Q1 2022





Author:
Gregory Hung
Chief Investment Officer at The Singularity Group
gh@singularity-group.com



Contact us:

The Singularity Group Obere Zäune 16 8001 Zurich info@singularity-group.com





HIGHLIGHTS

- In the first quarter of 2022, the Singularity Strategy posted a return of −12.5% vs the MSCI ACWI which had a performance of −5.4%. Underperformance for the quarter relative to benchmark was driven by underweights in Energy, Utilities, Financials, Consumer Staples and a general underweight to value stocks. The top performing Singularity Sectors were Space, New Energy, Big Data, and 3D Printing with Tesla, Visa, and Medtronic being the top individual contributors.
- > Since inception on Dec 21, 2017, the Singularity Strategy has delivered a cumulative return of +85% and approximately +16% on an annualized basis, compared to the MSCI ACWI which had a cumulative return of +50% and +10% annualized.
- The Singularity Strategy's long-term return is backed by sound portfolio characteristics. The current operating margin is 20% and return on assets and equity are 14% and 20% respectively. Three-year compound annual growth rates for revenue and EBITDA were 20% and 28% compared with 13% and 20% for the MSCI ACWI. In addition, the portfolio is underpinned by a healthy balance sheet with low net debt to equity levels of 18%.
- The Singularity Small & Mid Strategy, which comprises the top 100 innovation companies within the \$1bn to \$25bn market cap range, posted a gross return of -16.2% for the first quarter and -7.4% since launch on May 10, 2021 (vs -5.4% for the MSCI AC Mid Cap Index). In the backtest based on live data, the strategy is up +80% since inception, representing an outperformance of +39% vs the global mid cap benchmark.
- As geopolitical turmoil, inflation, and interest rate jitters provide for continued volatility, we believe our portfolio represents a resilient long-term investment in a slower growth environment providing diversified exposure to applied innovation across industries.
- > TSG Global Innovation Survey: In our upcoming webinar on April 26 at 3.30 CEST we are pleased to present you the results of our inaugural annual innovation survey, which was targeted over 1,000 C-level management team members globally and across industries with close to 400 respondents. Highlights: 1/ Sectors beyond Non-IT sectors increasingly integrate new technologies into their business models with three technologies standing out in particular. 2/ Listed and non-listed companies have different approaches to open innovation and engagement with startups. 3/ The Singularity Score varies considerably across regions and industries based on different innovation hotbeds.





THE SINGULARITY GROUP IN THE SPOTLIGHT

In the press:

- Our CEO Evelyne Pflugi gave a <u>refreshing interview to Millionär/Handelszeitung</u> about how we capture innovation and what makes a company stand out from the crowd.
- Evelyne also wrote a **guest article for Swiss business magazine Sphere** on circularity and how we identify the drivers and catalysts of the Green Revolution. She also spoke to experts on how CO2 and waste will become thought-after resources along the way. The piece is available in <u>German</u> and <u>French</u>.
- To keep up with current coverage on TSG, please visit our website.

Up next:

- We will launch the inaugural Global TSG Innovation Survey with our next Singularity Insights Quarterly Live Webinar on April 26 at 3.30 CEST. Join us to see the results and insights context from our Singularity Think Tank experts. Register here.
- In cooperation with Wirtschaftsförderung Luzern, we will also present the Global TSG Innovation Survey at a physical event in Lucerne. One of the highlights is the prominent panel with Swiss executives Suzanne Thoma (CEO BKW), Marc Schürmann (Executive Vice President Komax Wire Processing), Peter Delfosse (CEO Axon Active) who will discuss the survey findings and shed a light on the Swiss innovation landscape. If you want to take part, please contact Dita Bunjaku: db@singularity-group.com. A limited number of seats are still available.
- We continue hosting our Art & Innovation Breakfast Talks. The next round will take place on June 10, 21 and 28 at 8.30am. We limit every event to 5 guests and have very few spots left. If you are interested, please contact Dita Bunjaku: db@singularity-group.com.

