

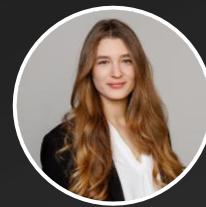


Navigating the Global Agrifood Policy Shift:

Understanding the Forces Shaping Future Innovation



Harini Venkataraman, Ph.D.
Associate Research Director



Matilde della Fontana
Analyst



The EPS case



European Union: Ban on Single-Use Plastics Takes Effect





The TiO_2 case



Goodbye E171: The EU bans titanium dioxide as a food additive



Pervasive policy risks in agrifood





**Innovation that ignores policy trajectory
becomes capital risk**

What to expect

01 | Use Lux's Agrifood Policy Compass to pinpoint where regulation enables or constrains innovation

02 | Identify policy trajectories shaping technology adoption for key themes

03 | Set strategic priorities for innovation teams navigating regulatory change

The Lux Policy Compass

Business Impact

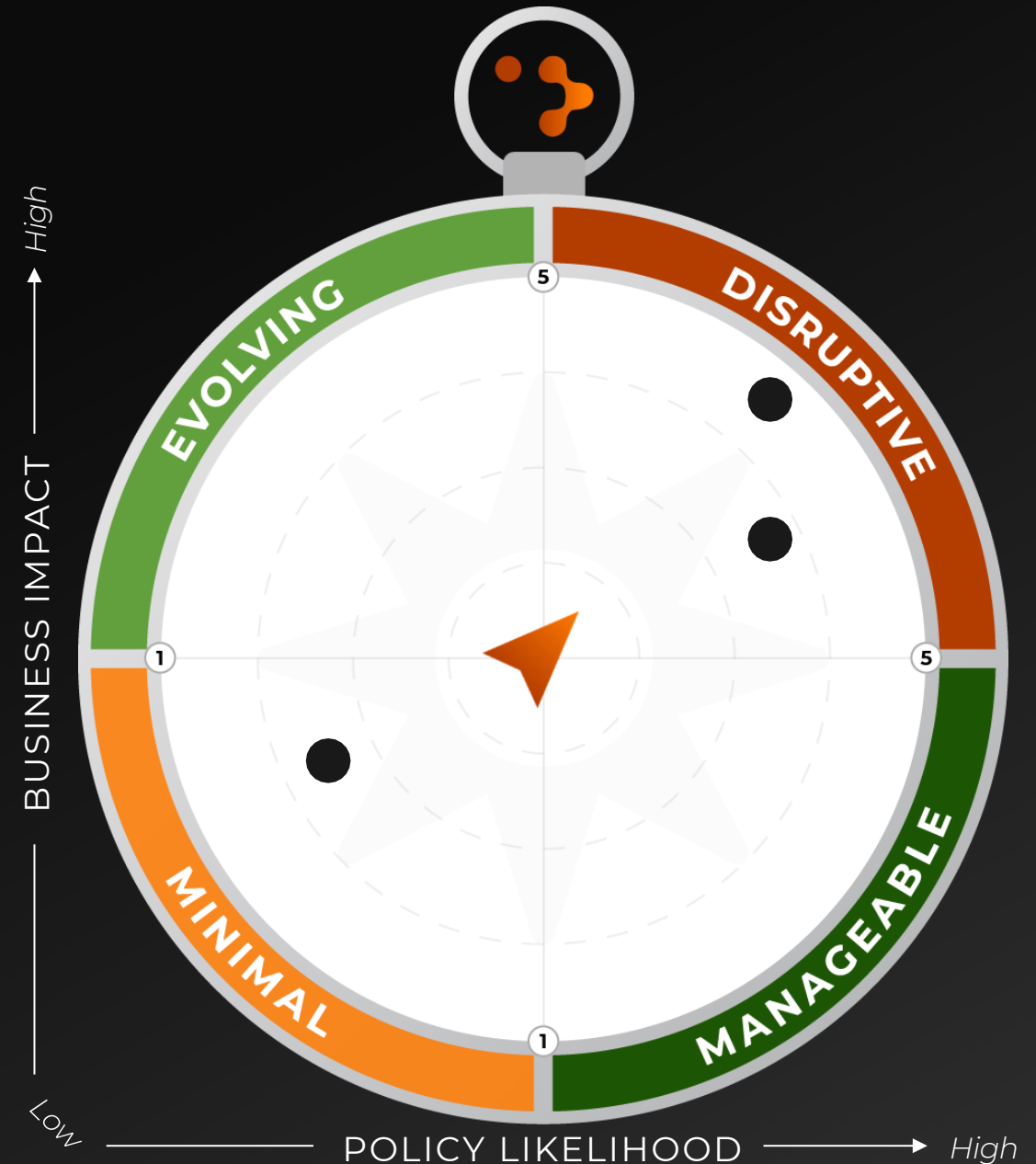
The business impact score represents how a policy affects the six major aspects of the industrial sector and its value chains, including:

- Input
- Process
- Product
- Partners
- Demand
- Supply-side impact

Policy Likelihood

The likelihood of a policy or regulation to materialize, from ideation to implementation. Key considerations include:

