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What gets measured, gets managed

Using data to support scaled change in dairy systems … with a focus on sustainability metrics

Richard Vecqueray 18th Nov 2024

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Agenda

- An introduction to me, and my team’s work
- Examples of measurement to manage
- Five principles for achieving scaled farm change
- Using data to support scaled change
- A case study
- Conclusion

Working in partnership with farmers and suppliers

Sainsbury's has a long standing commitment to source animal products in a responsible and ethical way, and we work hard to build sourcing models and supplier relationships which allow us to influence and improve animal health and welfare. We're proud of the improvements we've achieved across our supply chains but we know there's still some way to go. That's why we're committed to working with our farmers to continuously improve animal health and welfare across our supply chains.

We have farmer development groups covering our main agriculture value chains, enabling us to work directly with farmers we know and trust and who share our vision and values. The 2000+ members of our farmer development groups have access to training and resources to support improved animal health and welfare through efficient, sustainable management methods. This partnership approach allows farmers to remain profitable while delivering great quality meat, dairy and poultry reared or grown in the way our customers would expect. This approach has allowed us to establish trusting relationships where we can share useful learnings. All our farmer suppliers have to meet the same exacting animal health and welfare standards, whether or not they belong to one of our groups.

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“What gets measured, gets managed”

- Peter Drucker

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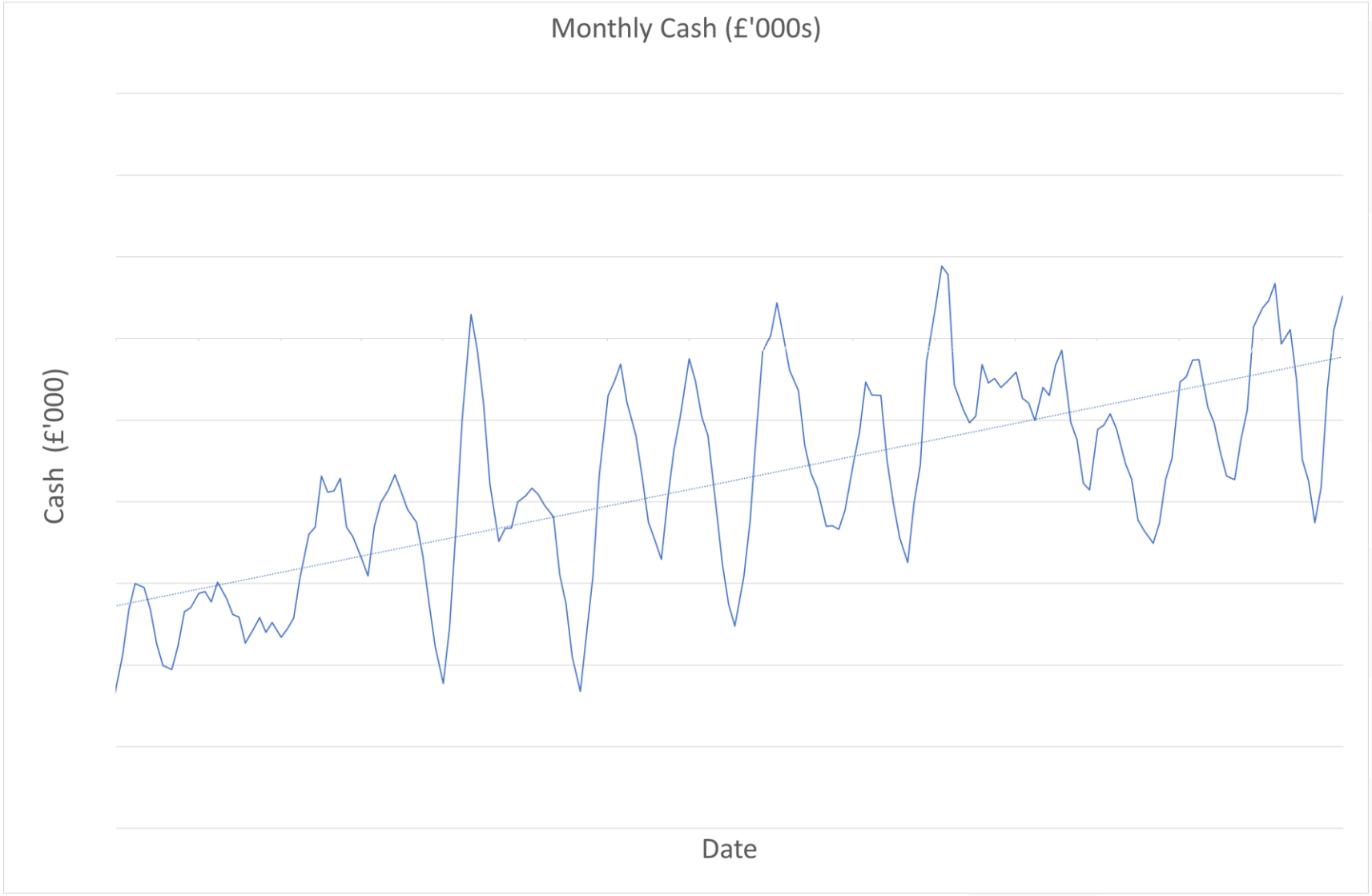
What get’s measured, gets managed - Cash