What happened:

- We welcomed **four new members to our Singularity Think Tank:** <u>HonMun Yip, Sandhya Sriram, Joscha Krieglsteiner and Tristan Hocke</u>. Please find all the information here.
- Is the Singularity Fund a theme fund? Not really. However, we do subscribe to a theme: applied innovation.
 By investing in the most important enabling technologies, we naturally cover the most relevant innovation
 themes: the ones that generate revenues today. Read our latest blog post "The Theme of all Themes"
 featuring Evelyne Plugi and Gregory Hung.
- Our monthly **Greg Cast** continues to be a popular video format. You can find all episodes also on our <u>YouTube channel</u>.

Singularity



PERFORMANCE COMMENTARY

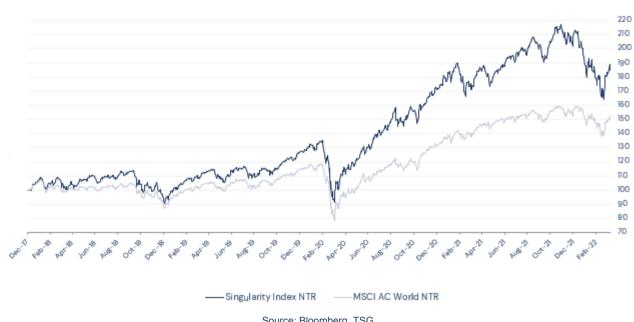
In the first quarter, the Singularity Strategy registered a gross return of -12.5% vs the MSCI AC World Index's return of -5.4%. Both security selection and sector allocation contributed negatively for the quarter. Top contributors were Tesla (+0.11%), Visa (+0.06%) and Medtronic (+0.06%). Bottom contributors were Meta Platforms (-0.94%), Tencent (-0.59%) and Paypal (-0.38%). On a relative basis vs the MSCI ACWI, the strongest positive attributions came from Tesla, Home Depot, Visa, and Medtronic, with Meta Platforms, Tencent, and Paypal being the laggards also in relative terms.

The global Energy sector rallied close to +30% over the quarter while Utilities, Financials, and Consumer Staples ended nearly unchanged to only slightly negative. These are all sectors that the Singularity Strategy typically is underweight in. As such, returns in Q1 were weighed down by its exposures to Information Technology, Communication Services, and Consumer Discretionary, which all finished the reporting period in double digits negative territory.

In terms of equity style factors (long/short factors), value was the big winner, finishing up +13%, and quality was the bottom performer (-7%). Volatility, size, and momentum were broadly unchanged. The Singularity Strategy represents a portfolio of innovation leaders made up of high quality companies with strong growth profiles. While the Strategy's factor exposures proved unfavorable during the first quarter, we feel confident about its ability to outperform over the long-run as manifested by its historical track record.

Since inception on December 21, 2017, the strategy delivered a gross return of +85.0% (+15.5% p.a.) vs the benchmark's return of +50.2% (10.0% p.a.). This represents an outperformance of +34.8% over the entire period or 5.5% p.a.

Singularity Index Performance Since Inception

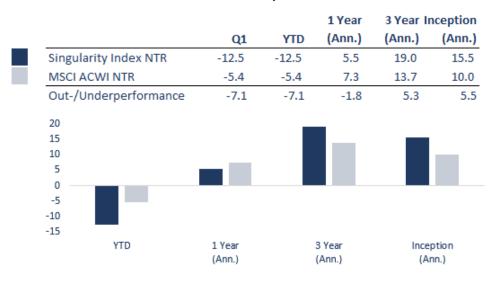


Source: Bloomberg, TSG





Historical Performance (%) per March 31, 2022



Source: Bloomberg, TSG

Following a strong year for equities in 2021, the start of 2022 was a lot more challenging for global markets. The perceived worsening of inflation dynamics lead to an acceleration of interest rate hikes resulting in a pullback in equity markets. Increasing tensions around Ukraine and an imminent invasion weighed further on sentiment into February. Energy and commodity prices were pushed to extreme levels, exacerbating already heightened concerns around global growth dynamics, inflation and supply chain issues.

