

No Beef with BEEF

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Beef Sustainability | The Journey Ahead | McDonald's Canada

- <https://www.youtube.com/watch?v=w8ubbgW3jZw>



www.CRSB.ca

www.crsbcertifiedsustainablebeef.ca

Functioning Example

CANADIAN BEEF SUSTAINABILITY ACCELERATION PILOT

An initiative led by  |  |  | 

Canadian Beef Sustainability Acceleration Pilot



www.CBSApilot.ca

Moving to Long-Term Commercialization



Meeting the Market Shift: Attribute-based buying/selling/acceptance

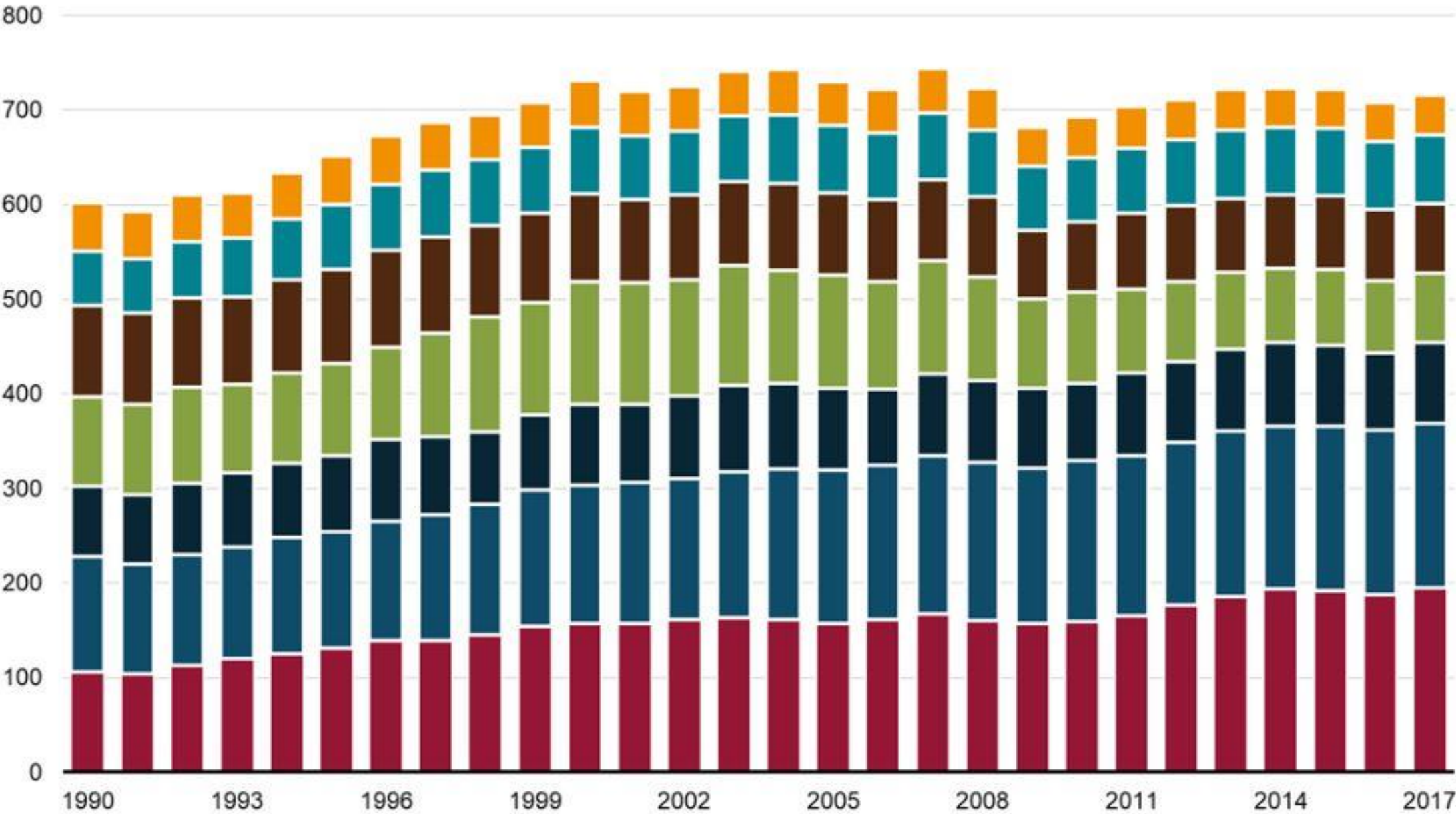


Beyond Meat Burger

- The company says on their website that they wanted to make a burger that “looks, cooks, and tastes” like a beef burger but without the environmental and health problems that can come from red meat (greenhouse gas-emitting cow farts, saturated fat, the like).