- Policy's current status
- Governmental approval
- Political volatility



The Lux Policy Compass

Evolving

Policy Likelihood: *Low* | Business Impact: *High*

Minimal

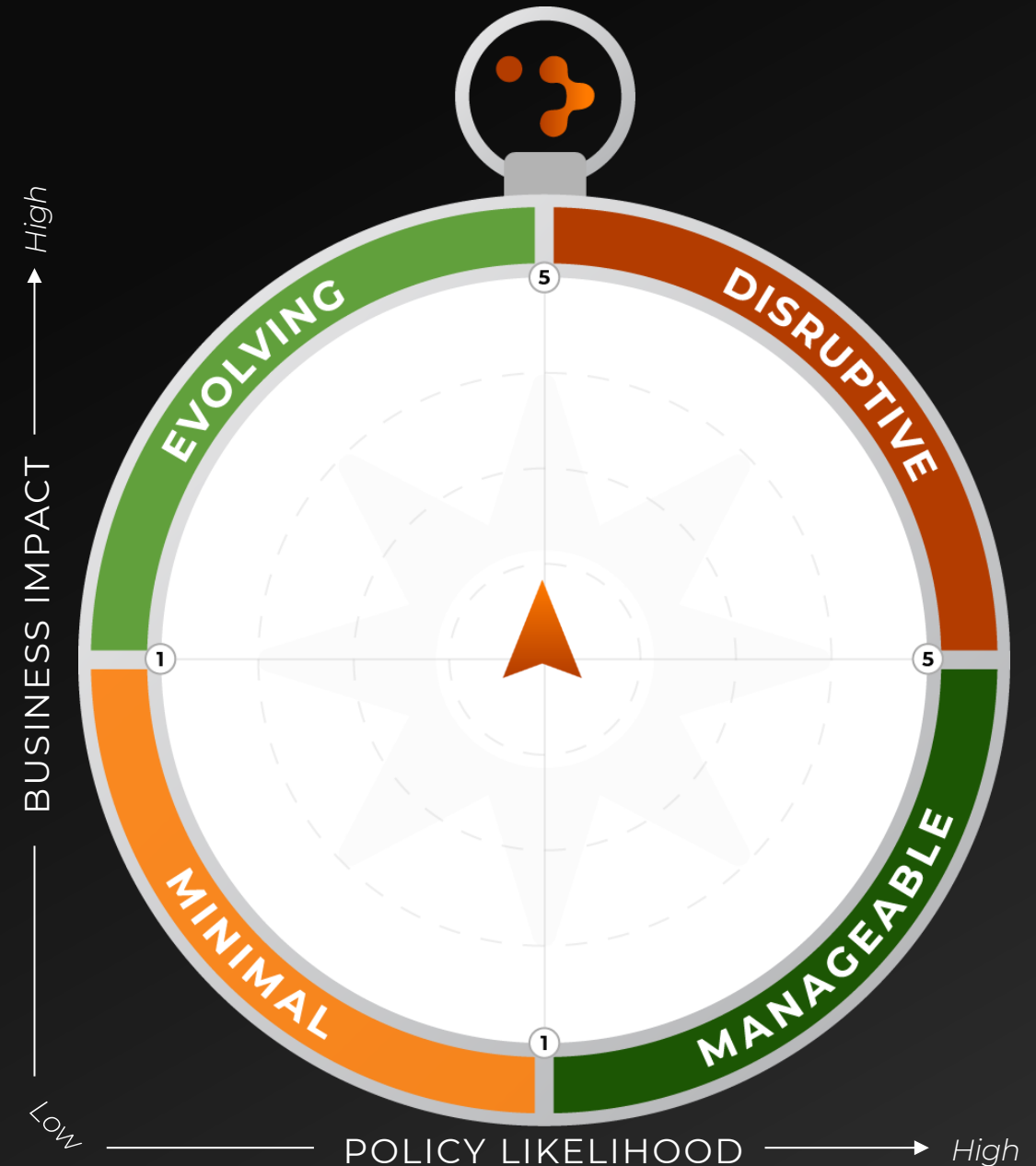
Policy Likelihood: *Low* | Business Impact: *Low*

Manageable

Policy Likelihood: *High* | Business Impact: *Low*

Disruptive

Policy Likelihood: *High* | Business Impact: *High*



The Lux Policy Compass is a guide

1

How can I avoid risks from policy/regulation in my technology innovation strategy?

2

How can I make the most of policy-generated opportunities for innovation?

3

In what cases does policy/regulation affect how, where, when, and with whom I should pursue innovation?

What to expect

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Lux For Innovation Leaders



Enhanced Health and Reduced Harm

Evaluate better-for-you ingredient formulations and monitoring devices that improve health outcomes and reduce harm.



Resilience Building

Strengthen supply chains and services to reduce emissions, use fewer resources, and withstand regional disruptions like land-use restrictions and catastrophic weather events.



Growth Through the Bioeconomy

Assess risks and opportunities associated with building or blending biotech-based ingredients into the value chain.



Purposeful Innovation

Reduce the cost and improve the accuracy of innovation by optimizing discovery, reformulation, and personalization to add value and agility to your portfolio.



Impactful Packaging

Evaluate technologies and materials that reduce waste and loss, protect quality, and improve the consumer brand experience.



Policy and Regulations

Get pragmatic advice on how to guide innovation strategies based on regional policy changes and regulatory uncertainties.