Since Russia invaded Ukraine on 24 February, equity markets have staged a rapid recovery from strongly oversold levels in early to mid-March – much in the way of a 'sell the rumor, buy the fact' phenomenon – and this despite the disruption of commodity supplies and a global rise in interest rates. Since this initial recovery phase, the US Fed shifted to a significantly more hawkish tone and embarked on its interest rate hiking cycle in mid-March, marking an end to its ultra-low and accommodative policy.

The global equity sell-off in Q1 has been largely a story of resetting valuations rather than an outright growth scare. Markets with higher price/earnings (P/E) ratios at the end of 2021 have experienced the sharpest declines. To illustrate, the US (S&P 500) fell close to -5% with a starting P/E of 26 while Latin America (MSCI Emerging Markets Latin America) is up +27% with a starting P/E of 8. That said, it is quite remarkable that while public equity valuations have repriced significantly, late-stage private equity valuations haven't budged and may in fact have even increased. Who is right, public or private markets?

Fourth quarter Singularity Strategy portfolio fundamentals were strong across the board. Singularity Portfolio companies in Q4 grew sales by 25% and earnings by 66% year-over-year, with more than two-thirds of companies beating on both metrics. For the full year of 2021, overall sales and earnings grew 22% and 65% respectively compared to 2020.

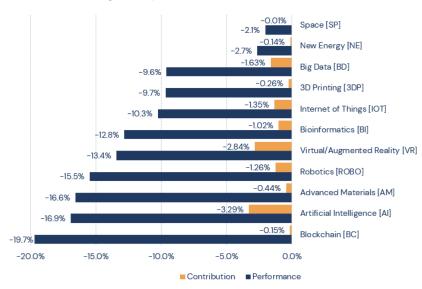




Singularity Sectors

All sectors had a negative return for the quarter. Top performing Singularity Sectors in Q1 were **Space** (-2.1%), **New Energy** (-2.7%), **Big Data** (-9.6%) and **3D Printing** (-9.7%). **Blockchain** (-19.7%) and **AI** (-16.9%) were the bottom performers for the quarter.

Q1 Singularity Sector Performance and Contribution



Source: Bloomberg, TSG

In terms of performance attribution, the biggest positive contributions came from Tesla (TSLA US, +0.11%, Singularity Score [SC]: 89), Visa (V US, +0.06%, SC: 96), Medtronic (MDT US, +0.06%, SC: 74), Palo Alto Networks (PANW US, +0.05%, SC: 100), Deere & Co (DE US, +0.05%, SC: 33), Crowdstrike (CRWD US, +0.04%, SC: 100), American Express (AXP US, +0.04%, SC: 42), Johnson & Johnson (JNJ US, +0.03%, SC: 18) and Check Point Software (CHKP US, +0.02%, SC: 100). Tesla reported blowout Q4 vehicle deliveries of more than 300K, comfortably beating Street expectations and bringing full-year deliveries close to 1M. The opening of its new gigafactory in Berlin in March was also well received by the market. The factory is set to produce up to 500K vehicles per year. Visa, Medtronic and American Express gained on reporting solid financial results while Palo Alto Networks, Crowdstrike, and Check Point Software profited from increased demand for cybersecurity solutions. Deere & Co unveiled its first autonomous tractor that can be controlled by a smartphone and is equipped with 12 stereo cameras and an Nvidia GPU. Its stock price increased on guidance for strong machinery demand. Johnson & Johnson shares rose on easing legal overhang in connection with a nationwide opioid settlement agreement.





Top Q1 Contributors by Singularity Sector

Sector	Company	Perf (%)	Contr (%)
New Energy	Tesla	2.0	0.11
Big Data	Visa	2.5	0.06
Bioinformatics	Medtronic	7.9	0.06
Internet of Things	Palo Alto Networks	11.8	0.05
Robotics	Deere & Co	21.5	0.05
3D Printing	Johnson & Johnson	4.3	0.03
Artificial Intelligence	Splunk	28.4	0.02
Space	Transdigm Group	2.4	0.01
Advanced Materials	Umicore	7.7	0.01
Virtual Reality	Texas Instruments	-2.0	-0.00
Blockchain	Block	-16.0	-0.07

