Automation and Artificial Intelligence

Revolutionising How The World Works

April 2022

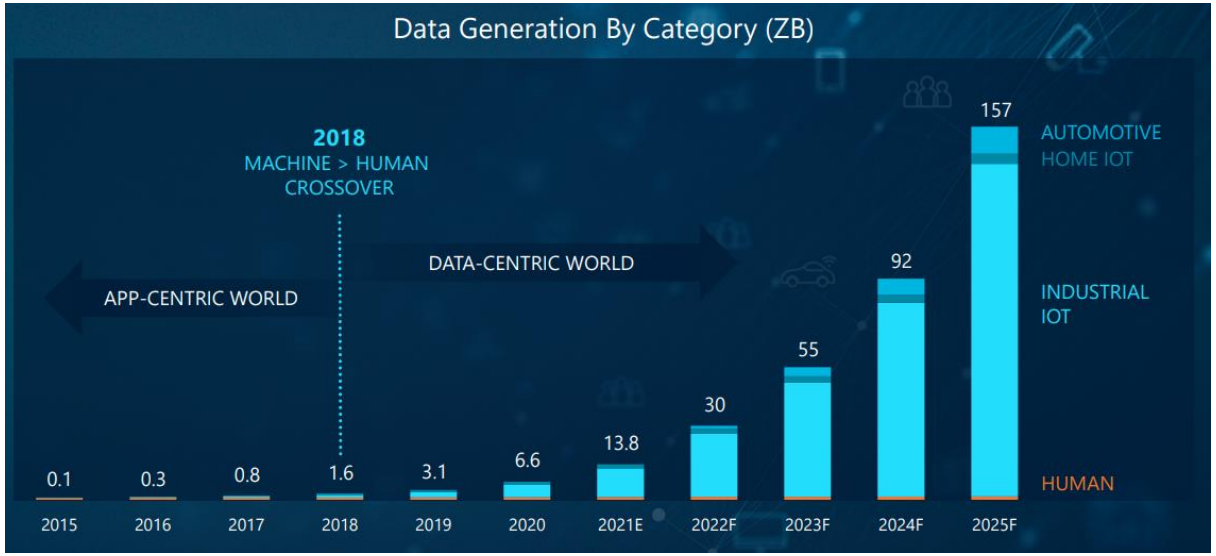
polarcapitalfunds.com

Exploding Data Growth

More data is created per hour now than in an entire year just two decades ago[1]

The datasphere doubles every 3 years[2]

- Human genomics: 100GB per genome
- Autonomous vehicle: 32,000GB per vehicle per day
- Smart factory: 1,000,000GB per day
- Smart city infrastructure: 2,500,000GB per day



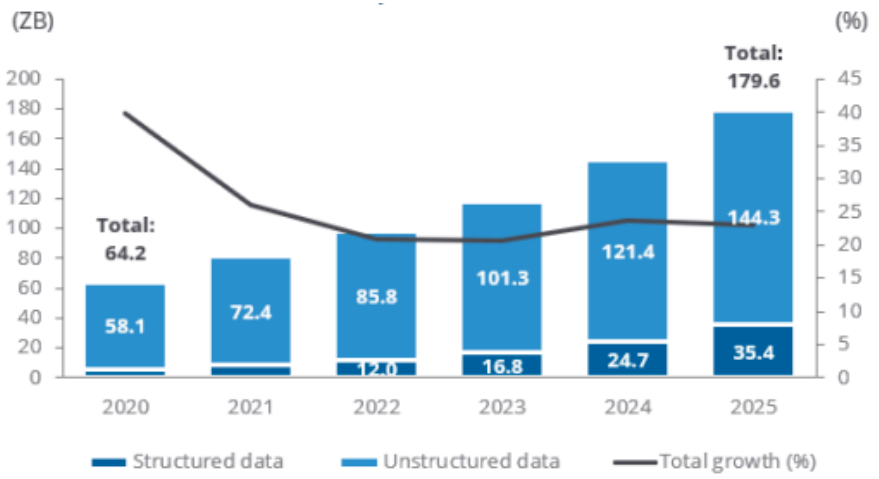
Source: 1. Rethink Data, IDC, 2020; **2.** 2021 Analyst Day, Seagate;.

All Data is Not Created Equal

The importance of unstructured data is rapidly increasing

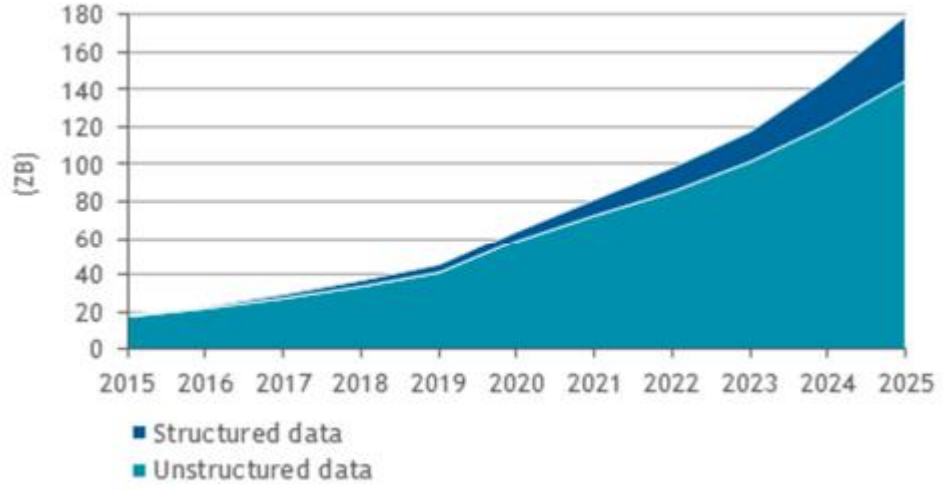
Most data has not been utilised

- 56% of total data generated is captured[1]
- 3% of total data captured is being tagged[1]
- 6.2% of total data created is stored[2]
- 0.5% of total data captured in 2012 was being analysed[1] and 4.7% in 2021[2]



The future of the data revolution is all about unstructured data

- ~10% of the 2020 global datasphere is structured data
- Unstructured data makes up the rest and is expected to grow at 20% CAGR
- Conventional data analysis techniques can only process structured data and tagged unstructured data



Source: 1. <Big Data, Bigger Digital Shadows, and Biggest Growth in the Far East>, EMC/IDC, Dec 2012; **2.** IDC, August 2021; **3.** Charts are taken from IDC's Global StorageSphere, July 2021. Past performance is not indicative or a guarantee of future returns. All opinions and estimates constitute the best judgment of Polar Capital as of the date hereof, but are subject to change without notice, and do not necessarily represent the views of Polar Capital.

Artificial Intelligence: Harness the Power of Data

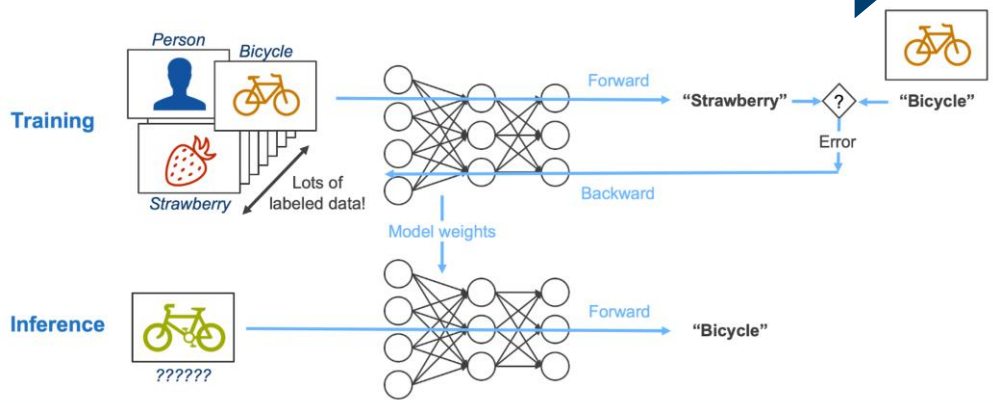
AI is the first technology to unearth insights from unstructured data

Training

The compute-intensive process of training algorithms using *structured data* to "self-improve" by adjusting the weights for neurons dynamically with feedback from other neurons (not predefined by humans).

