

The background of the entire page is a grayscale aerial topographic map. It shows a complex network of rivers and streams, with a prominent, winding river system on the right side. The terrain is depicted with various shades of gray, indicating elevation and land features.

AlphaGe

GeoSense

Making sense of the world through the lens of geography

May 2024
Volume 1, Issue 3

Introducing GeoSense from AlphaGeo

Rising geopolitical tension, economic competition and climate volatility collectively demand that investors broaden the aperture when it comes to assessing risk and seeking opportunity.

In particular, the time has come to view geography and climate as primary macroeconomic components which, along with traditional market factors, drive financial performance across all operating sectors. No company, country or economy is immune to the impacts that this systemic complexity exerts – yet a proactive view on how and where these changes are occurring will give investors an edge in identifying market opportunities.

AlphaGeo's investment framework guides the asset identification and selection process using an approach that links geography and environment to financial outcomes. This lens – known as "spatial finance" –examines and constructs portfolios with a focus on physical exposures and linkages.

Indeed, the foundation of global commerce for a significant number of public and private assets, either directly or indirectly, is commodities such as agriculture (food/fiber), materials and energy. While globally distributed supply chains are now the norm, companies and analysts routinely underestimate the impact that supply chain disruption exerts on earnings and overall financial performance.

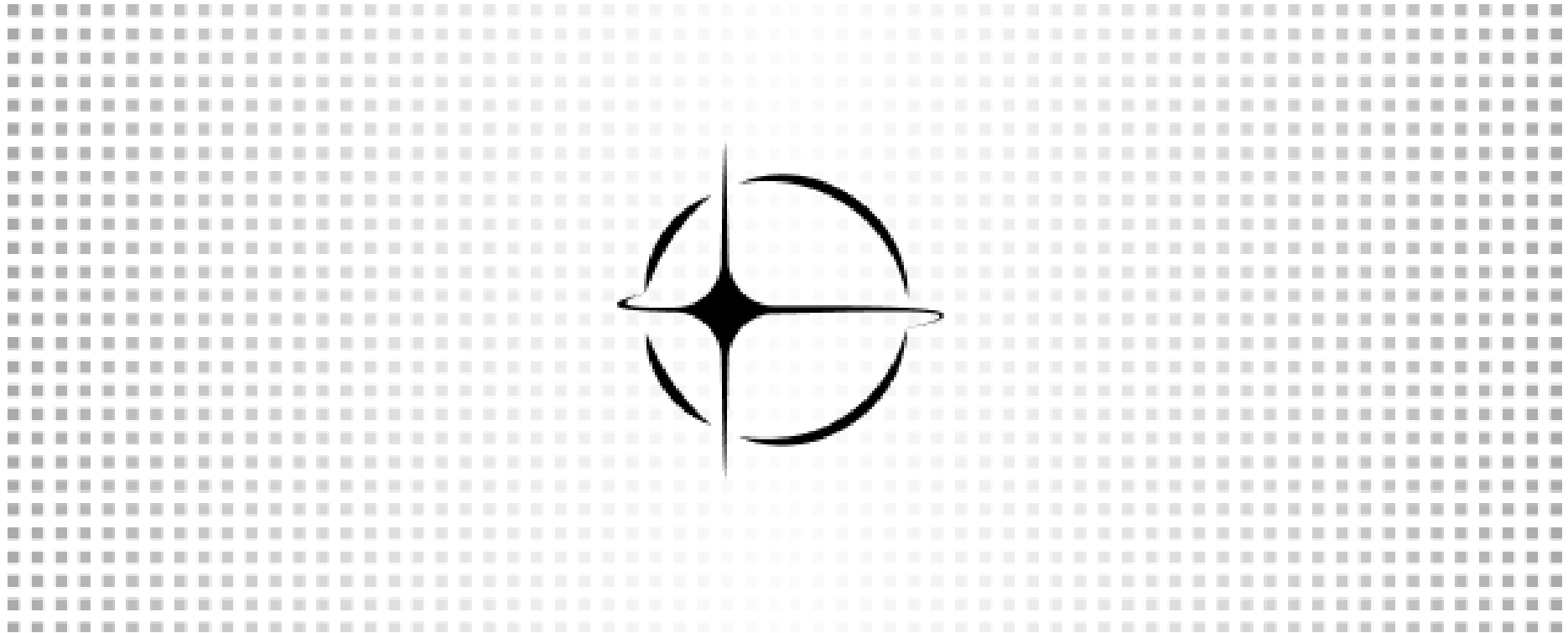
We therefore go beyond balance sheet analysis and financial reporting with a spatially oriented quantitative and fundamental toolkit that enhances current mainstream investment strategies and yields geographically referenced asset identification and selection in public and private markets.

