

What Will FinTech Do In The Climate Wars, Daddy?

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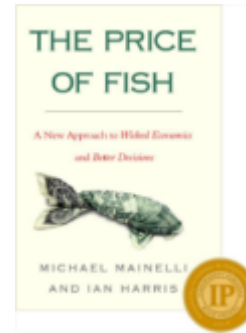
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Z/Yen - City Of London's Leading Commercial Think-Tank

- ◆ Services – projects, strategy, coaching, research, analytics, systems
- ◆ Sectors – technology, finance, voluntary, professional services, outsourcing
- Independent Publisher Book Awards Finance, Investment & Economics Gold Prize 2012 for *The Price of Fish*
- British Computer Society **IT Director of the Year**, DTI **Smart Award** for PropheZy
- £1.9M **Foresight Challenge Award** for Financial Laboratory visualising financial risk
- ChainZy smart ledger (blockchain) 1995
- Indices – Global Financial Centres, Global Green Finance, Smart Centres



Agenda

- ‘Green So Far’
- Multiple views
- Roadmaps
- Dynamic anomaly & pattern response (DAPR) – machine-learning, AI, whatever...
- Track & trace
- What will FinTech do in the climate wars?



**"Get a detailed grip on the big picture."
Chao Li Ning**

The 'City' Story So Far

City of London Corporation passes local Clean Air directive in 1953 leading to Clean Air Act of 1956.

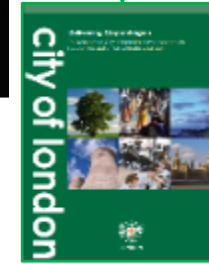


"[The London Principles: The Role Of The UK Financial Services In Sustainable Development](#)", Johannesburg Earth Summit.

2002



2007



2009

London Accord – Sharing Investment Research For The Sake Of The Planet

Policy Performance Bonds



2017



2019



1991



World Business Council for Sustainable Development

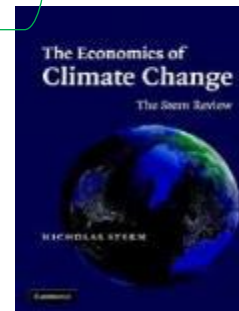
1992



2007



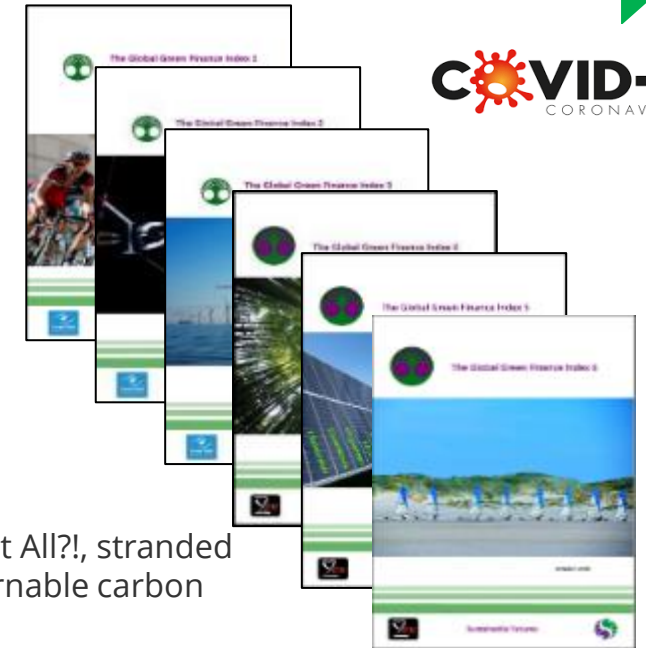
2008



2006

Following COP3 Kyoto (1997), City of London Corporation publishes – "[Trading Emission Permits – A Business Opportunity For The City?](#)" (January 1999). COLC sets up shadow trading scheme, works with DTI, EU Emissions Trading System (ETS) adopts UK framework, launches April 2005.

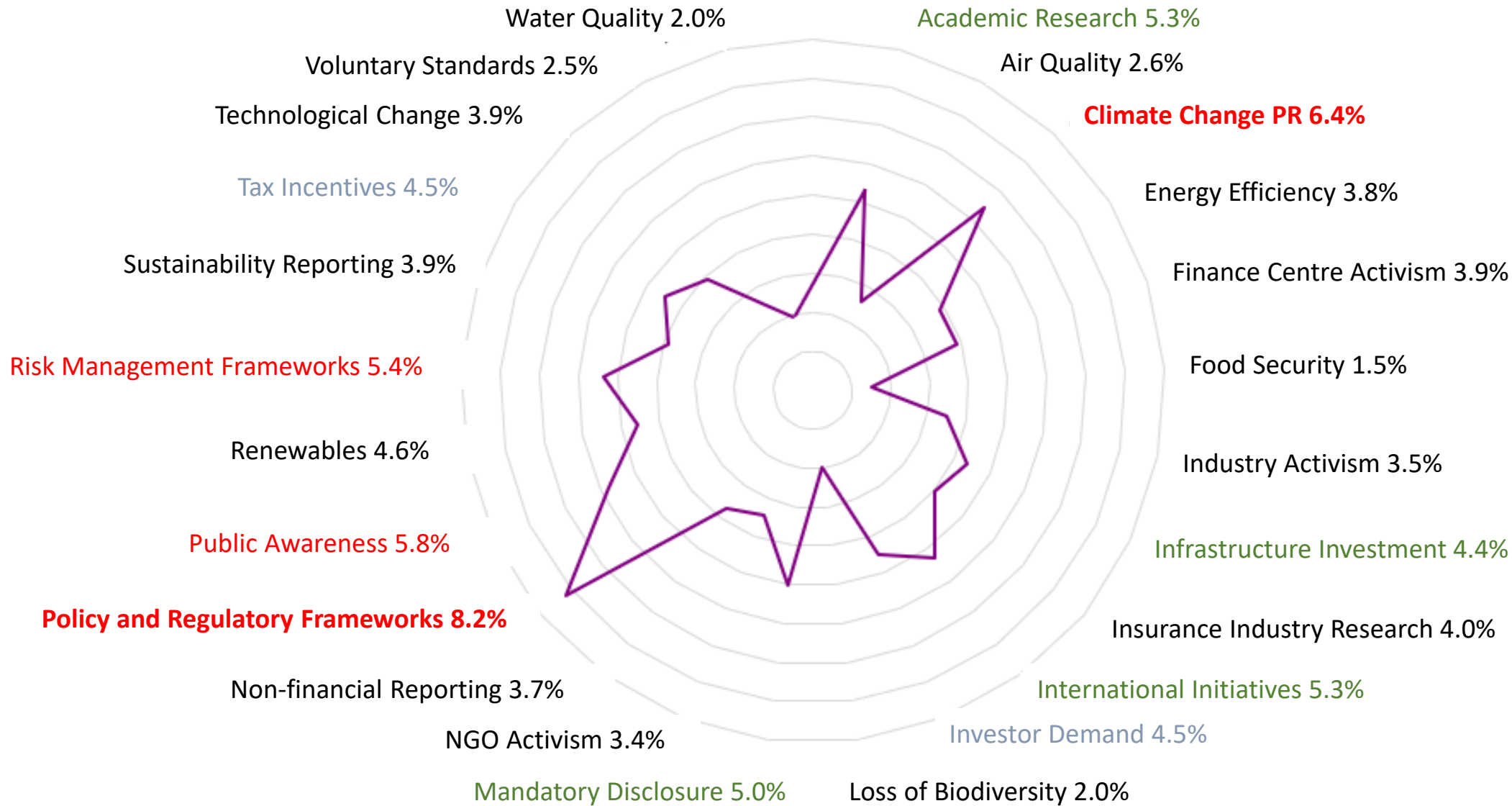
Carbon - Burn It All?!, stranded assets, unburnable carbon



2018



What Is On Practitioners' Minds?