Inference

The subsequent ability for the algorithms to determine a correct outcome or response from *unstructured data* encountered in daily use.



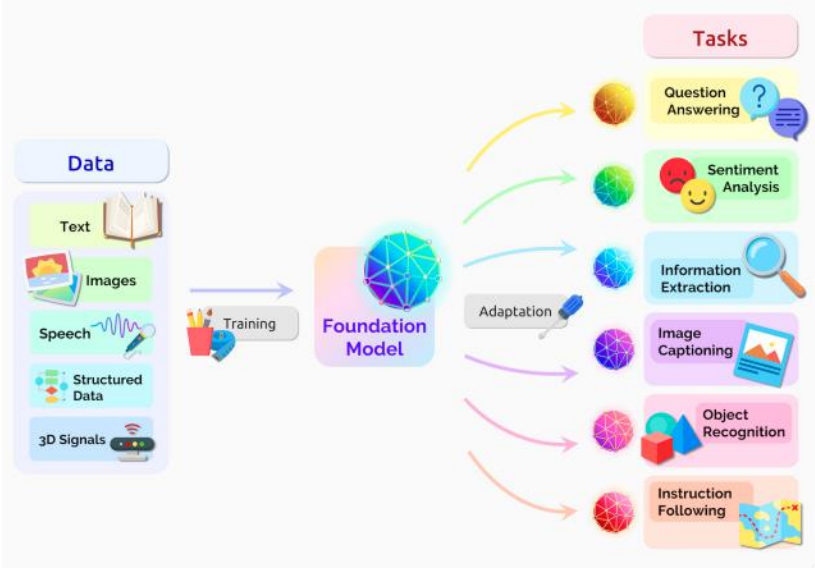
Unstructured data has required very expensive, manual analysis.
AI is the breakthrough that can generate insight into previously unusable data.

Source: https://www.intel.com/content/www/us/en/artificial-intelligence/posts/deep-learning-training-and-inference.html

Artificial Intelligence: A Paradigm Shift in AI

Transformer Models are possibly the most powerful classes of models invented to date

- **Transformer Models have become the foundations for AI thanks to their uniquely powerful self-attention units.**
  - By strategically applying an evolving set of mathematical techniques (so-called self-attention units), a transformer model can mathematically find patterns between elements and “learn” context by tracking relationships in sequential data.
  - While these models are designed to handle sequential data (such as natural languages), they do not need to process the data in order, which significantly increase the parallelisation.
  - Transformers eliminate the need to use large, labelled datasets to perform machine learning; these are costly and time-consuming to produce.
  - Transformers enable computers to see the same patterns humans can. These can then be used in more generalised ways, such as real time translation, trend/fraud detection, making recommendations and speeding up drug discovery.



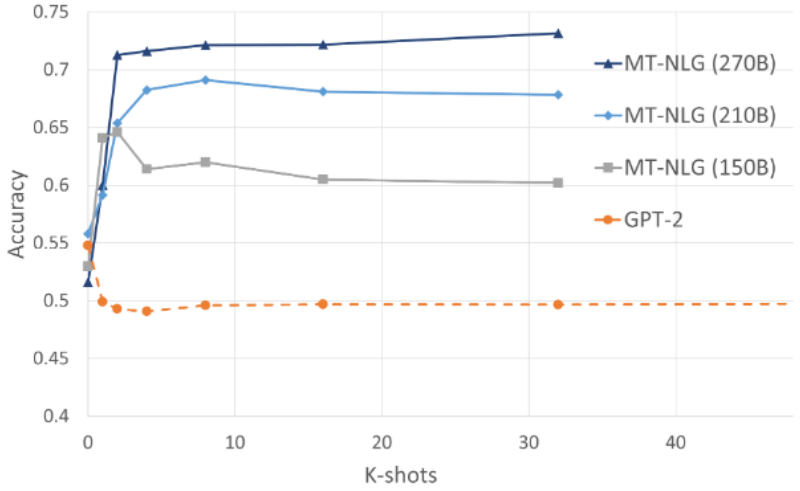
> “Transformers made self-supervised learning possible, and AI jumped to warp speed[1]”
>
> **– Jensen Huang, CEO of Nvidia**

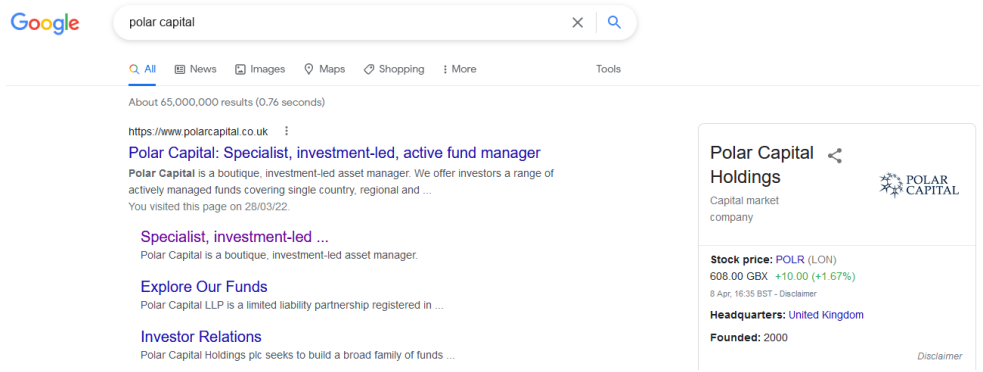
Source: 1. GTC, Nvidia, March 2022; **2.** Image source: <On the Opportunities and Risks of Foundation Models>, Stanford University, August 2021; It should not be assumed that recommendations made in future will be profitable or will equal performance of the securities in this document. A list of all recommendations made within the immediately preceding 12 months is available upon request. All opinions and estimates constitute the best judgment of Polar Capital as of the date hereof, but are subject to change without notice, and do not necessarily represent the views of Polar Capital.

Artificial Intelligence: Big is Beautiful

Natural Language Processing (NLP) has been the battleground for tech titans

- **Natural Language Processing has progressed massively in recent years**
  - Transformer-based models with large parameters are designed to be task-agnostic with limited data sets, just like how humans perform a new language task from very few samples.
  - Open AI's GPT-3 has 175bn parameters; the Megatron-Turing Natural Language Generation model (MT-NLG) from Microsoft and Nvidia features 105 layers with 530bn parameters[1].
  - Google released the Multitask Unified Model (MUM) in 2021[2]; with 1.57trn parameters this can answer complex questions in context. MUM is 1000x more powerful than their BERT model released in 2018.
- **The breakthrough of this new type of large AI models that can generalise the training process marks the beginning of the next generation of AI.**





Source: 1. Microsoft, Oct 2021; **2.** <mT5: A Massively Multilingual Pre-trained Text-to-Text Transformer>, Google Research, March 2021; It should not be assumed that recommendations made in future will be profitable or will equal performance of the securities in this document. A list of all recommendations made within the immediately preceding 12 months is available upon request. All opinions and estimates constitute the best judgment of Polar Capital as of the date hereof, but are subject to change without notice, and do not necessarily represent the views of Polar Capital.

Artificial Intelligence: Far from Human Performance

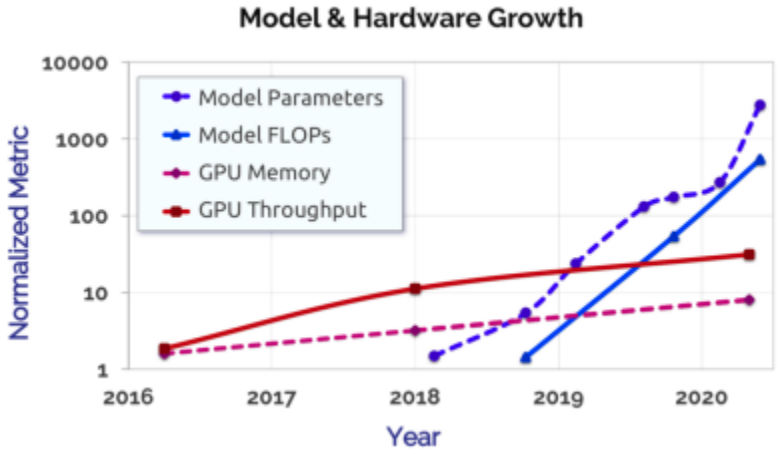
"Biologic compute" remains more efficient by many orders of magnitude

	Human Brain	Nvidia DGX-2[4]
Computational Capacity	10^{12} - 10^{18} FLOPS[1]	10^{15} FLOPS
Memory Capacity	2500TB[2]	1.5TB
Power Consumption	20 watts[3]	10,000 watts

The world's most powerful deep learning system, Nvidia DGX-2, has a computational capacity similar to the estimated average of the human brain. However, it consumes 10kW power, 500x that of human brain and only has memory capacity of 1.5TB, 0.06% that of human brain.

