

GA-Courtenay Special Situations Fund

GA-Courtenay Special Situations Fund has been built to deliver enhanced long-term returns through investment in dominant growth businesses across a range of opportunity types, alongside deploying a positive carry hedging structure

A message from the fund manager, Adrian Courtenay

Dear Investor,

Welcome to the GA-Courtenay Special Situations Fund.

We operate at a time defined by rapid shifts in technology, geopolitics and demographics. Those forces are compounding volatility, but they are also creating a deep opportunity set for investors who can distinguish durable value from noise. Our mandate: deliver double digit percentage compounding while providing meaningful protection of capital.

The fund focuses on dominant growth businesses with resilient cash flows, strategic assets and strong governance, often in situations where structural change or dislocation create mispricing. This is paired with a disciplined, positive-carry hedging framework designed to mitigate market drawdowns and support an asymmetric return profile.

In April 2025, The Hedge Fund Journal recognised GA-Courtenay Special Situations as the best-performing event-driven UCITS hedge fund over the trailing five-year period, revealing the advantages embedded within the fund's philosophy and process. However, our track record of more than six years also includes a full platform transition, during which financing and derivative arrangements were withdrawn in 2023 and re-established only from the second half of 2025 onwards. That period tested yet ultimately reinforced our infrastructure, counterparties and risk disciplines.

Despite the temporary headwind, fund unit holders today should rest assured that the fund again operates with all tools deployed within a framework fully enhanced to again deliver peer-group leading results.

My vision is for the strategy to be anchored in a depth of research and analytical rigour that goes well beyond conventional practice. When investment decisions are grounded in this manner—treating each situation as a unique, first-principles inquiry—capital can be allocated more intelligently. In turn, the fund becomes a constructive force in global markets, reducing capital misallocation and helping high-quality businesses scale their most productive trajectories.

We would welcome a conversation about how GA-Courtenay Special Situations can serve as a long-term home for your capital, defined by disciplined stewardship and a focus on downside-aware performance orientation.

Best regards,

Adrian Courtenay



*Adrian Courtenay, Managing Director
and Head of Special Situations Strategy*

Fund background

- *Founded and seeded by fund manager Adrian Courtenay in October 2019 at Odey Asset Management*
- *2019-2021 the fund performed at the top percentile within UCITS hedge funds, AUM rose to \$110m*
- *Following Odey disruption in 2023, fund transferred to GreenAsh Partners*
- *Financing and derivative protection agreements lost 2023-mid 2025; in the interim period the fund largely focused on merger arbitrage in line with absolute return mandate*
- *Fund has emerged stronger with enhanced systems and fully restored prime broker financing and derivative protection agreements from mid-2025, again positioning the fund to target peer group leading returns*
- *Annualised net return since inception 12.0%*
- *Strong risk metrics: low equity correlation R^2 of 0.10, strong Sortino ratio, defensive in market stress*
- *Current AUM \$25m, positioned for growth*

Fund strategy

- *Research-intensive, deep dive approach to stock selection*
- *The fund targets exceptional businesses, including both esoteric special situations and enduring compounders*
- *Concentrated positioning (within UCITS limits)*
- *Long equity book leverage ~ 1.3x*
- *Market risk is significantly reduced by permanent maintenance of S&P500 put options holding*
- *Hedge structure designed to achieve positive carry – incorporating merger arbitrage yield funding S&P500 put option protection*
- *The outcome: the fund amplifies our unitholders' exposure to dominant growth corporate trajectories concurrently with the maintenance of strong defences against market risk – over time delivering highly advantageous absolute returns.*

Manager background

- *More than 20 years of hedge fund experience, including Special Situations Group at D. E. Shaw & Co, with strategy refined through multiple market cycles*

Net performance since inception

Since inception the GA-Courtenay Special Situations (USD I class) has returned 12.0% net annualised at low correlation to the market at large

GA-COURTENAY SPECIAL SITUATIONS FUND (USD I) PERIOD NET RETURNS

Price at 12-Dec-25

\$200.61

Month to date

6.0%

Year to date

6.1%

Annualised since inception (%)