Reporting Regulatory Failure?

Overarching goal: Every financial decision takes climate change into account

Reporting



- Private sector to refine TCFD climate-related financial disclosure to increase quantity and quality of reporting
- Agree potential paths to mandatory reporting at domestic and international levels
- Build coalitions of countries who mandate reporting and companies committed to full climate disclosures

Risk Management



- Assess the resilience of firm's strategies to net zero transition through stress tests
- Develop open source, business-relevant reference scenarios for regulators, financial firms and businesses to test strategic resilience
- Establish coalition of central banks and regulators committed to issuing guidance on risk management and running stress tests

Return



- Enable investors to make informed decisions on whether companies and portfolios are transition ready
- Agree metrics to measure net zero/alignment of investment portfolios
- Build coalition of financial institutions that commit to net zero alignment and measurement and disclosure of progress

MDBs/DFIs



- Encourage MDBs to report their own emissions and exposure to climate risks, in line with TCFD
- Realise MDBs' commitments to transition plans to achieve Paris Alignment
- Explore rapid expansion of blended financing for climate resilience, adaptation and mitigation

Innovative Finance



- Work with the private sector to promote the most promising and impactful financial innovations in sustainable finance (including transition bonds, contingent climate securitisations, and the scaling up of rapid private markets for carbon offsets and nature-based solutions)

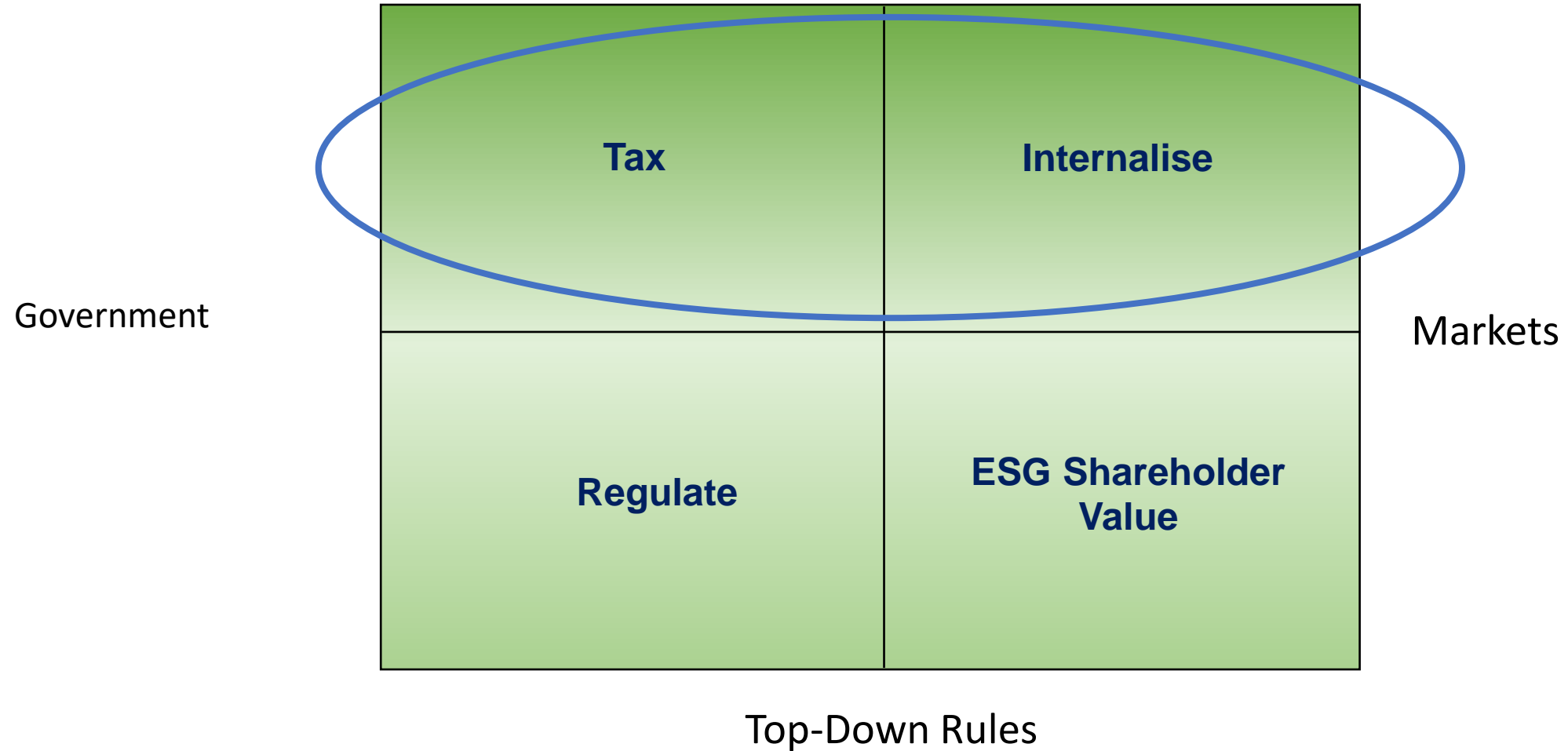
ESG Works?

- Do ESG ratings work?
 - ESG has had 25 years+ already
 - MIT 'Aggregate Confusion' project found companies could be in the top 5% on one ESG rating algorithm and the bottom 20% on another - reputable firms like Shell find their ratings to be A from one rating agency and C+ from another
 - 'Alphabet' soup of ESG models may be irresolvable problem
 - Creating separate 'currency'

- How do banks decarbonise their loan book?
 - Do they need to? Shouldn't companies?