In addition to access to our core software platform, GeoSense subscribers will receive monthly market intelligence notes, AlphaGeo generated tracking indices and sample portfolios for evaluation and idea generation.

GeoSense will be your compass to finding alpha.



The GeoSense Market Tracking Index

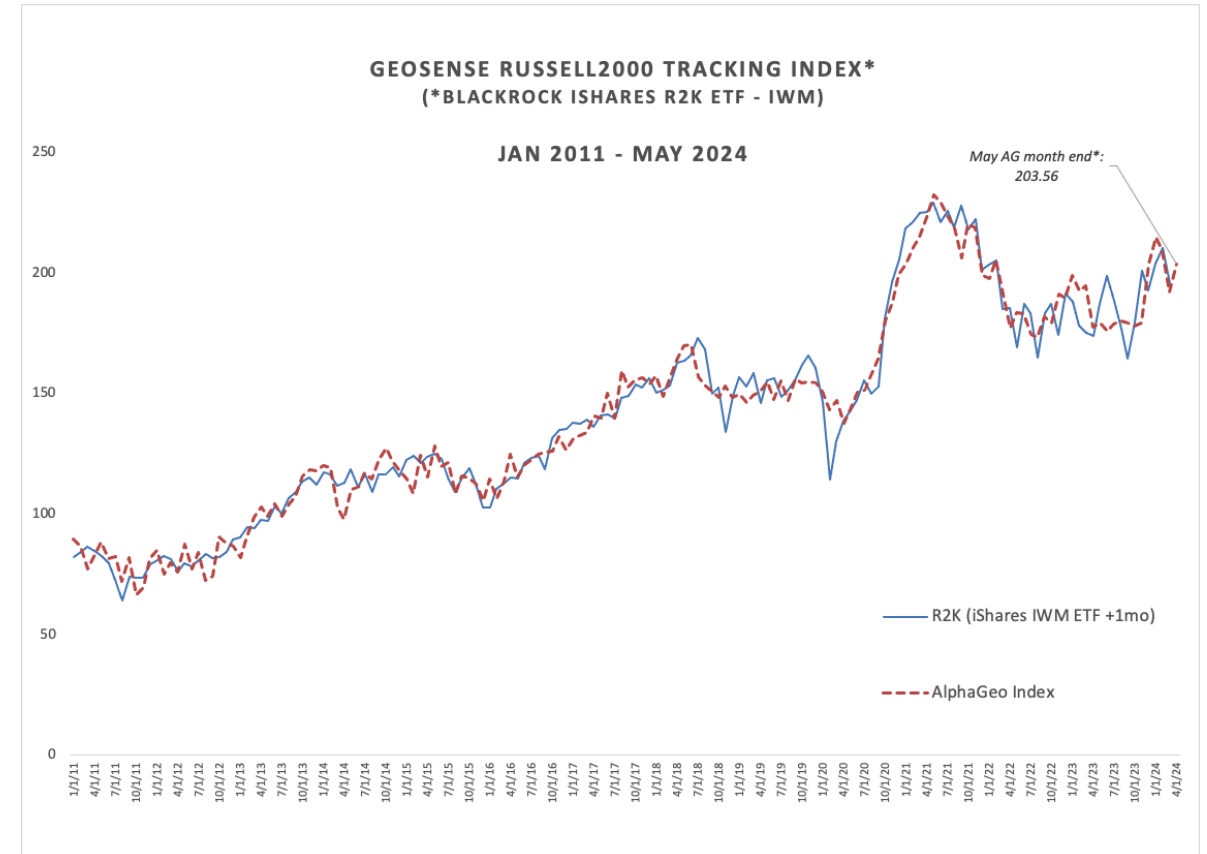


GeoSense's Russell 2000 Market Tracking Index

Last month the GeoSense April IWM tracking index verified by projecting a lower month-over-month ending value (\$199 per share); April closed at 196, down from 210 at the end of March. Looking to May, our index forecasts that IWM will rebound in value by the end of the month – with current data we are expecting the month to close in the **203-204** range.

