Cambridge Global Food Security Symposium Thursday 6th July 2023

Towards a Better Food System: challenges and opportunities

Opening Address

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UNIVERSITY OF CAMBRIDGE

GLOBAL FOOD SECURITY

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Food systems futures and how to achieve them?

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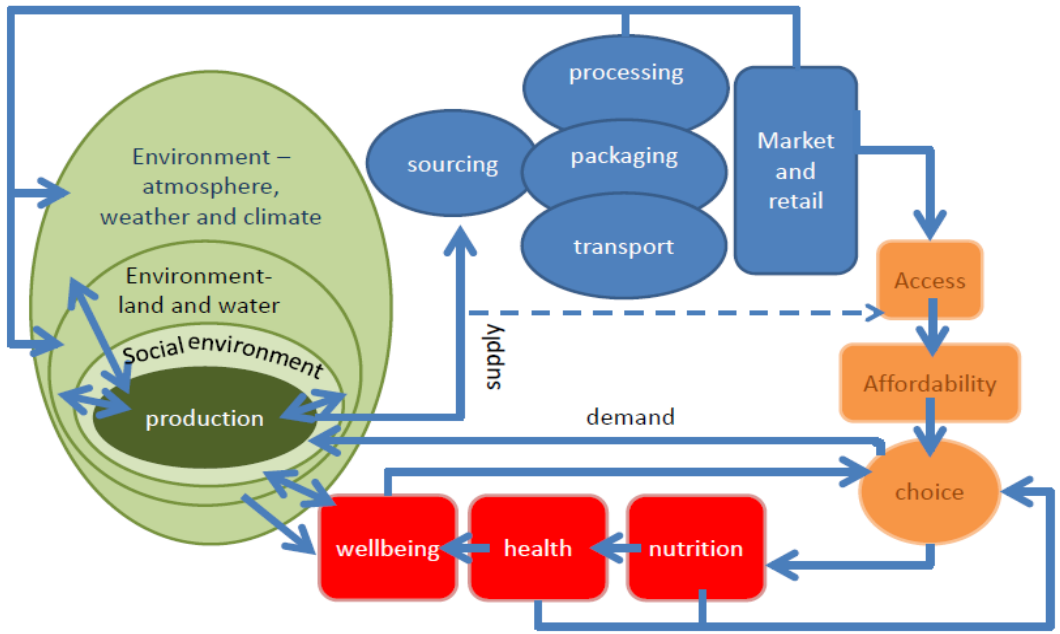

WHY ARE WE WHERE WE ARE TODAY?

Taking a food systems approach is much needed to avoid problems getting worse…

Jevons' paradox: was the green revolution the root of today's problems?

Demand → Supply

Supply → Demand

Examples:

- Apple juice
- Palm Oil
- grains and meat

?alternative proteins

Hawkes et al 2012 Food Policy
Benton & Bailey 2019 Global Sustainability

The “cheaper food paradigm” (CFP) drives interlocking vicious circles

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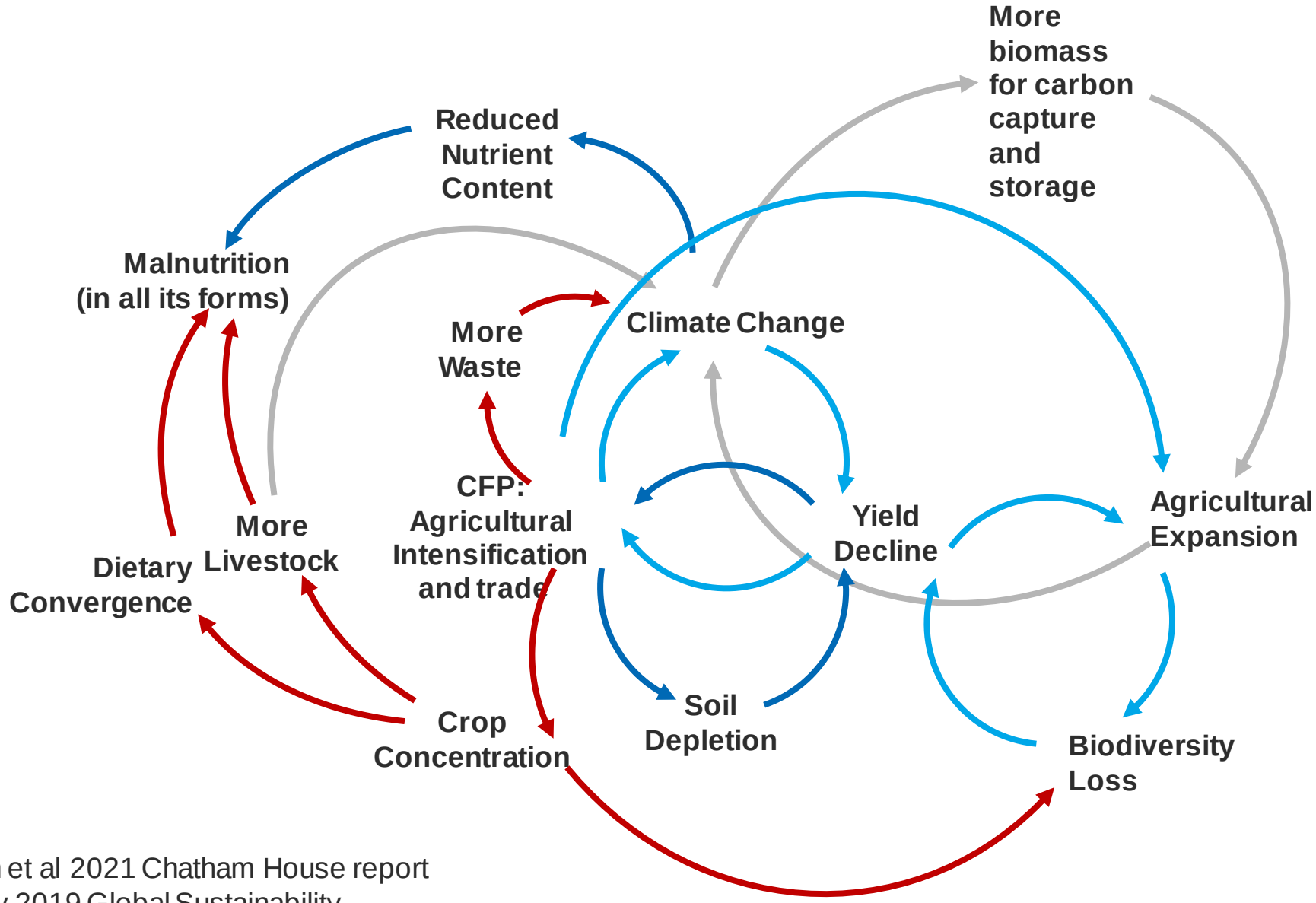
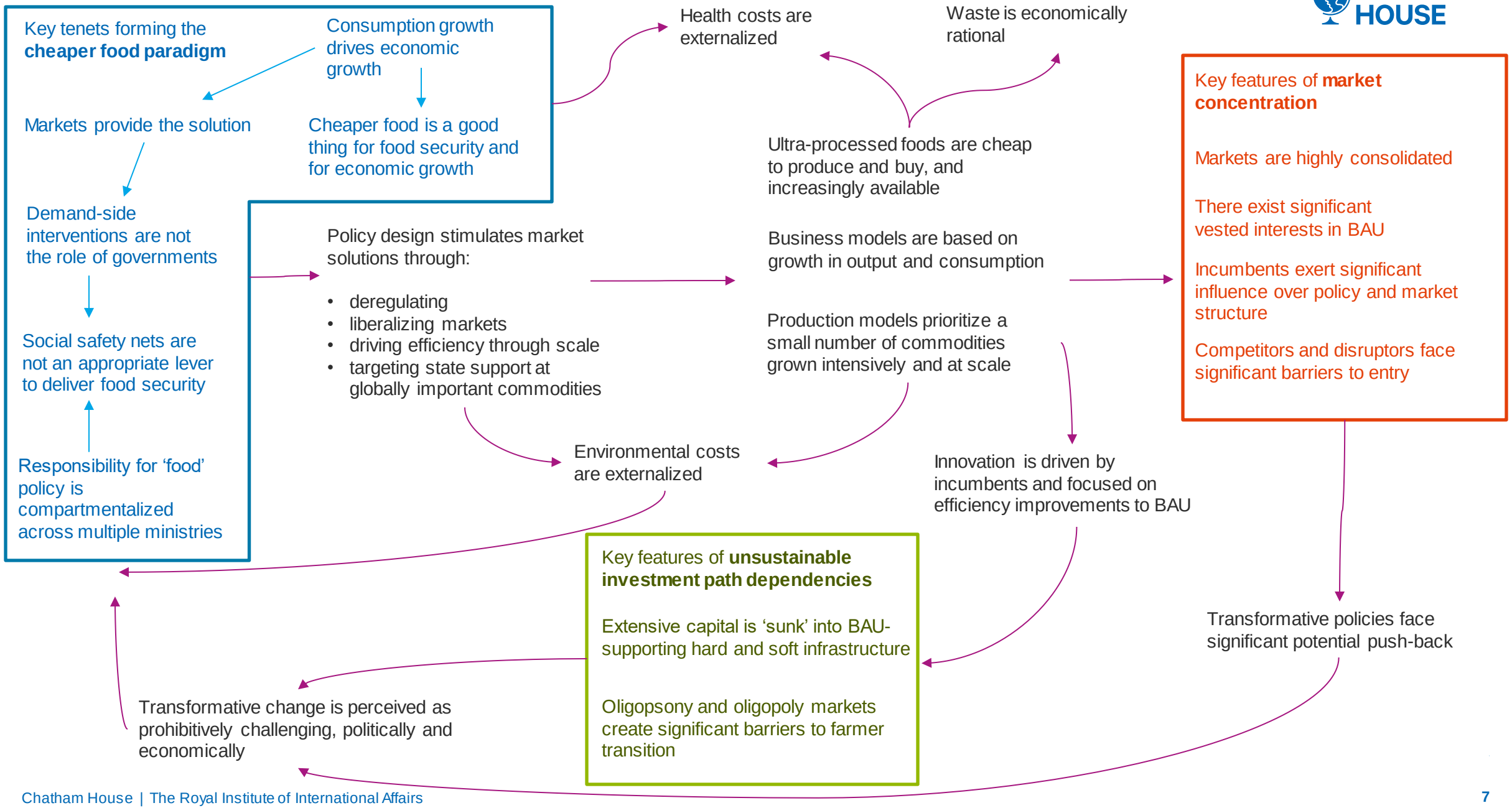