Multiple Views



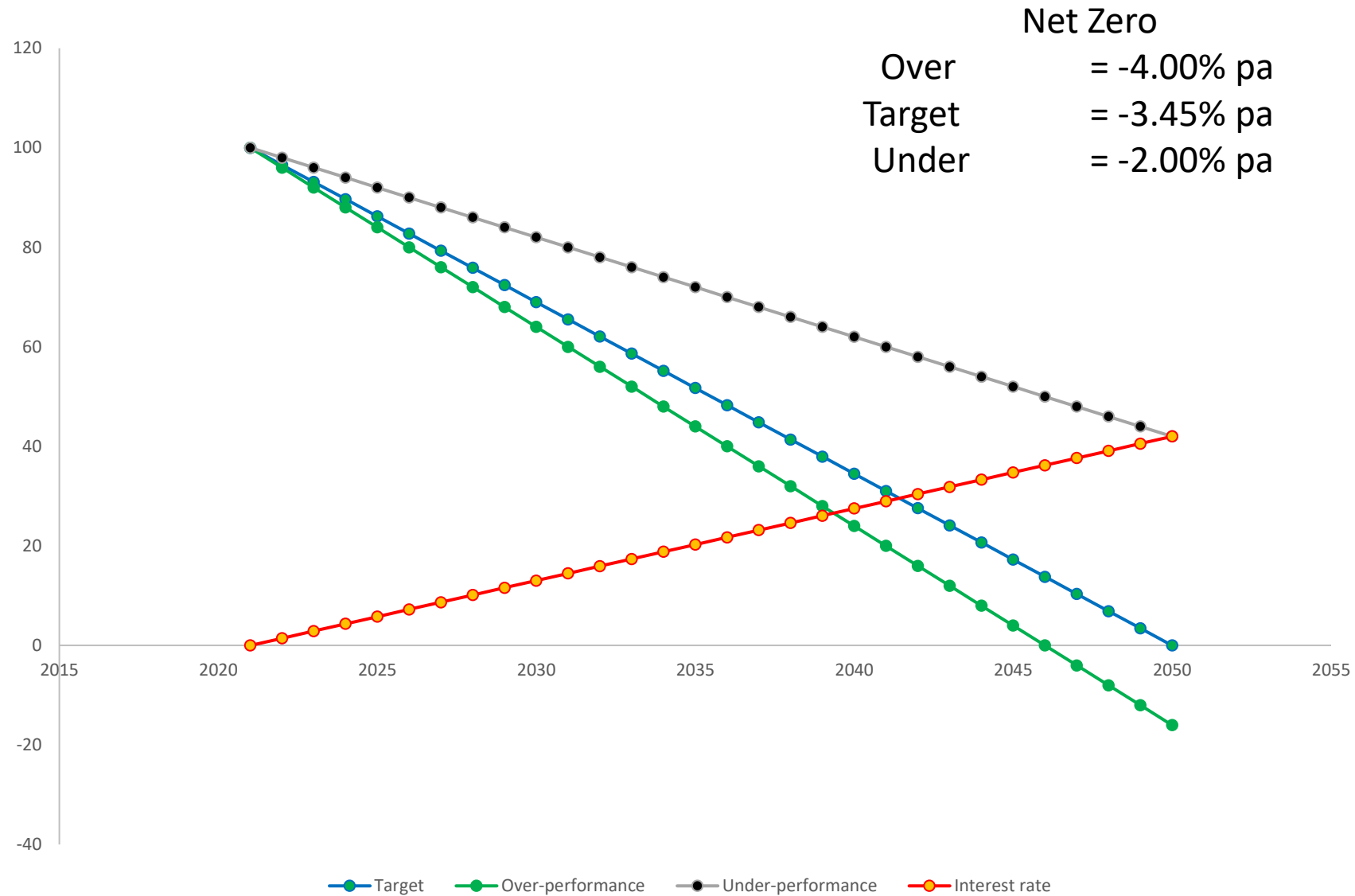
Need Economics - Plandemics Are Insufficient

Policies Need Pricing, In 2007, Or 2020

- **Focus on the Carbon Market** - business investment follows the carbon price
- **Avoid Carbon-Dumping Wars** – duties on carbon ‘at the borders’ could be worse than anti-dumping trade wars
- **Set International Standards** – product level, carbon intensity, carbon offsets
- **Set Higher Policy Standards to Realise Existing Positive Abatement Opportunities** - lower consumption, and increase efficiency of existing energy
- **Support More Research:**
 - Quantify the impact of forestry
 - Assess carbon capture and sequestration
 - Energy storage is the great equaliser



Policy Performance Bonds



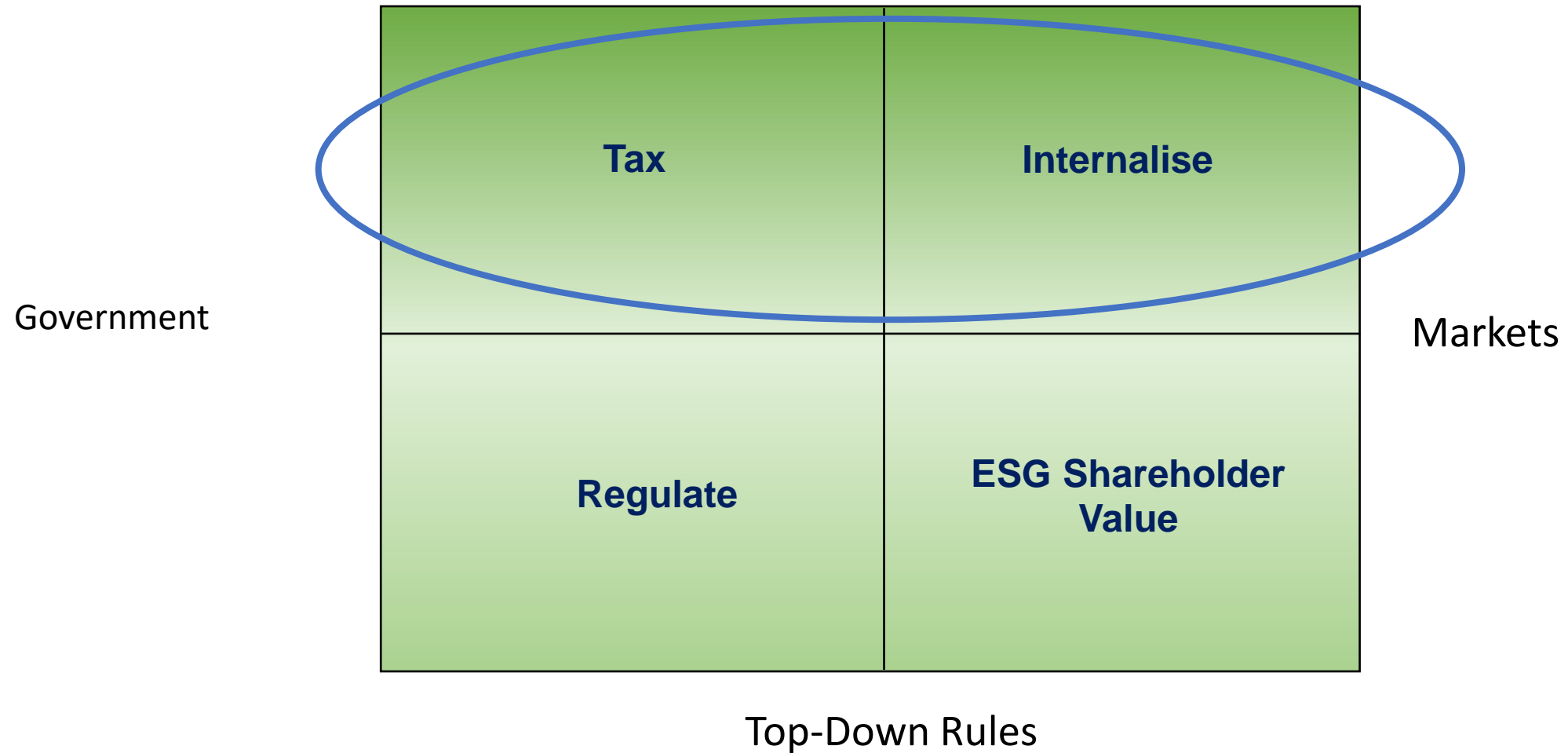
Governments Need Policy Bond-Cuffs

- [Policy performance bonds](#) - (aka ESG 'linked', sustainability 'linked', 'performance incentive')
 - Natural policy hedge to bring follow-on investment
 - Mechanism for open trade, e.g. link issuance (% of government debt) and price to tariffs, if any

Danone (2018), Louis Dreyfus (2019), Nokia (2019), Enel (2019), Wilmar International Limited (2018), Bunge Finance Europe BV (2019), WSP (2020), MásMóvil (2019), COFCO International (2019), TRIG (2021), ...