Policy impact pervades across all themes



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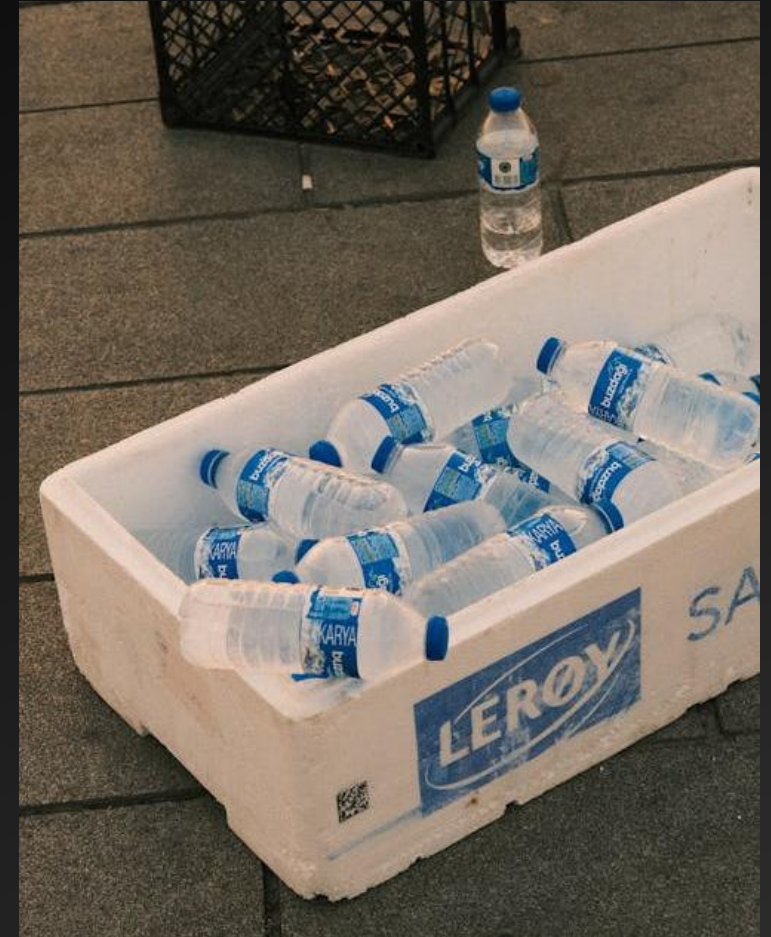
Enhanced Health and Reduced Harm



Resilience Building



Impactful Packaging



Enhanced Health and Reduced Harm



Resilience Building



Impactful Packaging



Enhanced health policies



Policy compass:

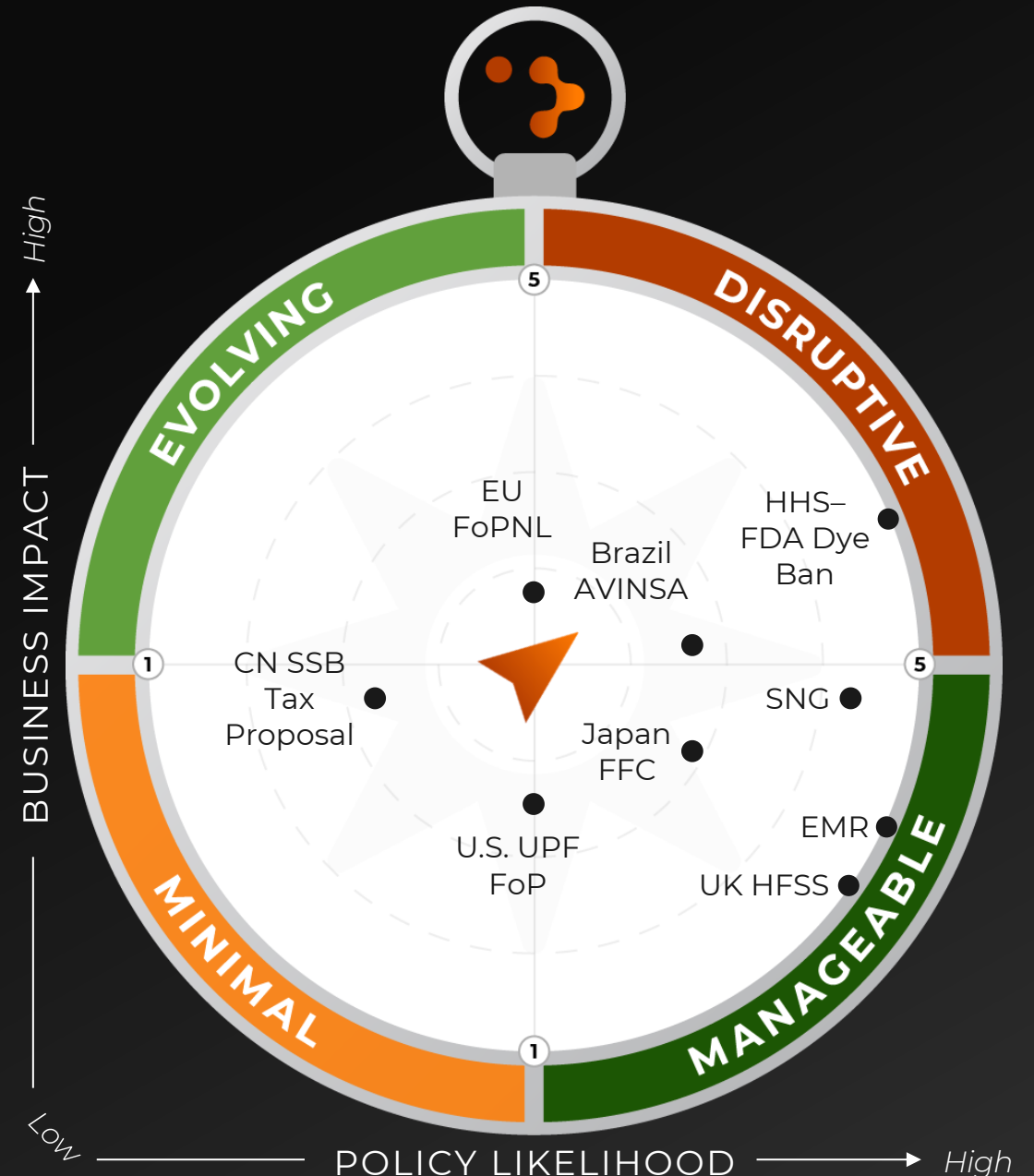
Enhanced health

Health policy momentum reshaping product portfolios

- FoP momentum growing
- Reformulation pressure accelerating
- Asia moving gradually