- Thanks to beets as one of the ingredients, it even changes color as you cook it to mimic the bloodiness of beef.
- **“Cow Farts” seriously??**

Greenhouse gas emissions by economic sector, Canada, 1990 to 2017

Megatonnes of carbon dioxide equivalent



Beyond Meat Burger

- Then there's the fact that while it may have a good amount of protein (20 grams), it doesn't exactly have vegetables (pea protein isolate doesn't count).
- Despite being a "veggie burger," it's not getting you any closer to your five to seven servings of vegetables a day

Basic Nutritional Comparison of 4 ounces

Beyond Meat Burger

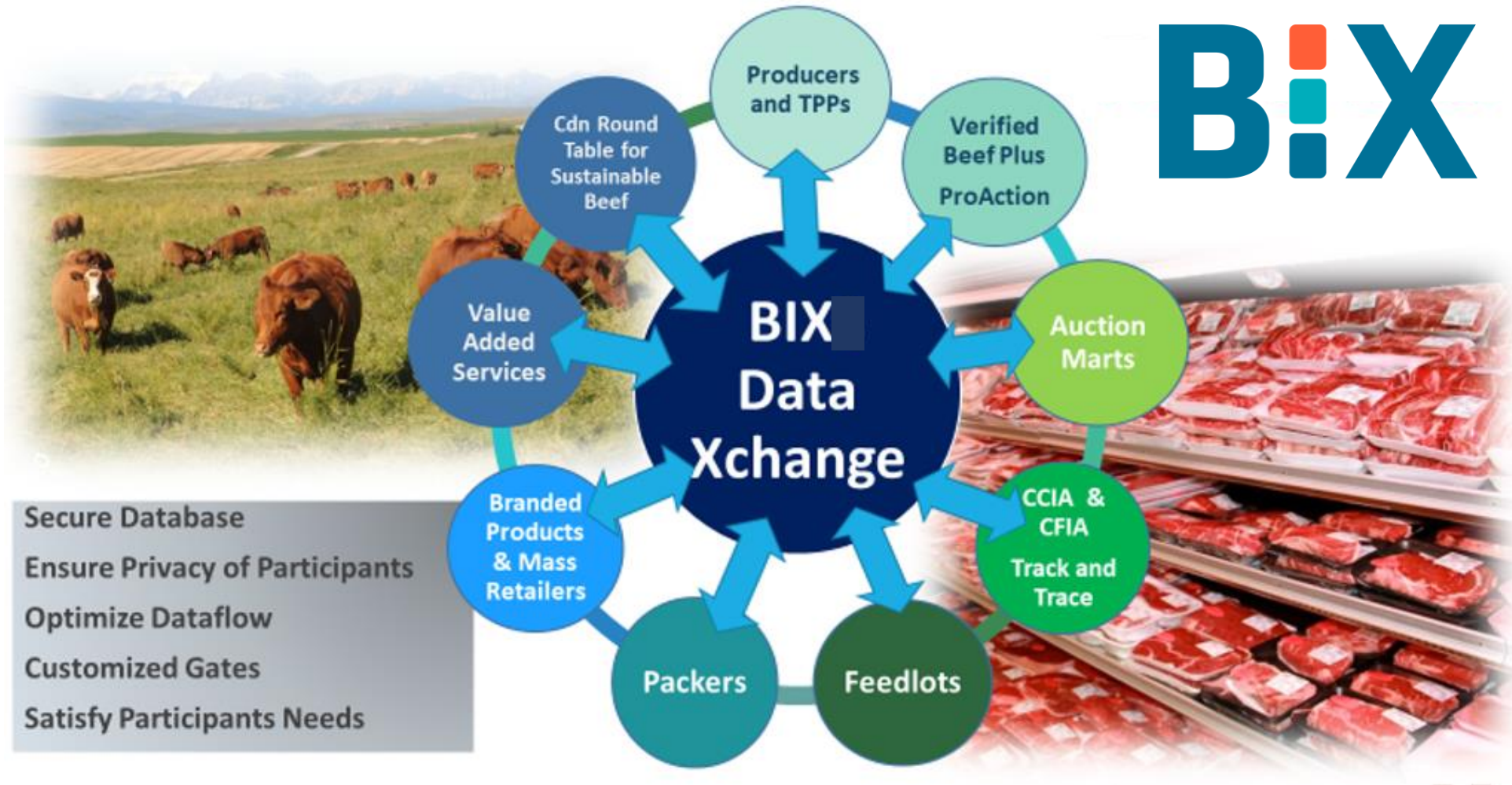
- *Calories:* 270
- *Fat:* 20 g (5 g sat fat)
- *Sodium:* 380 mg
- *Carbohydrates:* 5 grams
- *Fiber:* 3 grams
- *Sugars:* 0 grams
- *Protein:* 20 grams