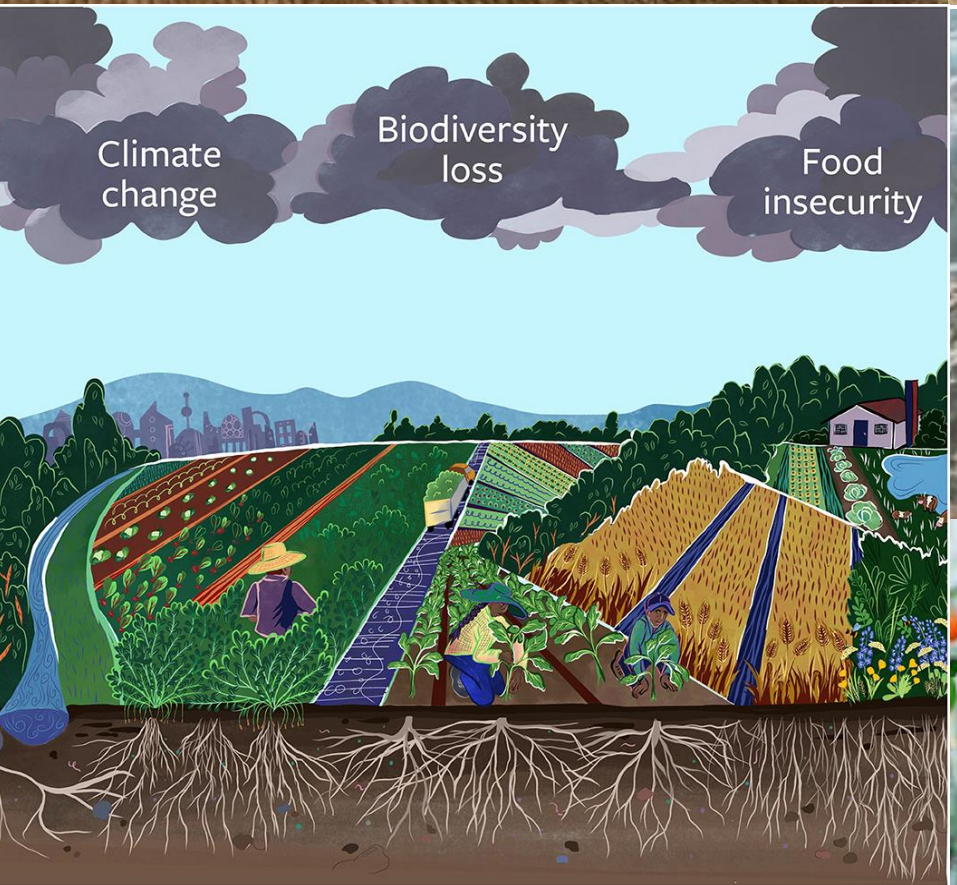
Source: Benton et al 2021 Chatham House report
Benton & Bailey 2019 Global Sustainability