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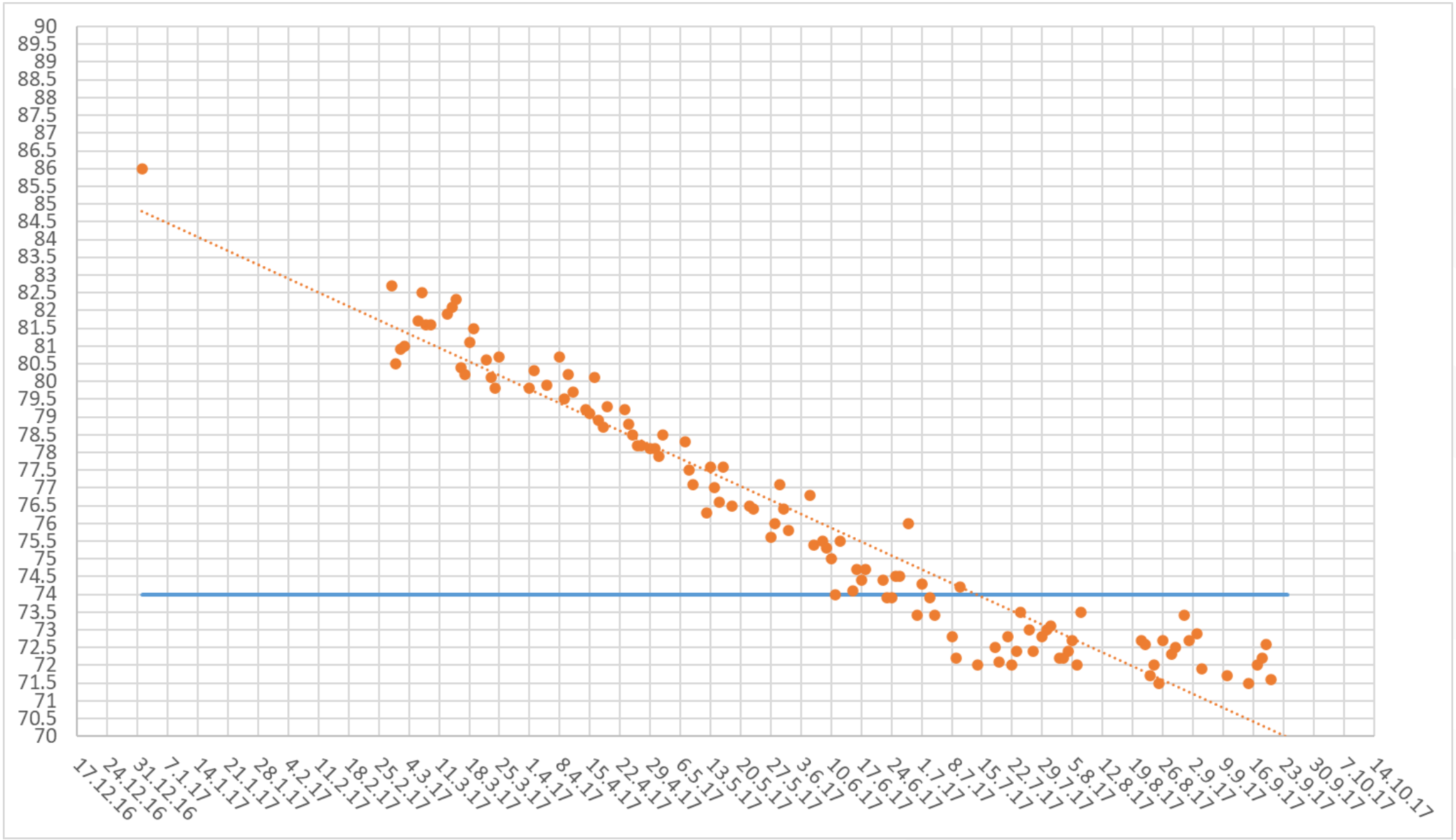
What get's measured, gets managed - Weight



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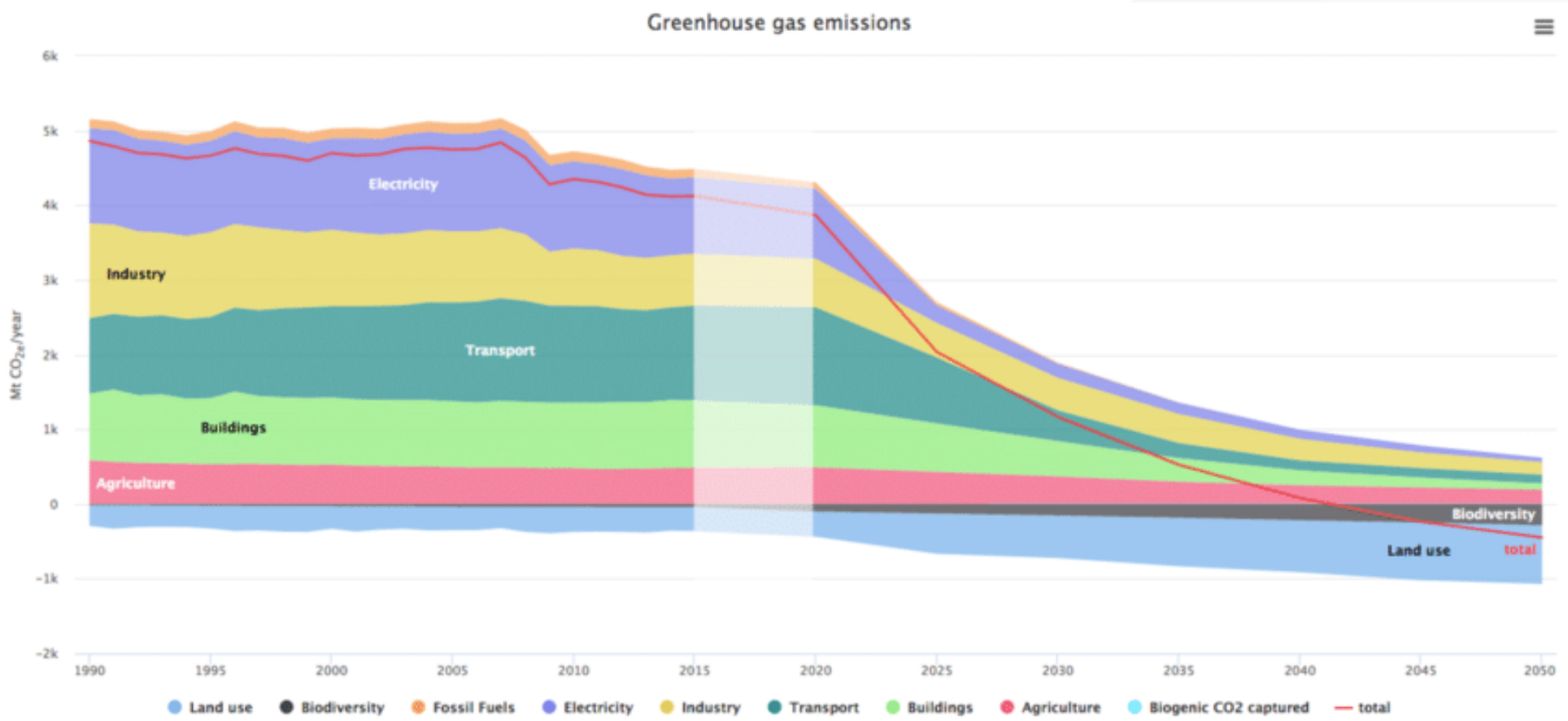
What gets measured, gets managed – Net emissions?