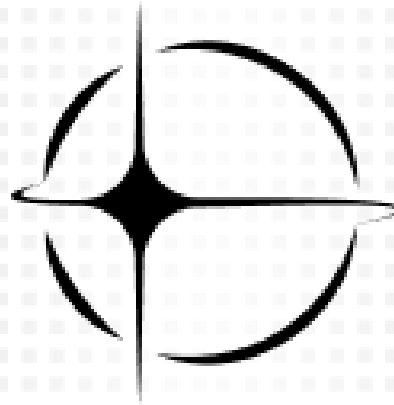
For May, the GeoSense tracking model expects stronger market performance, and highlights variables related to the commodity complex, currencies and seasonal climate pressures. Specifically, the model has selected the metals complex, US energy prices and supply expectations, dollar strength and materials as strong drivers. We view both the US and global energy markets as significant market sentiment drivers to monitor over the coming month from both the supply and demand perspectives. Regarding energy, the transition towards La Niña conditions in the equatorial Pacific Ocean could be a signal for a more active Atlantic Hurricane Season, which could be a constructive factor for natural gas.

The training data for this model includes a broad combination of macroeconomic, environmental and socioeconomic factors, and the index we have created exhibits a statistically significant relationship between these independent variables and the dependent variable (IWM). The model selects variables with p-values below 0.05, and the mean absolute percentage error in this model is below 5%, so we have high confidence in the values and variables as strong predictors.



Feel free to reach out to AlphaGeo to discuss our GeoSense market intelligence reports and market factor assumptions.

The GeoSense Commodity Discussion



Geoeconomics and Wheat

This month we take a deeper dive into one of the world's staple commodities with respect to food and nutrition – **Wheat**.

Wheat prices have exhibited strength in recent sessions as supply side concerns globally are now starting to be priced into futures contracts. The spot contract is not at the levels seen last summer, but as we are entering the speculation season regarding global supplies, mid-season prices could easily test or exceed those seen in 2023. Globally, production figures are expected to be at record levels (just below 800 mmt); however, demand is anticipated to outstrip supply, so monitoring stocks-to-use (S/U) ratios, in addition to weekly weather patterns during key stages in the crop globally, will be on the radar for analysts, speculators and producers alike.

