



Mid-Year Tech Check 2026: What's Rising and Falling



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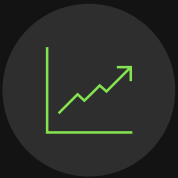


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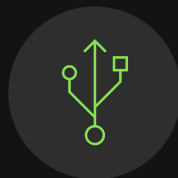
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Make More **Confident** Innovation Decisions



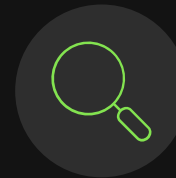
**Strategic
Foresight & Market
Opportunities**

*Where should we focus
innovation efforts?*



**Technology
Scouting &
Assessments**

*Which technologies
deserve investment?*



**Startup
Discovery &
Validation**

*Which partners can
accelerate innovation?*

Agenda

01 | **Shifting innovation themes in 2026**

02 | Getting behind the data on what's rising and falling

03 | Capitalizing on changes in innovation momentum

Oil & Gas: Resiliency



Utilities: Affordability



Chemicals: Performance



Industrials: Momentum



Agrifood: Refinement



Medical Devices: Diagnosis



Oil & Gas: Resiliency



**Energy security and
operational efficiency**

Utilities: Affordability



**System optimization and
grid flexibility**

Chemicals: Performance



**Portfolio optimization
and restructuring**

Industrials: Momentum



**Resilient supply chains
and defense**

Agrifood: Refinement



**Regulatory and health-
driven demand**

Medical Devices: Diagnosis



**Productivity and
decentralized care**

Oil & Gas: Resiliency



Utilities: Affordability



Chemicals: Performance



Industrials: Momentum



Agrifood: Refinement



Medical Devices: Diagnosis



Oil & Gas: Resiliency



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Oil & Gas: Resiliency



Utilities: Affordability



Chemicals: Performance



Industrials: Momentum



Agrifood: Refinement



Medical Devices: Diagnosis





**Which technologies are picking up
innovation momentum?**

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01

Shifting innovation themes in 2026

02

Getting behind the data on what's rising and falling

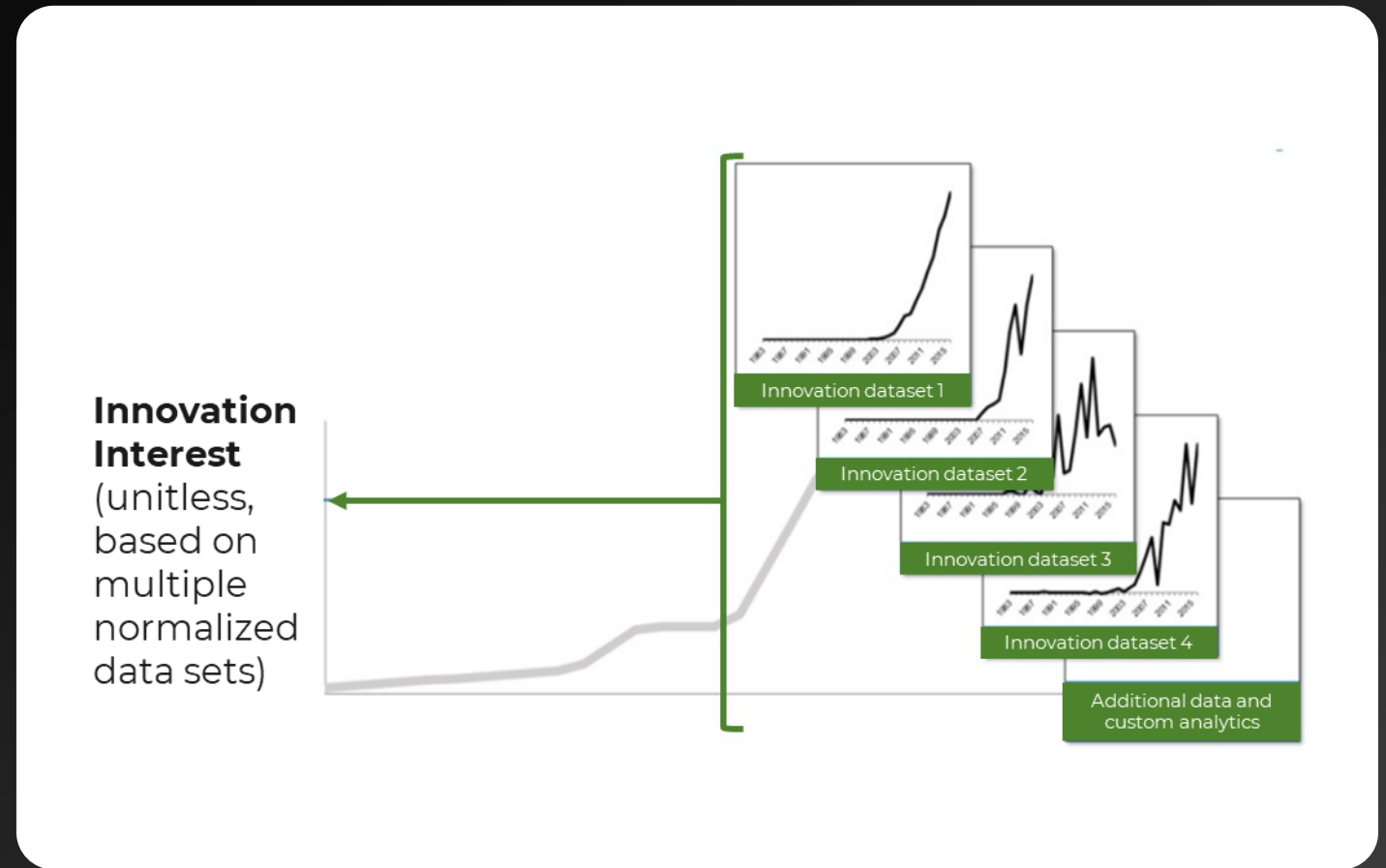
03

Capitalizing on changes in innovation momentum

The Lux Tech Signal is the foundation of innovation foresight and tech scouting

The Lux Tech Signal, which provides foresight into the future of innovation, is:

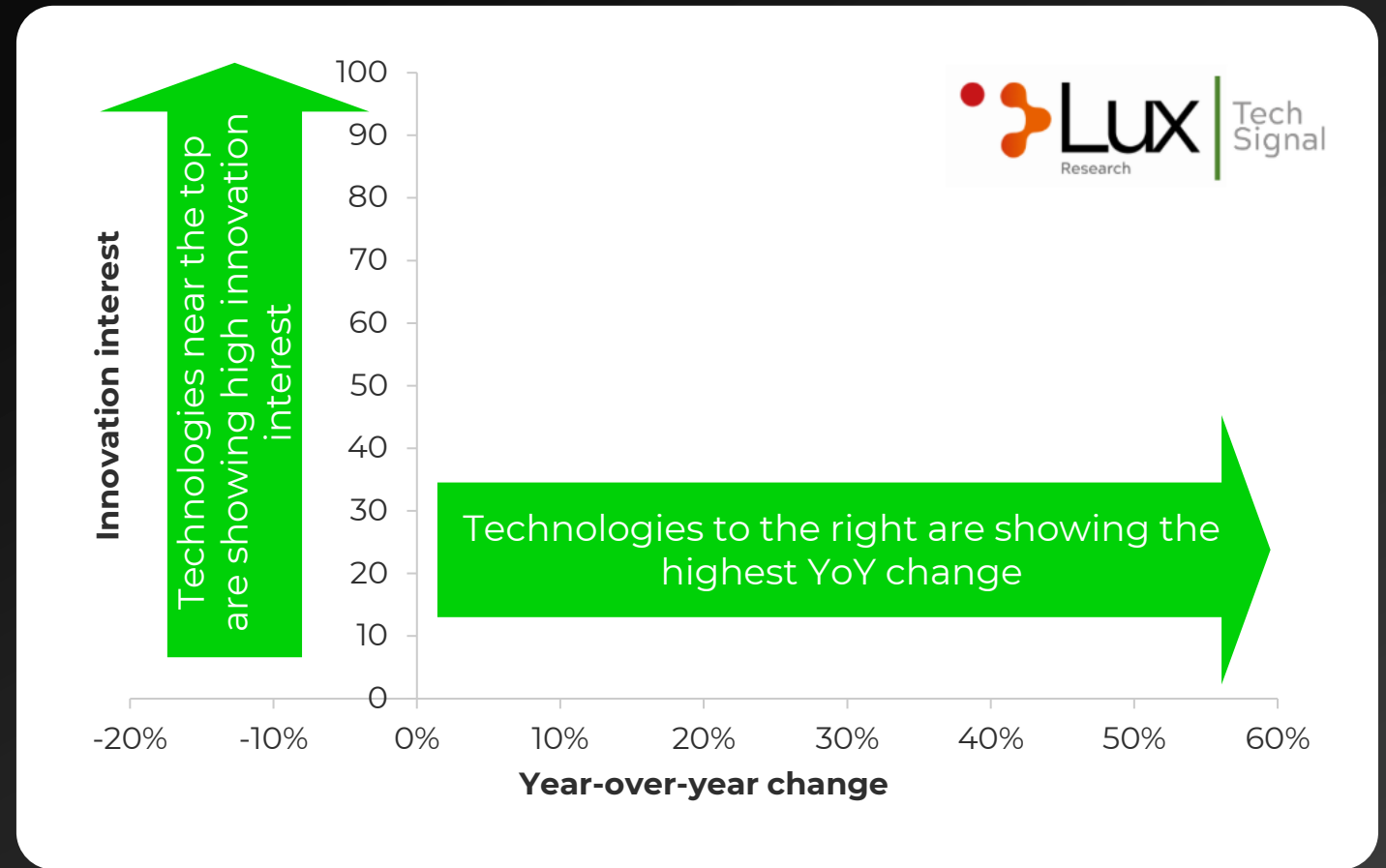
- **Data driven.** A unitless innovation signal normalizes unique data sets.
- **Data backed.** It combines patents, academic publications, venture funding, early stage government funding, and Lux proprietary data.
- **Foresight.** It pinpoints early indicators of technology breakthroughs and bursting hype bubbles.



Uncovering the interest and changes in innovation trends

With the pace of innovation moving faster, the Lux Tech Signal plays a key role in:

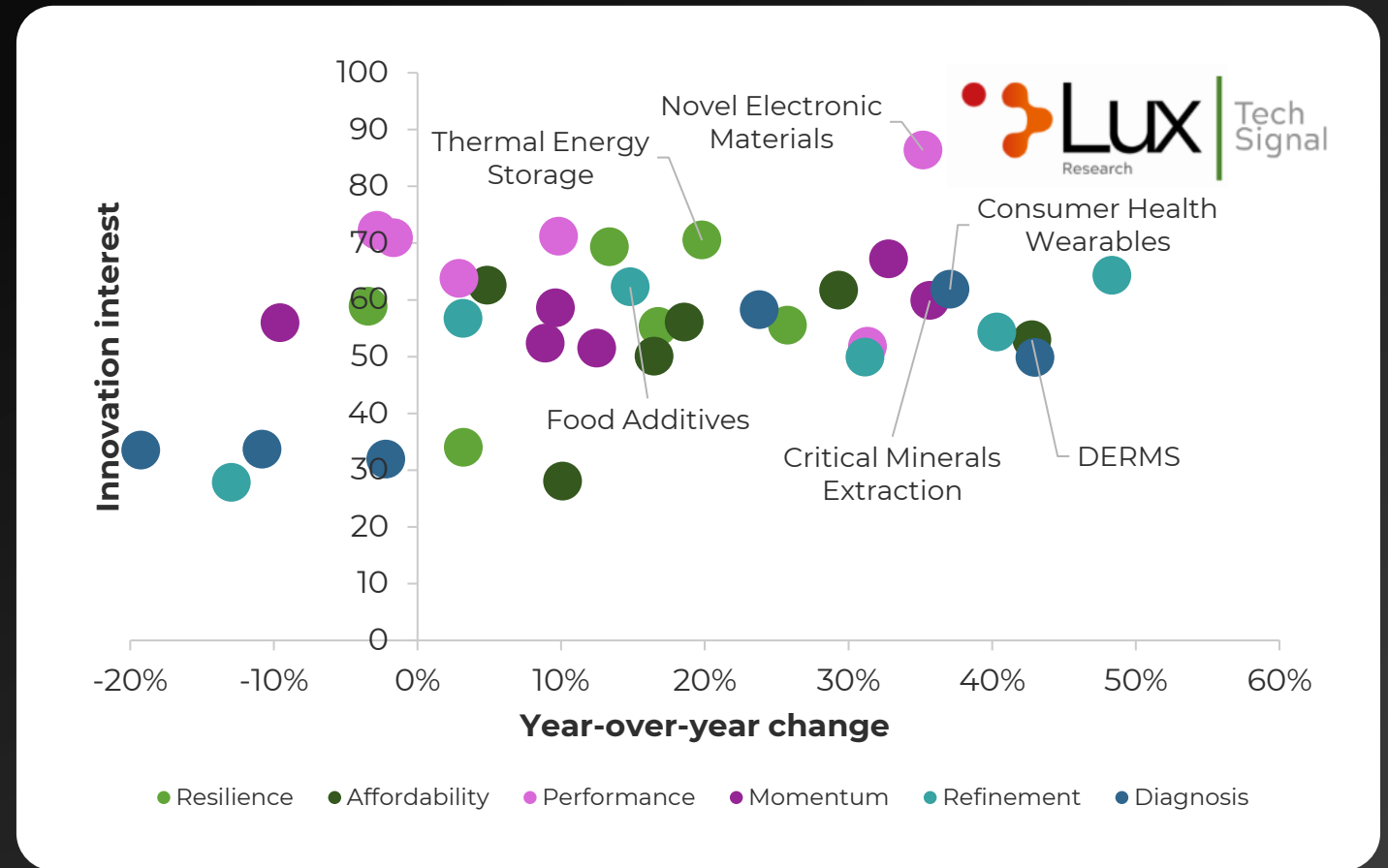
- **Going beyond the headlines.** As hype cycles wax and wane, ground innovation interest with data-backed evidence.
- **Identify early signals.** Pick up on momentum as new technologies emerge into the landscape.



Differences in year-over-year change of innovation interest highlight focus areas

Innovation interest points the direction that you should look; **year-over-year change** indicates what you should focus on — the overarching innovation story.

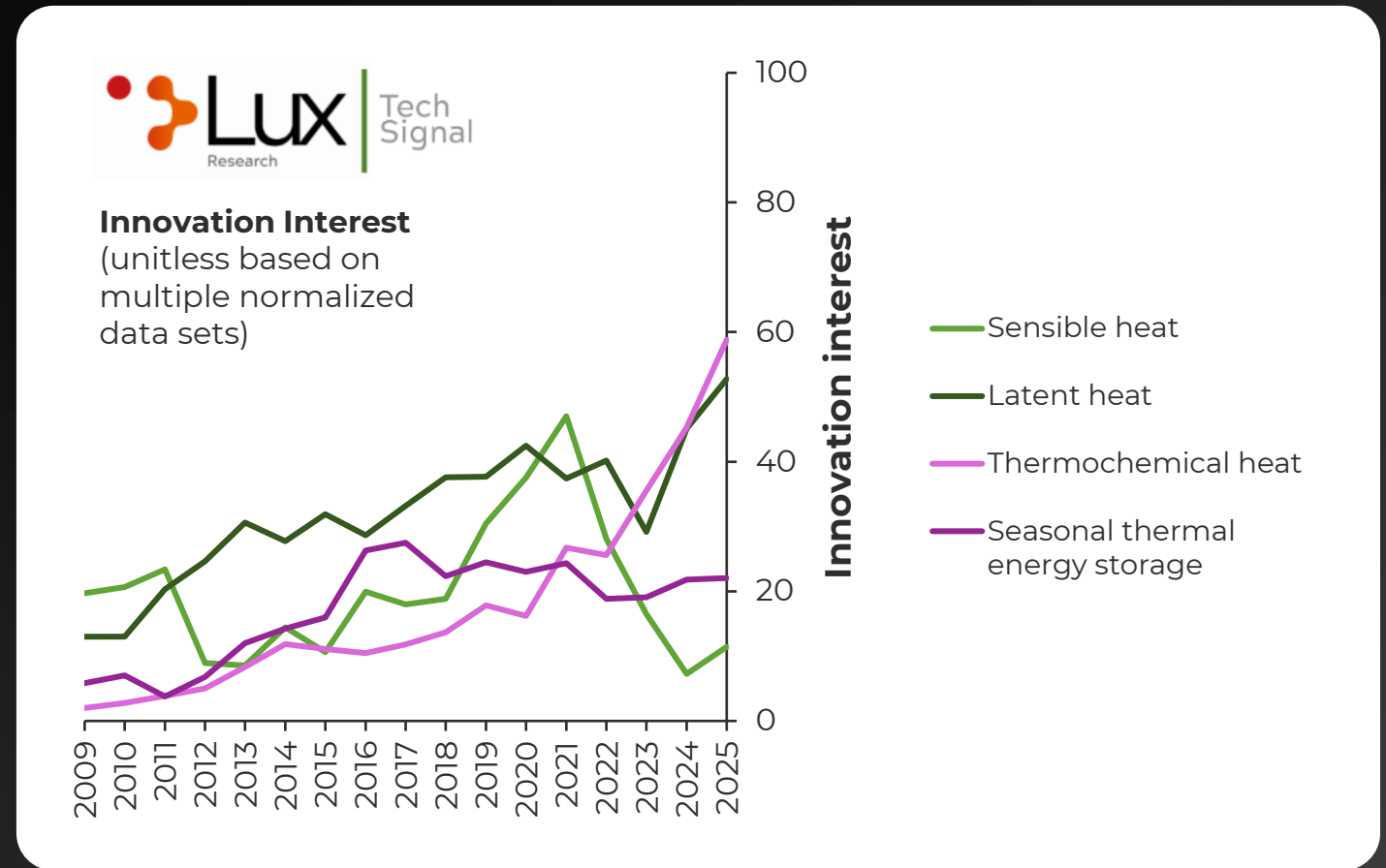
One level deeper in Lux's analysis pinpoints when you should act — pinpointing where innovation momentum originates.