Lean Ground Beef

- *Calories:* 287
- *Fat:* 23 g (9 g sat fat)
- *Sodium:* 75 mg
- *Carbohydrates:* 0 g
- *Fiber:* 0 g
- *Sugars:* 0 g
- *Protein:* 19 g

Impossible Burger

- *Calories:* 220
- *Fat:* 13 g (10 g sat fat)
- *Sodium:* 430 mg
- *Carbohydrates:* 5 g
- *Fiber:* 0 g
- *Sugar:* < 1 g
- *Protein:* 20 g



BIX Data Flow

The BIX platform is a network of API-based micro-services operating in the cloud.

Definitions when talking about Traceability

- Traceability - The ability to verify the history, location, or application of an item, in this case an animal, by means of recorded identification
- Chain of Custody - the custodial sequence that occurs as ownership or control of the animal is transferred.
- Traceability System – the system that records and follows the trail, in the case of a live animal, to the point of harvest. This can extend beyond harvest, throughout fabrication and further processing.
- Verification – of the chain of custody or traceability in the value chain

- The micro-services interoperate within the platform by leveraging a common single-sign-on authentication system that governs access-control and data permissions.
- Each micro-service maintains its own data persistence system, allowing strict data segregation and strong data integrity.

Big Data – Challenges and Opportunities

Data facilitates analytics –

- Data aggregation for improvement
- Opportunity for change and growth
- Data sets can be too large
- What data provides improvement
- How to protect producer privacy

Where does

Blockchain

come into play?

