

The following slide reports what people 'voted' for at the close of the meeting as being the trait that they thought we should be breeding for, together with a list of things we need to measure

TRAIT

DATA needed

	No. of votes	
• CH4/kg DMI	6	• Product (or E in product)
• CH4 as % of GE	1	• Intake - DM or would E do?
• g/d or kg/year	3	• CH4
• Economic value	1	• Correlated traits (blood milk)
• RFI	2	• Condition score
• CH4/kg DMI + RFI	1	• Data on MATURE animals
• CH4/unit output	2	• Total Co2 equivalents – Include Manure + urine
		• Central testing at a centre

The following slide summarises how we reconciled the government objective of reduced total emissions and the farmer objective of staying financially viable. Start from the top (the 2 objectives) & work down.

The 2 objectives didn't have to be seen as an 'either/or' choice, but synergistic

Objectives

Gov't objective
Reduce national
emissions

Farm objective
Stay profitable

Farms cant cover the total cost of emissions & stay viable so will HAVE to reduce total emissions

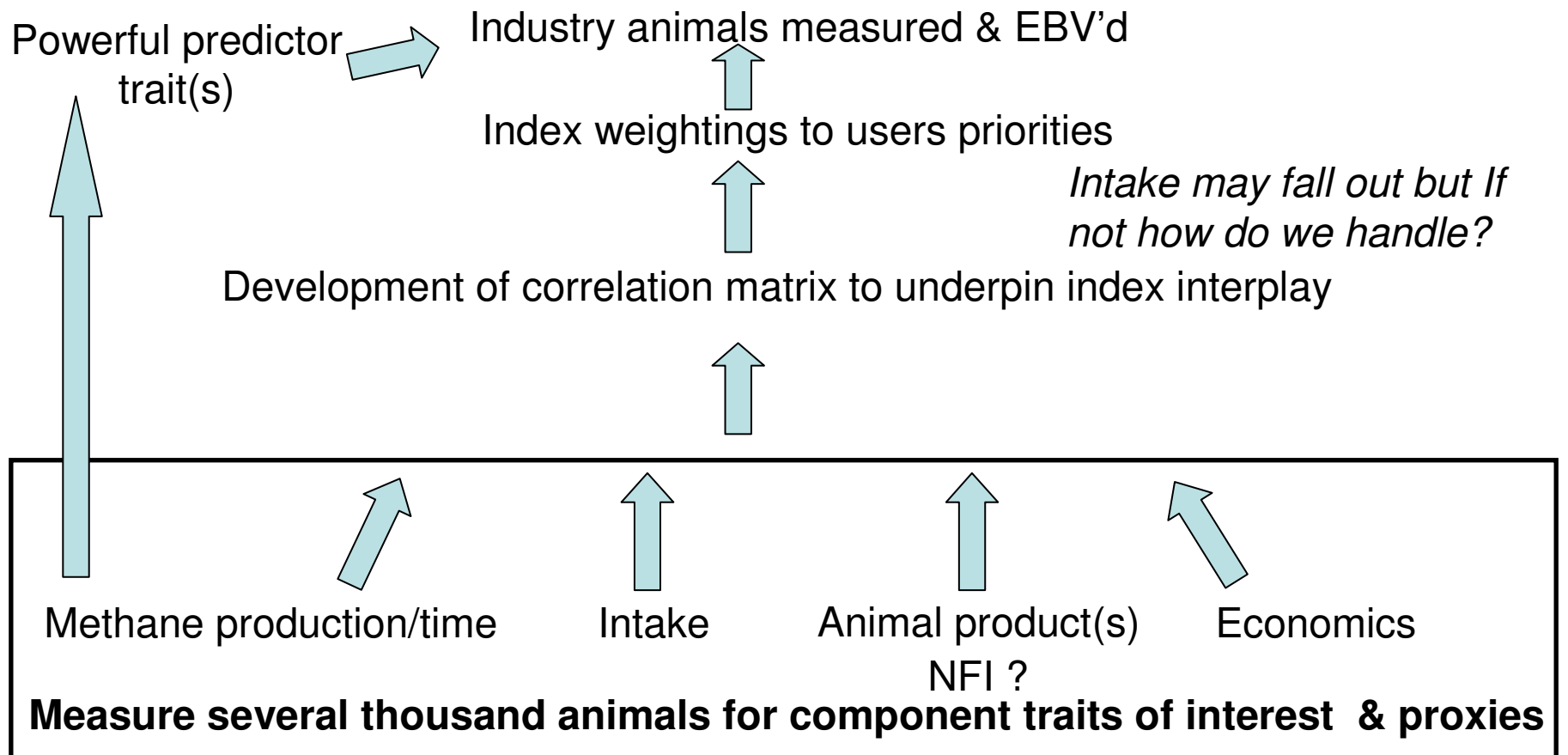
Minimise the net cost of
emissions (liability) by
reducing emissions and
increasing production

Adopt production enhancers and methane mitigation strategies:
Breeding, rumen interventions, pasture, supplements