Oil and Gas: High-temperature TES defines the next innovation wave

TES innovation is shifting from broad, low-temperature storage toward high-temperature, materials-driven systems for industrial heat. Competitive advantage will depend less on large-scale infrastructure and more on materials science and systems integration.

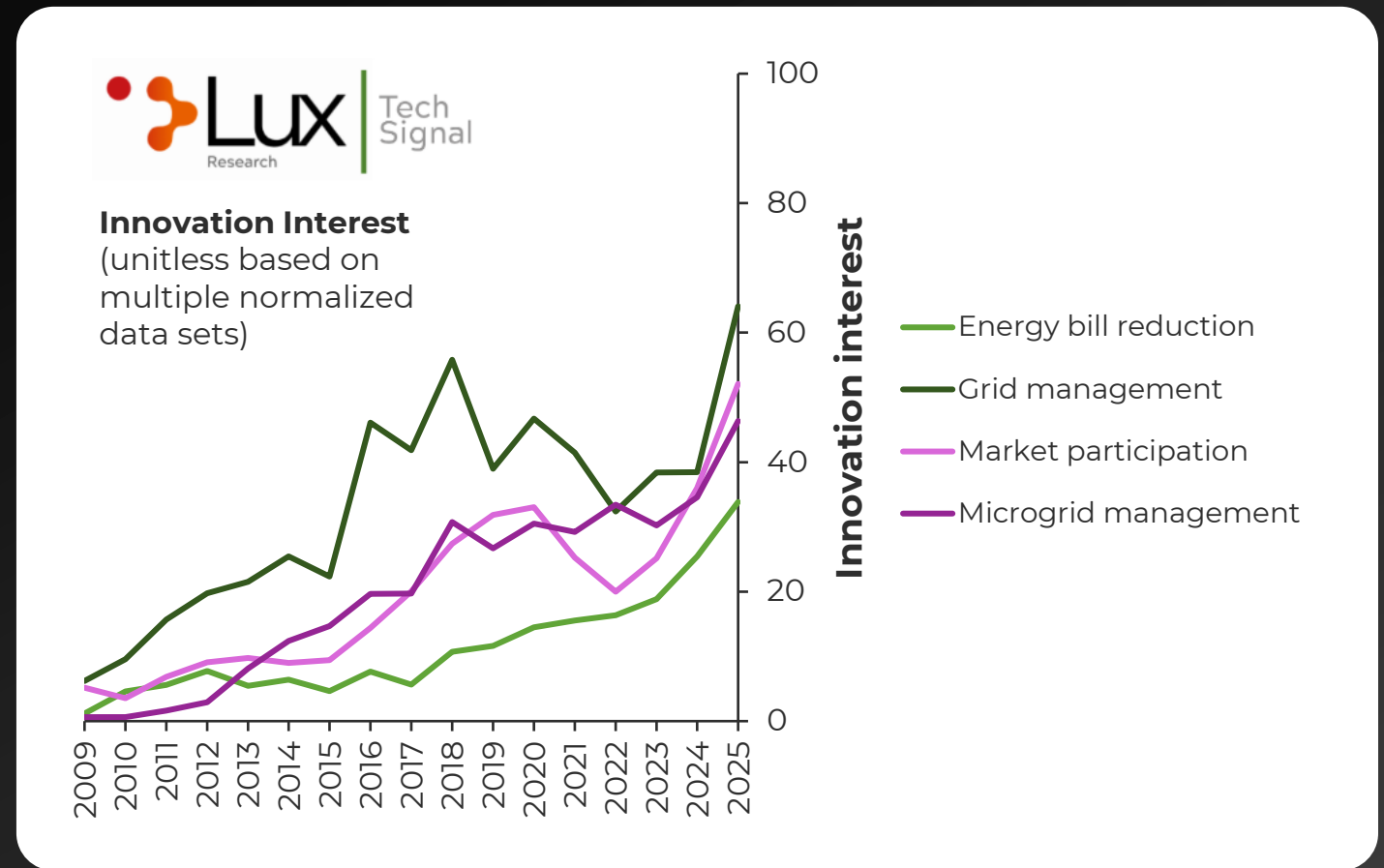
Deploy today in low-temperature applications but watch for rising fuel prices to spur interest in high-temperature applications.



Utilities: DERMS is shifting from grid tool to strategic platform for market differentiation

Rising grid congestion is finally triggering a need for DERMS solutions that orchestrate distributed resources to manage load.

