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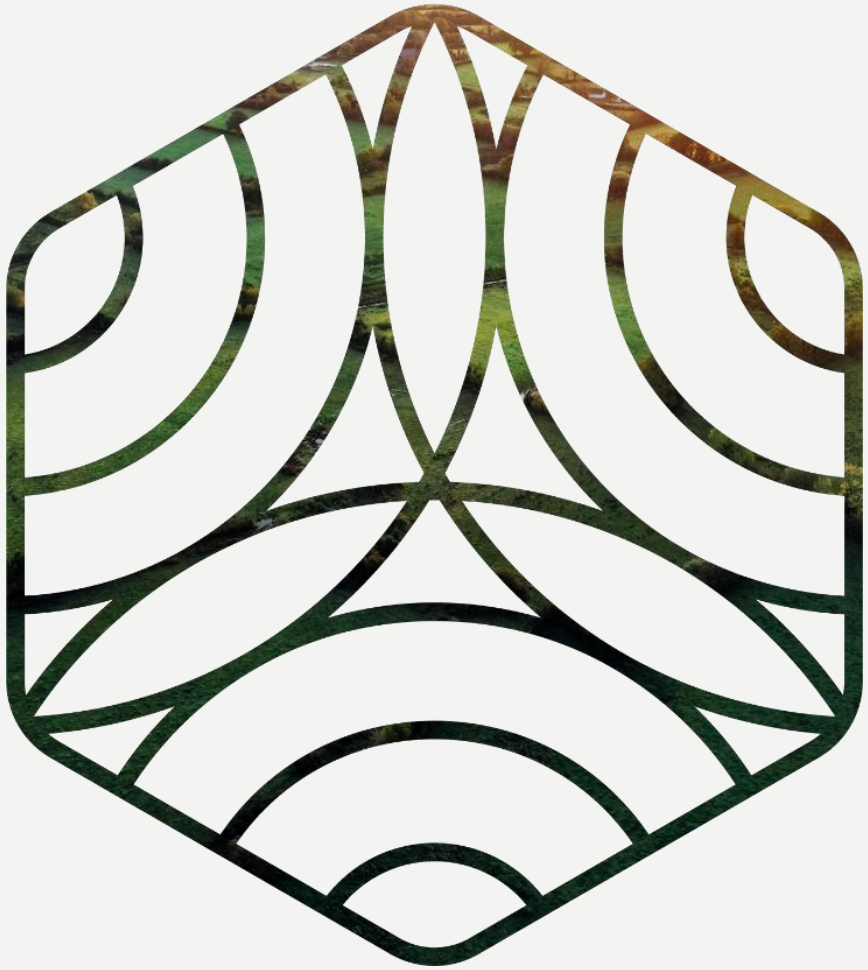

The three big things you need to know about Scope 3

Dr Stephen Wiedemann
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Three questions:

1. How do we **calculate** Scope 3 livestock emissions for beef and sheep in Australia?

2. **Who** needs to know & **what** do they need to know?

3. How do we **achieve reporting** of scope 3 at scale?

How do we calculate scope 3?

- Emission intensity x volume purchased…
- But what is an emission intensity?

  = Non-standardised term = confusion and noise.
- At farm scale, every calculator gives a different outcome.
- At supply chain scale, we get a ‘text-book’ lookup value…

How do we calculate scope 3?

- The research basis is ISO 14040/44/67 LCA and carbon footprint standards

- Beef and Sheep have specified guidelines by the FAO

These standards underpin ABSF & ASF reporting = reliable and reproducible results.

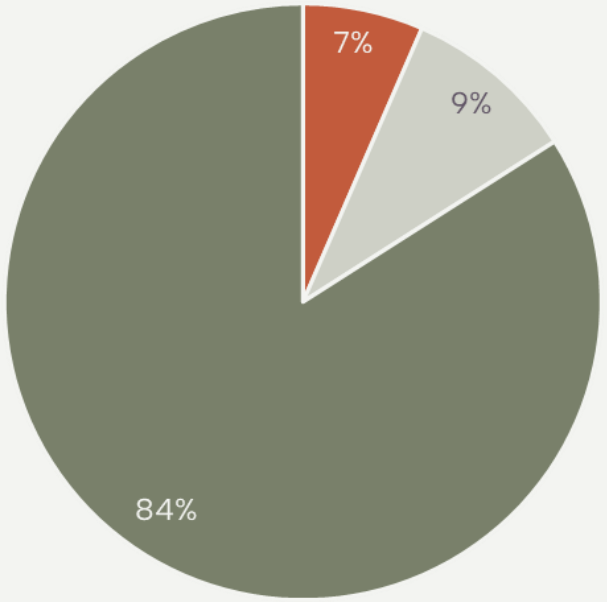
Who needs to know what?