Simulation of an approximate net-zero GHG emissions in Europe, based on the EUCalc 'Ambitious' example pathway



https://www.researchgate.net/figure/Simulation-of-an-approximate-net-zero-GHG-emissions-in-Europe-based-on-the-EUCalc_fig15_340905445

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Five principles for achieving scaled farm change

1. Why are you doing it? – Start with end in sight
2. Pick your battles – agrifood supply chains are complex
3. Trust – delivering any scaled data-based initiative requires trust
4. Hold primary data … Outputs from a black box are not acceptable
5. Keep it simple, stupid. Quality, not quantity

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Why? Start with the end in sight. Make it ambitious

“Christopher Columbus set on a journey to find another route to India. The voyage was much longer than anyone anticipated. They endured storms, shortages of food and water and mutiny. Yet, what made all the hardship worth it was the grand vision of finding India. If they had settled for a smaller vision along the way, they wouldn’t have made it.

For Map of Ag is important to keep its grand vision. It will have a bigger payoff than any profit we can produce now. It’s true that Columbus didn’t get to India, but he found something much better along the way.”

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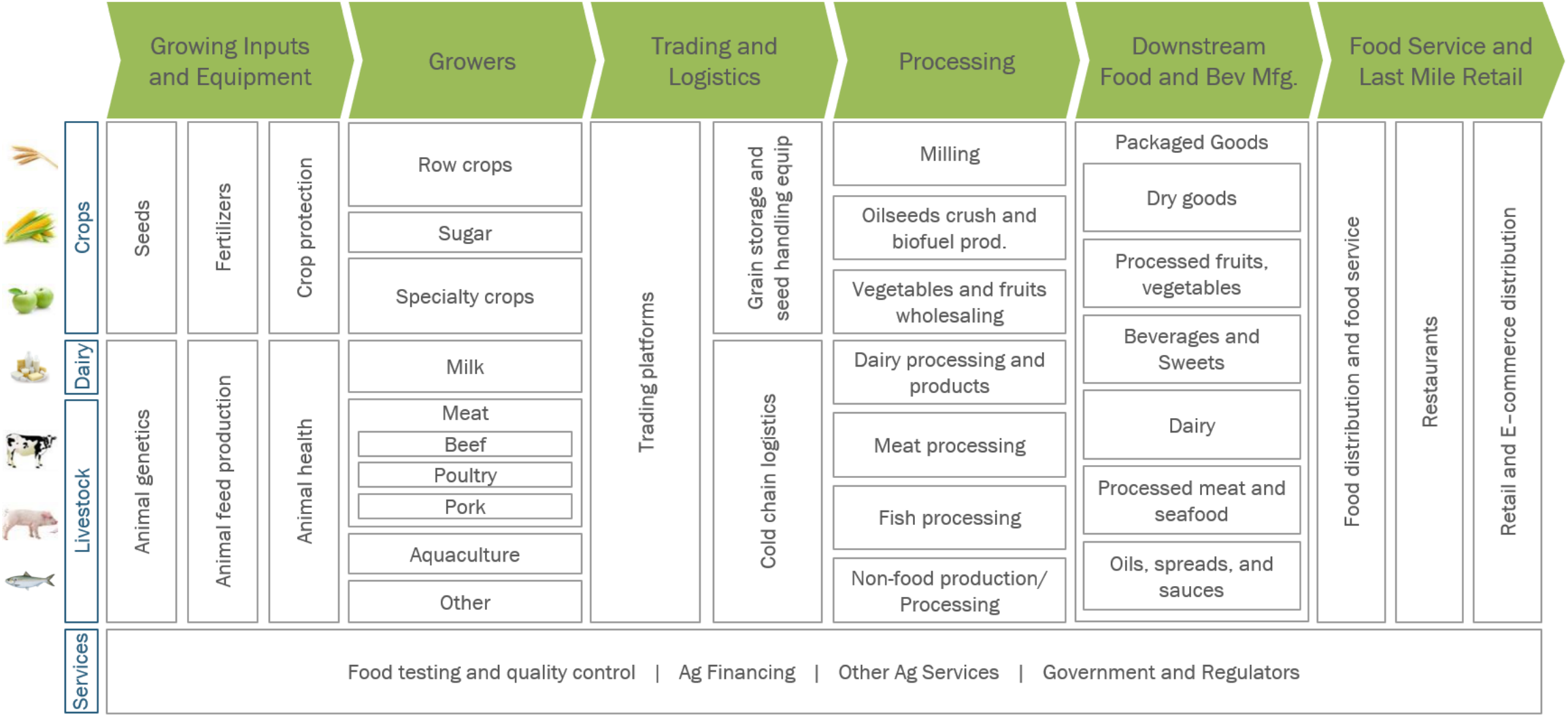
Agrifood supply chains are complex – Pick your battles