POLICY TITLE LEGEND

EU FoPNL: Harmonized Front-of-Pack Nutrition Labeling Regulation (EU)	HHS-FDA Dye Ban: Phase-Out of petroleum-based synthetic food dyes (U.S.)
Japan FFC: 2025 reforms to Foods with Function Claims (FFC) for supplements & functional foods (Japan)	SNG: Singapore Nutri-Grade labelling
Brazil AVINSA: Ultra-Processed Food (UPF) Front-of-Pack Warning Label Proposal (Brazil)	EMR: EU Microplastics (EU)
CN SSB Tax Proposal: Sugar-sweetened beverage (SSB) consumption tax (China)	UK HFSS: High fat, sugar, salt regulation (UK)
U.S. UPF FoP: Ultra-Processed Foods Front-of-Pack Labeling bill	



AI reformulation

Addressing evolving EU FoP nutrition standards

Aka Foods secures \$17.2M for accelerated formulation

- Centralizes R&D data, ingredient specs, sensory feedback, and regulatory documentation
- Potential use-cases align with clean-label reformulation and reduced sugar and fat content



LUX TAKE

Invest in technology that accelerates reformulation demands to turn regulatory pressure into market differentiation.

a.k.a
FOODS

Enhanced Health and Reduced Harm



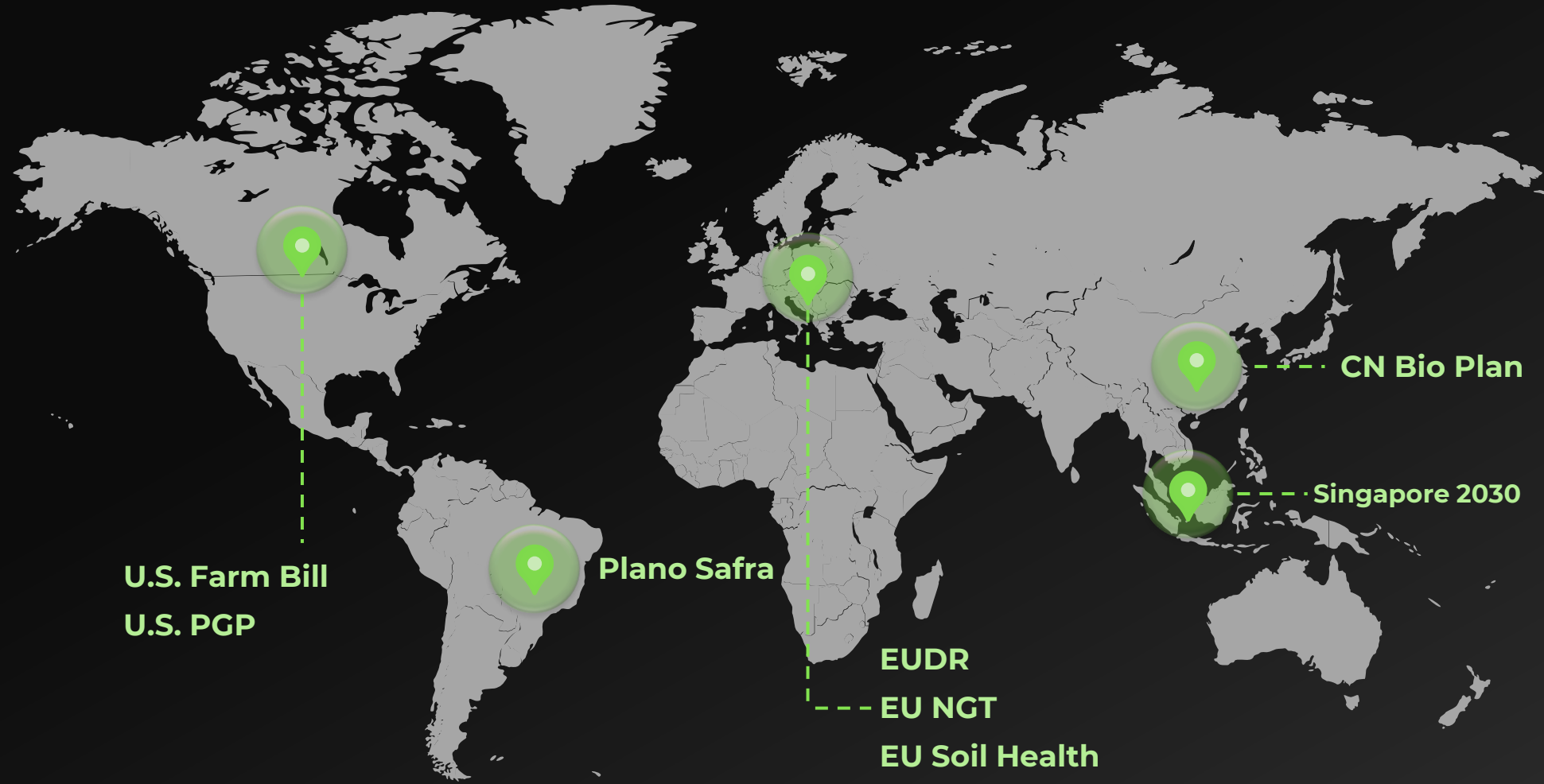
Resilience Building



Impactful Packaging



Resilience building policies



U.S. Farm Bill
U.S. PGP

Plano Safra

EUDR
EU NGT
EU Soil Health

CN Bio Plan

Singapore 2030

Policy compass:

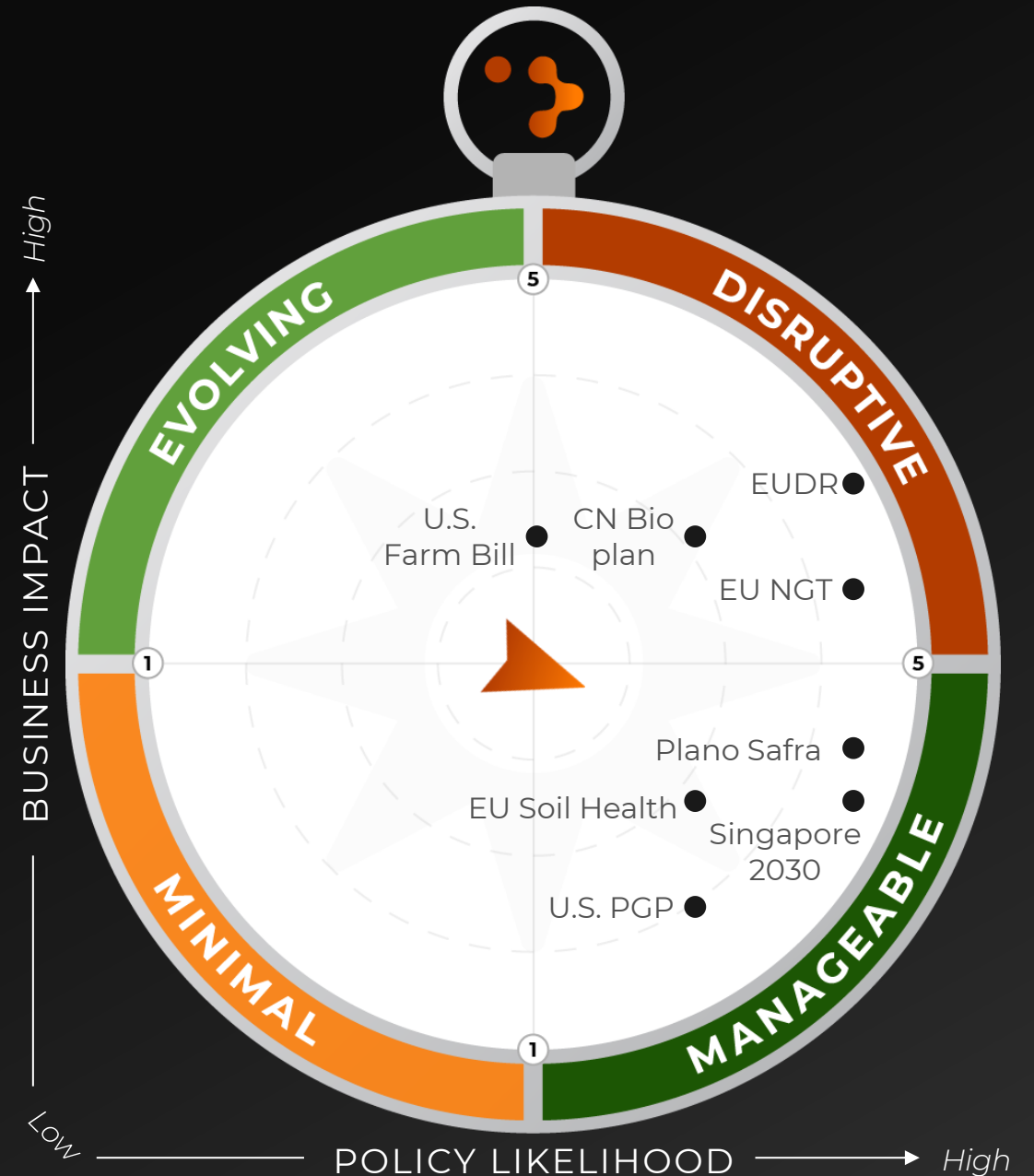
Resilience building

Agricultural resilience moving from strategy to mandate

- Input security (soil, genetics, biobased) moving up agenda
- Domestic production incentives accelerating (U.S., China, Brazil)
- EU is at the epicenter with major policy breakthroughs

POLICY TITLE LEGEND

Singapore 2030: Updated national food-resilience approach replacing “30-by-30”	CN Bio plan: China National Plan for Biomanufacturing (Five-Year Plan extensions + 2025+ strategy)
EU Soil Health: EU Directive on Soil Monitoring and Resilience	U.S. PGP: Pesticide Permitting-2026 Pesticide General Permit
EU NGT: EU New Genomic Techniques (NGTs) in plant breeding	U.S. Farm Bill: 2025 Farm, Food, and National Security Act (the upcoming “Farm Bill”)
EUDR: The EU Deforestation Regulation (EUDR) (Regulation (EU) 2023/1115)	Plano Safra: 2025/2026 Agricultural and Livestock Plan (Brazil)



Resurrect Bio platform

Gene-editing innovation for trait resilience under regulatory recalibration

Corteva Ventures invested in Resurrect Bio to expand access to advanced gene-editing platforms.