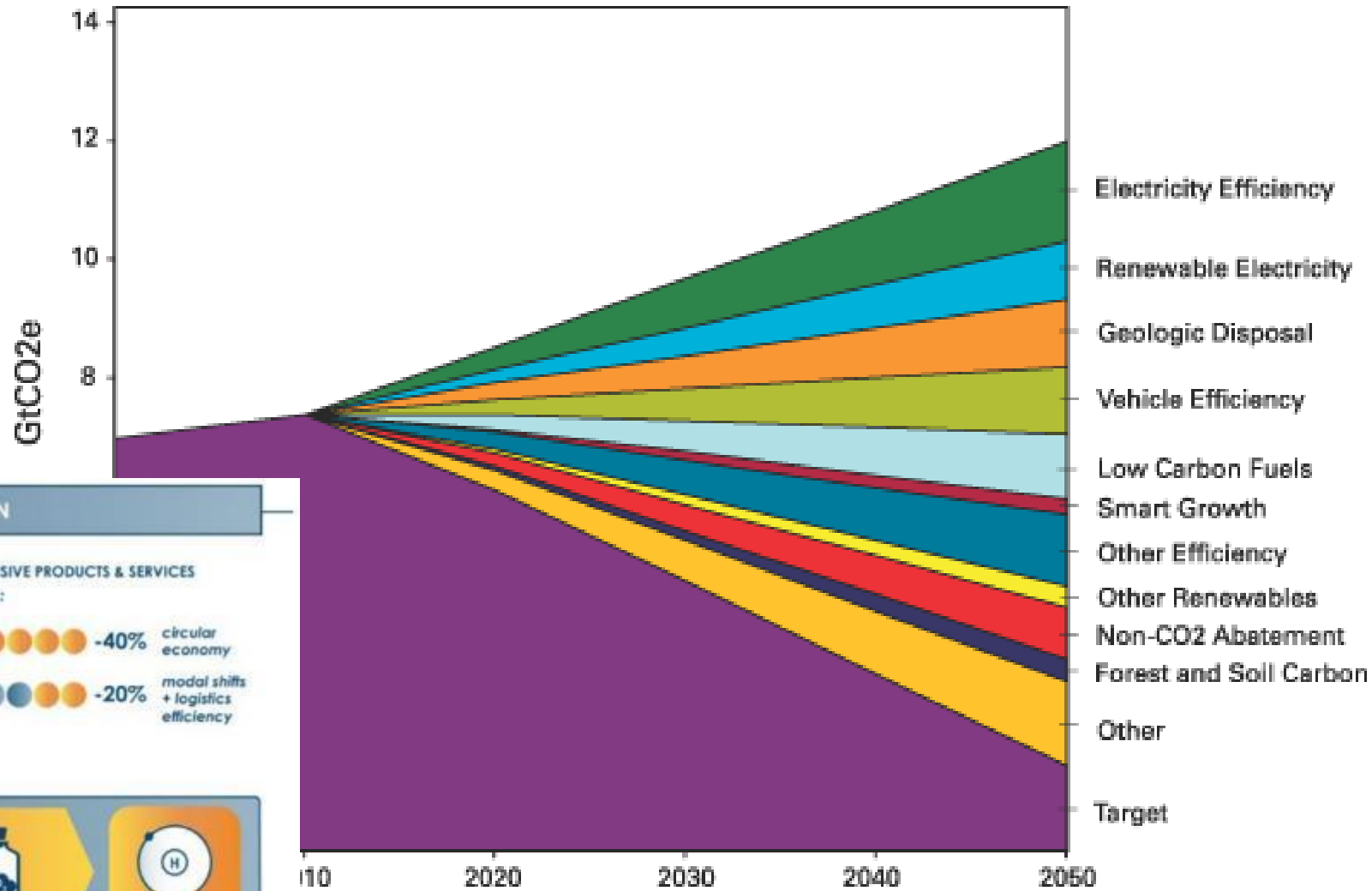


Multiple Views

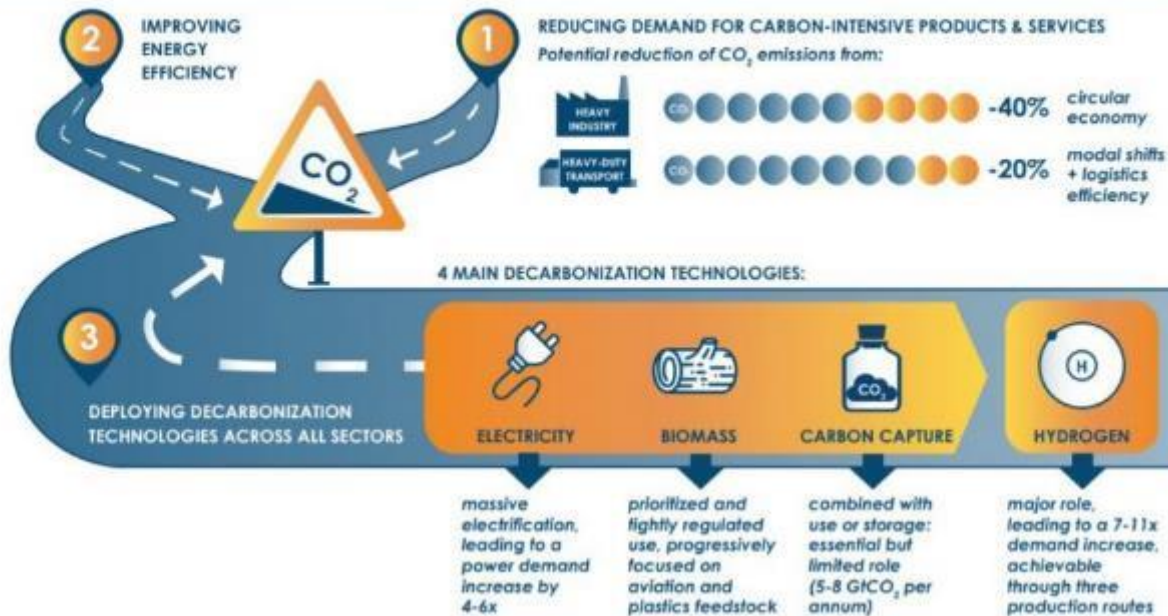


Need Economics - Plandemics Are Insufficient

FinTech? Everything Starts With A Roadmap



THERE ARE THREE MAIN ROUTES TO DECARBONIZATION



Roadmaps Differ

Top 10 solutions to climate change

Total gigatons of CO2-equivalent emissions that could be reduced by 2050

SOLUTION		PLAUSIBLE SCENARIO		DRAWDOWN SCENARIO		OPTIMUM SCENARIO
Refrigerant Management	1	89.74	2	96.49	3	96.49
Wind Turbines (Onshore)	2	84.60	1	146.50	1	139.31
Reduced Food Waste	3	70.53	4	83.03	4	92.89
Plant-Rich Diet	4	66.11	5	78.65	5	87.86
Tropical Forests	5	61.23	3	89.00	2	105.60
Educating Girls	6	59.60	7	59.60	8	59.60
Family Planning	7	59.60	8	59.60	9	59.60
Solar Farms	8	36.90	6	64.60	7	60.48
Silvopasture	9	31.19	9	47.50	6	63.81
Rooftop Solar	10	24.60	10	43.10	13	40.34