12.0%

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	YTD
2025	0.5	-1.6	-0.2	0.9	6.5	2.4	-3.5	-1.7	-0.2	0.1	-2.6	6.0	6.1
2024	1.5	1.5	0.7	-2.6	1.6	2.2	0.6	-0.7	0.1	0.6	-0.6	0.2	5.0
2023	7.6	-3.2	-5.4	0.6	-6.6	-4.1	1.0	-2.5	-2.4	-2.0	23.2	3.0	6.4
2022	-1.2	2.0	2.3	-3.1	-6.7	-6.1	1.5	7.7	1.0	-9.0	-0.2	-0.5	-12.8
2021	7.7	4.2	-3.2	-0.3	0.5	-4.7	-1.9	2.5	3.0	17.6	-2.1	1.6	24.4
2020	8.4	-2.5	-13.2	6.1	8.7	20.5	5.6	-5.1	5.7	-4.0	-2.7	13.2	42.8
2019										0.6	4.0	4.4	9.1

Note: Inception 17-Oct-2019; Performance figures are for share class USD I = the fund's base currency.

From July 2023 to June 2025 the fund's financing agreements and derivative protection were withdrawn following disruption to its prior house Odey Asset Management. During this period, the product was operated at low leverage and with a higher focus on yield creation through merger arbitrage in order to ensure consistent adherence to its absolute return mandate. From July 2025 all financing agreements and derivative protection were re-gained.

The GA-Courtenay fund architecture has been progressively optimised to deliver a series of differentiated structural advantages

Optimisation vector

Strong defence without long-term performance drag

Returns amplification through safely deployed leverage, equity investment book
~ 1.3x fund assets

A stock selection approach targeting enhanced accuracy in long-term investment outcomes

GA-Courtenay architecture

The fund deploys a permanent holding of S&P500 put options, strongly protecting against market dislocation risks; put option expenses are paid for using merger arbitrage yield, removing the otherwise long-term performance drag.

Our strong defences allow higher equity leverage than a long-only fund. This allows the fund to amplify returns, with tracking error between equity book and hedge closely monitored and extensively modelled through history.

Our amplification empowers a highly disciplined stock selection approach focused on accuracy of outcome rather than amplitude of outcome (i.e. by otherwise targeting higher risk situations). Fund holdings centre on dominant businesses, with high barriers to entry tested through time, and enduring growth tailwinds.

Whether extraordinary founders create value in private or public markets, we target the public-market pathways to own it

<i>Company</i>	<i>Founder/CEO</i>	<i>Founded</i>	<i>Business model</i>	<i>Fund holdings</i>
Space / in-orbit economy				
		2002	Dominates reusable rocketry and low-cost high-cadence orbital launch with unmatched execution speed	  <p>SpaceX is deeply discounted through EchoStar (cash > market cap, SpaceX equity implied at zero)</p> <p>Direct investment through Filtronic equity; monopolist in high-power E-band SSPAs – the fulcrum technology for SpaceX Starlink backhaul</p>
Robotics				
		2003	The car as a robotic platform for at-scale autonomy while developing humanoid robots that can translate AI into the physical economy	 Direct investment through Tesla equity
		1994	Amazon is building the world's most advanced commercial automation ecosystem, running the world's largest deployed fleet of mobile and articulated warehouse robots	 Direct investment through Amazon equity
		2017	Reinventing defence with autonomous systems, rapid iteration, and software-centric architectures	 Investment through Kraken Robotics equity, a monopolistic supplier of deep-sea batteries and sensors to Anduril
AI computing				
		2015	Leading the frontier of AI and driving a global transformation in software, productivity, and autonomous systems at unprecedented velocity	 SoftBank, trading at a more than 40% discount to NAV, deep value exposure to both OpenAI and ARM Holdings
Drug discovery				
		2014	Pursuing a unified immunotherapy platform targeting cancer and infectious diseases; driven by a founder with a history of breakthroughs	 Direct investment through ImmunityBio equity
Development stage gold mining				
		1997	Controls one of the world's largest undeveloped gold deposits; a rare blend of visionary contrarianism and long-cycle resource expertise	 Direct investment through NovaGold equity

Source: GA-Courtenay research, public domain disclosures

Fund equity holdings are also centred around enduring growth tailwinds

Breakthrough cos: 15% of NAV

– Breakthrough companies –

Rocket & satellite launches

SpaceX
(discounted through EchoStar)
90% share

Market leader provider of reusable rocket families, and low earth orbit satellites.