- Its AI platform, Flora Fold, predicts edits to block effector binding, accelerating trait development
- Advancing 18 disease-resistance traits in corn, soybean, and wheat over the next three years



LUX TAKE

As the EU creates a differentiated pathway for NGT crops, clients must secure access to compliant breeding platforms early, through partnerships, or platform integration.



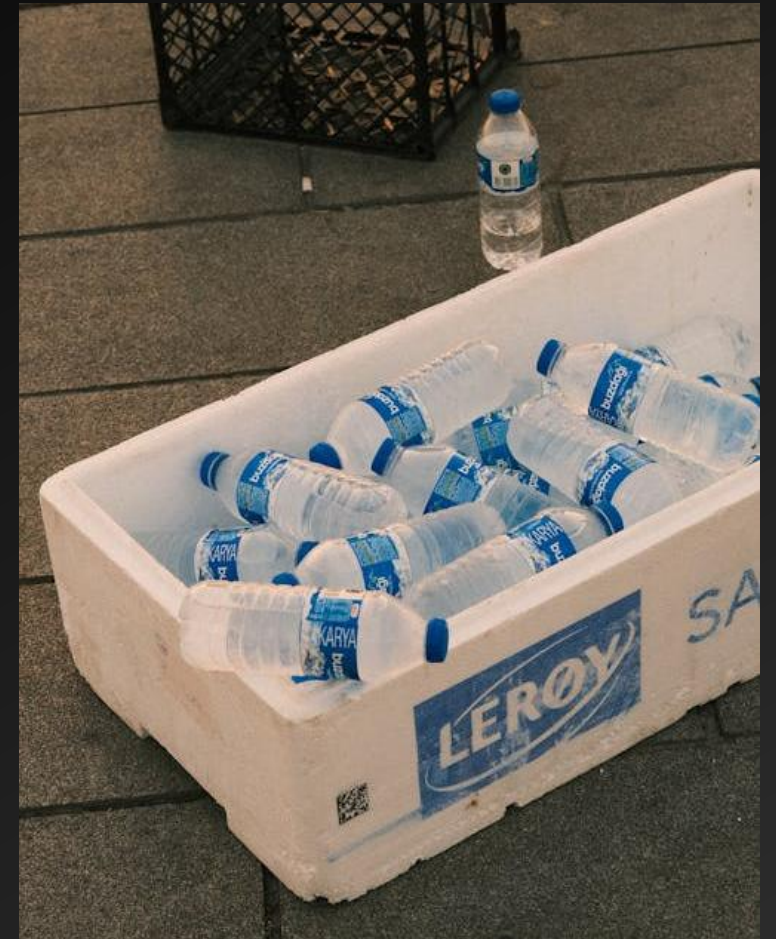
Enhanced Health and Reduced Harm



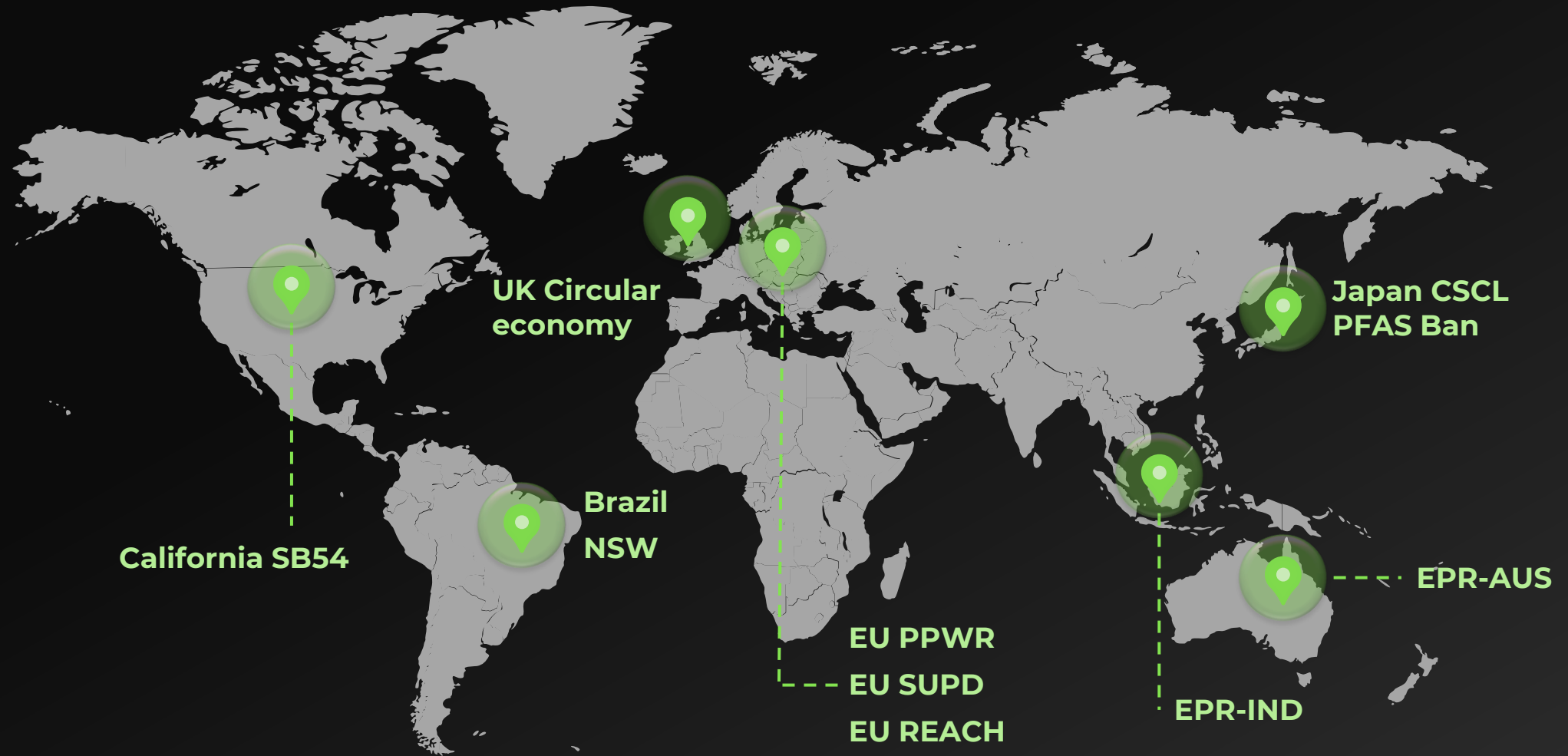
Resilience Building



Impactful Packaging



Impactful packaging policies



Policy compass:

Impactful packaging