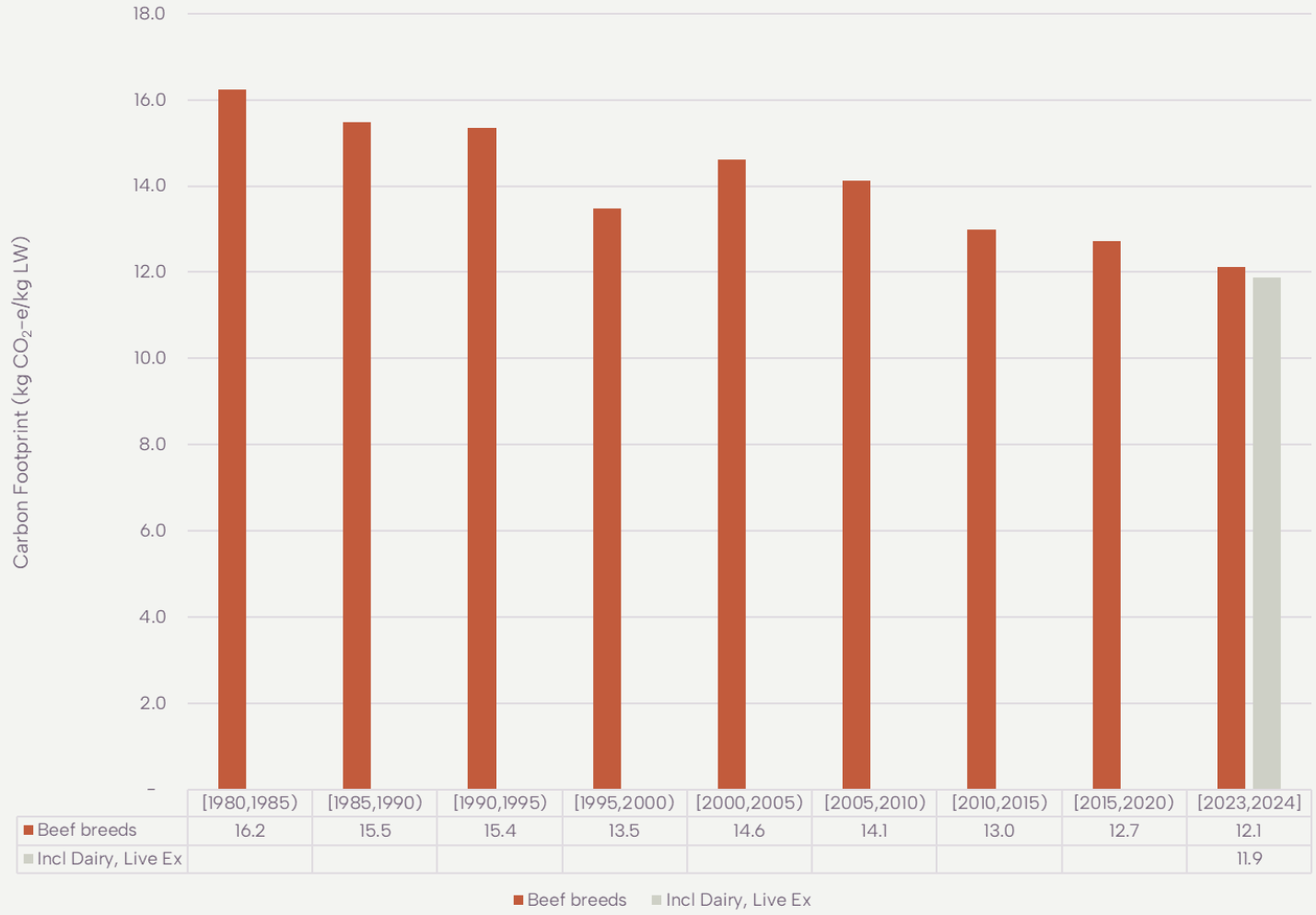
Source: Science Based Targets Initiative

Customer expectations...