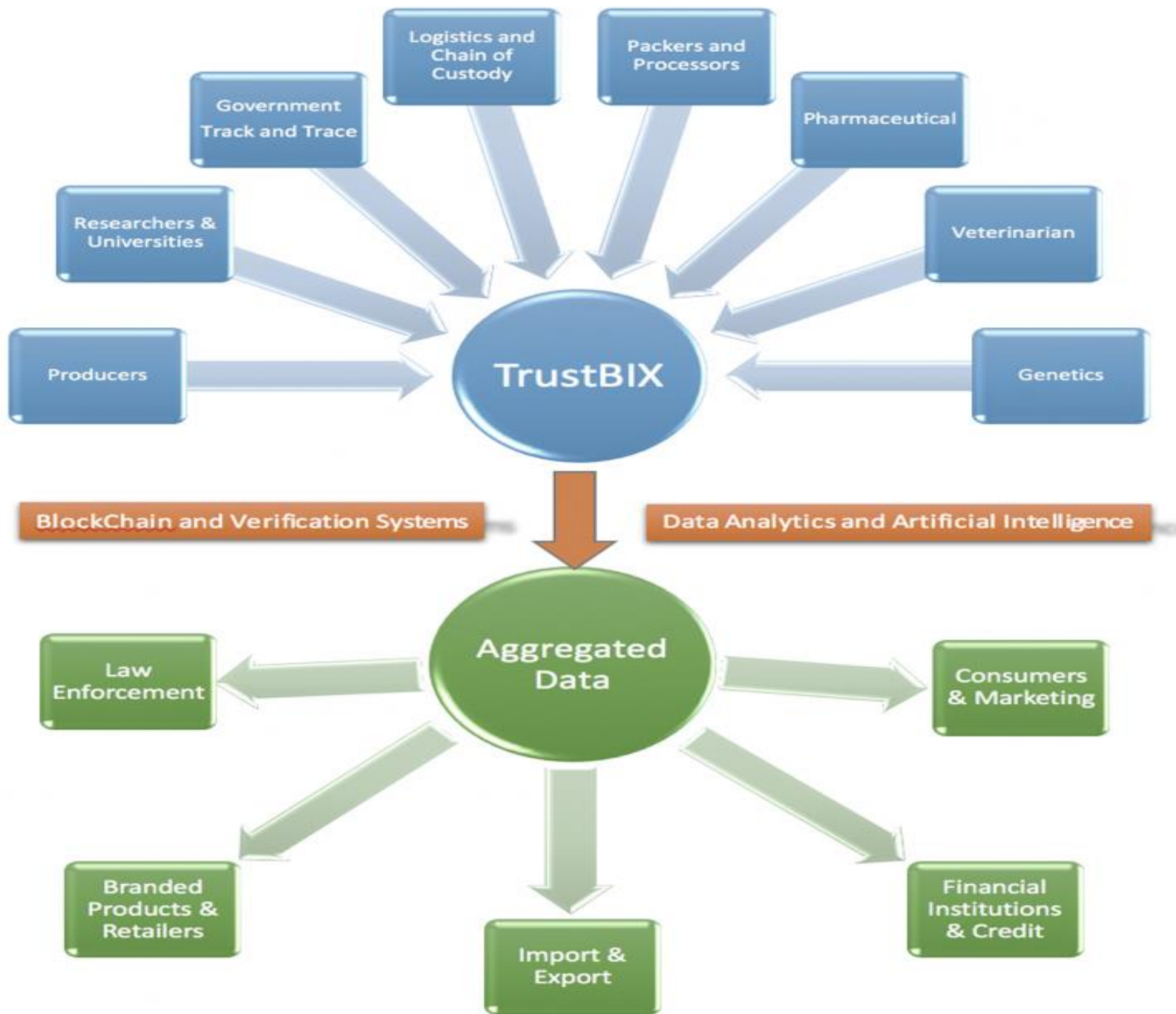
TRUST
B:X

Blockchain Is Like Teenage Sex

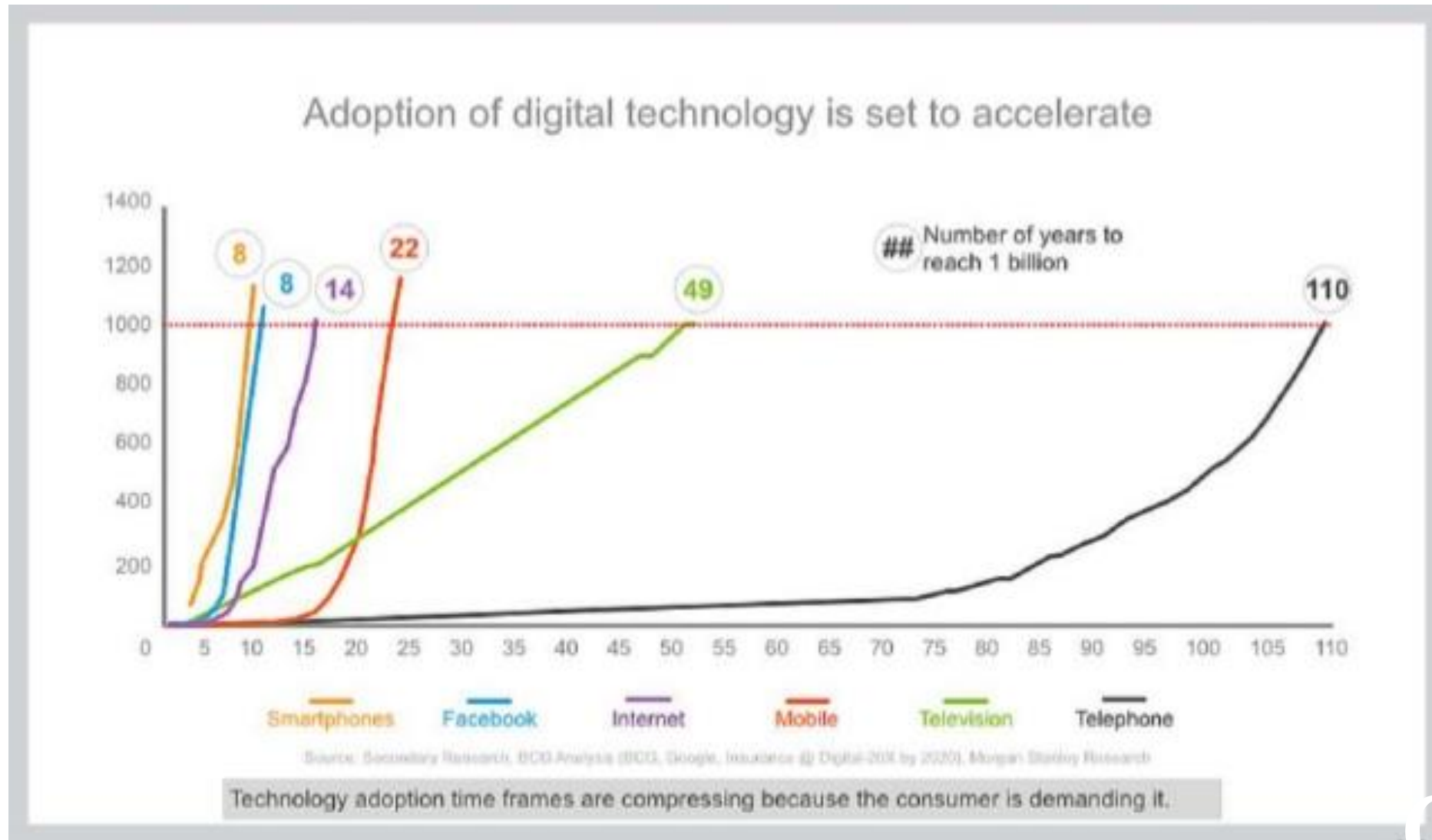
Everyone talks about it

No one really knows how to do it

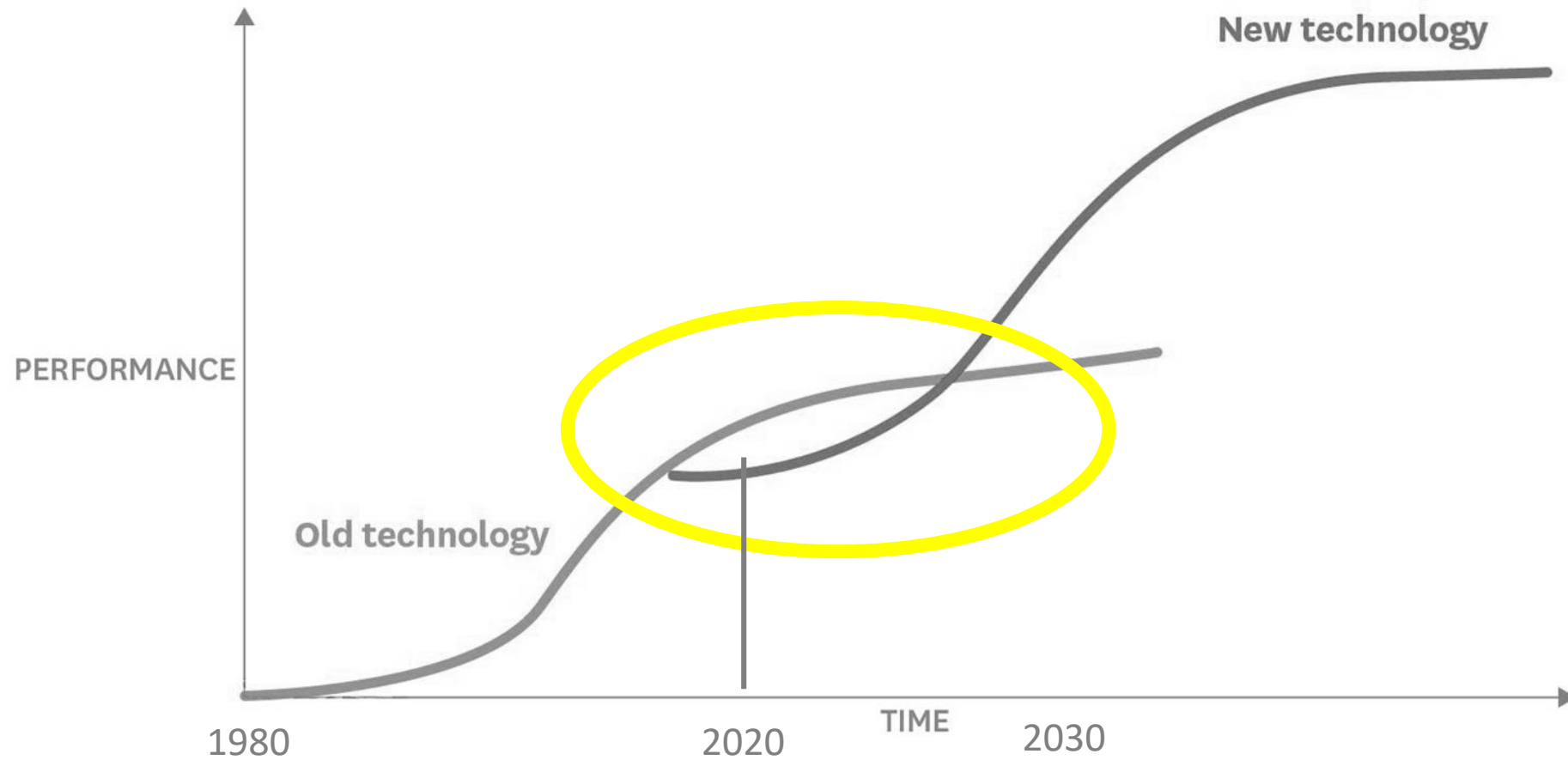
Everyone thinks everyone else is doing it



Change is Accelerating



How Fast does New Technology Replace the Old?



Blockchain Myths	Reality
Blockchain is Bitcoin	Bitcoin is just one crypto-currency application of blockchain
Blockchain is better than traditional databases	Blockchain's advantages come with significant technical trade-offs that mean traditional databases often still perform better
Blockchain is immutable or tamper-proof	Blockchain could be tampered with if >50% of the network computing power is controlled

Blockchain Myths	Reality
Blockchain is 100% secure	Overall blockchain system security depends on the adjacent applications – which can be attacked and breached
Blockchain is a “truth machine”	Blockchain cannot assess whether an external input is accurate or “truthful” – this applies to all off-chain assets and data digitally represented on blockchain

The agriculture industry is being driven by:

- changing consumer expectations
- need for data to back up claims
- expectations of sustainability
- need for accurate information
- need for animal disease traceability



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THANK YOU!
Q&A