LOCK-INS

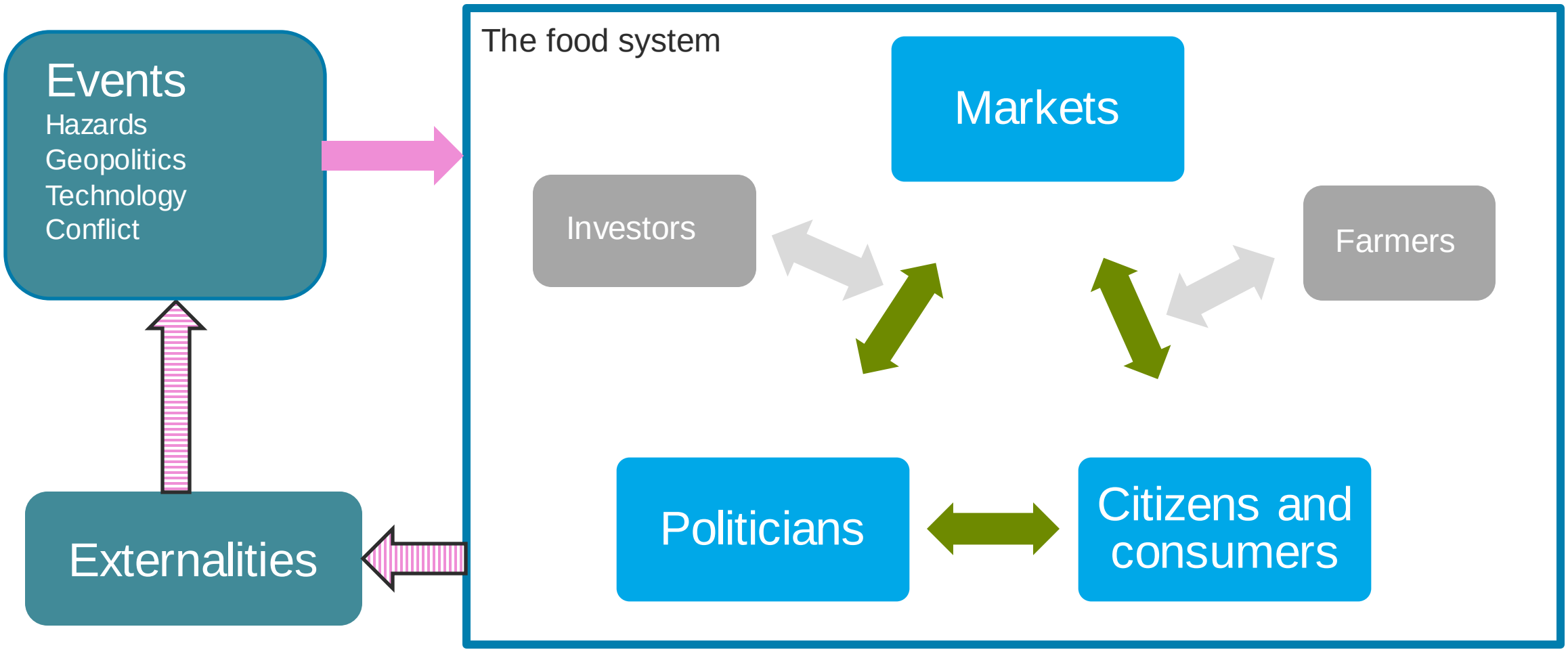
The food system has a lack of functional resilience but a lot of structural resilience