Company	Scope 3 reductions by 2030– 2033	Annual reduction needed to meet target
Aldi	25%	3.1%
Burger King (RBI)	50%	4.5%
Cargill	30%	2.3%
Coles	30.3%	3.0%
McDonalds	16%	1.3%
Starzen	25%	3.1%
Woolworths	39.4%	3.9%

Beef Carbon Footprint (AR6) – Scope 3 LW basis





25% reduction over 44 years

Primary data driven prediction of biennial performance

Wiedemann et al. (in press)

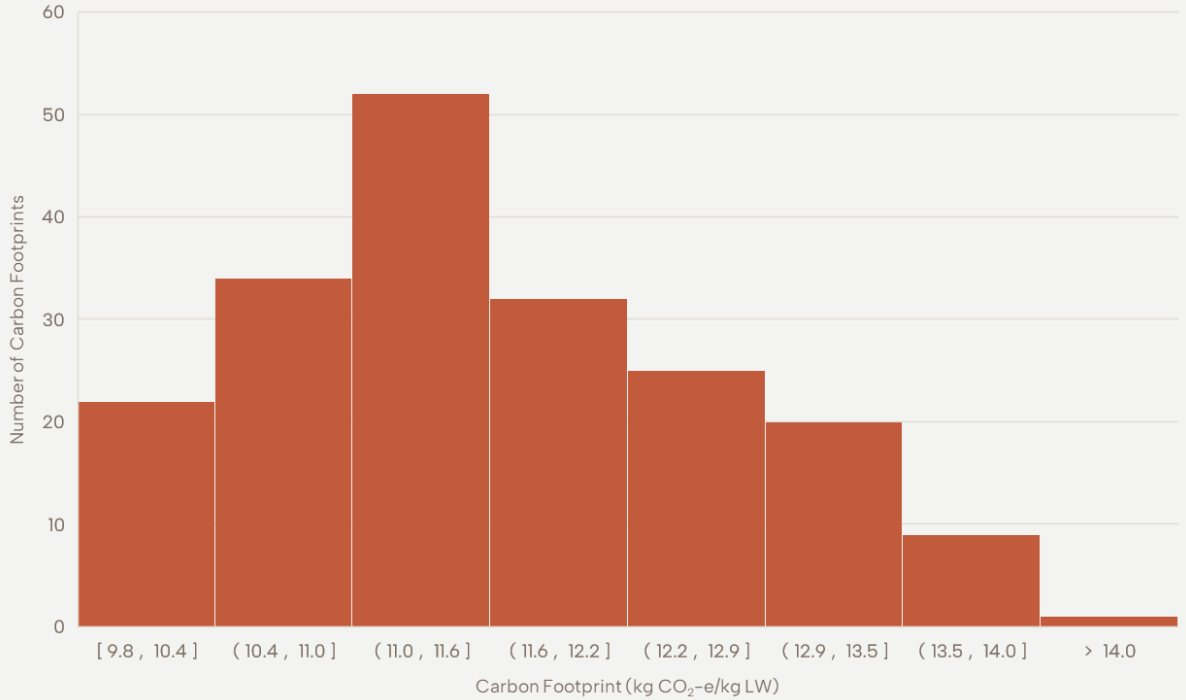
Impacts include land sector – Land Use and sLUC

	Carbon footprint reported on live weight basis ($kg\ CO_2\text{-}e\ kg\ LW^{-1}$)	
	excl LULUC	**Land Use and sLUC**
20 year linear discounting	12.1	2.6
10 year linear discounting		−1.1

Wiedemann et al. (in press)

Farm to supply chain scale

- 200 farms sponsored by JBS
- Verified mean: 11.4 with statistically significant predictors at farm scale.
- Predicted mean from carcase data: 11.7
- *Beef CF can be predicted at supply chain scale*