Source: Project Drawdown



<https://www.vox.com/energy-and-environment/2017/5/10/15589038/top-100-solutions-climate-change-ranked>



SUSTAINABLE DEVELOPMENT GOALS

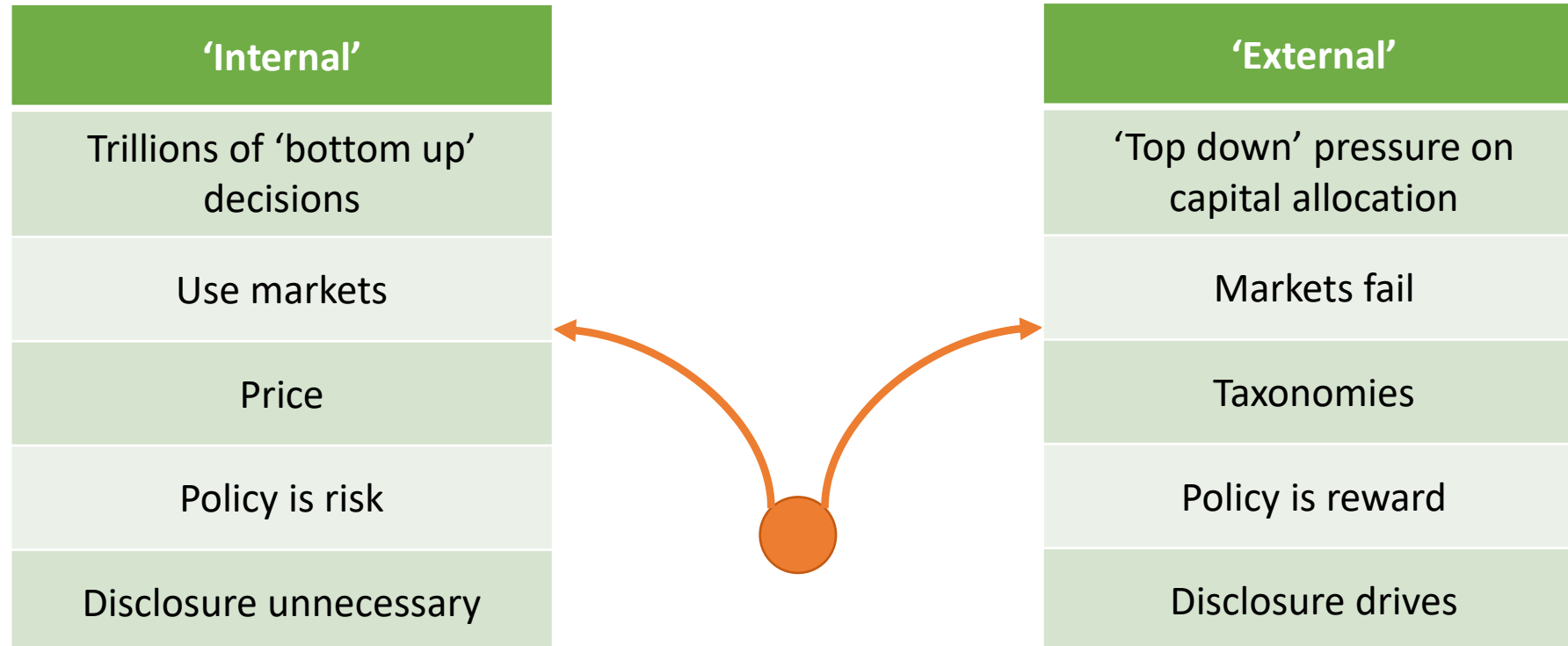
17 GOALS TO TRANSFORM OUR WORLD



SUSTAINABLE DEVELOPMENT GOALS

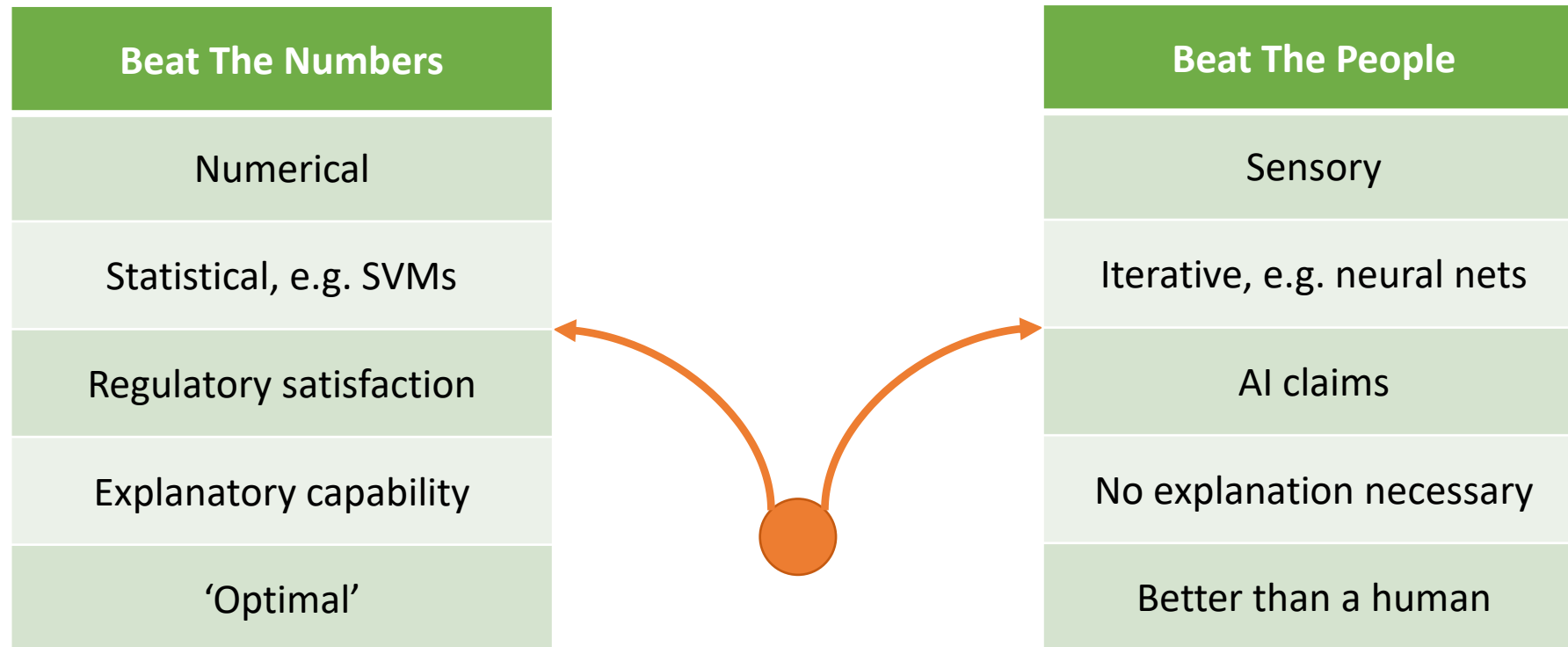
After 'Awareness' What Next?