Source: Bloomberg, TSG

The largest negative contributors were **Meta Platforms** (FB US, -0.94%, SC: 98), **Tencent** (-0.59%, SC: 81), **ASML** (-0.34%, SC: 100) and **TSMC** (2330 TT, -0.31%, SC: 96). **Meta Platforms**' shares suffered on missing its revenue forecast and slowing user growth, while **Tencent's** stock was burdened by worries that Beijing would roll out more restrictions for the sector and by a monetary fine in relation to its still strongly growing WeChat Pay service for violating anti-money laundering rules. **ASML**, which underpins many of the enabling technologies underlying our Singularity Sectors with its leadership in EUV lithography equipment, reported a solid Q4 result and outlook but gave back some of its previous gains amid a broader tech sell-off, as did Taiwan Semiconductor Manufacturing **(TSMC)**.

Singularity Stocks

Best performing stocks for the quarter in terms of absolute performance were **Splunk** (SPLK US, +28.4%, SC: 100), **Deere & Co** (DE US, +21.5%, SC: 33), **Check Point Software** (CHKP US, +18.6%, SC: 100), **Nuvei** (NVEI US, +16.0%, SC: 100), **Zendesk** (ZEN US, +15.3%, SC: 100), **Solaredge Technologies** (SEDG US, +14.9%, SC: 87), **Quanta Services** (PWR US, +14.9%, SC: 69), **American Express** (AXP US, +14.6%, SC: 42), and **Palo Alto Networks** (PANW US, +11.8%, SC: 100).

Splunk's 2023 revenue guidance beat analyst estimates and profited from reports that Cisco Systems was interested in acquiring the firm. **Nuvei**, a Canadian payment technology company, rose on Q4 revenue and earnings beats. **Zendesk** shares were up on takeover approaches by a consortium of private equity firms which was turned down. **SolarEdge** benefited from increased interest for renewables in the search for oil alternatives as power prices jumped. Similarly, shares of **Quanta Services**, a specialized contractor to electric utilities and the telecommunications sector, gained on an improved sales outlook and big contract win for its engineering and construction services.



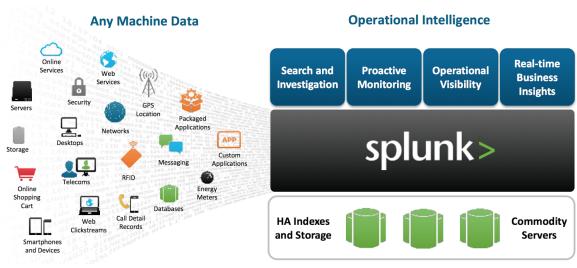
Company Spotlight: Splunk (SPLK; Singularity Score: 100)

Splunk (Singularity Score: 100) is a business intelligence software company operating at the intersection of big data, cloud, artificial intelligence, IOT, and security. Splunk's solutions provide visibility to customers' diverse technology infrastructure including systems deployed on the edge, on premises, and in cloud environments. The product offering supports customers in their transition to data-driven, more accurate and actionable insights, proactive monitoring, as well as automated and Al-assisted processes that drive better outcomes as the complexity and scale of technology infrastructures increases. Out-of-the-box machine learning algorithms optimized for common data types and use cases and interfaces are an integral part of the offering and allow data scientists to develop and deploy customized algorithms and models against their company's own data.

While in general the cost of data creation and data storage have decreased exponentially, the cost of analyzing this data has been increasing. The more data is generated, the harder and the more time consuming it is to extract value from it. Splunk aims to specifically reduce the cost of analytics to customers and drive value from data insights from unstructured data. The company provides software that collects, indexes, and analyzes machine-generated data in real-time by almost any piece of hardware and software in the ecosystem that contains a time-stamped record of transaction, security threats, user actions, and other activity. This includes data from sensors (IOT), commerce, RFID, mobile, telemetry, energy meters, enterprise systems and more.

Such data could be generated from applications, servers, websites, networks, or mobile devices. The software platform can collect any type of data, irrespective of format, structure or source and uses a patented data processing architecture, enabling users to run queries without prior understanding of the data structure. With Splunk's software, users can analyze, monitor and report on this plethora of data for purposes of operational intelligence, application management, analytics, as well as security and compliance. Some call Splunk the Google of ITOps in the sense that it provides Operational Intelligence to both IT users and business.