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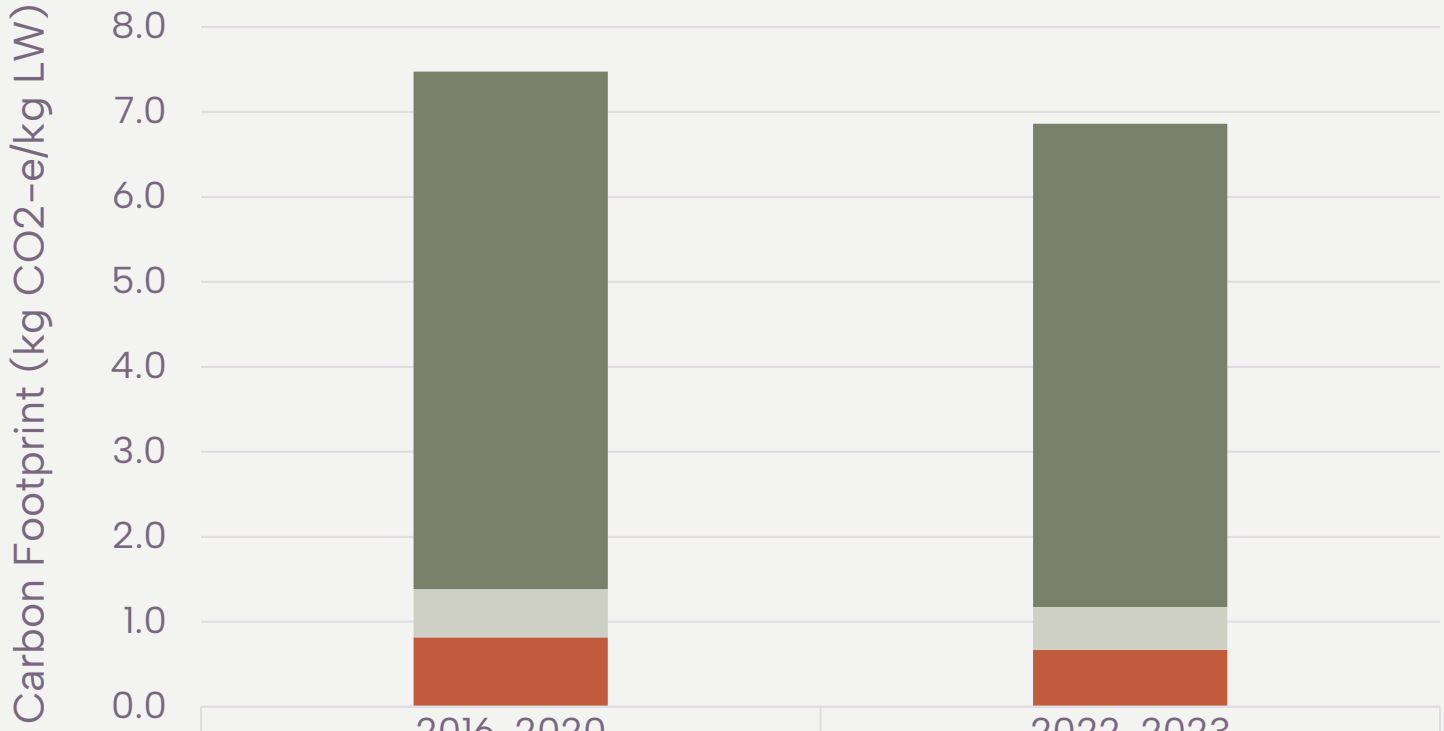
O'Shannessy &
Wiedemann et al. (in press)

Boxed beef

	National Average
Primary Processing – energy and waste water (scope 1)	0.8%
Primary processing – energy (scope 2)	0.7%
Primary production – livestock and farm inputs (processor scope 3)	98.5%
Carbon Footprint (kg CO_2-e kg boxed^{-1}) excl. LU, sLUC	26.9

Sheep Meat Carbon Footprint (AR6)



	2016–2020	2022–2023
Total	7.5	6.9
Methane (CH_4)	6.1	5.7
Nitrous Oxide (N_2O)	0.6	0.5
Carbon dioxide (CO_2)	0.8	0.7

Wiedemann et al. (in press)

Where to from here?

Australia can (and does) lead in reporting underpinned with world-class systems; **we can deliver scope 3 reporting**.