Key tenets forming the **cheaper food paradigm**
Consumption growth drives economic growth
Markets provide the solution
Cheaper food is a good thing for food security and for economic growth
Demand-side interventions are not the role of governments
Social safety nets are not an appropriate lever to deliver food security
Responsibility for 'food' policy is compartmentalized across multiple ministries
Health costs are externalized
Waste is economically rational
Ultra-processed foods are cheap to produce and buy, and increasingly available
Policy design stimulates market solutions through:
• deregulating
• liberalizing markets
• driving efficiency through scale
• targeting state support at globally important commodities
Business models are based on growth in output and consumption
Production models prioritize a small number of commodities grown intensively and at scale
Environmental costs are externalized
Key features of **market concentration**
Markets are highly consolidated
There exist significant vested interests in BAU
Incumbents exert significant influence over policy and market structure
Competitors and disruptors face significant barriers to entry
Innovation is driven by incumbents and focused on efficiency improvements to BAU
Transformative policies face significant potential push-back
Key features of **unsustainable investment path dependencies**
Extensive capital is 'sunk' into BAU-supporting hard and soft infrastructure
Oligopsony and oligopoly markets create significant barriers to farmer transition
Transformative change is perceived as prohibitively challenging, politically and economically

WHAT SHAPES THE FUTURE?


Climate change
Biodiversity loss
Food insecurity

What shapes the future?



4 LEVERAGE POINTS – AND 14 TYPES OF LEVERS - FOR CHANGE

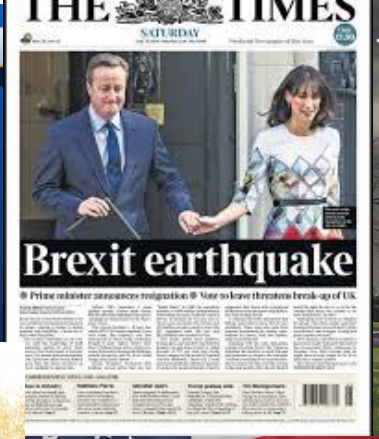
The food system has a lack of functional resilience but a lot of structural resilience

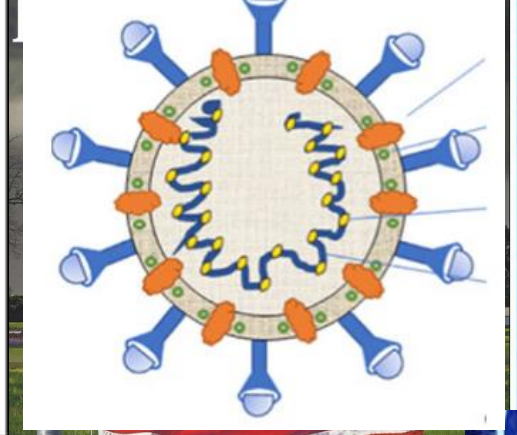
Leverage points to unlock systems-level change

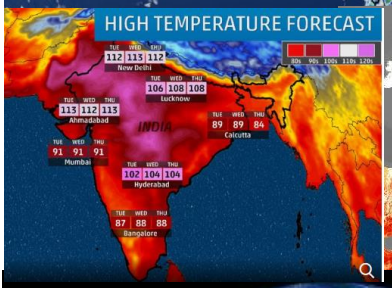
Leverage point	Example levers
Changing the rules of the market	Regulate/tax harmful effects
	Reform subsidies
	Stimulate demand for the “better”
	Make change less risky for markets
	Increase competition/reduce power of big businesses
Build market transparency	Increase disclosure
	Limit greenwashing
	Limit lobbying power
Unlocking political change	Build citizen pressure for change
	Foster ambition for change internationally
	Build social safety nets
Mainstreaming systems-level approach to change	Create a clear vision
	Build whole-of-govt approach
	Use “true-cost” accounting

