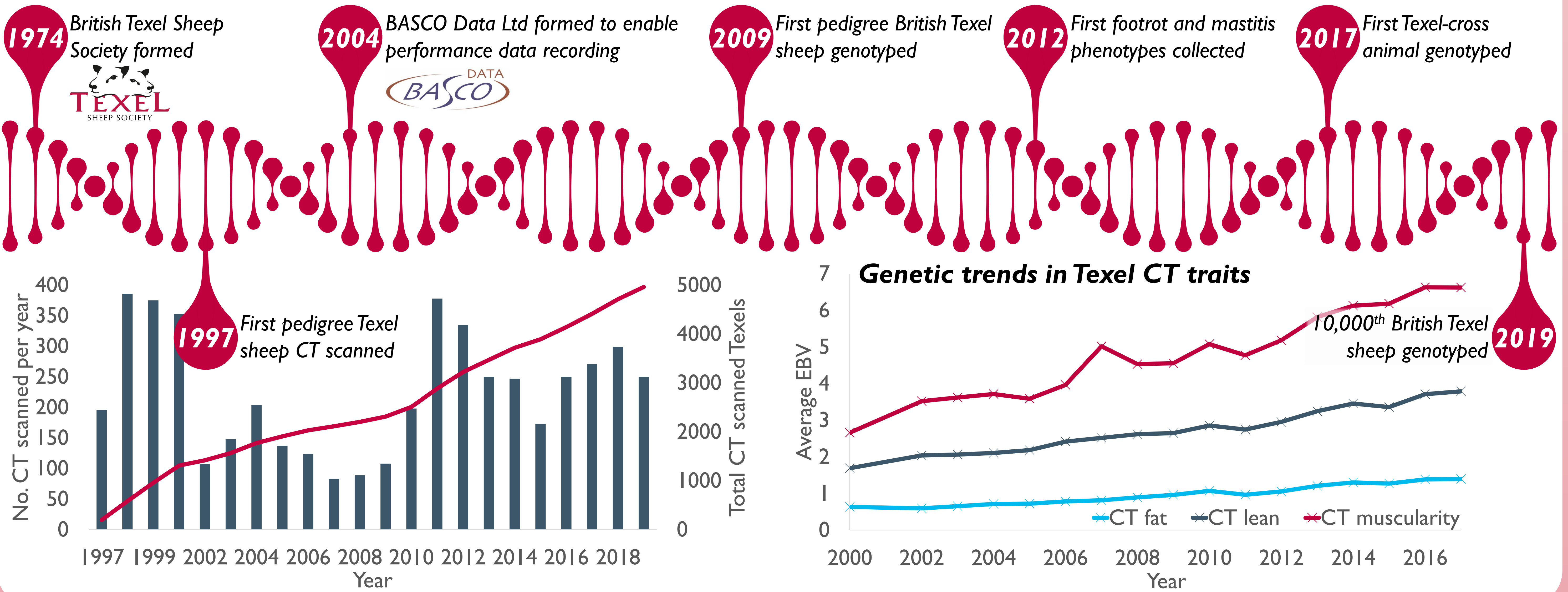
- UK produces ~300,000t sheepmeat per year<sup>[1]</sup> ~12% UK maternal flock
  - 25% EU production<sup>[2]</sup>
- 13M ewes in the UK
  - 1.6M (12%) Texel / Texel-cross<sup>[3]</sup>
- 365,000 rams used
  - ~100,000 (27%) Texel sires<sup>[3]</sup>