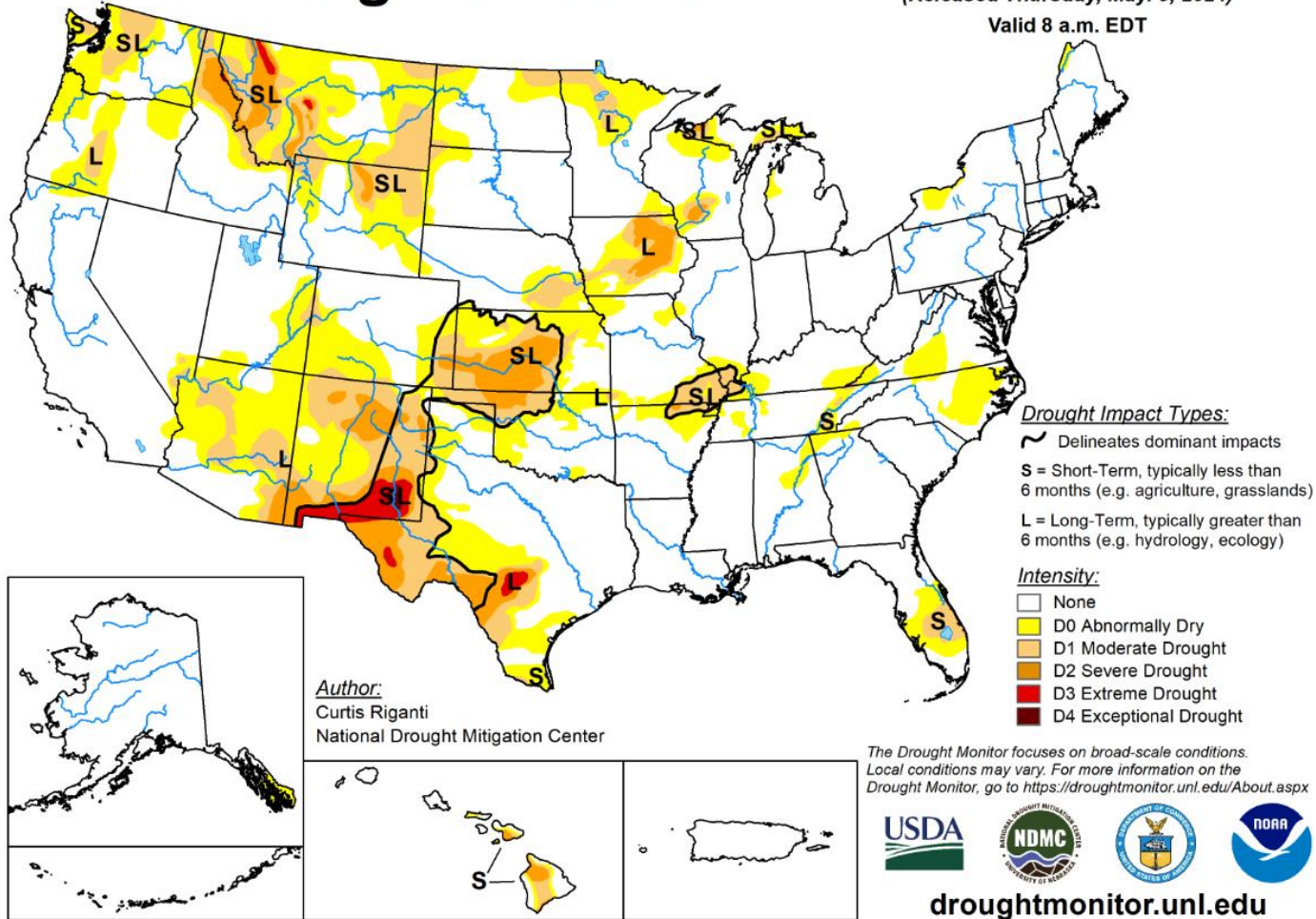
ZWK24 - Wheat - Daily OHLC Chart



Geography, Water and Wheat

U.S. Drought Monitor

May 7, 2024
 (Released Thursday, May. 9, 2024)
 Valid 8 a.m. EDT



Looking closer at US wheat situation, it should be an interesting year for US supply. According to the May 2024 WASDE* report, 2023/24 total domestic wheat supply (all varieties) should be up approximately 6% year on year, driven by larger carry-over stocks and strong production numbers. Domestic demand and global exports are both expected to be higher, so any curtailments in supply could negatively impact the S/U ratio.

With tight physical stocks this year, the US could prove to be a swing producer for the coming campaign – with the ability to push the global balance from surplus to deficit, and vice versa. Once Spring & Durham wheat are planted in the US and the maximum potential yield becomes locked in, adverse weather will only decrease yield expectations, so the dryness that has been developing across the Southern Plains is a factor to keep an eye on as the season progresses.

Further, as the ENSO neutral phase transitions to a La Nina pattern, this could put the wheat belt at a higher risk for dryness to persist across the Southern Plains states.

*World Agricultural Supply Demand Estimates

AlphaGeo's Location Explorer

Seasonal forecasts can be used as guiderails when assessing crop potential, and the subsequent impacts to price. Many forecasters use analog years to assess conditions for the season ahead, but this can be dangerous as no two years are alike, and varieties in the ground today likely responded differently than they may have to similar physical and biophysical conditions in the past. In light of this, another tool for users to consider is the **AlphaGeo Location Explorer**, where longer term weather and climate risk can be put into geographic perspective. The table below from the AlphaGeo platform displays a small sample of high producing wheat counties in the US. Analysts may utilize this tool to assess potential crop risks not in an absolute sense, but in a comparative one, which is perhaps more important when assessing supply chain risk. While variables such as Heat Stress and Drought are obvious, the socioeconomic indicators may also uncover insights that serve to enable or inhibit a reliable and stable end to end agricultural value chain.

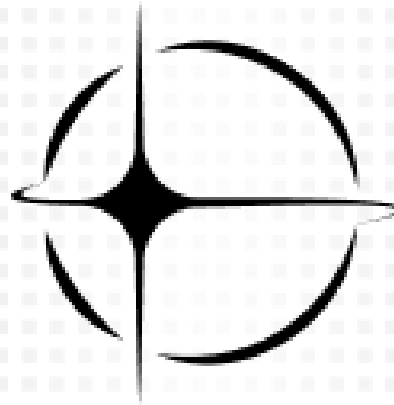
We encourage readers to learn about how to employ the AlphaGeo platform as a guide to anticipating and planning for supply chain volatility.