Need Economics - Plandemics Are Insufficient



Dynamic Anomaly & Pattern Response (DAPR)

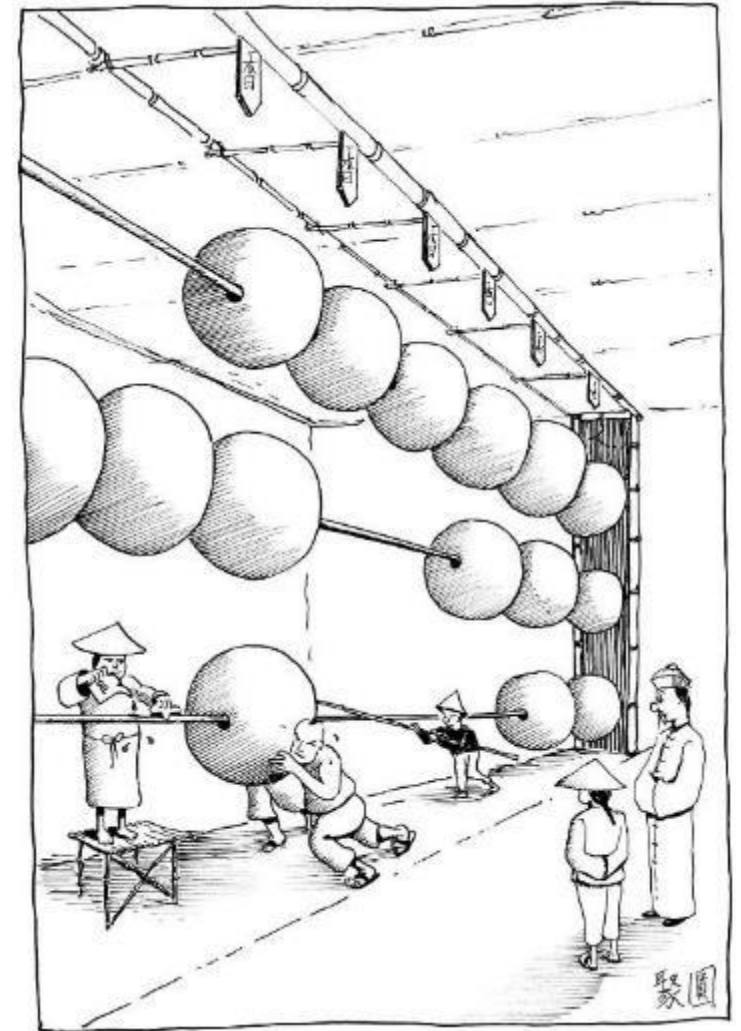
“identify patterns, then spot anomalies while reinforcing successful patterns”



“data, processing, connectivity”

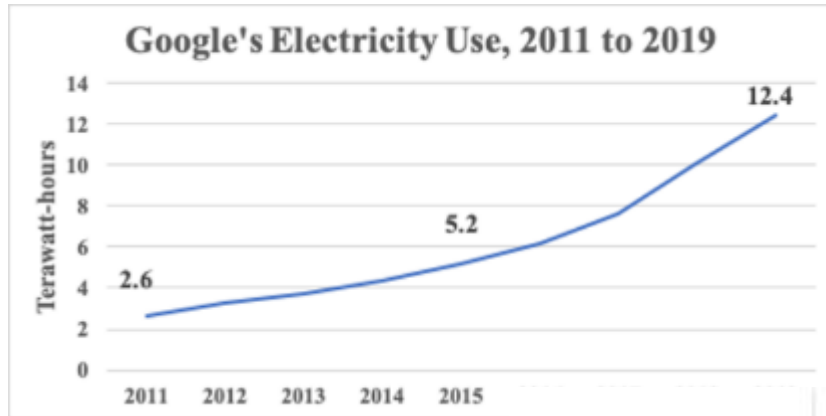
Recognition Of The Obvious For DAPR

- Trillions of decisions – if people made better decisions every day the world would be a better place
- First benefit - better economic decisions on sustainability
- Second benefit - supply chain tracking, including capital supply chain

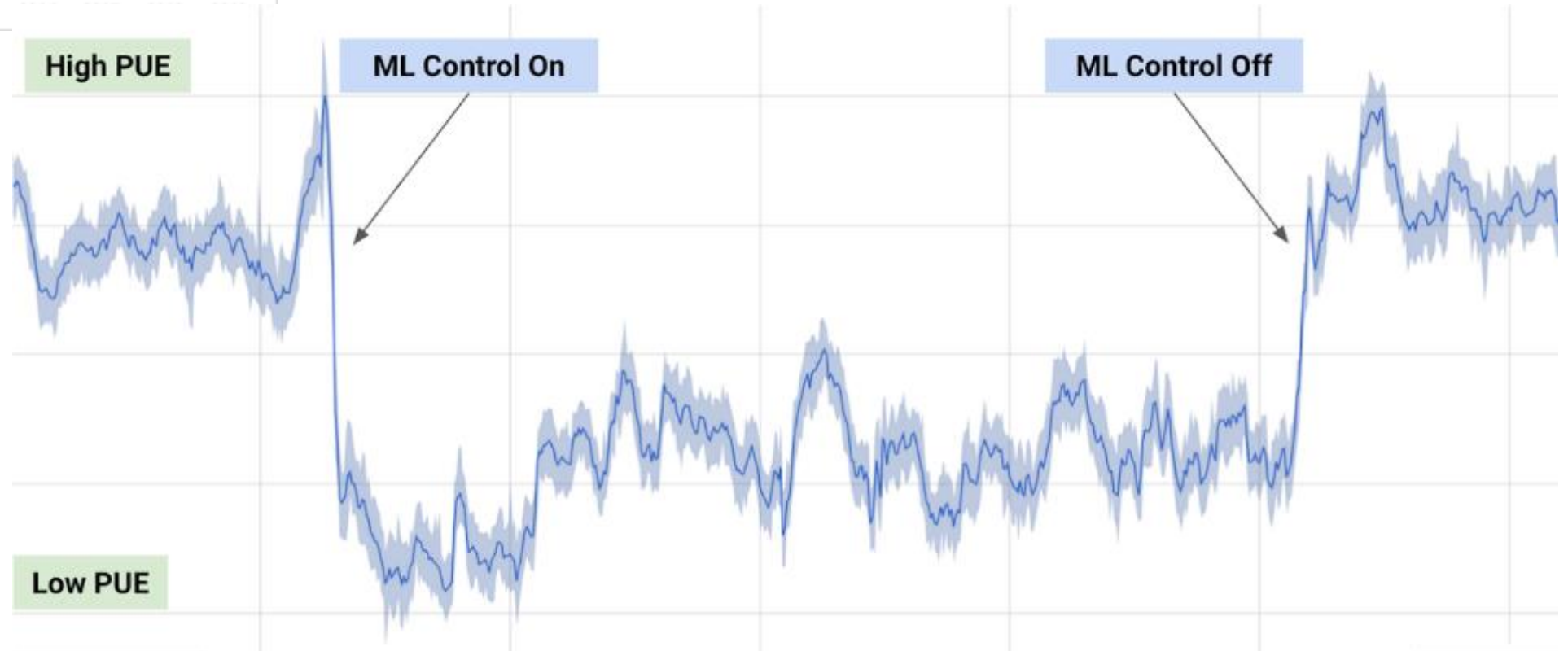


“Get a big picture grip on the details.”
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Trillions Of Tiny Financial Decisions