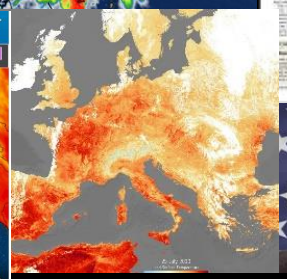
To enable change, also need an R&D agenda that removes constraints:

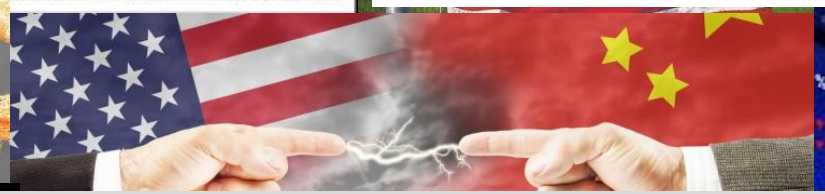
More F&V, less focus on grains, more farm systems research

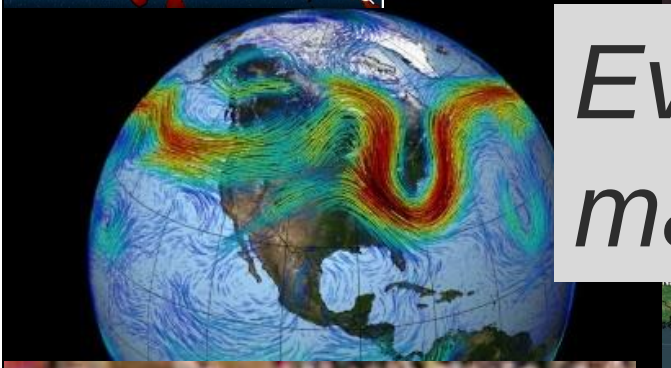




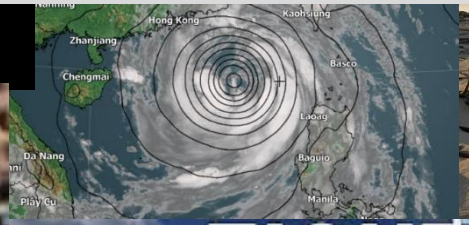


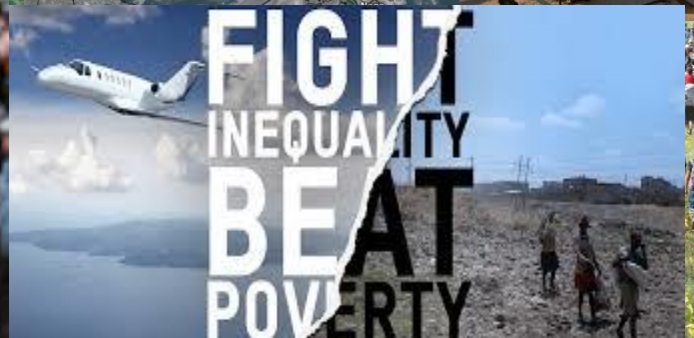




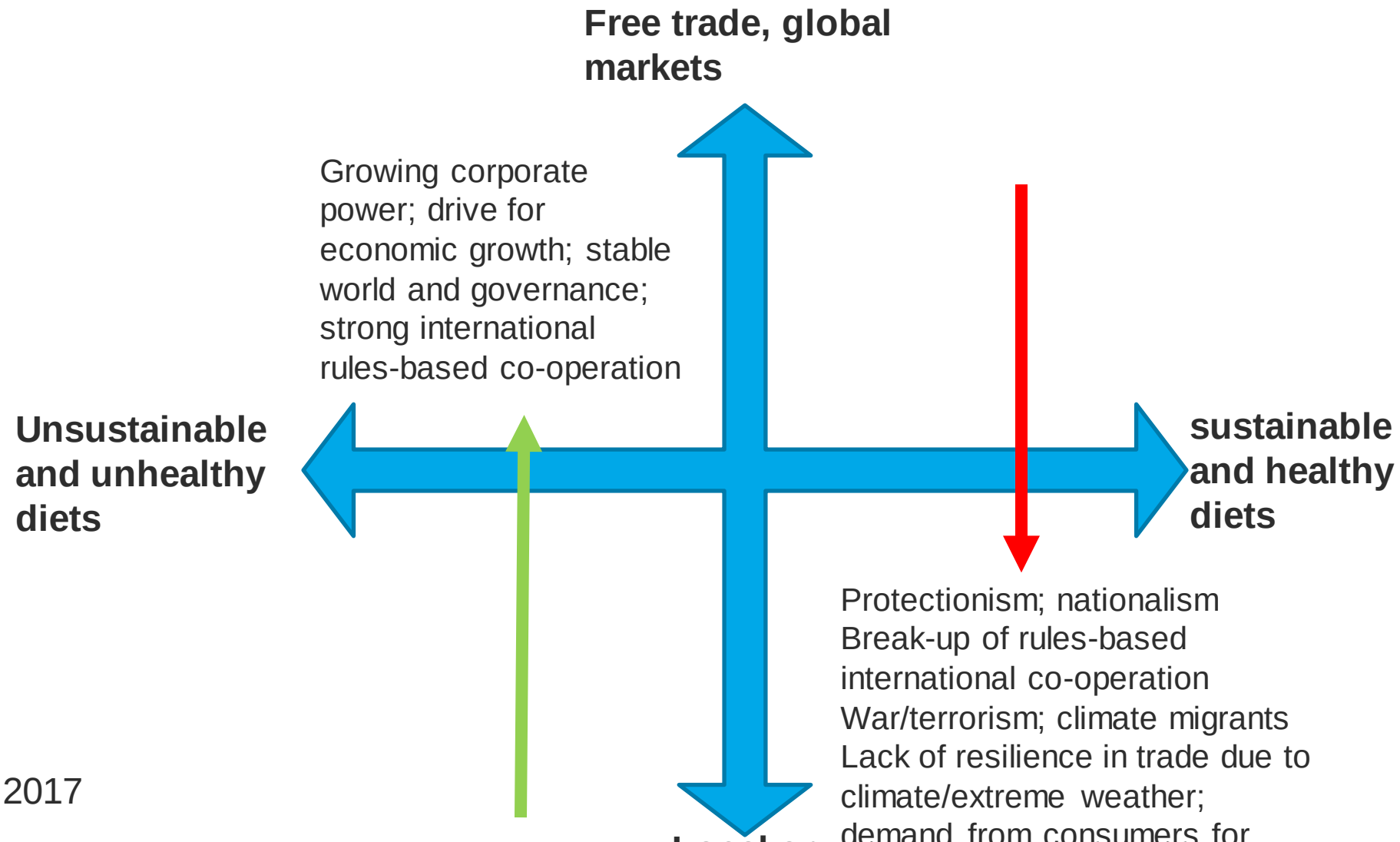


Events happen that reshape markets, politics and attitudes





Future of food systems

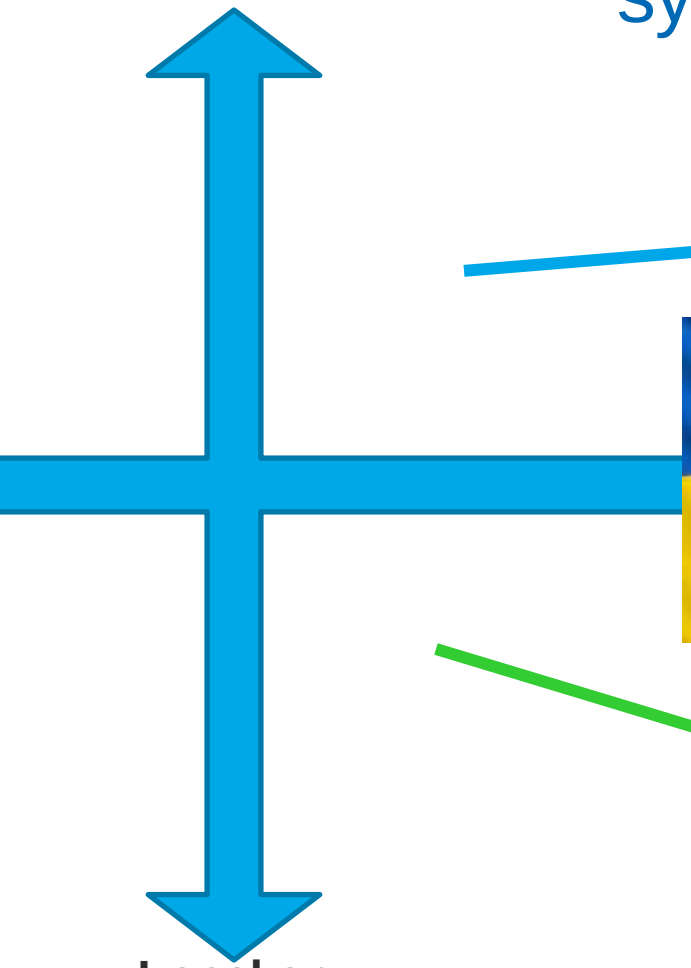


2017

https://www.weforum.org/whitepapers/shaping-the-future-of-global-food-systems-a-scenarios-analysis

Different futures, different food systems

Free trade, global markets



Local or regional markets

Commodity crops, large scale
Biotechnology and biofortification
Ultra-processed foods
Long supply chains
Lots of robotics

More varied diets to provide nutrients
More varied farming systems, smaller scale
Less agricultural efficiency and more system efficiency
Low waste
Whole foods, cooked at home
Short supply chains

“Sustainable” intensification & land sparing to meet inevitably increasing global food demand

Agro-ecological approaches (land sharing) and land-sparing enabled by demand-reduction through adopting healthy, sustainable, low-waste consumption.

CONTESTED VISIONS FOR A “SUSTAINABLE FOOD SYSTEM”

…each version is based on sets of assumptions, which are mainly ***ideological not “fact”***

Benton, Tim G., and Helen Harwatt. "Sustainable agriculture and food systems." (Chatham House, 2022).

Core issues at the heart of the debate

Sustainable Ag Version 1
"Sustainable" intensification & land sparing to meet inevitably increasing global food demand
Key Assumptions
Demand is exogenous and **will increase** as population size and wealth increase
Growing market demand **requires** productivity growth to raise supply