Farmers have become increasingly distant from consumers



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Agrifood supply chains are complex – Pick your battles

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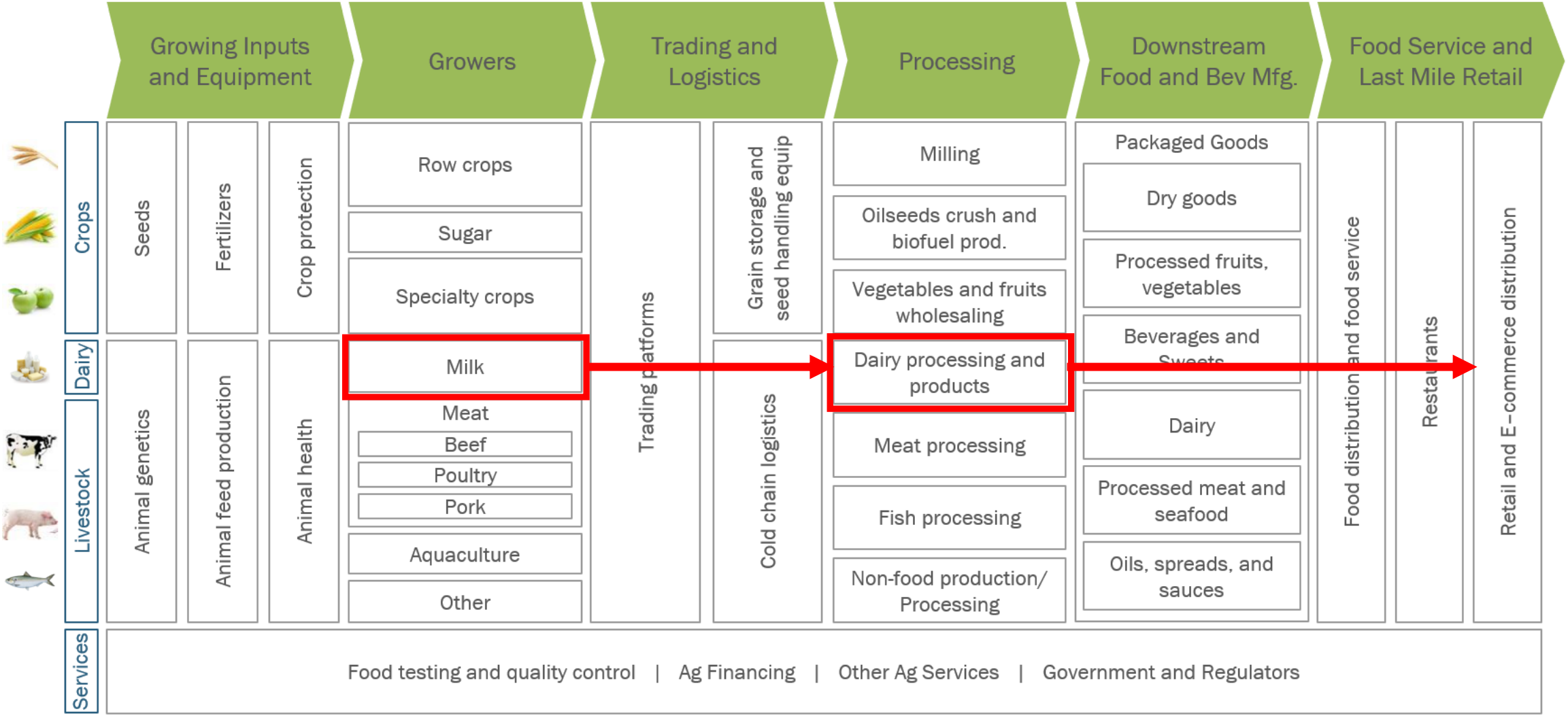

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Dairy is uniquely placed to connect farmers and consumers

eit Food

Co-funded by the European Union

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Connection = communication = mutual understanding = trust

eit Food
Co-funded by the European Union

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To form that connection and share the data that underpins it requires a relationship. Relationships are built on trust.

Do I trust this person or company?
TRUST

=

Are they credible?
CREDIBILITY

+

Are they reliable?
RELIABILITY
Do they do what they say they will?

+

Can I be intimate with them?
INTIMACY
Will they be keep my confidences?

How much is about them?
SELF- ORIENTATION
How much is about me?