Computational resources have become the bottleneck for the development of large parameter natural language generation model

- 275x increase every 2 years for parameters of transformer models vs 25x for the parameters of all AI models[5] vs Moore's law 2x increase of transistors every two years (every 3 years in reality).
- Loading the information required to train a 530bn parameter model needs 10TB of memory, the activation of each block need 16.9TB of memory[6]. The most powerful GPU (the A100) has 80GB memory.



Source: 1. <Whole Brain Emulation>, Anders Sandberg, 2008; **2.** <What Is the Memory Capacity of the Human Brain?>, Scientific American, May 2010; **3.** <Real-time Scalable Cortical Computing at 46 Giga-Synaptic OPS/Watt with ~100× Speedup in Time-to-Solution and ~100,000× Reduction in Energy-to-Solution>, IBM Research, 2014; **4.** Nvidia DXG-2 Datasheet; **5.** Nvidia, Nov 2021; **6.** <Using DeepSpeed and Megatron to Train Megatron-Turing NLG 530B, A Large-Scale Generative Language Model >, Shaden Smith with Microsoft and Nvidia, Feb 2022; **7.** Image source: <On the Opportunities and Risks of Foundation Models>, Stanford University, August 2021; It should not be assumed that recommendations made in future will be profitable or will equal performance of the securities in this document. A list of all recommendations made within the immediately preceding 12 months is available upon request. All opinions and estimates constitute the best judgment of Polar Capital as of the date hereof, but are subject to change without notice, and do not necessarily represent the views of Polar Capital.

Artificial Intelligence: Enhancing Human Tasks

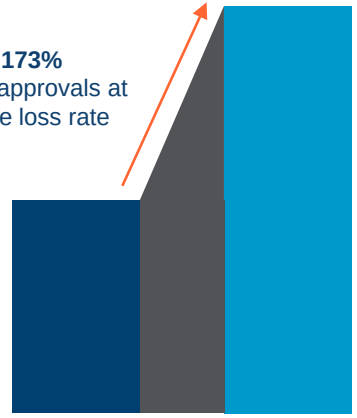
Computers are now taking over advanced human tasks

Automating Credit Decisioning[1]

75%
Fewer defaults at same approval rate

Large US Banks

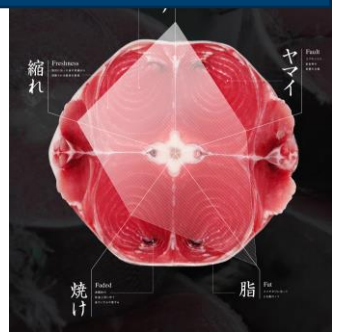
173%
More approvals at same loss rate



Large US Banks

Buying Better Tuna[2]

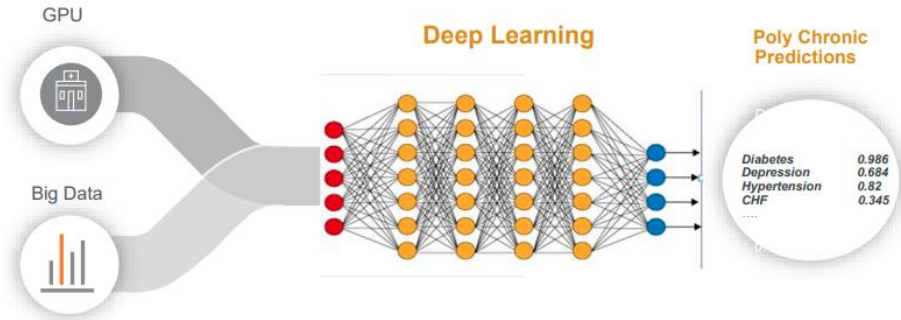
Kura Sushi use AI to identify superior tuna fillets.
Kura can command a price premium for AI TUNA.



More Effective Disease Imaging

- On chest radiographs, tuberculosis was detected with a sensitivity of 97% and a specificity of 100%, using two deep neural networks for image analysis[3].
- 30% of the world's stored data is healthcare related[4].
- Optum healthcare data assets span approximately 75% of the US population, including 4bn diagnoses, 5bn procedures and 11bn lab results[4]. AI usage reduces member health insurance costs.

Predicting Disease Likelihood[5]



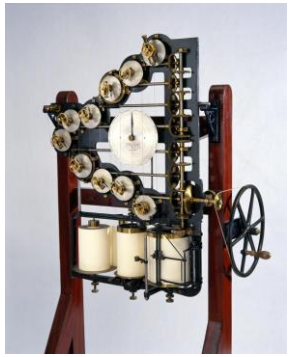
Source: 1. About Upstart **2.** TUNA SCOPE (tuna-scope.com). **3.** Lakhani & Sundaram 2017; **4.** Machine Learning and Advanced Technology, Optum, 2019; **5.** Succession Planning Template (nvidia.com). It should not be assumed that recommendations made in future will be profitable or will equal performance of the securities in this document. A list of all recommendations made within the immediately preceding 12 months is available upon request. All opinions and estimates constitute the best judgment of Polar Capital as of the date hereof, but are subject to change without notice, and do not necessarily represent the views of Polar Capital.

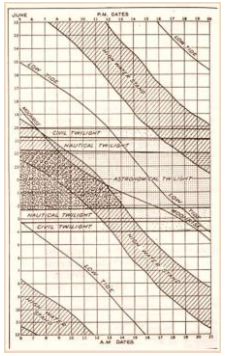
Artificial Intelligence: Predicting the Future?

Humans have been using machines to predict events for thousands of years

The first analogue calculator or "Analogue Twin"

- The famous astronomical calculating machine made by the ancient Greeks 2000 years ago, known as ***the Antikythera Mechanism***, has a highly complex structure to determine and visualise the position of the sun, the moon and the planets. It was used to predict the solar and lunar eclipses[1].





The first mechanical calculator or "Mechanical Twin"

- William Thomson (later Lord Kelvin) invented the ***tide-predicting machine*** in 1872. It combined ten astronomical components and drew tidal curves of a given location for one year in four hours[2].
- Not only did it provide valuable information for fishermen, engineers and navigators, it also played a critical role in the Normandy landings during WWII[3].

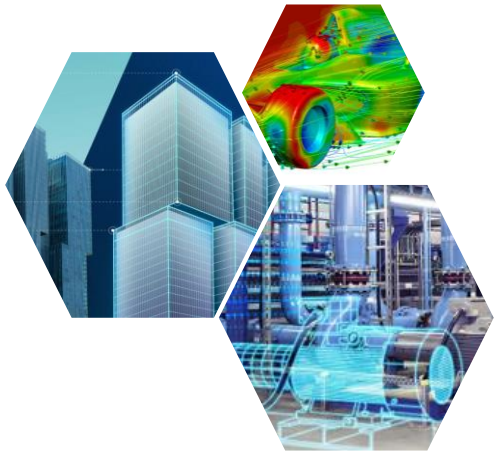
"The greatest untold story of the Apollo 13 mission is that of the spacecraft simulators"[4]

- NASA employed high fidelity simulators to match conditions on the Apollo 13 mission in the 1970s[6], marking one of the earliest examples of what would become known as a "**digital twin**"
- The simulator provided the crew with exact steps to return safely after fuel cells exploded 330,000 km from Earth[5]

Source: 1. Communications of the ACM, April 2020, Vol. 63 No. 4, Pages 108-115; **2.** Science Museum Group; **3.** Physics Today, Sep 2011; **4.** Gerald Griffin, Apollo Mission Control Flight Director; **5.** 50 Years Ago: How Simulators Saved Apollo 13, Tele Vue Optics, May 2020; **6.** SIMCENTER, Siemens; Apollo simulators image courtesy of NASA. It should not be assumed that recommendations made in future will be profitable or will equal performance of the securities in this document. A list of all recommendations made within the immediately preceding 12 months is available upon request. All opinions and estimates constitute the best judgment of Polar Capital as of the date hereof, but are subject to change without notice, and do not necessarily represent the views of Polar Capital.