- The next slide sought to capture the findings of the meeting on what needs to be done to evaluate, and if desirable, then implement genetic improvement for a methane trait
- Read from the bottom and work up

Genetic Improvement

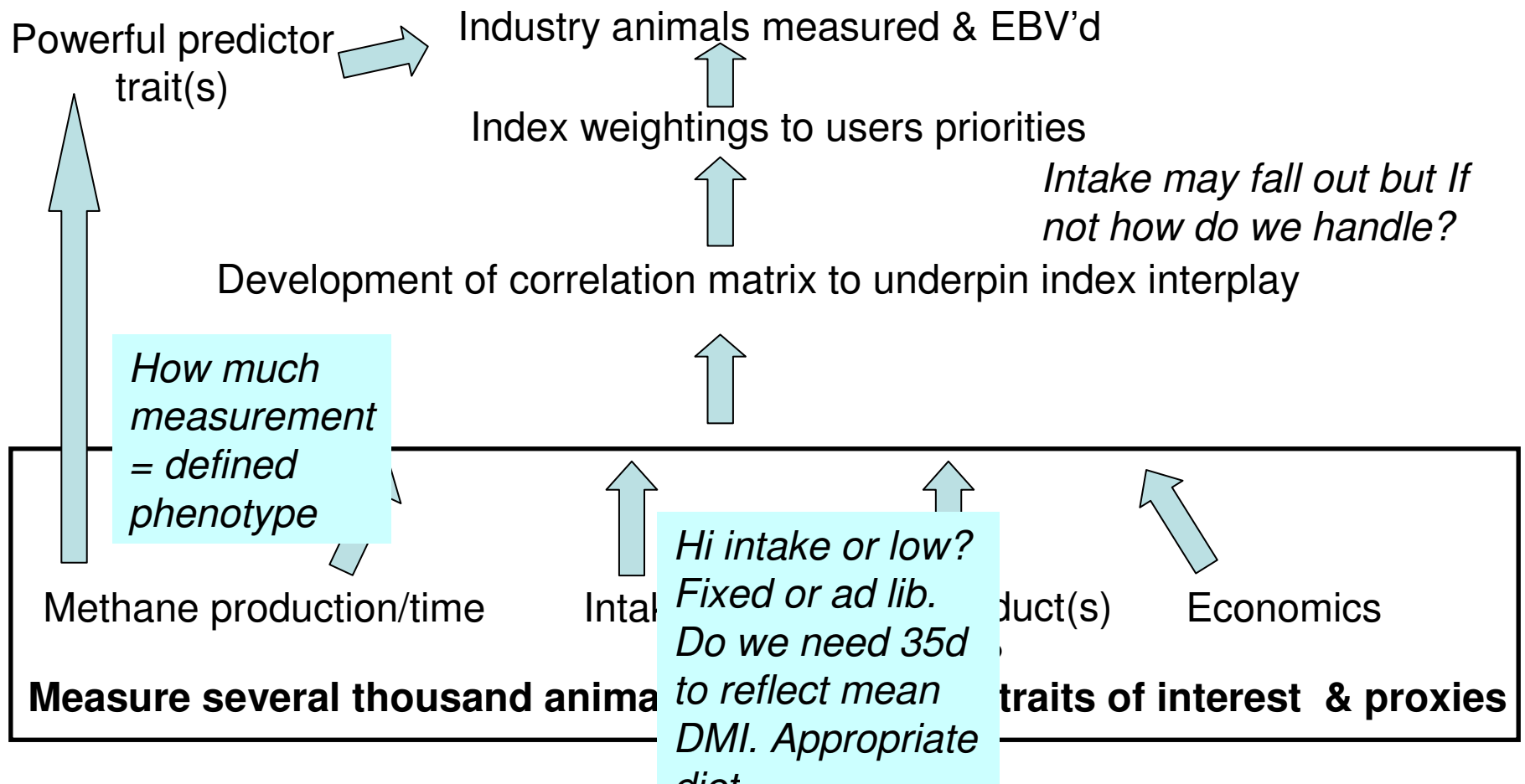
Breeding values/index used in industry



- The plan looked good but there are still some outstanding questions on detail.
- Largely these are questions of scale of measurement & how the methane trait itself is measured. These are shown in italics

Genetic Improvement

Breeding values/index used in industry



Lastly the need for methane selection lines was addressed. There seemed merit in research selection lines as a means of rapidly gaining divergent animals for identifying proxies of the methane trait.

The lesson should be learned from NFI that to get commercial uptake, the trait should start being measured on commercial not research cattle at the earliest appropriate time.

Issues

- Selection lines .. On what trait ?
 - Anything that reflects the animal producing less than 'normal'
 - CH₄/kg DMI, % of GE,
 - 'net' methane (independent of intake)
 - (~net methane)
- Industry uptake of RFI ?
 - Canadian model (if national schemes?)
 - Cheap near perfect proxies.... How long ?