Global policies prioritize plastic waste management over absolute reduction measures

- EU sets regulatory benchmark
- Compliance driven by recyclability, PCR, and chemical thresholds
- Material viability is geography dependent

POLICY TITLE LEGEND

PPWR: Packaging & Packaging Waste Regulation (2025/40) (EU)

REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals (EU)

UK packaging circularity: Extended Producer Responsibility (EPR) for packaging and single-use plastic ban (UK)

SUPD: Single-Use Plastic (SUP) Directive (EU)

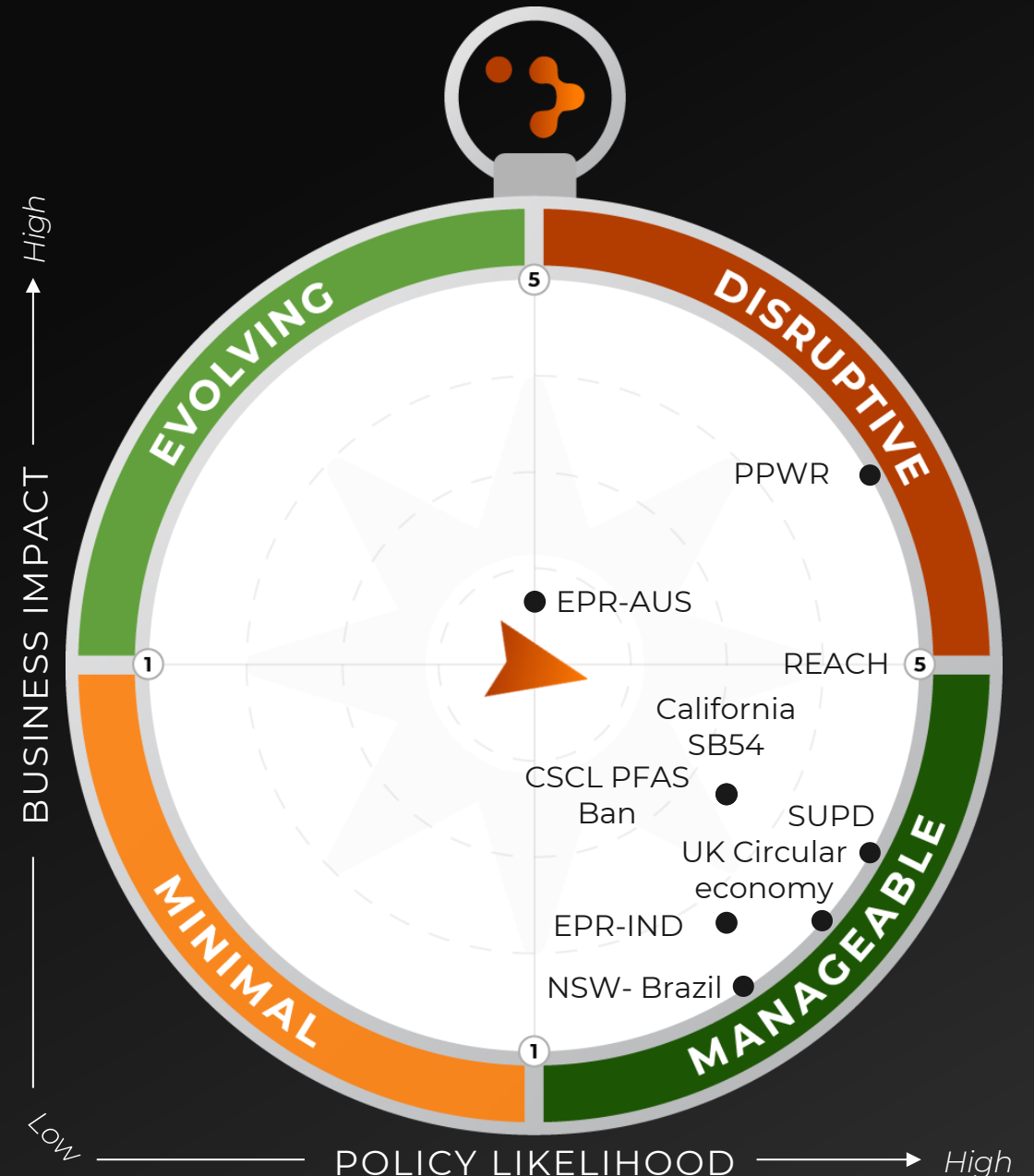
EPR-IND: Mandatory Extended Producer Responsibility (EPR) for plastic packaging – Indonesia