Ultimately, this gives companies better insights into security threats, user behavior, service levels, capacity consumption, suspicious activity, and customer experience. Examples for use cases for Splunk's solutions are:



Source: Splunk





- Observability: Analyze, visualize, monitor and optimize system and application performance across the entire IT infrastructure stack including network equipment
- Cybersecurity: Visualize, investigate and respond to security alerts and threats
- Troubleshooting any failure condition
- Anticipation and prevention of incidents and automation of responses
- Surgical search and investigation of particular outcomes

The company recorded a year-over-year revenue (ARR) growth rate in 2021 of 20% (23% 5-year CAGR) with a gross margin of 73% and a LTM free cash flow margin of 4%.

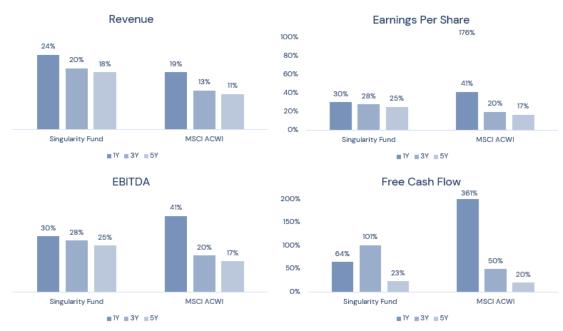




Portfolio Characteristics

The Singularity Portfolio's strong long-term return is grounded in a set of sound portfolio characteristics. Revenue grew at a compound annual growth rate (CAGR) of 20% over 3 years and 18% over 5 years. The 3-year CAGRs for EBITDA, EPS, and Free Cash Flow were 28%, 28% and 64%. These growth rates compare very favorably with the global equity benchmark.

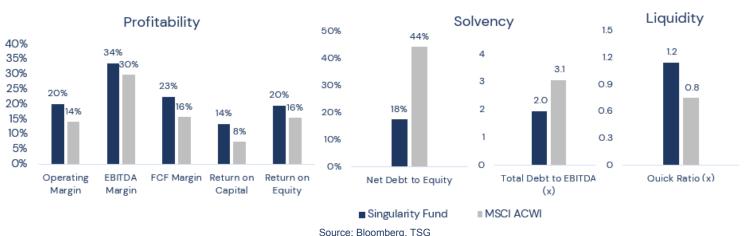
Compound Annual Growth Rates per end of March 2022



Source: Bloomberg, TSG

The current Singularity portfolio continues to be highly profitable with an operating margin of 20%, EBITDA and free cash flow margins of 34% and 23%, as well as strong returns on capital (14%) and equity (20%). The balance sheet is healthy with low debt ratios (18% net debt to equity) and a solid liquidity position with a quick ratio of 1.2x.

Portfolio Characteristics per end of March 2022







Singularity Small & Mid Performance Q1 2022

The Singularity Small & Mid strategy posted a gross return of -16.2% during the first quarter, compared to -6.2% and -5.8% for the MSCI AC Small Cap Index and MSCI AC Mid Cap Index respectively. Its relatively larger exposure to growth (and underweight to value) and to China (with an average portfolio weight of ca. 18%) were the dominant factors of underperformance. China as a region in particular has been underperforming. The regulatory crackdown on large tech platforms and internet consumer companies has dragged down small and mid cap companies over the last year, to the extent that Chinese stocks in general have become very attractive from a valuation point of view and may be set for a period of outperformance from here.

Since launch of the certificate on May 10 2021, the strategy is down by -7.4%, underperforming the above indices by -3.1% and -5.4%. Since strategy inception (Dec 21, 2021) cumulative gross performance is +80%, representing an outperformance of +40.2% and +38.9% respectively.

The biggest portfolio contributors for the quarter were **Check Point Software** (CHKP US, +0.22%, SC: 100), **SolarEdge** (SEDG US, +0.18%, SC: 87), **FleetCor** (FLT US, +0.17%, SC: 41), **Quanta Services** (PWR US, +0.15%, SC: 64), **Zendesk** (ZEN US, +0.11%, SC: 47), **Terna** (TRN IM, +0.09%, SC: 73), **Edenred** (EDEN FP, +0.07%, SC: 69), **Umicore** (UMI BB, +0.07%, SC: 88), and **Plug Power** (PLUG US, +0.06%, SC: 53).