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“The key to a successful relationship is: *The management of expectation*”

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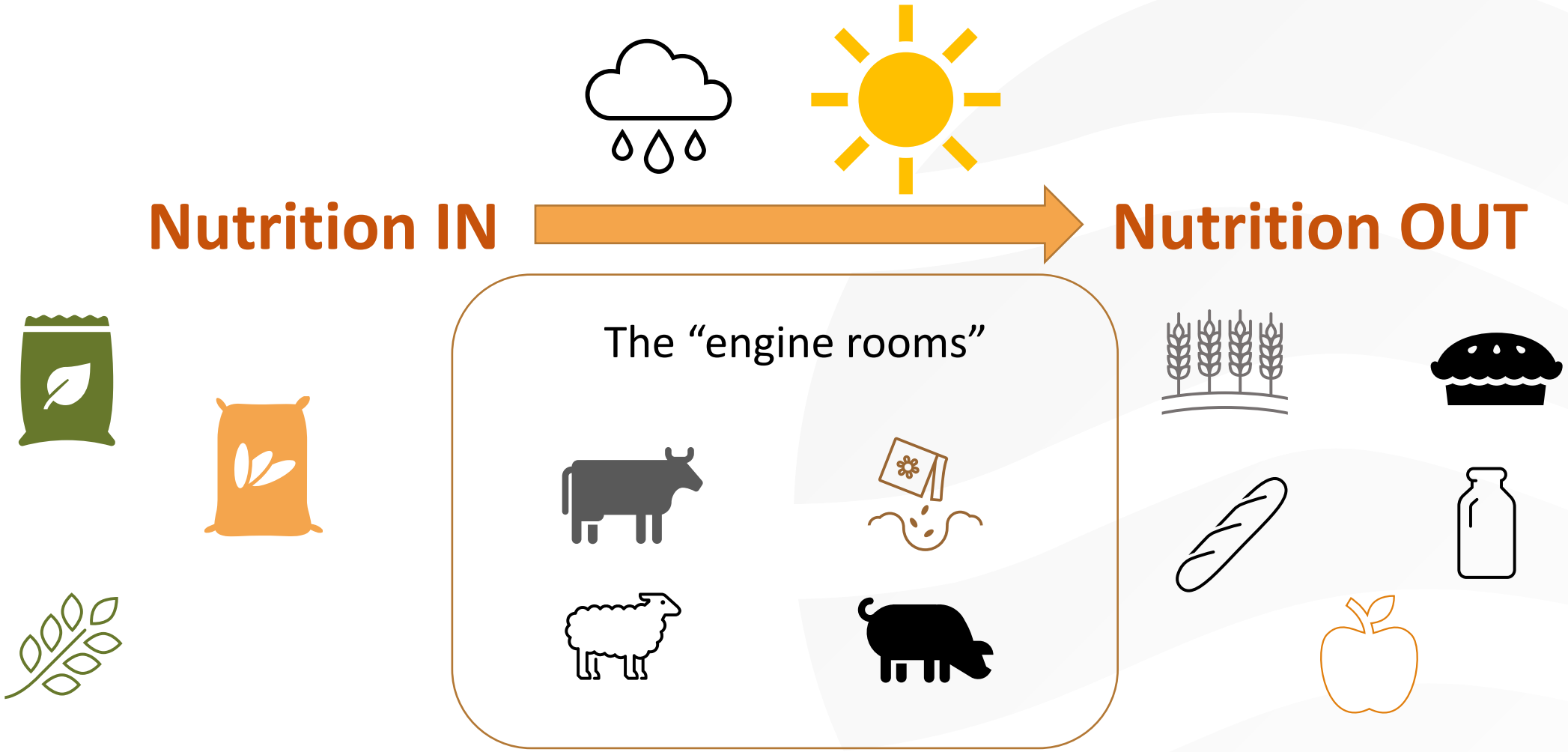
Hold primary data - Not outputs from a black box

You need to understand the granular drivers of efficiency. The answer to your emissions reduction strategy lies here.



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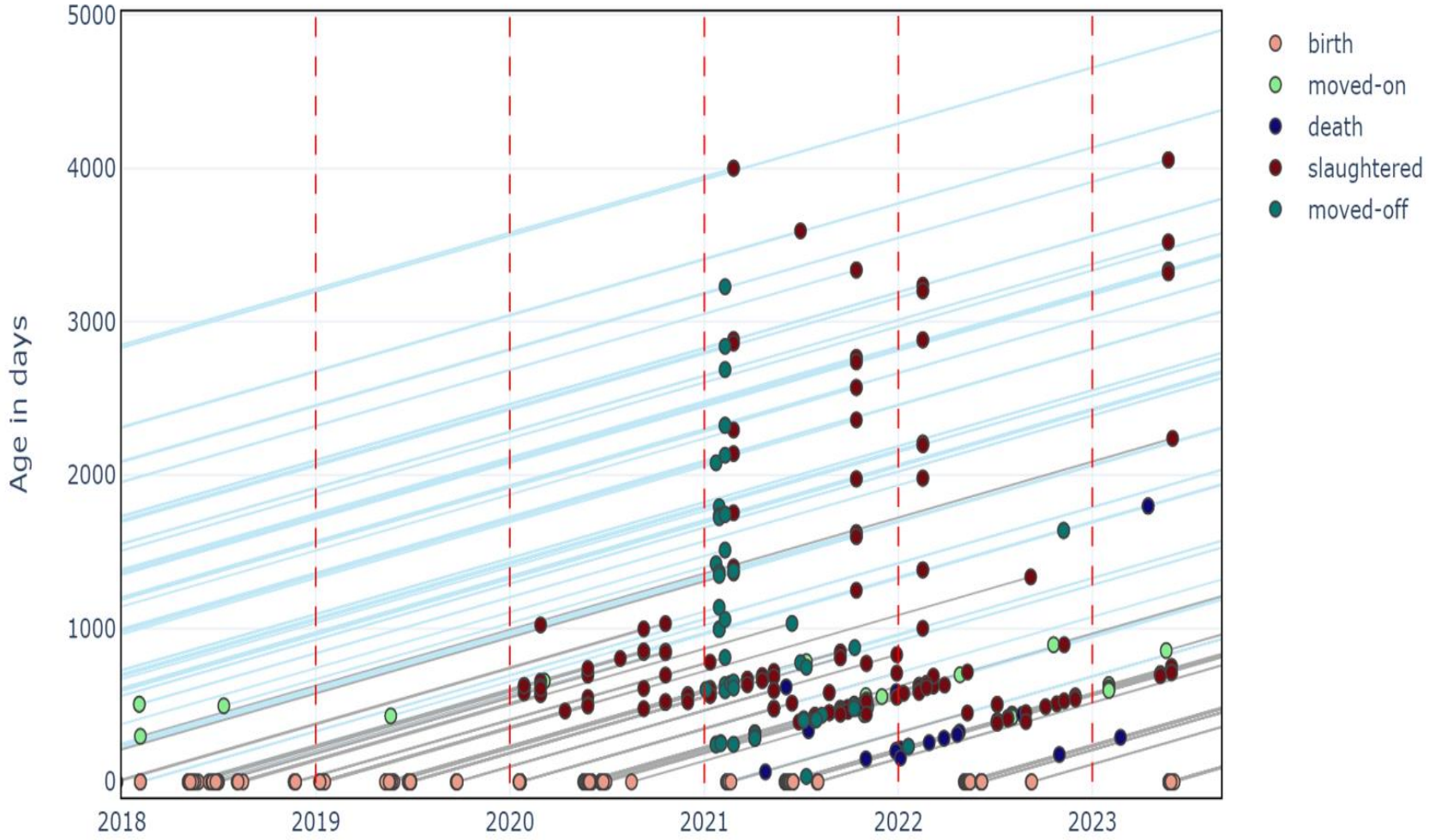
KISS: Keep it simple stupid