California SB54: Plastic Pollution Prevention and Packaging Producer Responsibility Act

NSW–Brazil: Brazil's National Solid Waste Policy

EPR-AUS: Extended Producer Responsibility (EPR) scheme Australia

CSCL PFAS Ban: Japan PFAS Ban (Chemical Substances Control Law Amendment)

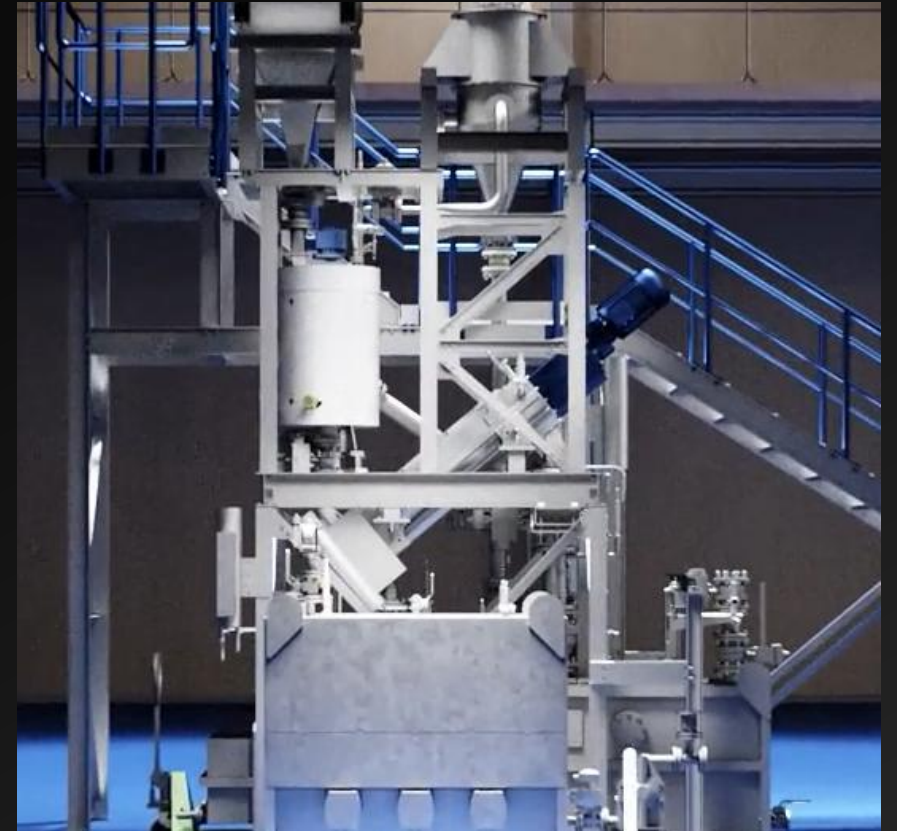


Flexloop technology

Plastic recycling solution unlocks adjacent opportunities through core expertise

P&G and Lindner launched Flexloop to expand portfolio of solvent-based recycling technologies

- New business opportunities
- Overcoming scarcity of higher-quality PCR for sensitive applications



LUX TAKE

Translate regulatory momentum into adjacency growth. Companies must secure PCR supply through long-term partnerships, investment, or ownership of recycling capacity.



LINDNER

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Delayed transition

High capital risk



**Early
reallocation**

**Market
advantage**

Huhtamaki



**How should innovation leaders convert
regulatory exposure into strategic
advantage?**

Understanding regulatory shift



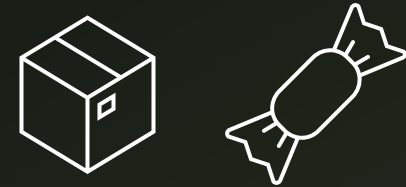
Input

Supply



Process

Partners



Product

Demand

Setting strategic priorities under regulatory shift

REGULATORY EXPOSURE

- **Input**
- **Process**
- **Product**

STRATEGIC SHIFT

- **De-risk input**
- **Portfolio redesign**
- **Compliant supply**

ORGANIZATION ALIGNMENT

- **R&D**
- **CVC & Open Innovation**
- **Marketing**

Key Takeaways

1

Read policy as a strategic signal, not a compliance burden.

Innovation teams must decode directionality (what is being targeted: input, product, or process) and intensity to anticipate where capital demand will shift.

2

Anticipate and reallocate early.

Treat policy as structural act early and build it in your R&D strategy. This enables proactive capital allocation and timely adaptation of your technology bets.

3

Prioritize across the ecosystem, not just the pipeline.

Winning requires cross-functional alignment and strategic diversification across technologies, suppliers, geographies, and partnerships.



Thank you

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questions@luxresearchinc.com

About Lux

Lux Research fuels innovators to not only imagine what's possible in the future but also operationalize innovation success in the near term. We deliver research and advisory services to inspire, illuminate, and ignite innovative thinking that reshapes and grows businesses. Using quality data derived from primary research, fact-based analysis, and opinions that challenge traditional thinking, our experts focus on finding truly disruptive innovations that are also realistic and make good business sense.

The “Lux Take” is trusted by innovation leaders around the world, many of whom seek our advice directly before placing a bet on a startup or partner — our clients rely on Lux insights to make decisions that generate fantastic business outcomes. We pride ourselves on taking a rigorous, scientific approach to avoid the hype and generate unique perspectives and insights that innovation leaders can't live without.

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