FleetCor and **Edenred**, two business payments solutions providers, both gained on strong Q4 results with solid top-line growth and room to outperform their 2022 guidance. **Umicore**, a material science and leading metals recycling company, climbed on higher metals prices boosting the outlook predominantly for its recycling division. **Plug Power**, a leader in hydrogen fuel and electrolysers, gained on analyst and price target upgrades. See above for comments on the other top contributors.

The largest detractors for the quarter were **Lasertec** (6920 JP, -1.04%, SC: 100), **Maxscend Microelectronics** (300782 C2, -0.50%, SC: 100), **10X Genomics** (TXG US, -0.50%, SC: 100), **Teradyne** (TER US, -0.46%, SC: 79), **Jiangsu Hengli Hydraulic** (601100 C1, -0.45%, SC: 89), **Natera** (NTRA US, -0.40%, SC: 100), and **Monday.com** (MNDY US, -0.35%, SC: 100).

General weakness in tech shares pulled down Lasertec and Teradyne, two semiconductor testing equipment manufacturers, and Maxscend Microelectronic which additionally suffered from weakness in China EV related names this year. 10X Genomics sold off on cautious comments on Q4 earnings and missing revenue forecast for 2022 due to lingering supply chain constraints and weak academic budgets. Jiangsu Hengli Hydraulic, a top supplier of valves and fluid control products in China, sold off on weaker-than-expected domestic sales trends. Natera, a leader in cell-free DNA testing for preconception and prenatal use cases, fell on negative news flow around the effectiveness of its screening test. Monday.com, a leading SaaS project management platform that is highly modular and configurable, gave back most of the strong return following its IPO last year after beating on Q4 sales and earnings but guiding for a weaker Q1 22 operating result.





Live Performance and Backtest: Singularity Small & Mid vs. MSCI AC Small & Mid Cap Indices per end of March 2022 (indexed)



Source: Bloomberg, TSG

Outlook

Following the most significant correction after the Covid19 sell-off in March 2020, equities rebounded hard since around mid-March. The magnitude of the recent correction seems to have been deep enough to entice market participants back into buying equities. As markets climb a wall of worry of high inflation, slowing economic growth, and rising interest rates by central banks, investment horizons matter increasingly: traders and timers aside, for long term investors, this may represent a unique opportunity.

Even the recent 2-10 year Treasury yield curve inversion, signaling heightened recession risks, has so far not derailed the nascent recovery in stocks since the breakout of the war in Ukraine. In fact, yield inversions historically don't spell imminent trouble, and equity corrections typically only follow with a long lag. Over the last 50 years, yield inversions in the US (7 in total) were followed by an average return in the S&P 500 of 11% over the ensuing 12 months (minimum of -4% after the Sept 1980 inversion, maximum of +27% after the Dec 1988 inversion). After the last brief inversion in August 2019 markets were 21% higher 1 year later. Also, stocks have averaged a 9% return during Fed rate-hike cycles since the 1950s.

This bear flattening of the curve (short-term rates rising faster than long-term rates) may also indicate that as short-term headline inflation is currently pushing higher, long-term inflation expectations are in fact in check, unless we get into an uncontrolled wage-price spiral that would trigger a strong policy reaction which doesn't seem likely at this point.¹

What's more, a look at average returns since 2010 after a so-called "death cross" where the 50-day moving average crosses the 200-day moving average to the downside suggests a positive trajectory for stocks going forward.

The reason for this is likely that alternatives to owning stocks don't look particularly inspiring: Cash and bonds offer increasingly negative real yields, commodities have enjoyed an extraordinary run given geopolitical tensions and supply chain issues, and real estate in general doesn't look like a steal either.