Big data and AI are sexy but next to useless if you don’t know how many cows you have and how much milk they produce



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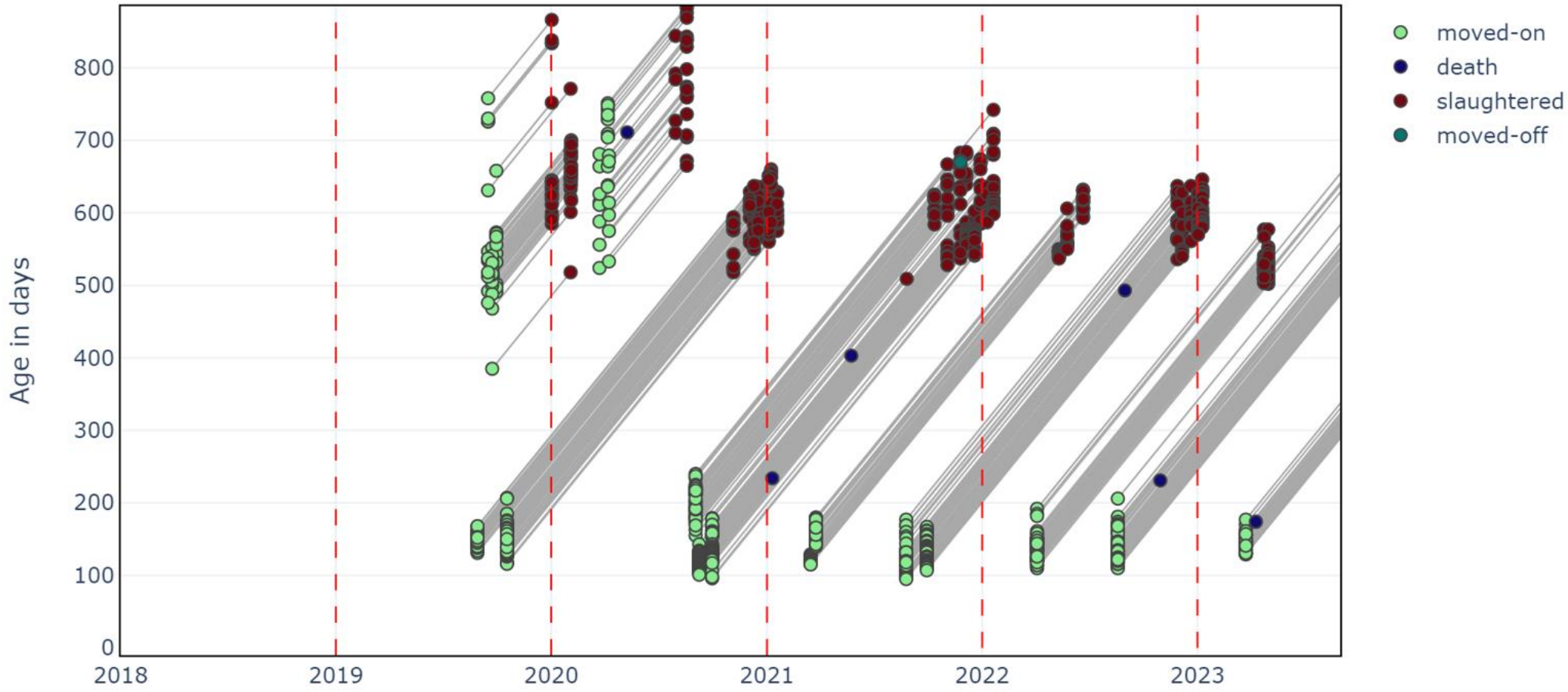
Quality, not quantity