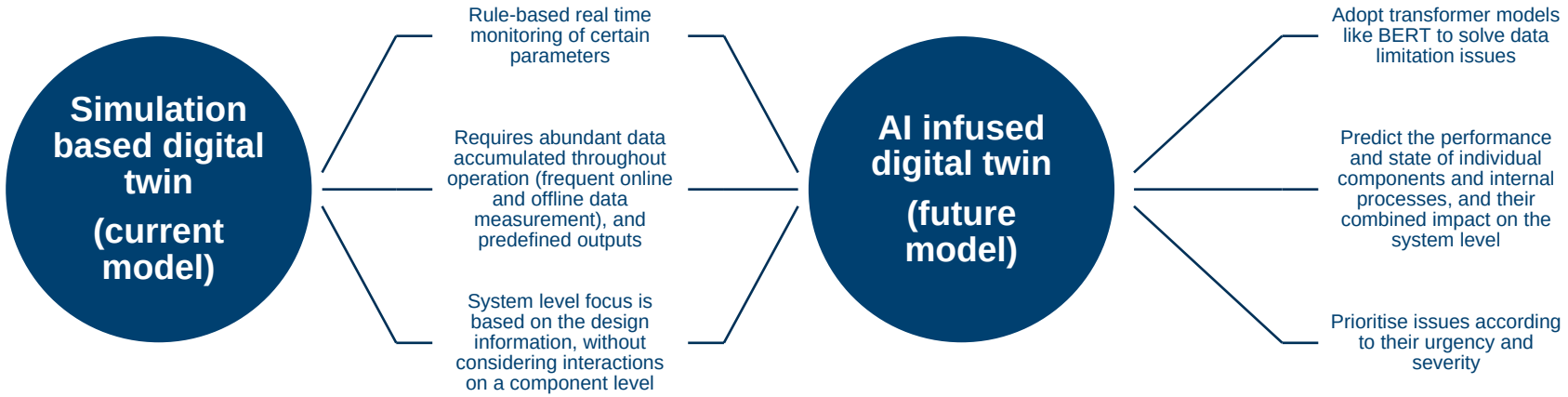
Artificial Intelligence: Digital Twin

Probably the most disruptive application of industrial IoT



A digital representation of a physical object

- An encapsulated software object that mirrors the physical object with the same metadata, data structure, functional and system **model**
- **Real time data** that comes directly from the physical object (identity, time series, event, status data) and **contextual data** (environment, maintenance, supply chain data)
- **One-to-one correspondence/unique identity**
- **Real time monitorability**



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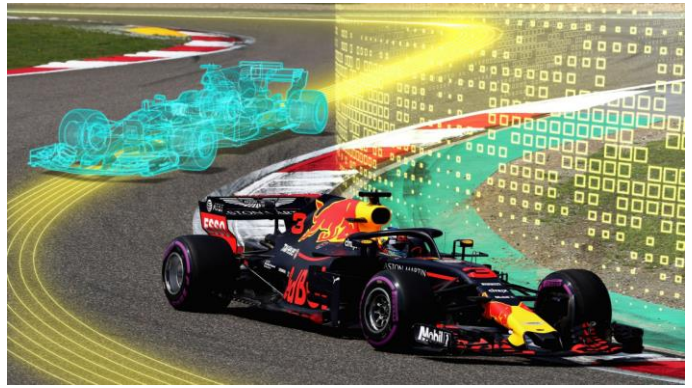
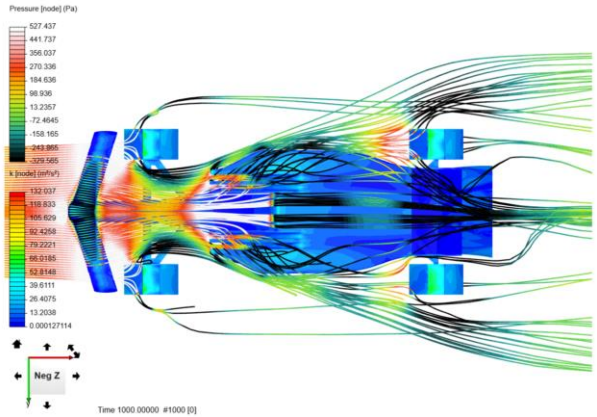
Artificial Intelligence: Digital Twin

F1, the most advanced implementation of AI-infused digital twins, is a truly data-driven sport

Data: the fuel of the game

- 300 sensors on each car
- 1500 data points per second[1]
- 5bn data points per race
- 2GB of data per lap / 3TB data during the full race day[4].
- 3000 new components per week / 30,000 design modifications per season[2]





AI infused digital twins transform F1 racing

- The virtual replica will recommend the optimised component setup to achieve target values for aerodynamics and fuel levels from billions of possible combinations, accounting for weather conditions, the road condition of a particular race track, the number of brake and acceleration points, amongst other parameters.
- AI also helps determine which key information gets shown on a live dashboard depending on the car's status and locations on a track.

"The race to create the best AI will be paramount to succeed on track." – McLaren[3]

Source: **1.** AWS, https://aws.amazon.com/f1/; **2.** <A World Made of Speed>, Siemens; **3.** <AI by design>, McLaren Applied; **4.** <Big Data Powers F1>, Intel; **5.** Imagine: Formula 1 2022 CFD Simulation, erolandinieto@Simscale

Artificial Intelligence: Digital Twin

Transformational cost savings through digital twin applications

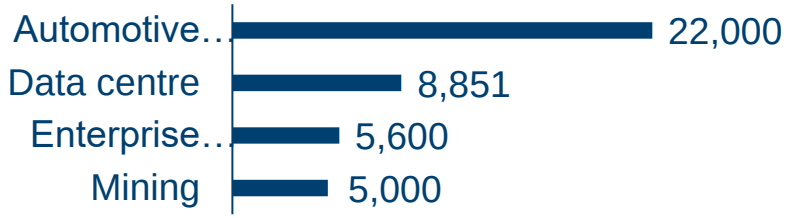
Unparalleled benefits

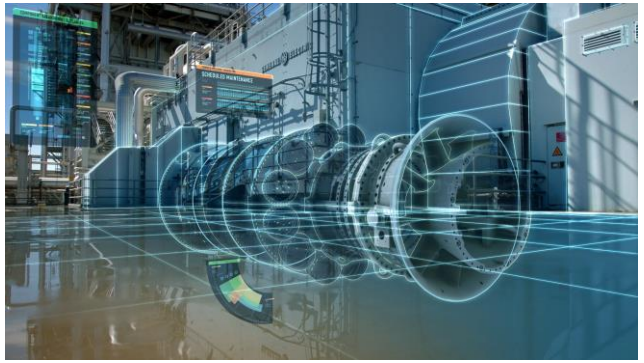
- Improving predictive maintenance
  - $8bn annual cost to airline industry due to unscheduled maintenance. Adjustments to how turbines operate can save $12m per year[4]
  - Siemens Energy improves its power plants' thermodynamic efficiency by over 60%, cuts scheduled down-time by 5.5 days per year, saving $1.7bn cost a year[5]

- Accelerating prototyping and new product development
  - From 33% (Gas Turbine) to 25x (Rotating Machinery) design cycle time reduction[2]
  - Nearly 50% time-to-market reduction for Nissan and 30% reduction for Maserati[1]

- Optimising asset deployment and lower operating cost
  - A jet engine that would normally be overhauled every 24 to 36 months would only require such a service after 38 months based on data from its digital twin[3]

Cost of 1 minute unplanned down time6-9 (USD)
– 10x the cost of scheduled downtime10
– 5% of process industry output value lost10





"Around 63% of all maintenance is unnecessary" – Aspen Technology[11]

Source: 1. <Getting to market quickly>, Siemens; **2.** Simulation and Optimisation Product Briefing, ANSYS; **3.** MINDS-MACHINES 'Digital Twin' Technology, GE; **4.** GE Global Research; **5.** Nvidia, Nov 2021; **6.** < Three Moves for CIOs to Lower Business Costs With Cloud >, Gartner, March 2017; **7.** Advanced Technology Services, 2006; **8.** <Emerson Network Power Study> , Emerson, Jan 2016; **9.** UBS Report, 12 Sep 2013; **10. <**Total Cost of Downtime>, Industry Week Magazine; 11. <How automation can transform mining>, Raconteur, April 2020; All opinions and estimates constitute the best judgment of Polar Capital as of the date hereof, but are subject to change without notice, and do not necessarily represent the views of Polar Capital.