Dominant protagonist for more than 20 years.

Net cash / mcap (Echostar, pro-forma): 90%

Others
10% share

81-86 GHz band SSPAs

Filtronic
(core customer: SpaceX)
100% share

At the high end of E-band (81-86 GHz), Filtronic is the only supplier of high-frequency solid state power amplifier (SSPA) modules and subsystems where huge bandwidth and very low latency is required.

The result is that Filtronic is by far the price / performance leader.

Care customer: SpaceX

Filtronic has been an RF specialist for more than 40 years and held the leadership position in SSPAs since 2015

Net cash / mcap: 5%

Immune-based oncology

ImmunityBio
100% share

Monopoly patents of immune-based monoclonal treatments, which can be considered as possessing "best in class" cancer treatment.

ImmunityBio has led the market on immune-based oncology since 2014.

Net debt / mcap: 18%

Computing efficiency improvement: 47% of NAV

– Value uplift from continuing improvements in computing efficiency –

– Robotics –

Industrial robots (US market)

Fanuc
56% share

Founded in 1972, FANUC has held the global leadership position in industrial robotics since 2000.

Net cash / mcap: 15%

Online retail / warehouse robotics

Amazon
40% share

Dominant online retail and logistics platform since 1994

Net debt / mcap: 3%

Walmart
11% share

eBay: 4%

Others
45% share

Yaskawa
9% share

ABB
9% share

Others
26% share

Robotaxis (prospective)

Tesla
95% share

With manufacturing capacity >2m units per annum, Tesla is poised to dominate robotaxis

Net cash / mcap: 1%

Waymo/others
<5% share

Aqueous batteries (>6km depth)

Kraken Robotics
100% share

Kraken possesses a monopoly on large, 6,000m-deep-rated, pressure-resistant Li-ion battery packs that are suited to 200-400 kWh vehicle applications.

Kraken is also the only company in the world that sells a military-grade Spinalite-Aperture Solar as a standalone sensor provider present anywhere near the US\$0.3m level.

Monopoly positioning since ~2010.

Net cash / mcap: 10%

– Computing hardware and software –

Cloud infrastructure

Amazon
30% share

Dominant cloud provider since 2002

Net debt / mcap: 3%

Microsoft
20% share

Dominant cloud provider since 2008

Net debt / mcap: 1%

Google
13% share

Others
37% share

Apple
16% share

Other
13% share

Computing operating systems

Microsoft
71% share

PC OS monopolist since 1975

Net debt / mcap: 1%

Apple
16% share

Other
13% share

AI services

ChatGPT
70% share

OpenAI was founded in 2015, however, OpenAI can also be viewed as a partial Microsoft subsidiary, which has a right to revenue/IP-sharing and Azure commitments until 2030-32.

Microsoft, founded in 1975, has monopolised PC operating systems for more than 50 years.

Microsoft's 27% equity stake in OpenAI is included in its valuation "for free". SoftBank, trailing at a more than 20% discount to NAV, also owns an 11% stake in OpenAI (its second largest investment after ARM Holdings).

Others
30% share

Music streaming

Spotify
31% share

Globally dominant music streaming service since 2012

Net cash / mcap: 4%

Apple
14% share

Tencent
13% share

Amazon
13% share

YouTube
9% share

Others
20% share

Extreme Ultraviolet Lithography

ASML
100% share

Monopoly provider of EUV lithography machines since 2010

Net cash / mcap: 1%

TSMC
95% share

TSMC has held the number 1 market position in pure play foundries for more than two decades, progressively consolidating market share.