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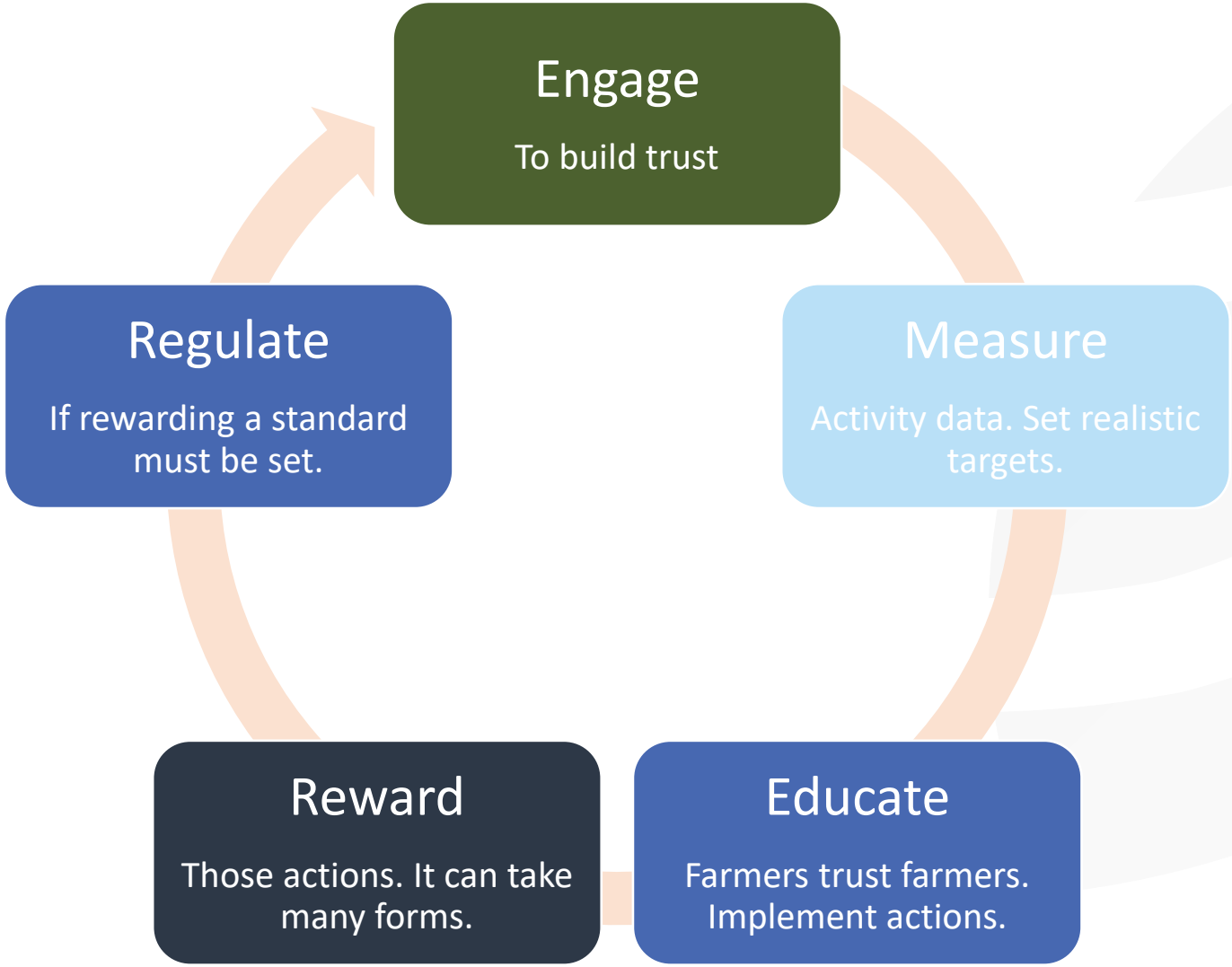
Using data to support scaled change

Trust is needed for a relationship. Relationships form through mutual understanding. Mutual understanding requires communication.



"Economics is, at root, the study of incentives: how people get what they want, or need, especially when other people want or need the same thing."

— Steven D. Levitt, Freakonomics

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Case Study: The application of incentives

Monitoring animal health

We monitor an extensive suite of KPIs on a monthly basis from all our dairy farms which our animal welfare team and veterinary partners monitor closely. We have an industry leading dairy health and welfare database which allows us to track performance and identify best practice which we share across our supply base. We have seen demonstrable improvements to many of our KPIs and incentivise farmers to focus on improving animal health by paying a bonus to top performers. We are committed to driving improvements through clear action plans, collaboration and innovation with our suppliers.

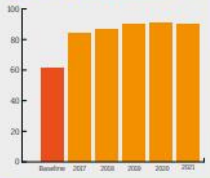
Proactive disease prevention

We have committed to ensuring all farms achieve the following by 2023:

- **100% of farms participate in National Johne's Management Plan**
- **100% of farms have veterinary led action plan for IBR, Leptospirosis and Neospora control**
- **100% of farms hold Bovine Viral Diarrhoea (BVD) free status**

100%
of our cows and calves are transported within 6 hours

BVD Negative Status *(%)*



100%
of farms are required to provide local anaesthetic and long acting pain relief when performing disbudding and castration procedures