AI Applications

Autonomous Vehicles

Autonomous mining - a $300bn+ market ripe for disruption

- Ventilation systems consume 50% of the total energy used in underground mines[1]
- The mining industry has to reduce Scope 1 & 2 emissions by 30% by 2030

Autonomous is already the default option

- 19 million meters have been drilled autonomously by Epiroc machines already[2]
- Caterpillar autonomous trucks circle the globe twice a day[3]
- Full automation has reduced total operating costs by 30%

On-road vehicles

- 92% of US car crashes (40k deaths per year) are caused by human error[5]
- Autonomous vehicles could travel 66% of total passenger kilometers by 2040[6]

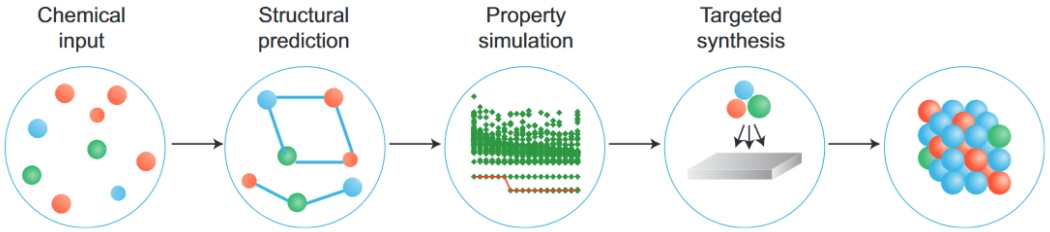
> "In 15 to 20 years… human-driven vehicles will be legislated off the highways. The tipping point will come when 20-30% of vehicles are fully autonomous. Countries will look at the accident statistics and figure out that human drivers are causing 99.9 percent of the accidents[4]"
>
> **– Bob Lutz, ex GM Vice-Chair**

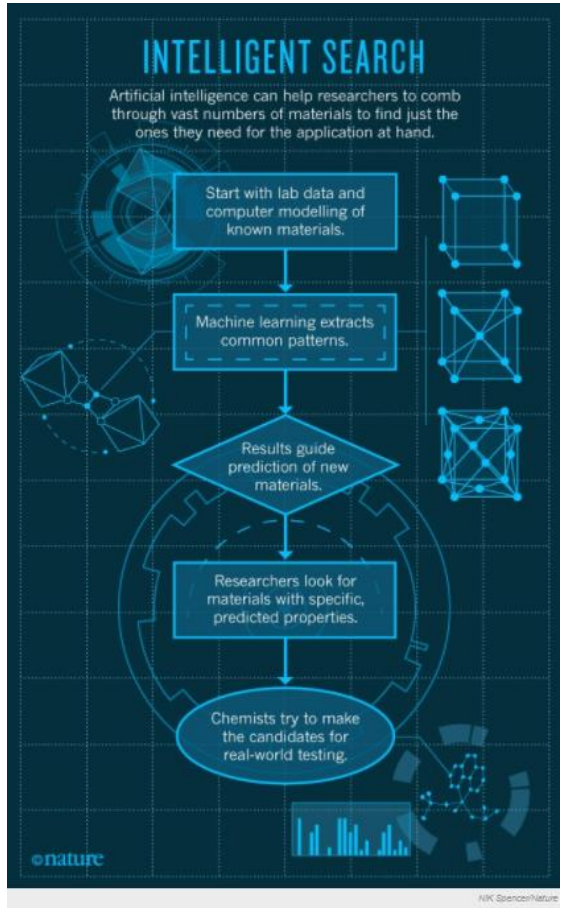
Source: 1. ABB, Canadian Mining Journal, May 2020; **2.** Epiroc CMD 2020; **3.** <A World Leader in Autonomous Mining>, Caterpillar, May 2020; **4.**<Kiss the good times goodbye> , Bob Lutz, Automotive News, 2017; **5. <**National Motor Vehicle Crash Causation Survey>, National Highway Traffic Safety Administration, 2008; **6.** <The future of mobility is at our doorstep>, McKinsey, 2019; All opinions and estimates constitute the best judgment of Polar Capital as of the date hereof, but are subject to change without notice, and do not necessarily represent the views of Polar Capital.

AI Applications

AI is advancing new material discovery and R&D

- **AI accelerates discovery in a massive market - googol (10^{100}) possible materials[1] and $4trn TAM**
- Computational research is bottlenecked by simulation cycles per day. More simulations mean a faster time to discovery[2]
- "We probably know about **1% of the properties of existing materials" -** Gerbrand Ceder, University of California, Berkeley[3]
- Embedded R&D in "green tech" can be leveraged in the same way as traditional tech





Source: 1. Can artificial intelligence create the next wonder material?>, Nature, May 2016; **2.** <Revolutionizing High Performance Computing>, Nvidia **3.** <Can artificial intelligence create the next wonder material?>, Nature, May 2016. It should not be assumed that recommendations made in future will be profitable or will equal performance of the securities in this document. A list of all recommendations made within the immediately preceding 12 months is available upon request. All opinions and estimates constitute the best judgment of Polar Capital as of the date hereof, but are subject to change without notice, and do not necessarily represent the views of Polar Capital.

Polar Capital Automation & AI Fund

Core and emerging themes to capture societal transformation

Artificial Intelligence

AI Enablers

AI Applications

Automation

Factory Automation

Digital Transformation

Emerging Themes

Material &
Environmental Science

Mobility & Connectivity

Demographic & Lifestyle

Source: Polar Capital.

The Automation and Artificial Intelligence Fund

Broad exposure to fundamental changes in business & society

A global equity, diversified portfolio

- (50-80 stocks) investing in the enablers and adopters of technology

Focus on companies that embrace new technologies to create a competitive advantage

- Technology adoption is driving better growth and profitability
- Opportunities are appearing beyond the universe of a traditional technology fund

80%+ active exposure[1]

- Relative to global equity benchmark
- Dominated by bottom-up stock selection process
- Growing AI adoption across all industries facilitates broad sector diversification

Leveraging our experience as technology investors

- As one of the largest technology investment teams in Europe, we have an unparalleled track record in identifying and investing in transformational technologies and underestimated market opportunities

Technology is fundamentally disrupting business models

- Markets are large and adoption cycles are misunderstood
- Adoption is happening at a rapid rate
- Whole industry transformations are happening over 10 year cycles
- Product and sub-trend level disruption is happening within 3-5 year cycles

Source: 1. Polar Capital, as at 31 March 2022. All opinions and estimates constitute the best judgment of Polar Capital as of the date hereof, but are subject to change without notice, and do not necessarily represent the views of Polar Capital.

The Team

Technology is at the core of the Polar Capital business

One of the largest technology franchises in Europe with **c.US$12.1bn** under management

Nine dedicated technology specialists – strong multi-cycle track record

Global Technology Fund US$7.0bn	Automation & Artificial Intelligence Fund US$644m	Polar Capital Technology Trust US$4.5bn

Fund Managers

Analysts









	Nick Evans Partner	Ben Rogoff Partner	Xuesong Zhao Fund Manager	Fatima Iu Fund Manager	Alastair Unwin Fund Manager	Brad Reynolds Analyst	Paul Johnson Analyst	Nick Williams Analyst	Patrick Stuff Analyst
Experience	24 years	26 years	15 years	16 years	10 years	14 years	10 years	6 years	5 years
Sectors	US	US	Asia (all-cap), global semi & semi cap equipment	Europe (all-cap), security, networking & healthcare	Global (all-cap) fintech, payments & SMB software	Internet, digital media, e-commerce	Gaming, autos & emerging tech inc.3D printing	Global (all-cap) healthcare, industrials & energy	Global small & mid-cap

Source: Polar Capital, 31 March 2022.