“DeepMind AI Reduces Google Data Centre Cooling Bill by 40%”



Sustainable Investment



Ocean Protocol
Be part of a new Data Economy

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Combining machine learning
with human intelligence

→ Intercontinental Exchange

Smart Ledgers



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The Mutual

Last Geo Timestamps (UTC)
2019-07-10 12:09:23.499213

Total Geo Timestamps
10697
in last 24 Hours

Total Cities
306
in last 24 Hours

Total Countries
47
in last 24 Hours

Geo Timestamp Rate
0.1238
per second

Timestamps Location

Last Stamp Country
Netherlands

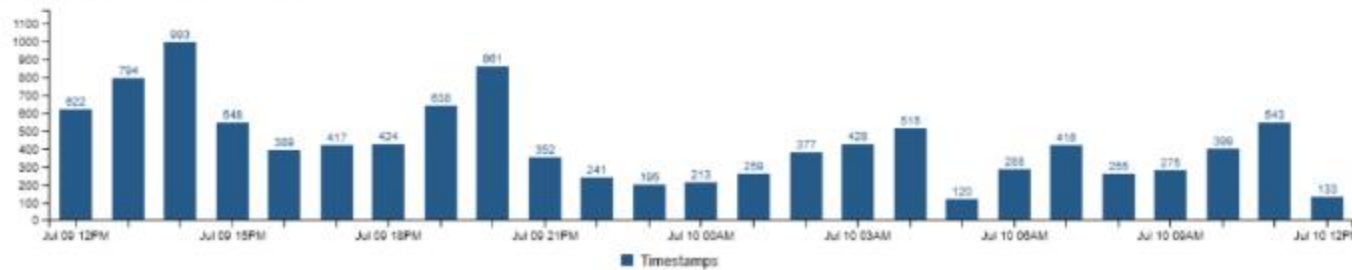
Last Stamp City
Leiden

Top Countries

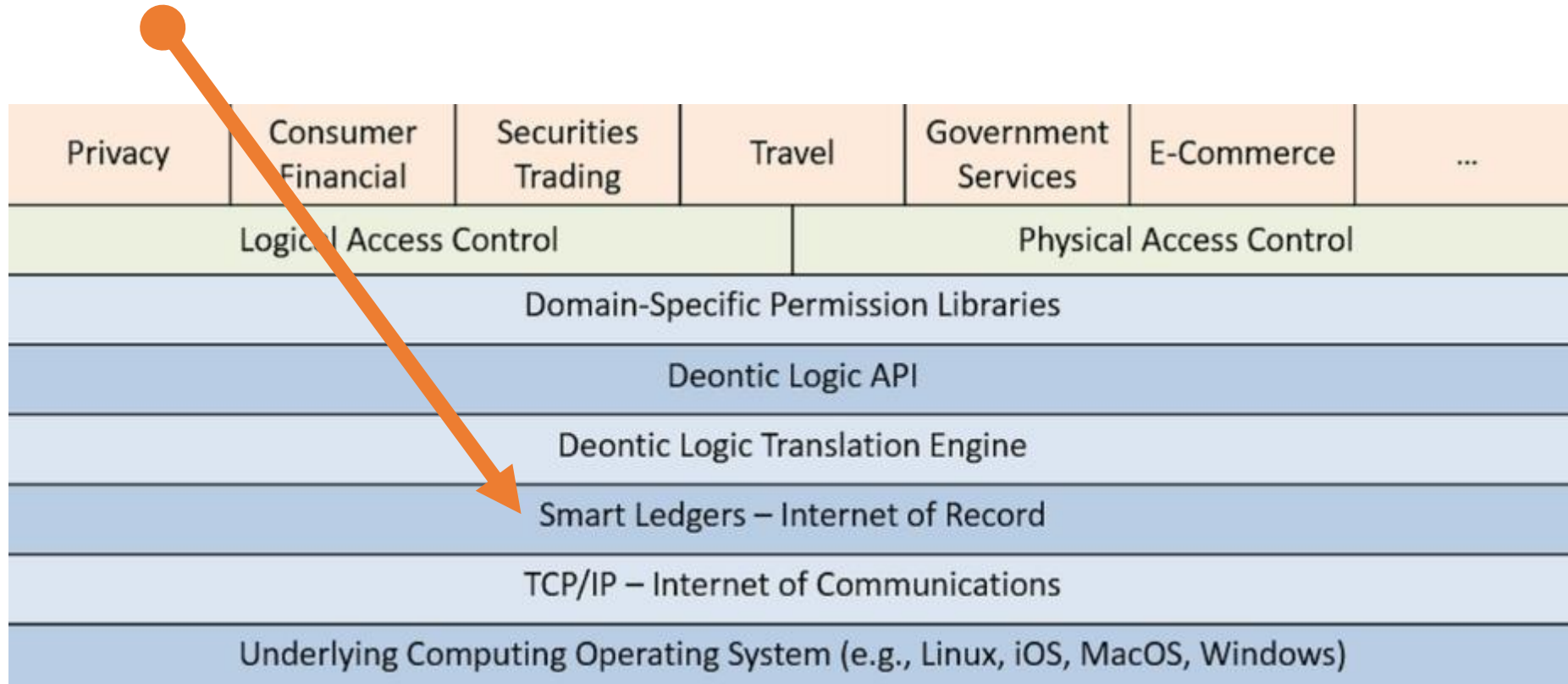
United Kingdom	28.64%
United States	22.46%
Netherlands	11.04%
Australia	7.97%
New Zealand	7.80%