Metric	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021
Farm performance											
AAFC for homegrown animals (days)	880.61	869.43	859.36	864.96	851.12	842.73	833.95	827.53	826.90	819.29	800.98
Calving Interval (days)	426.00	423.45	420.08	416.93	413.17	409.21	404.90	401.58	401.01	401.41	400.00
% 1-28 calf mortality	4.62	3.55	2.33	2.15	5.67	7.06	7.06	7.14	6.77	5.84	2.34
% 29-182 calf mortality	–	–	3.35	3.86	4.13	4.27	4.61	4.62	3.92	3.20	3.38
Providing the right environment											
% farms group housing calves in straw bedded pens by 7 days	–	–	–	–	–	–	–	–	–	–	70.30
% farms group housing calves in straw bedded pens by 21 days	–	–	–	–	–	–	–	–	–	–	96.53
Monitoring animal health											
% lameness score 2&3	13.07	9.10	6.82	5.37	5.28	5.59	6.18	6.61	7.47	6.69	6.23
% lameness score 3	2.88	1.63	0.99	0.66	0.64	0.70	0.76	0.69	0.82	0.58	0.34
Clinical mastitis cases/100 cows/year (12 month rolling average)	43.96	41.59	36.61	32.56	28.86	27.91	25.79	24.08	24.48	24.33	22.80
% milk fever	5.64	4.22	3.27	3.18	3.06	2.99	2.73	2.52	2.43	2.34	2.35
% displaced abomasa	1.60	1.28	0.95	0.92	0.88	0.87	0.80	0.78	0.90	0.82	0.77
% RFM	6.04	5.46	4.82	4.36	4.56	4.14	3.68	3.43	3.14	2.96	2.60
Somatic cell count	171.34	167.61	157.50	157.00	151.03	153.63	148.01	149.98	156.23	155.26	154.95
% cows SCC >200k	19.55	19.31	19.07	18.85	19.33	18.37	17.63	17.33	17.66	17.96	17.19
% cows scored thin	1.26	1.10	0.83	0.65	0.57	0.54	0.46	0.34	0.32	0.22	0.21
% cows meeting JS hock lesion target (>3%)	–	–	–	–	–	–	98.85	99.24	100	99.34	99.50
% cows meeting JS injuries target (>1%)	–	–	–	–	–	–	91.60	99.62	100	94.74	98.51
% cows meeting JS comfort score (>70%)	–	–	–	–	–	–	–	97.42	96.51	98.50	99.26

Massive changes are possible with the approach. For example, between 2011 and 2021 … across 44,000:

- Age at first calving 29 months to 26 months
  38% of theoretical biological minimum
- Calving Interval from 426 days to 400 days
  43% of theoretical biological minimum

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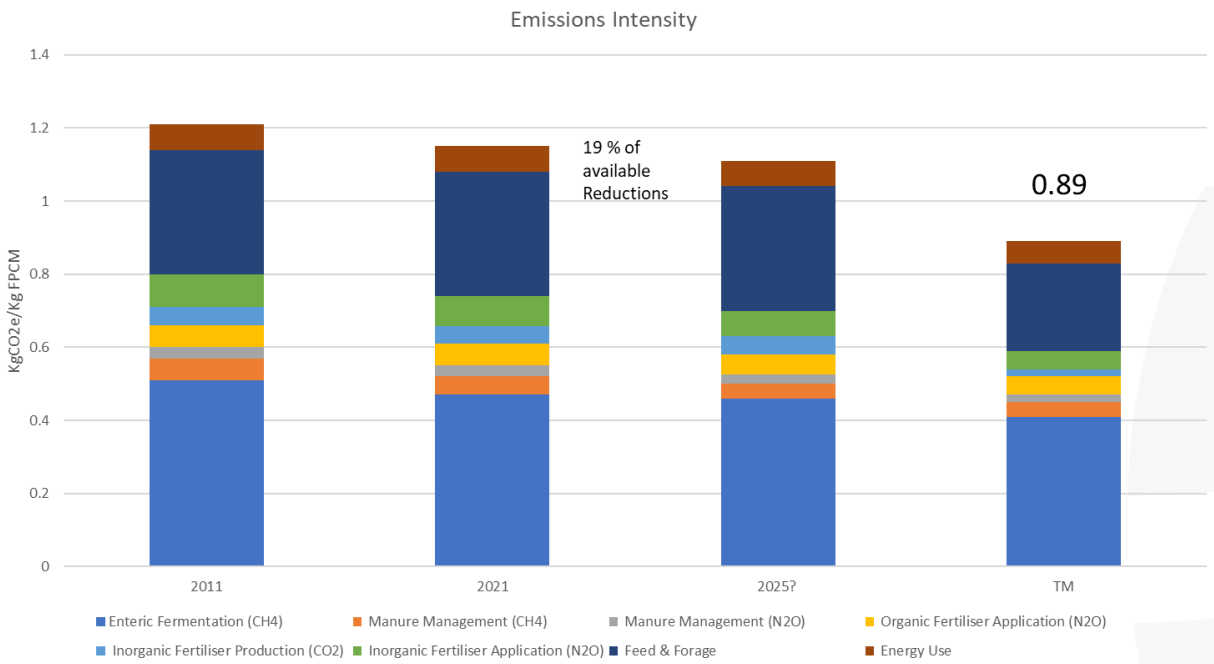
Case Study – The same approach works for net emissions

The concept of the theoretical minimum – the management of expectation



01

Provides context

Offers an understanding of emissions reduction potential (and limits when already very good)

02

Optimum Efficiency

Resource efficiency - balancing the inputs and output.

03

External Factors

Will vary from year to year depending on weather and systems change.

04

Innovation

Feed Additives, Nitrification inhibitors, Green/blue fert products

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Conclusion – Massive improvements are possible at scale

If …

- You understand incentives:
  - Why would farmers share? Why would they change?
  - Why would data sources allow access?
- You maintain credibility – you live or die buy by the quality of the data you return
- You communicate well, you build new relationships

… that takes time, change in agriculture is slow, get started

Thank you

Building a better world where industry and farms thrive together

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Building a world where industry and farms thrive together

Map of Ag is the Agricultural Data Exchange that brings industry and farms together. We believe connected supply chains thrive when farm data access is made simpler for everyone. That’s why we’ve created a platform that securely organises the information that matters, enabling sustainable outcomes at scale.