Polar Capital Automation & Artificial Intelligence Fund

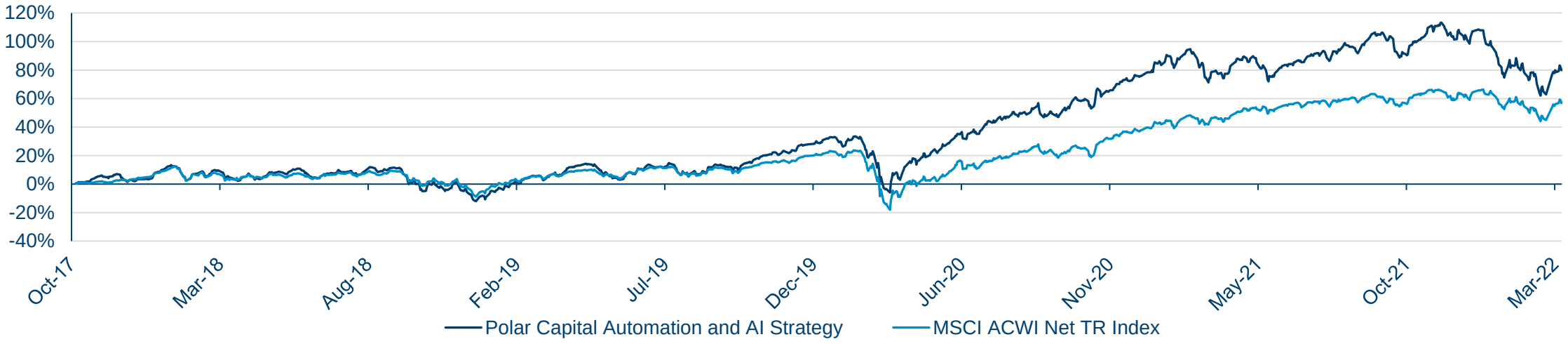
A global equity fund investing in future disruption

- Global, multi-cap portfolio
- AUM: £489.8m
- Active share: 85%
- Outperformed its BM by 20.5% over 3 years[1]

Xuesong Zhao
Lead Fund Manager

Ben Rogoff
Partner

Nick Evans
Partner



Source & Copyright: Polar Capital and Bloomberg. **Date:** 31 March 2022.**1.** Performance is stated in USD I Acc Share Class which was launched on 06 October 2017. **Benchmark:** MSCI AC World Index TR Net Index. ©2022 Morningstar. All Rights Reserved. Rating representative of the I USD Acc Share Class, as at 28/02/2022. Ratings may vary between share classes. The information contained herein: (1) is proprietary to Morningstar and/ or its content providers; (2) may not be copied or distributed; and (3) is not warranted to be accurate, complete or timely. Neither Morningstar nor its content providers are responsible for any damages or losses arising from any use of this information. Past performance is no guarantee of future results. For more detailed information about the Morningstar Rating or Morningstar Analyst rating, including its methodology, please go to: http://corporate1.morningstar.com/AnalystRating/. Past performance is not indicative or a guarantee of future returns.

Investment Framework

Secular Shifts

- Identify markets where technology can transform business models
- Multi-year industry transformations (10 year cycles)
- Sub themes/trends (3-5 year cycles)

Experience

- Understanding the roadmap of technology adoption
- “S curve” penetration analysis
- Understanding that tech is not mean reverting – “winners keep winning”

Company Analysis

- Identify companies embracing new technologies to create competitive advantage
- Companies with ability to outperform expectations
- Tech leadership can drive revenue and margin growth

Team Depth

- Company meetings (1000+ pa)
- Industry & sell side conferences
- Real world observations and expert networks
- Cross team and cross sector idea generation

ESG

- Combining first party data with reputable third party sources
- Overlay data with proprietary materiality framework
- Ongoing monitoring and regular review
- Active ownership and frequent engagement

Portfolio Construction

- Diversified portfolio on stock, sector and theme basis
- Cyclical considerations where appropriate
- Valuation framework (peer group, cross-sector multiples, DCF)
- Risk factors / Liquidity

Source: Polar Capital. All opinions and estimates constitute the best judgment of Polar Capital as of the date hereof, but are subject to change without notice, and do not necessarily represent the views of Polar Capital.

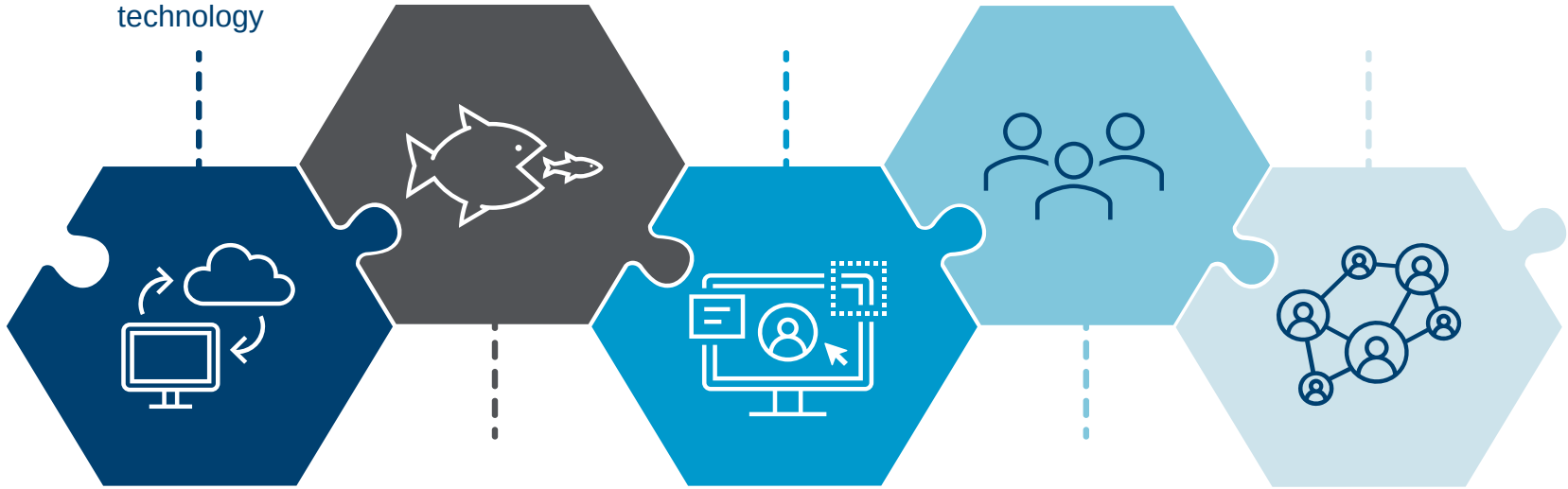
Summary

Broad exposure to fundamental changes in business & society

A global equity, diversified portfolio that invests in enablers and adopters of revolutionary technology

The opportunity across the three key thematic areas is vast and growing

AI and Automation are no longer restricted to the technology sector and are revolutionising traditional business models



Companies that embrace these new technologies create a competitive advantage

Leveraging our experience as technology investors is key to capturing the opportunity

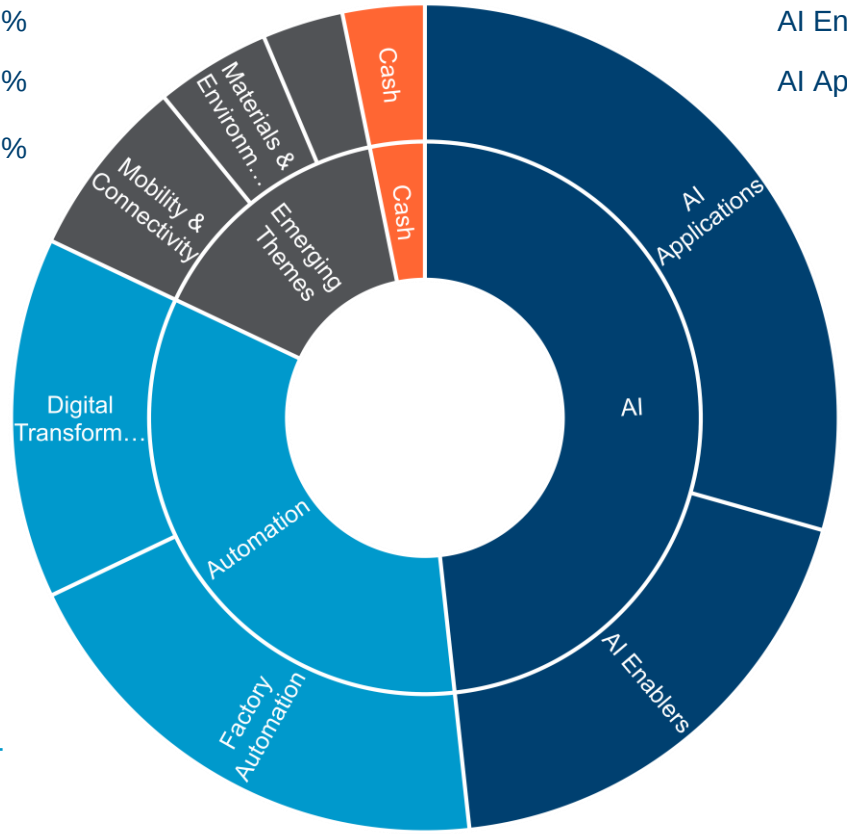
Source: Polar Capital. All opinions and estimates constitute the best judgment of Polar Capital as of the date hereof, but are subject to change without notice, and do not necessarily represent the views of Polar Capital.