High Performance
 Medium Performance
 Low Performance
 % # < Current (2020-2025) >

Indicators	Sumner County, ...	Archer County, ...	Alzada, Montana ...	Divide County, ...	Williams County ...	Whitman County, ...
Heat Stress	43	58	30	29	30	31
Drought	49	69	47	18	23	58
Hurricane Wind	0	0	0	0	0	0
Inland Flooding	40	22	33	26	25	29
Coastal Flooding	0	0	0	0	0	0
Wildfire	61	71	50	32	34	44
Infrastructure	76	65	98	96	94	54
Energy Transition	43	70	90	35	36	91
Energy Reliability	72	42	100	99	78	94
Social Robustness	50	5	38	45	66	65
Economic Momentum	58	56	45	78	73	58
Location Wellness	28	46	42	69	49	73

Sumner County, Kansas, United States
 Archer County, Texas, United States
 Alzada, Montana, United States
 Divide County, North Dakota, United States
 Williams County, North Dakota, United States
 Whitman County, Washington, United States

The GeoSense Industrial Renaissance Tracker



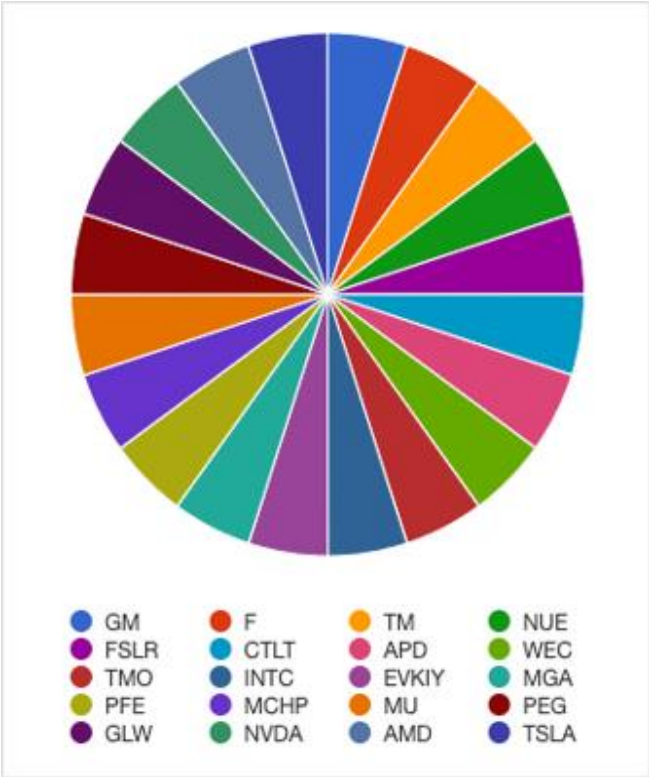
The Industrial Renaissance Tracker (IRT)

AlphaGeo is at the epicenter of the discussion around the Net Zero transition, which we feel will transform not just the energy sector, but all sectors of the global economy. Where the market transformations are taking place is as important as the assets themselves.

Our proprietary IRT guides investors by:

- (a) following announcements and capital flows resulting from legislation or innovation tied to the energy transition,**
- (b) identifying the locations that are poised to benefit and appreciate from these emerging economic opportunities,**
- (c) correlating these geographies to AlphaGeo's proprietary spatial index of risk and resilience indicators, and**
- (d) mapping assets and companies that are most likely to be the winners from this confluence of sustainability drivers.**

At present, the tracker consists of 20 public companies (equally weighted). We compare this portfolio to the IWM benchmark, so we view the IRT as a 'hypothetical ETF'. The figures on the following slides present the one and three year performance charts as compared to the Russell 2000 benchmark; additional benchmarks will be added in future issues.