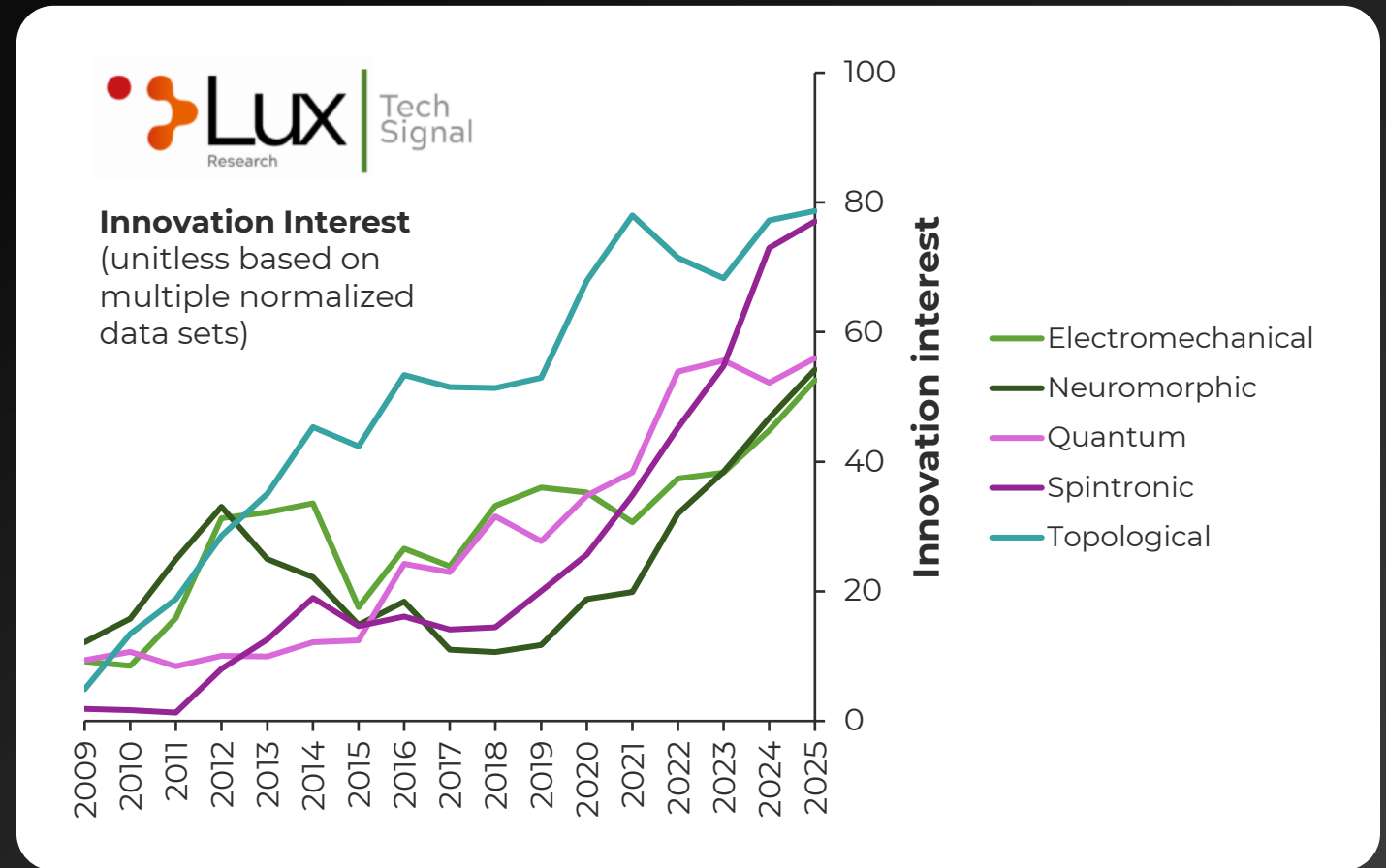
Build or acquire interoperable, asset-diverse platforms, using AI to strengthen optimization while prioritizing data quality as the foundation for long-term platform leadership.



Chemicals: Novel electronic materials are gaining broad innovation interest

Novel electronic materials are shifting from materials discovery to manufacturable device integration, with competitive advantage moving toward process integration, semiconductor compatibility, and application-specific systems.

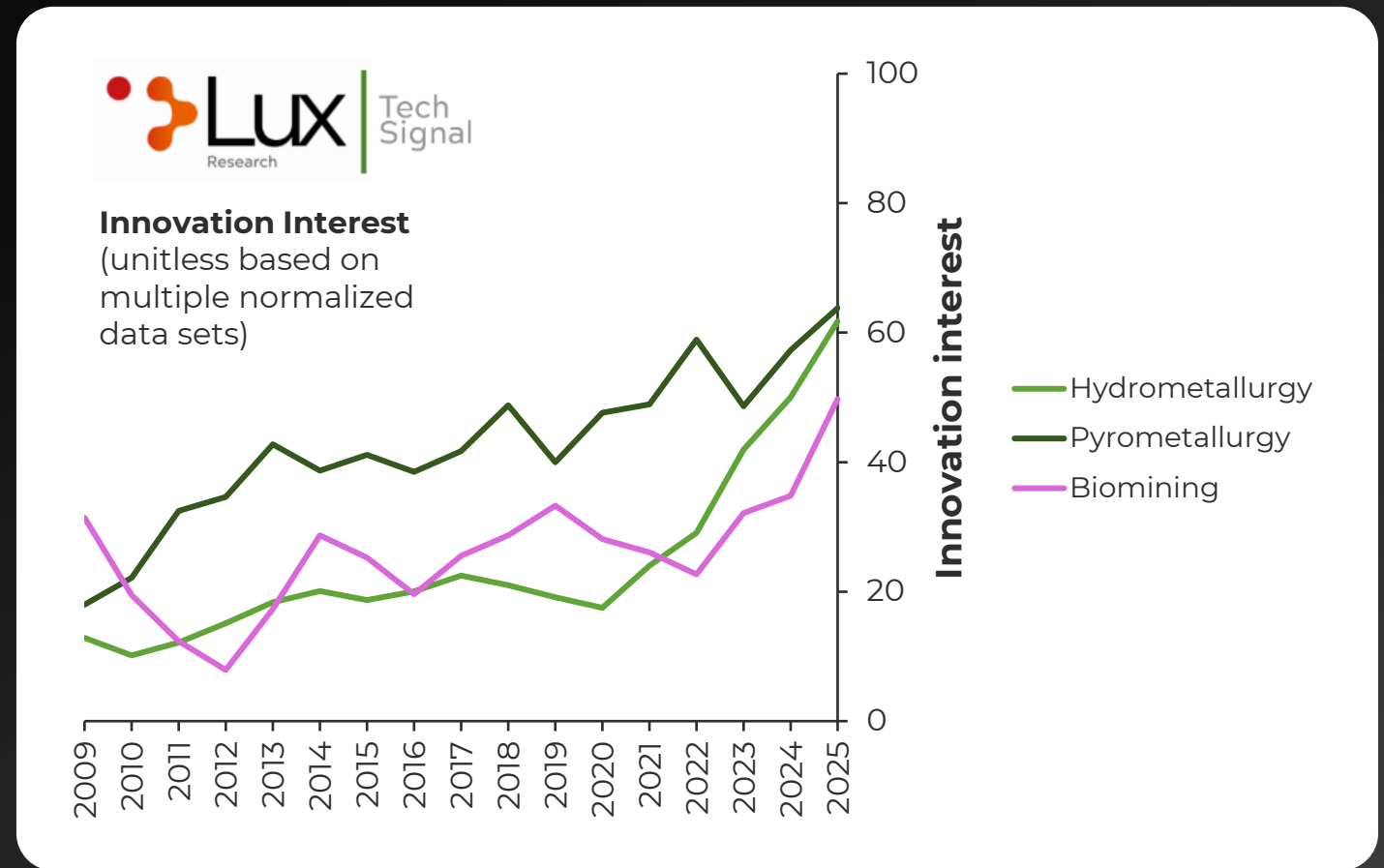
Prioritize codevelopment around integration, while focusing on near-term electromechanical and neuromorphic opportunities over broad material novelty.