Appendix

Thematic Breakdown

Emerging Themes	14.75%
Mobility & Connectivity	7.09%
Materials & Environmental Science	4.51%
Demographic & Lifestyle	3.16%

AI	48.28%
AI Enablers	18.91%
AI Applications	29.37%



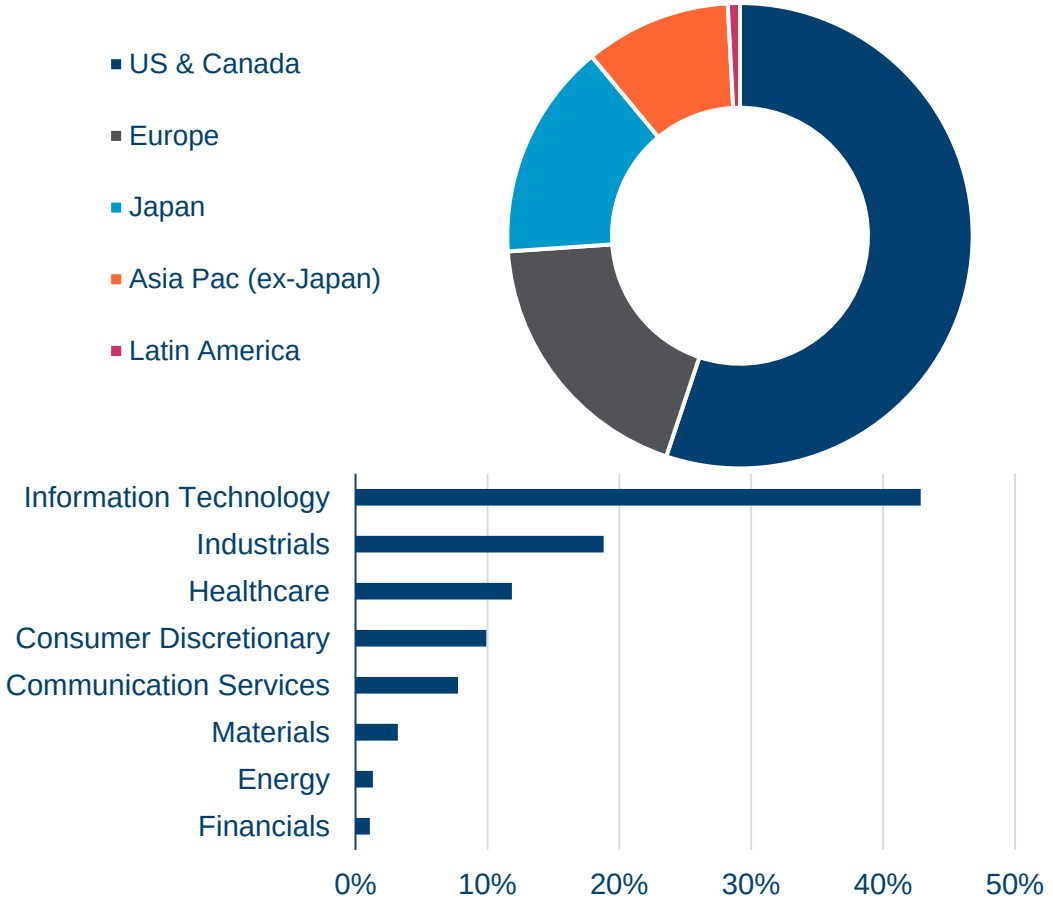
Automation	33.75%
Factory Automation	19.67%
Digital Transformation	14.08%

Cash	3.21%

Source: Polar Capital, 31 March 2022. Totals may not sum due to rounding. It should not be assumed that recommendations made in future will be profitable or will equal performance of the securities in this document. A list of all recommendations made within the immediately preceding 12 months is available upon request. Past performance is not indicative or a guarantee of future returns.

Portfolio Breakdown

Sector & Geographical Breakdowns



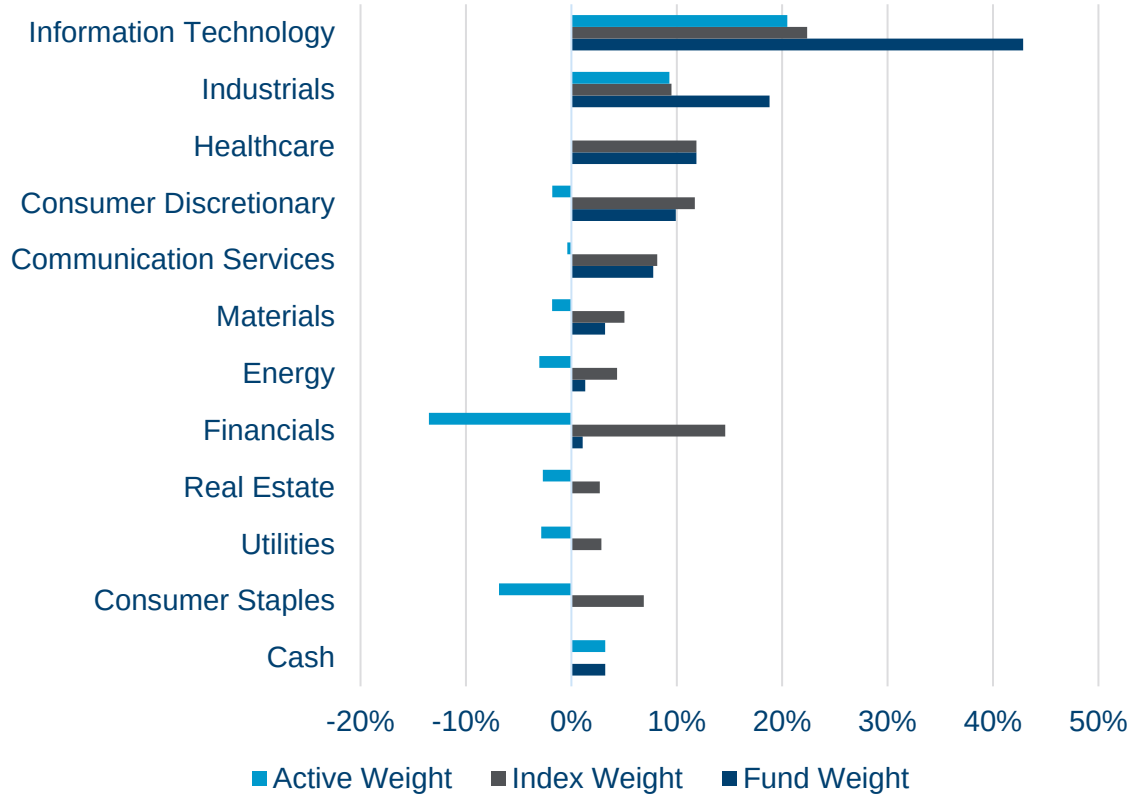
Top 10 Holdings	%
Microsoft	5.2%
NVIDIA	4.7%
Alphabet	4.6%
Amazon	4.3%
UnitedHealth Group	3.6%
Schneider Electric SE	3.2%
TSMC	3.0%
Emerson Electric Co	2.5%
eMemory Technology	2.4%
Rockwell Automation	2.4%

Source: Polar Capital, 31 March 2022. Totals may not sum due to rounding. It should not be assumed that recommendations made in future will be profitable or will equal performance of the securities in this document. A list of all recommendations made within the immediately preceding 12 months is available upon request. Past performance is not indicative or a guarantee of future returns.