Net cash / mcap: 4%

Others
5% share

Foundries (3nm)

Growth in flights: 24% of NAV

– Growth in passenger flights –

Jet engines

GE Aerospace and Safran
(joint venture)
55% share

GE Aerospace: Dominant jet engine manufacturer since 1942

Net debt / mcap: 3%

Safran: Dominant jet engine manufacturer since 1965

Net cash / mcap: 1%

Pratt & Whitney
26% share

Rolls Royce
18% share

Spanish airports

Aena
100% share

Monopoly owner of all Spanish airports, built from 1927

Net debt / mcap: 15%

Airplane manufacturer

Airbus
60% share

Aircraft manufacture champion since 1972

Net debt / mcap: 1%

Boeing
40% share

Pricing power through an inflationary age: 50% of NAV

– Media rights –

Open seat motor racing

Formula One
94% share

Monopoly provider of world racing championships since 1959

Net cash / mcap: 1%

Formula E
6% share

Hazardous Waste Incineration

Clean Harbors
64% share

Leading US waste incinerator for more than 40 years

Net debt / mcap: 25%

Veolia
21% share

Others
15% share

Premium chocolates

Lindt
30% share

Dominant in premium chocolate since 1845 (domestic production for US region)

Net debt / mcap: 4%

Others
70% share

Credit and debit cards

Visa
50% share
(credit cards)

72% share (debit cards)

Dominant payments exchange provider since 1958

Net debt / mcap: 1%

Amex
32% share
(credit cards)

Dominant premium credit card provider since 1958

Mastercard
30% share
(credit & debit cards)

Others
5% share

Credit rating agencies

Moody's
40% share

Dominant provider of credit ratings services since 1909

Net debt / mcap: 5%

S&P Global
40% share

Dominant provider of credit ratings services since 1916

Net debt / mcap: 6%

Fitch
15% share

Others
5% share

Canada-to-Mexico railroad

Canadian Pacific
100% share

Founded in 1881, the only both pan-US railroad and with a monopoly on uniterrupted Canada-to-Mexico transit.

Net debt / mcap: 27%

Toronto toll roads

Ferrovial
100% share

Ferrovial's core asset is the 497 ETR toll road, a 74 year duration central arterial roadway across Toronto, Canada.

Net debt / mcap: 20%

– Leverage to gold –

Gold mining (% prospective gold mined on US soil)

NovaGold
>22% share

The largest gold mine on US soil, forecast to go into production by 2021. The mine also has significant expansion potential.

Net debt / mcap: 1%

Carlin
19% share
Barrick/Neumann JV

Cortez
12% share
Barrick/Neumann JV

Others
<47% share

Dominant business models, high barriers to entry, locked to enduring growth tailwinds

Business value as discounted cashflow: key uplift variables are – initial cash yield, consistent cash returning to shareholders, duration period of cash returns, growth in cash returns over time