Land sector is a new horizon: deforestation >> Land Use Change

Next: Can we **double rate of reduction** to deliver 5% to 2030?
Engaging producers is the real challenge

Market signals are overdue for driving realistic change… we need **collaboration** to bend the emission reduction curve from 0.5% to 3%

Acknowledgements and Contacts

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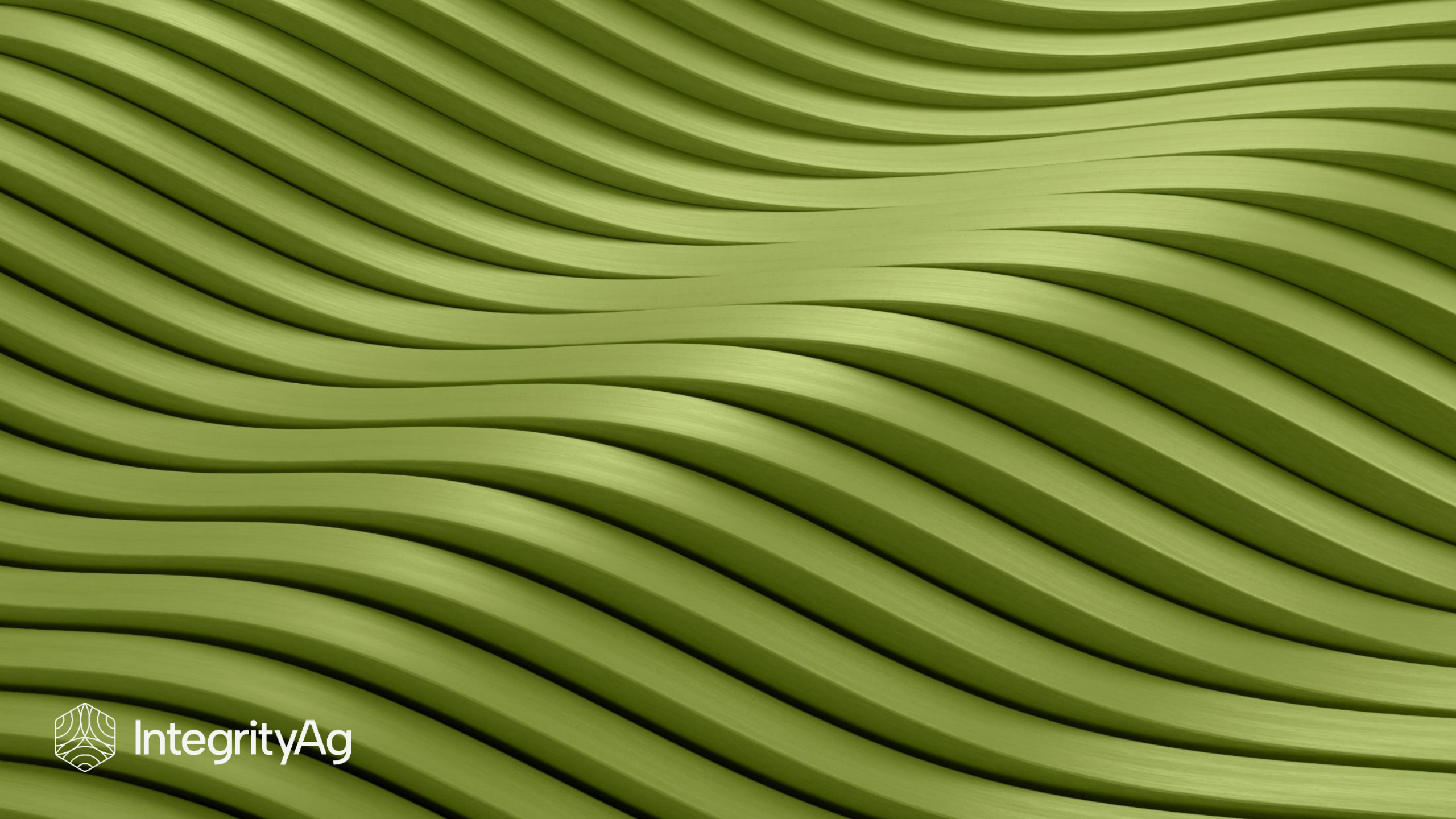
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