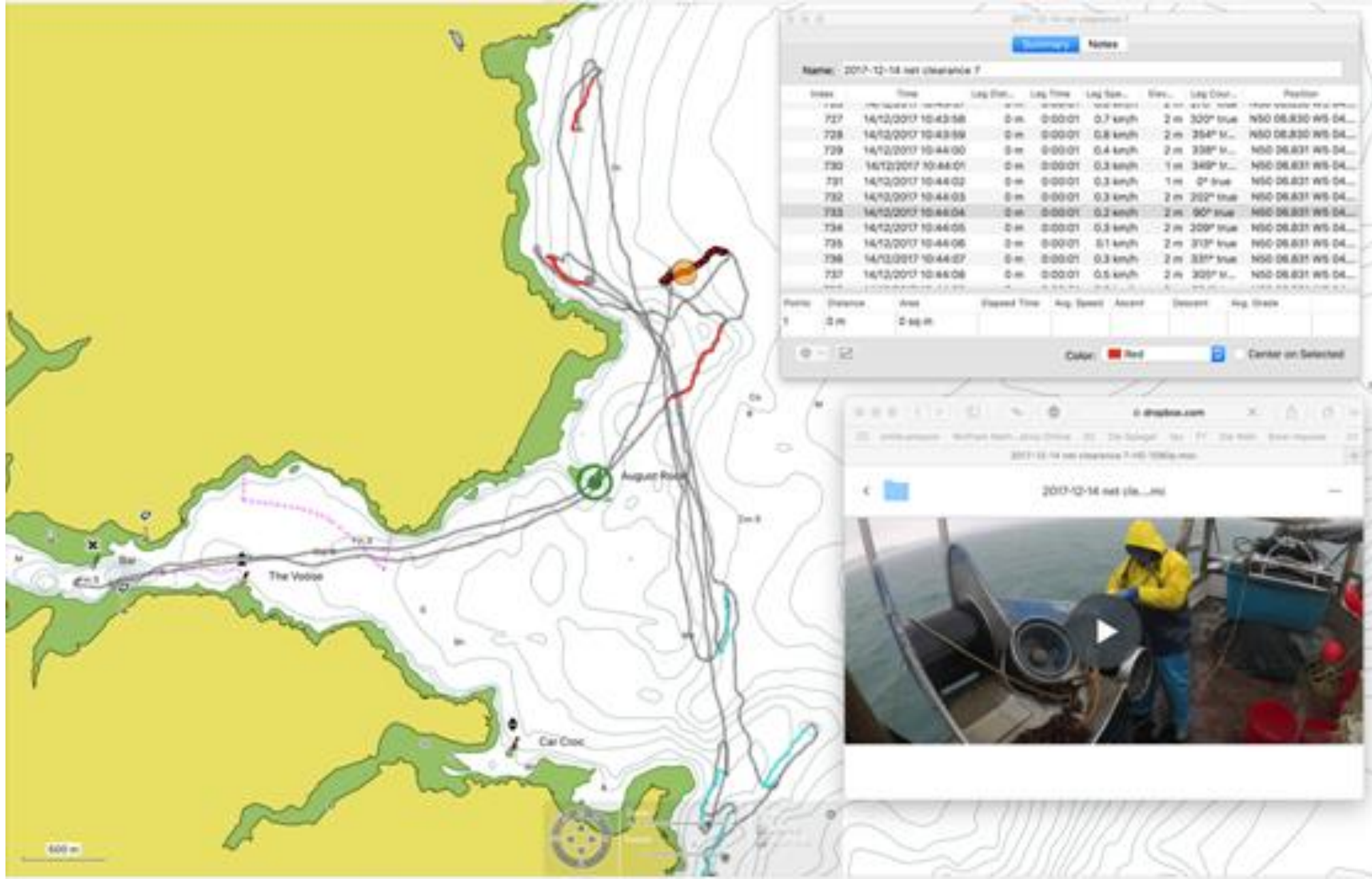
Activities in last 24 hours



'Internet of Record'



Track & Trace, Fishface



What Will FinTech Do In The Climate Wars?

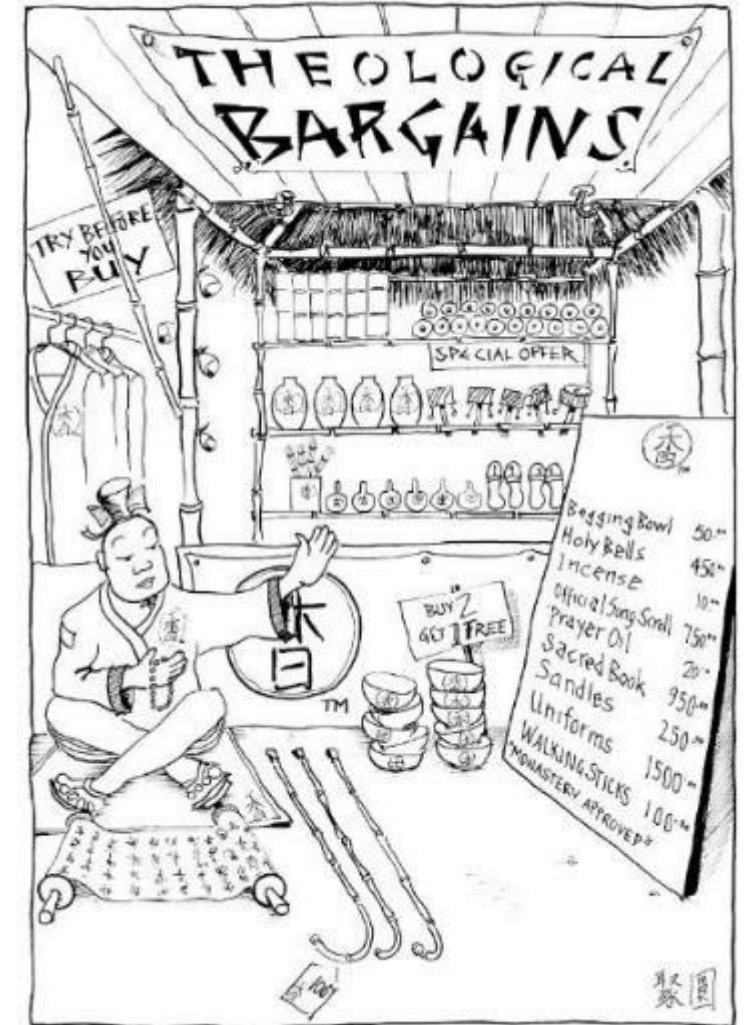
Economy	time reduction	fewer geographical sites or travel	fewer steps	less material or time
Efficiency	greater throughput per period	load balancing geographically	load balancing between functions	more output for given inputs
Effectiveness	on time for customer	right place	correctly performed	most appropriate
Innovation	radical time change	unexpected location	elimination or automation	elimination
	Time	Place	Function	Consumption

Big opportunities for DAPR, with financial integration, in:

- Carbon markets
- Energy storage markets
- Smart transport and logistics markets
- Smart energy markets and grids
- Smart land use management
- Smart cities, urban planning & design

Saving The Planet, One 'Bit' At A Time

- Market measures essential - competition, open data, better regulation, and voluntary standards markets
- FinTech should lobby for:
 - costed carbon
 - financial cuffs on government policy
- FinTech 1 – helping people make better decisions, trillions of small economic decisions on sustainability
- FinTech 2 - supply chain tracking, including capital supply chain
- FinTech doubtful – RegTech, ESG, voluntary carbon markets
- Implication for FinTech – shift from transaction & savings product focus to trading & IoT markets – from lipstick on banks to mini-Bloombergs for the masses

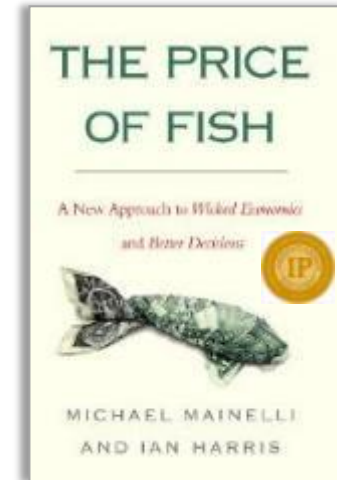


**"Get a detailed grip on the big picture."
Chao Kli Ning**

When Would We Know Commerce Is Working?



“Get a big picture grip on the details.”
Chao Kli Ning



Thank you!