Dietary change is *difficult* and **not** the preserve of policy
The potential for technologically led sustainable intensification is **large**
Land sparing is **enabled** by sustainable intensification

Core issues at the heart of the debate

Sustainable Ag Version 2
Agro-ecological approaches (land sharing) and land-sparing enabled by demand-reduction through adopting healthy, sustainable, low-waste consumption.
Key Assumptions
Demand **can** be changed and should be shaped by social needs through regulatory change leading to structural change in markets
The current unsustainability of farming is a form of **market failure** that can be corrected
A **healthy** diet is also a (more) **sustainable** one
Agro-ecological approaches can supply sufficient nutrients to "feed the world" **if consumption patterns change**
Agro-ecological approaches are **more sustainable** than sustainable intensification

CONCLUSIONS

Food system transformation is needed for human health, to protect biodiversity and reduce climate change impacts

- **There is an overly strong focus on technology to "unlock change"…**
- **But systemic change is unlikely to arise unless citizens, farmers and investors enable political change that changes the "rules of the game" and unlocks the lock ins**
- **Structural market change (trade, subsidies, research, taxes, availability, incentives, public procurement, education) is needed to invert the business model of large agri-business**
- **No lever is too small to pull, but real systemic change requires concentrated pressure on a smaller number of leverage points.**
- **Such pressure is as likely to come from "events" as from within**
- **The research agenda needs to tackle transformation, be robust to the future, be less based on BAU thinking and more systemic**

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Thank you!

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