There is a material risk of a global demand shortfall in 2022 and beyond which is not priced by markets, as overspending on durable and non-durable goods during the pandemic reverts back to earth while increased consumption on services is unlikely to be able to pick up the slack.² As a result, the outlook for real personal consumption (adjusted for inflation) looks challenged. And without sustained above-trend growth it's unlikely that we'll see sustained inflation beyond current cost-push inflationary factors which of course cannot be ignored.

So what to do? We believe our portfolio offers a wide range of opportunities across the applied innovation spectrum, powered by foundational exponential technologies (Singularity Sectors) that are poised to thrive going forward, including new energy systems, data, AI, cybersecurity, breakthroughs in material science, genomics, advanced manufacturing and logistics, accelerated computing, and more. Our strategy offers an effective exposure to innovation leaders that enable economies and societies, are able to adapt to change and prosper in a challenging environment, have continued strong growth potential and pricing power, and are shaping the future. In a nutshell: the Singularity Strategy represents a resilient portfolio for the long-run. In an environment of slower growth and slower inflation, having a diversified exposure to applied innovation across industries is more important than ever.



²For perspective, total retail sales in 2021 grew by an astounding 18% (clothing [+48%], gasoline [+37%], sporting goods/hobby [+29%], furniture/home furnishing [+26%], electronics/appliances [+25%]) which is not sustainable.





INTRODUCING OUR FIRST TSG GLOBAL INNOVATION SURVEY

At TSG, we aim to grasp to the fullest extent possible how innovations behave in systems, what allows them to flourish and what nips them in the bud, how they show up and how they take shape and form. The first TSG Global Innovation Survey represents a milestone in moving closer to this goal. It was established in 2021 and will recur annually within four months of calendar year end.

The goal of the survey is to get a snapshot of innovation mechanisms as they play out in different industries, regions, and companies. The survey was targeted at more than 1,000 C-level management team members globally and across industries. A total of 399 respondents (two-thirds representing listed-, one-third unlisted companies) make for a phenomenal hit rate of 36%. We thank participants greatly for their time and insights!

Survey framing and methodology: Respondents were asked a set of twelve questions aimed at different drivers, sources, levers, hindrances, as well as signs, markers, and reasons for innovation. To take things a step further than presenting results, we turned to our <u>Singularity Think Tank</u> experts for invaluable interpretation and context and complemented these views with an innovation screen on global equity benchmarks.

Highlights from the Inaugural TSG Global Innovation Survey

Ahead of the official release of survey results on April 26, 2022, we would like to exclusively share three exciting results with you:

- 1. Sectors other than the Non-IT sectors increasingly integrate new technologies into their business models. Three technologies stand out in particular.
- 2. Listed companies have different ways of adopting and integrating innovation than non-listed companies, particularly on open innovation and on the extent of engagement with startups.
- 3. The Singularity Score of regions as well as industries varies, so do the innovation sectors that show up. In investors' efforts to expose themselves to sustainability goals, some innovations may be better suited to achieve these goals than others.

For all the insights, join us for our launch webinar on April 26 at 3.30 CEST: Register

Get in touch with us

Complementing the Singularity Score and Strategy

While the survey maps out the innovation landscape from a retro- and prospective angle, TSG has subscribed to capturing innovation as it happens. In evaluating revenue streams with an innovation lense, we develop an understanding of technology value chains. This includes insights into how new technologies integrate with older ones to create value and growth in unexpected sectors and in untraditional ways. The bedrock of this evaluation is a close dialogue and collaboration with an ever growing expert network of entrepreneurs, industry practitioners, as well as academics that form the Singularity Think Tank. Guided by expert input and ongoing feedback, our research process is constantly fed with real-time and real-life information about how, if, and when new technologies evolve to become part of the business world.



The Singularity Score literally sums up to what we have identified as one of the most significant factors in innovation investing: Truly innovative products and services create revenues that are likely to surprise the market on growth and margin. As such, identifying innovation revenues allows us to capture positive EPS surprises – still the single most acknowledged driver of share price performance. The Singularity Score is one output that greatly helps in building innovation portfolios – and as our quest to better understand innovation ecosystems doesn't stop here, the survey now complements our efforts with a more multifacetted perspective.

Join our next Singularity Insights Live Webinar on April 26, 3.30 CEST, in which we will officially launch the survey results.