## Financial benefits of genetic improvement<sup>[4]</sup>



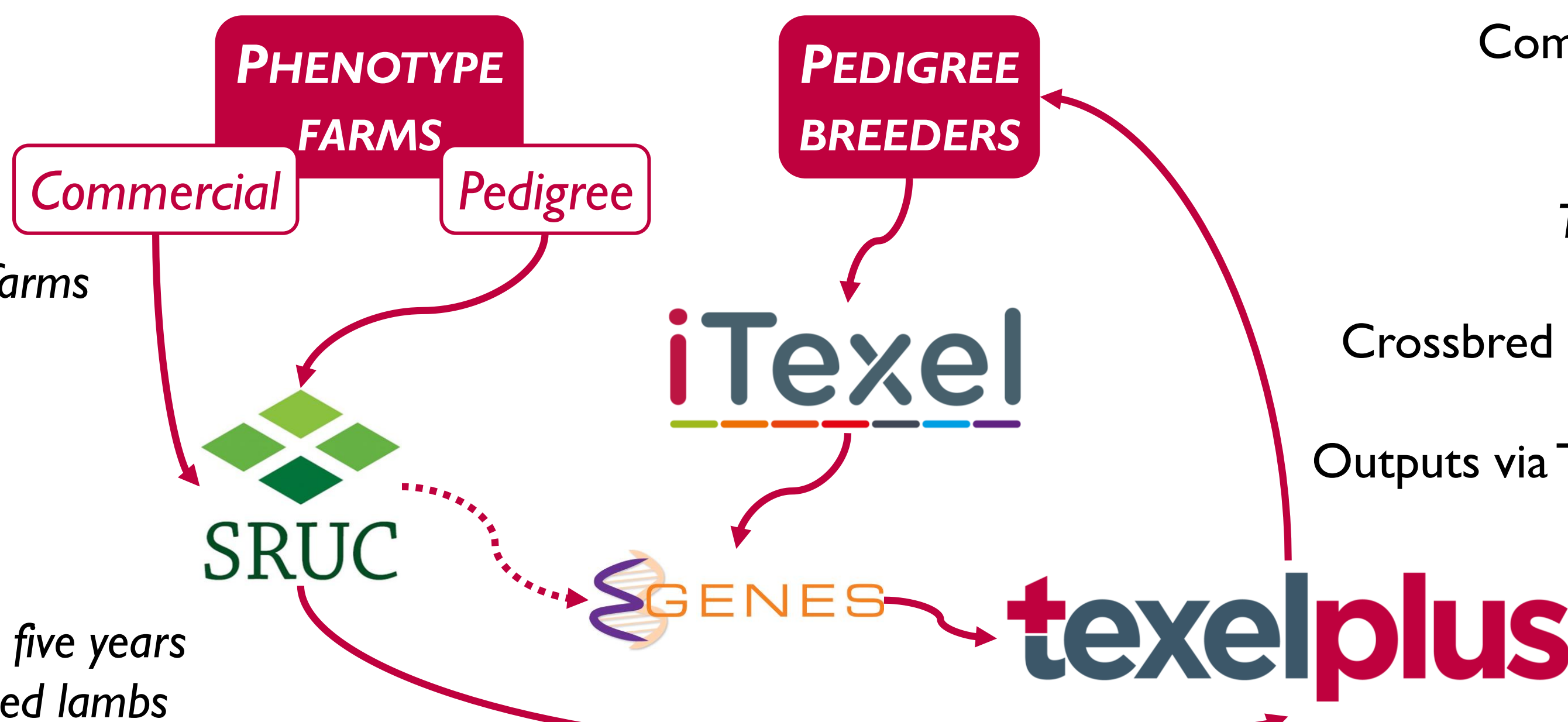
## TIMELINES OF PROGRESSION



## BREED DEVELOPMENT

“Through leadership and collaboration, increase the financial, animal health and welfare, and environmental benefits of Texel sheep to breeders, commercial farmers, industry and the public”

- Evolving ten-year breed development strategy
- Data collection
  - > 200 performance recording breeders
  - 25 pedigree and five commercial phenotyping farms
- Data collected
  - > 8,500 pedigree animal measures / year
    - 5 × growth / carcass traits
    - 5 × reproductive / maternal traits
  - > 4,500 ewes scored for footrot and mastitis in five years
  - Pre- and post-mortem data on > 5,000 crossbred lambs

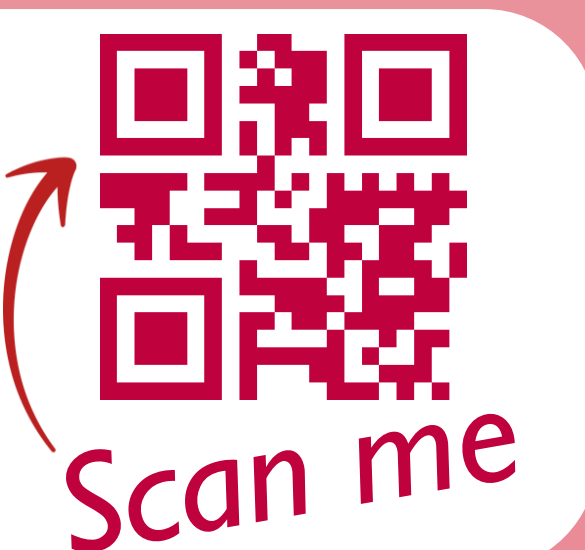


- Commercial genetic evaluations via Egenes
- Novel research-based evaluations
  - Towards gEBVs for mastitis and footrot
- Crossbred measures to inform pedigree breeding
- Outputs via TexelPlus genetic improvement service
  - Breeding values
  - Animal indexes
  - Inbreeding coefficients
  - Parentage verification

We work with **Innovate UK**



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References  
 [1] AHDB (2018) Sheep yearbook | [2] <http://www.fao.org/faostat/en/> | [3] Pollott (2012) The breeding structure of the British sheep industry 2012 | [4] Byrne et al. (2015) Modelling the benefits of British Texel sheep genetics