Industrials: Building resilient supply chains with novel critical minerals extraction

Critical minerals are becoming a supply chain challenge rather than an extraction challenge. Hydrometallurgy offers the strongest near-term opportunity, but long-term competitiveness depends on integrating extraction with domestic refining and recycling.

Prioritize DLE and refining capacity while treating biomining as a longer-term investment supported by government partnerships.

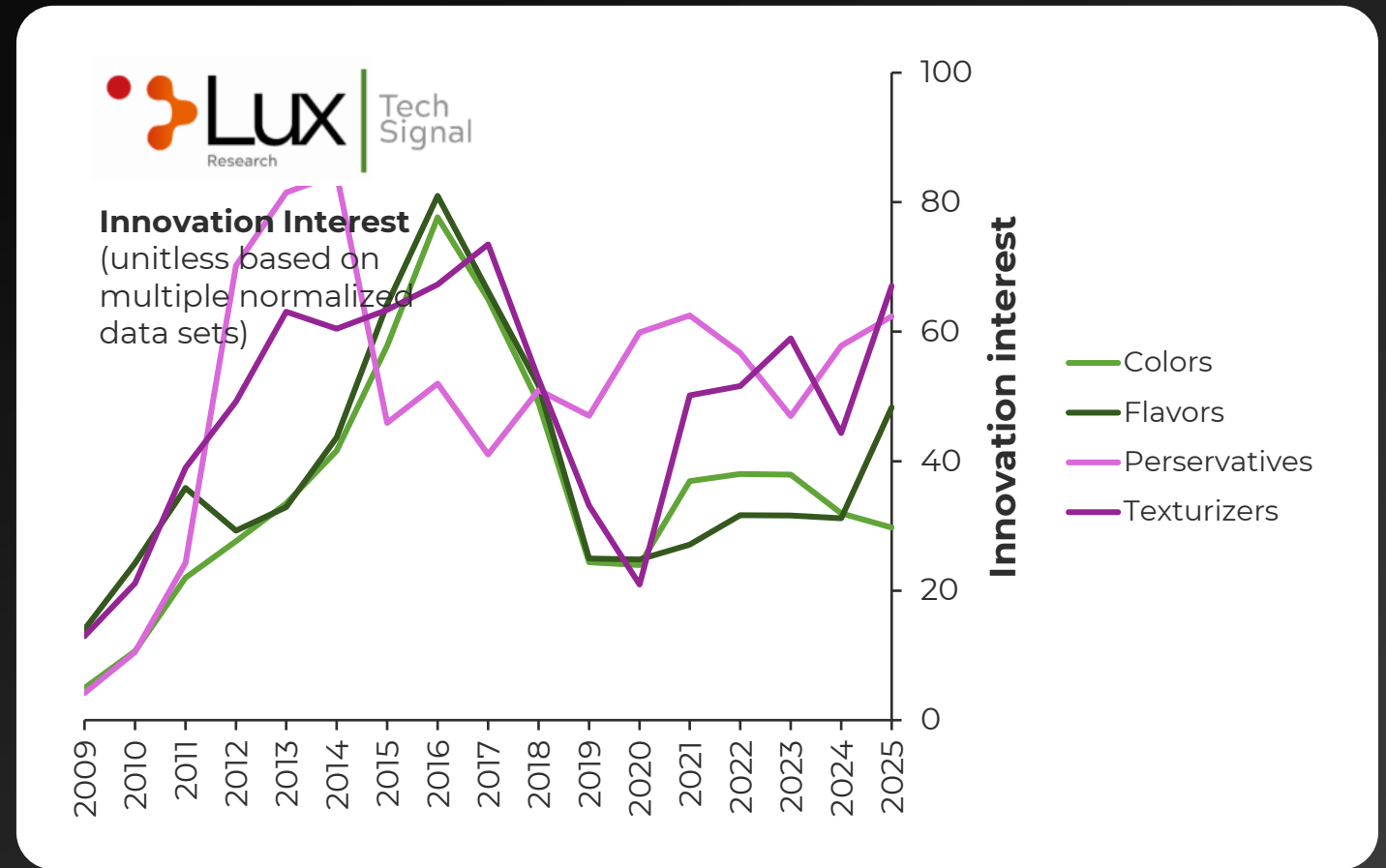


Agrifood: Commercial execution and functional performance overtakes novelty

Food additive innovation has shifted from scientific exploration to commercial execution, with capital concentrating on ingredients that solve functional and safety-critical needs.

Texturizers and preservatives are best positioned for growth, while colors and flavors face scale-up and cost hurdles.