The Industrial Renaissance Tracker (IRT) Hypothetical Portfolio 16-month performance vs benchmark

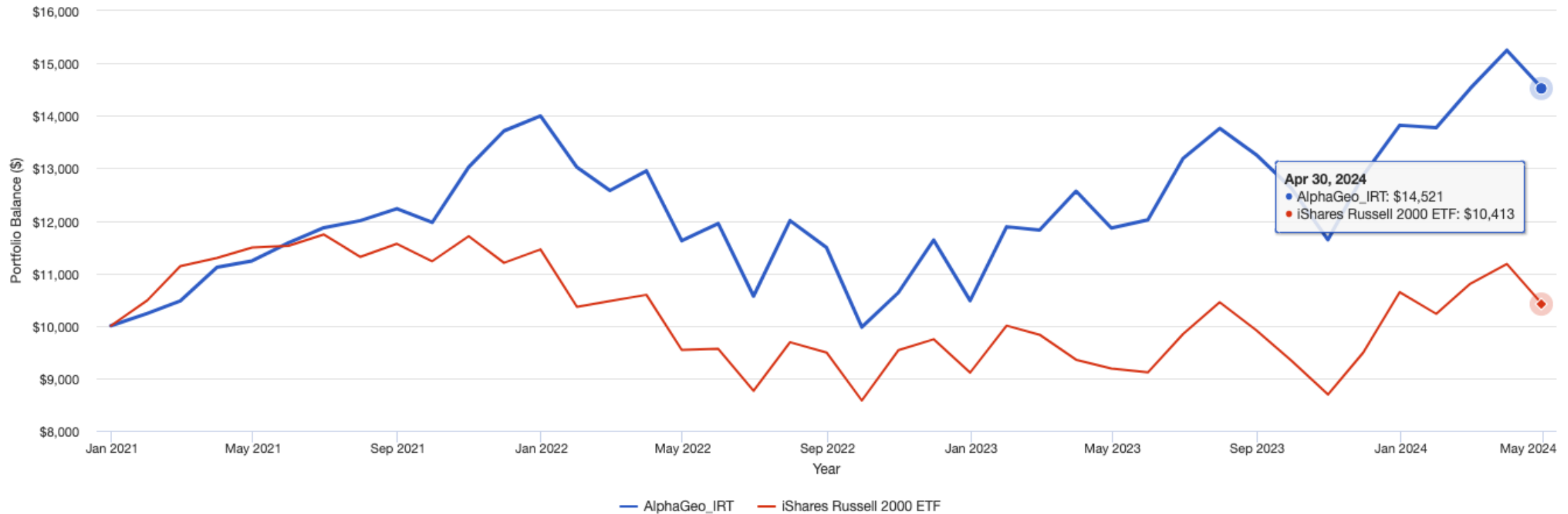


Name	Total Return		
	3 Month	Year To Date	1 year
AlphaGeo_IRT	5.44%	5.07%	22.42%
iShares Russell 2000 ETF	1.82%	-2.15%	13.36%

The Industrial Renaissance Tracker (IRT)

Hypothetical Portfolio 3+-year performance vs benchmark

Portfolio Growth



Name	Total Return			Annualized Return	
	3 Month	Year To Date	1 year	3 year	Full
AlphaGeo_IRT	5.44%	5.07%	22.42%	8.92%	11.84%
iShares Russell 2000 ETF	1.82%	-2.15%	13.36%	-3.23%	1.22%

Our Team



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Founder & CEO

GEOGRAPHY and MACROECONOMICS

Scenario-planning and strategy advisor to major financial institutions and governments. Bestselling author of *Connectography* and *Financial Times* Book of the Year *MOVE* on human geography and climate migration. Young Global Leader of the World Economic Forum. PhD from the London School of Economics.



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Chairman of the Board

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Formerly Founding President of Lennar International (NYSE:LEN) and responsible for over \$12b in real estate transactions; significant cross-border real estate fundraising/transaction track record. Former global head of strategy/business ops for CNN Worldwide. Director, The United States Atlantic Council. Former World Economic Forum Future Council on Cities; assisted Forum in founding Centre for Urban Transformation.



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Chief Scientific & Chief Investment Officer

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PhD Researcher at the Singapore-ETH Center Future Cities Lab. Expert in urban data mining and analytics with academic publications in scientific journals on geospatial data and generative AI.



Mark Langan

Chief Operating Officer

TECH and PRODUCT MANAGEMENT

Former Vice President of Hedge Fund Research and PMO to the Chief Data Office at Preqin, a leading data platform for alternative investors, with expertise in SaaS, client relations, process automation, program management, data management and compliance.

Our global team of 15 seasoned professionals spans the US and Asia – and we plan to hire more data scientists, product managers and sales executives.

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