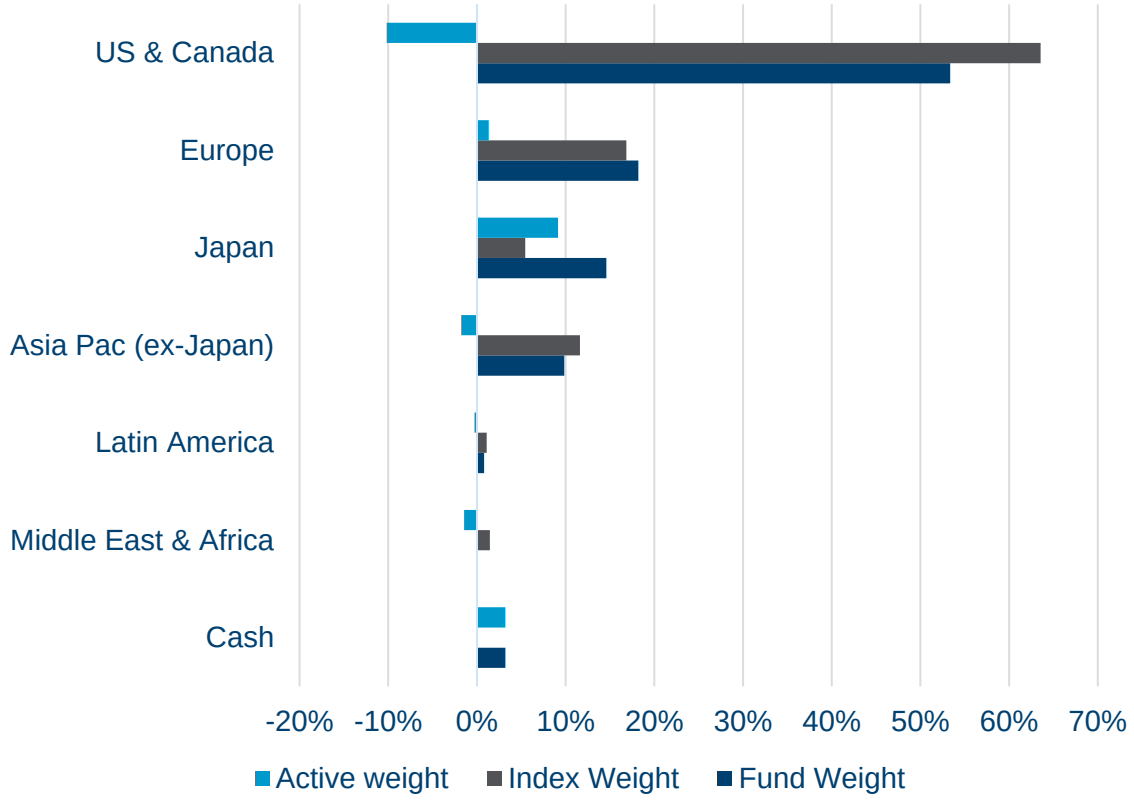
Portfolio Characteristics

Sector & Regional Breakdowns

Sector Breakdown



Regional Breakdown



Source: Polar Capital, as at 31 March 2022. GICS Sector (Level 1) Exposure. It should not be assumed that recommendations made in future will be profitable or will equal performance of the securities in this document. A list of all recommendations made within the immediately preceding 12 months is available upon request. Past performance is not indicative or a guarantee of future returns. **Benchmark:** MSCI All Country World (ACWI) Net TR Index.

Portfolio Characteristics

Positions

Performance summary (USD I Acc share class, net of fees)		
		(%)
	US$	Index US$
1 Month	0.84	2.17
3 Months	-13.51	-5.36
Year to Date	-13.51	-5.36
1 Year	0.45	7.28
3 Years	67.66	47.19
Annualised since inception	13.99	10.55
Cumulative since inception	79.90	56.79

Total number of positions	65
Active exposure	85%
Beta	1.31
Index	MSCI ACWI Net TR Index

Top positions	Fund
Total Top 10%	35.9%
Total Top 20%	57.9%

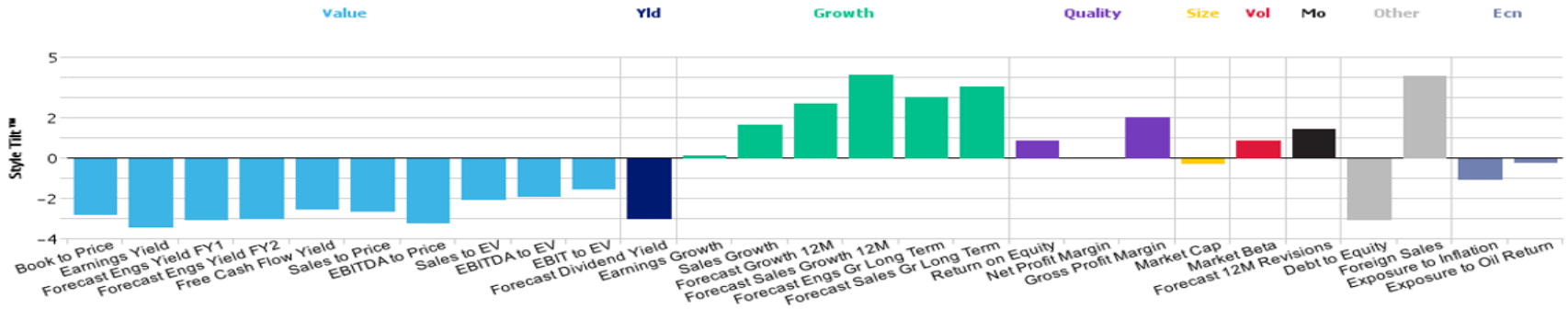
Top 20 positions and our classification	
Name	**Theme**
Microsoft	AI
NVIDIA	AI
Alphabet	AI
Amazon	Automation
UnitedHealth Group	AI
Schneider Electric SE	Automation
TSMC	AI
Emerson Electric Co	Automation
eMemory Technology	AI
Rockwell Automation	Automation
Advanced Micro Devices	AI
Micron Technology	AI
Tokyo Electron	AI
Epiroc AB	Automation
Byd Co	Emerging Themes
Shin-Etsu Chemical	AI
KLA Tencor	AI
Thermo Fisher Scientific	Emerging Themes
RELX	AI
Hoya	AI

Source: Polar Capital, 31 March 2022. Performance is stated in USD I Acc Share Class which was launched on 06 October 2017. The index performance figures are sourced from Bloomberg and are in USD terms. Totals may not sum due to rounding. It should not be assumed that recommendations made in future will be profitable or will equal performance of the securities in this document. A list of all recommendations made within the immediately preceding 12 months is available upon request. Past performance is not indicative or a guarantee of future returns.

Portfolio Characteristics

Automation and Artificial Intelligence Fund versus MSCI ACWI Index portfolio style skyline

STYLE SKYLINE™



Portfolio: Automation & AI
Benchmark: MSCI ACWI Index
Snapshot Date: 28/Feb/2022
Currency: USD

StyleAnalytics

Historical	Portfolio	MSCI ACWI Net TR
Trailing 3Y Sales Growth	11.23	8.10
Trailing 3Y Earnings Growth	11.14	10.46
Historical EV/FCF	35.37	19.29
P/S	4.51	2.29
EV/S	4.92	3.06
EV/EBIT	31.11	23.73
EV/EBITDA	21.45	16.23
Gross Profit Margin	51.34%	43.88%
Debt/Equity	52.67%	106.80%

Forward looking	Portfolio	MSCI ACWI Net TR
IBES 1YR P/E	26.47	18.17
IBES 2YR P/E	22.73	16.67
IBES Div Yield	1.16%	2.00%
IBES Sales 12m Growth	19.81%	11.61%
IBES 12m Earnings Growth	23.09%	13.11%

Source: Style Research and The Polar Capital Risk Team, as at 28 February 2022. **Benchmark:** MSCI All Country World (ACWI) Net TR Index. **Currency:** USD. Past performance is not indicative or a guarantee of future returns.

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