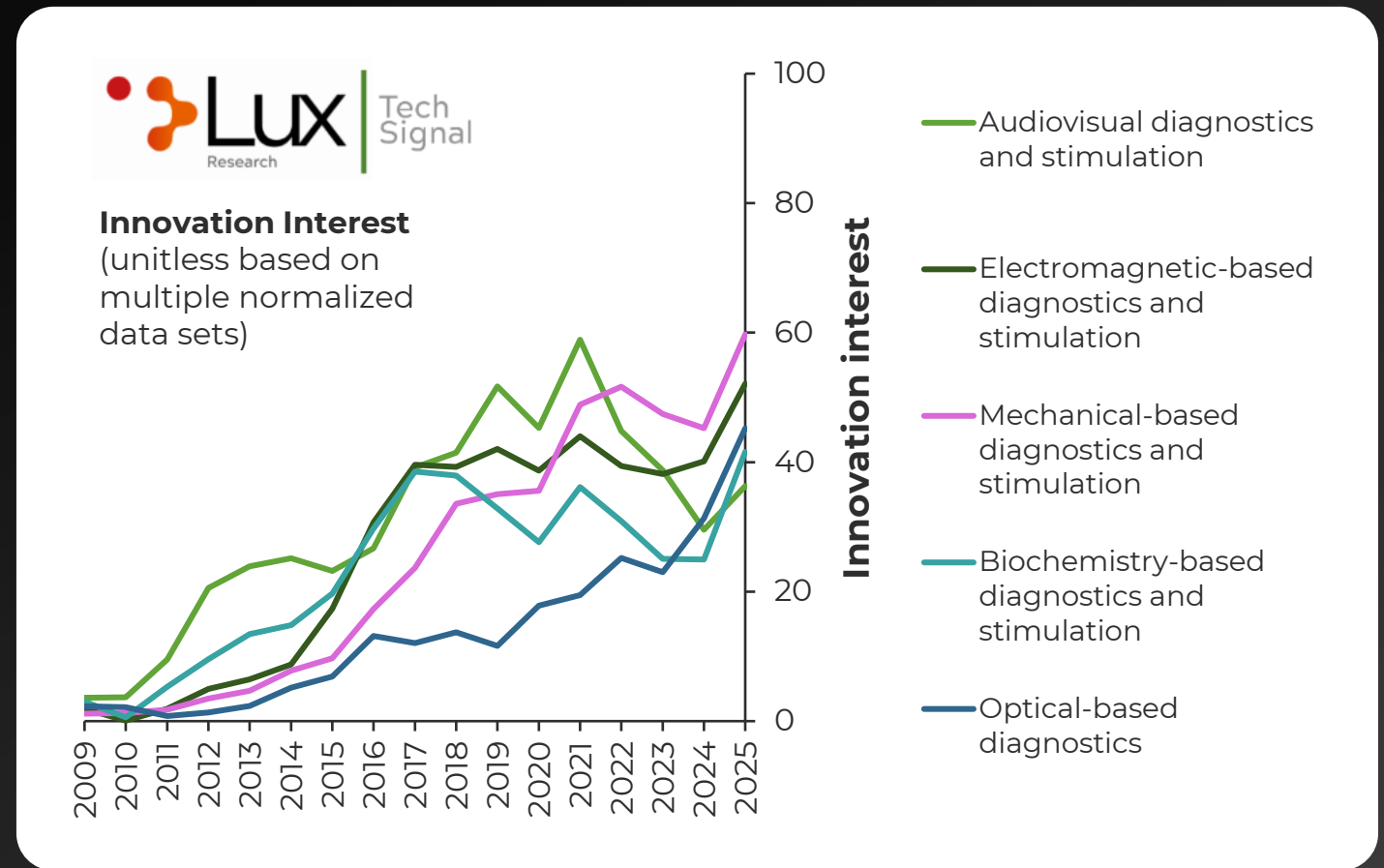
Prioritize scalable, regulation-ready biobased platforms that deliver functional performance and cost parity.



Medical Devices: Wearables innovation shifting from monitoring to intervention

Wearable devices are shifting from standalone monitoring devices to closed-loop platforms that sense, interpret, and respond to physiological signals in real time.

Integrate multimodal sensing, AI-driven analytics, and therapeutic intervention for competitive advantage, while prioritizing clinically validated platforms over technologies with unresolved technical and validation gaps.



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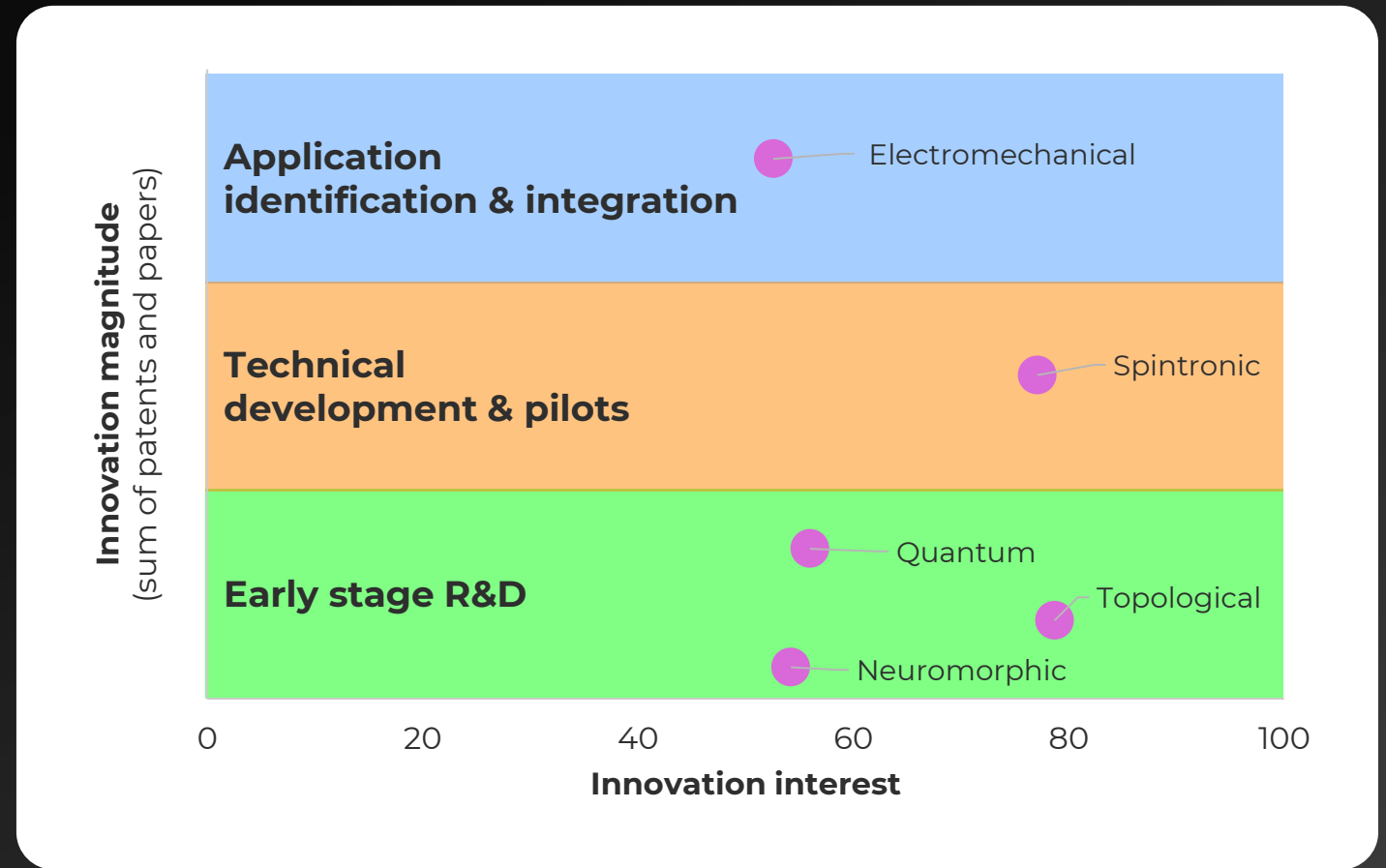
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Capitalizing on changes in innovation momentum

Segmenting innovation interest to find the sweet spot for your innovation activities

The Lux Tech Signal provides an integrated signal of science, investment, and commercialization.

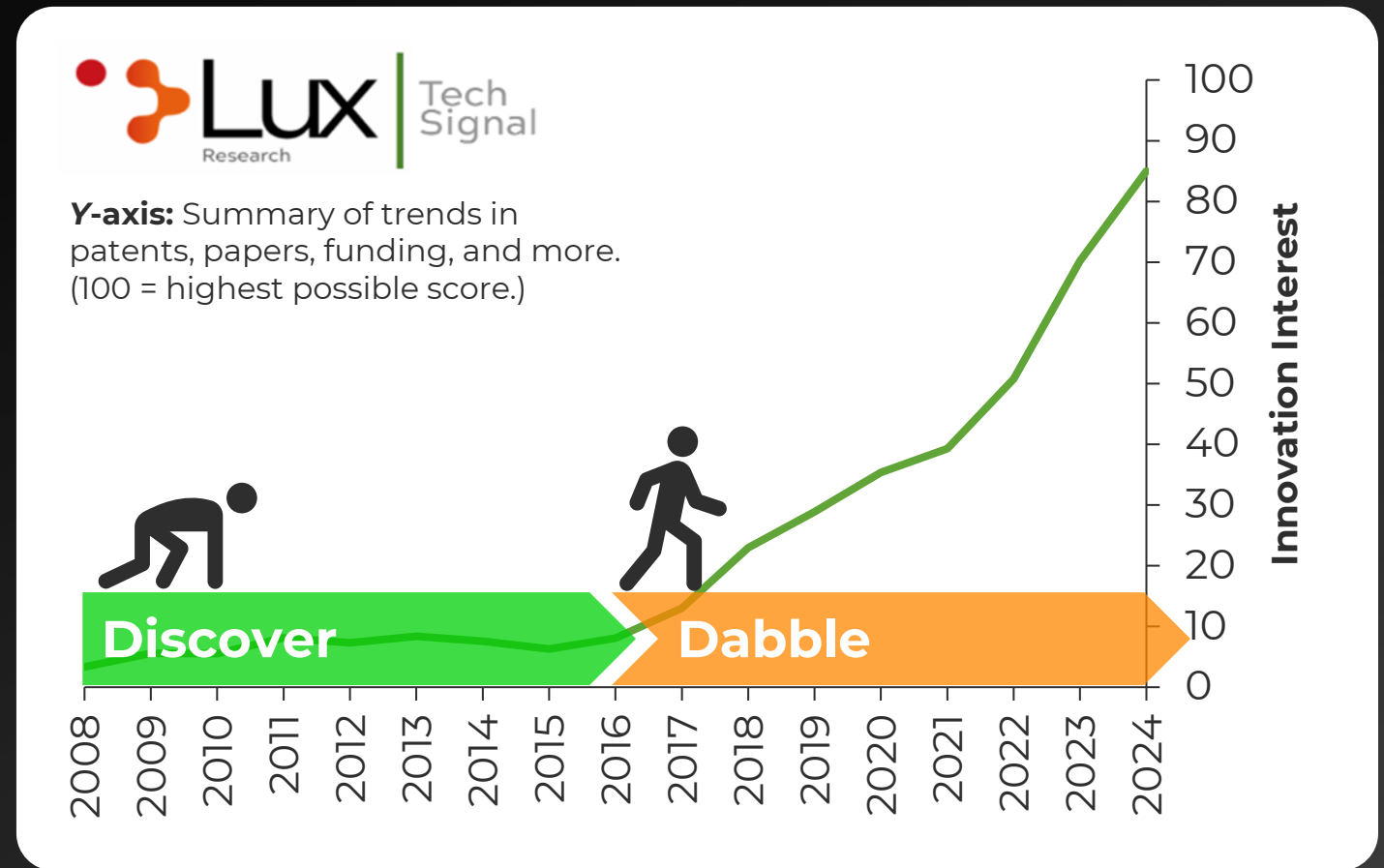
Innovation magnitude reveals well-investigated areas and those that remain more exploratory.



Track the start of the conversation from scientific discovery to inventive dabbling

The Lux Tech Signal provides an integrated signal of science, investment, and commercialization.

Dabbling takes you in all directions and gives you direct insight on the potential impact of a scientific breakthrough.



Complement technology momentum with market readiness signals

Monitor market movements and listen to weak signals that change the maturity of factors beyond technology.

Detecting, interpreting, and acting systematically enable companies to position themselves better for tech-driven innovation opportunities.



Key Takeaways

1

Pinpoint how to engage the technology options.

Various sources drive innovation interest — isolate where momentum is coming from to shape your strategy.

2

Defend your right to dabble.

Dabbling is a necessary part of innovation — involvement in earlier-stage technologies are critical to long-term success.

3

Monitor tech and market signals in parallel.

Current megatrends create the conditions for technology adoption — market readiness will tip the scale for innovation success.



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Where Does Your Team Rank?

Take the 2026
Innovation
Benchmarking Survey



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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