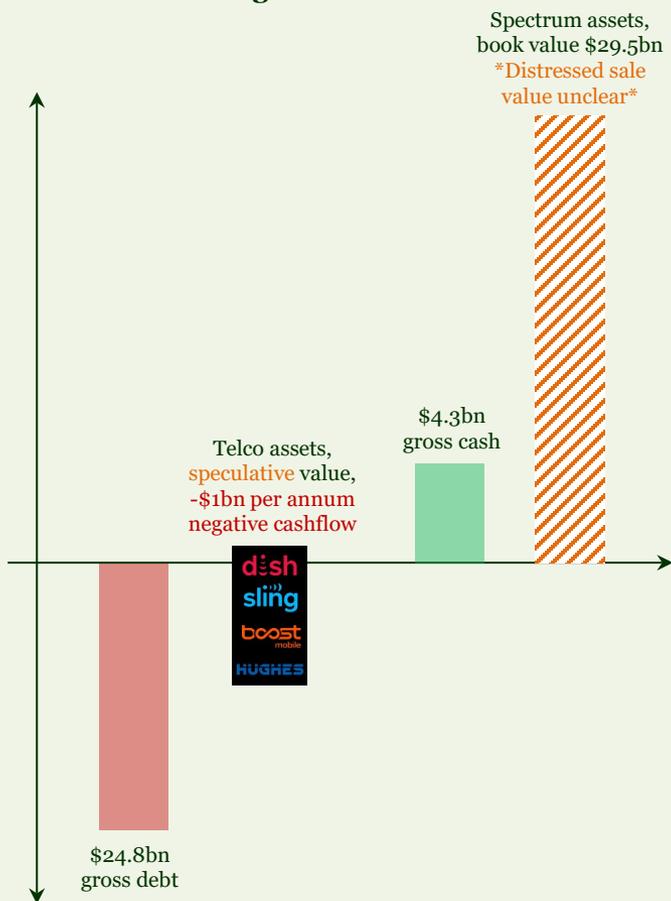


Case study: Echostar restructuring implies SpaceX at a deep discount

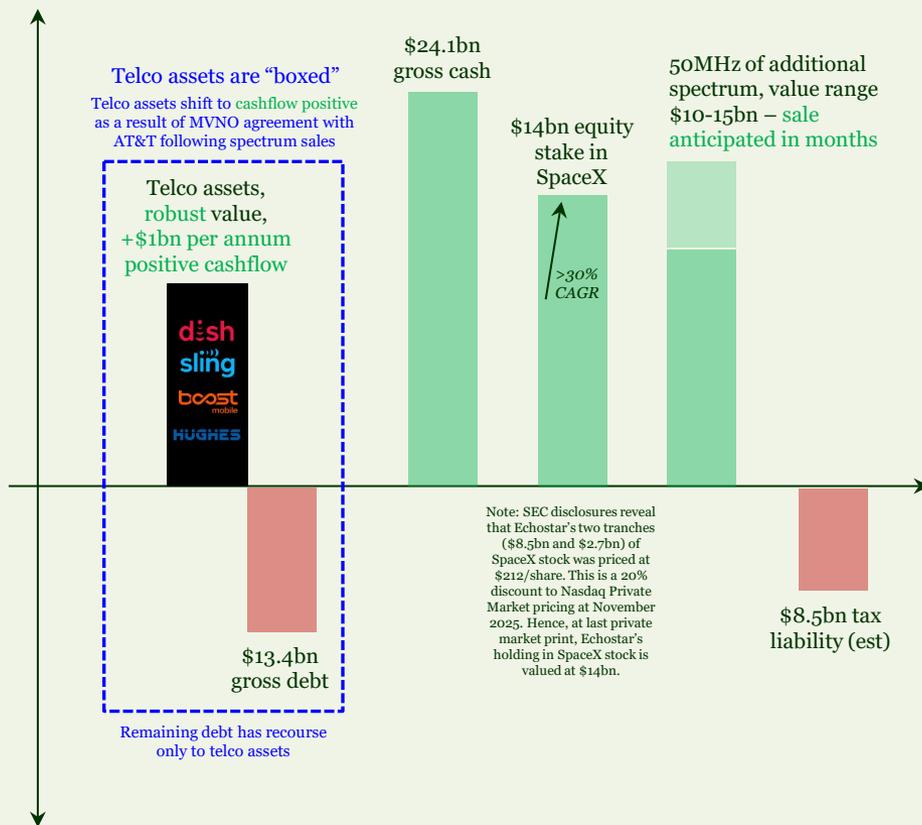
As SpaceX reduces the cost of reaching orbit by more than 10x, Starlink satellites possess a tailwind to dominate broadband and mobile bandwidth

Following \$23bn sale of spectrum to AT&T, MVNO agreement with AT&T, \$19bn sale of spectrum to SpaceX (\$14bn was paid to Echostar in SpaceX equity), Echostar's net asset value is implied at above \$39bn based on Nasdaq Private Market pricing at end November 2025. In December, Elon Musk confirmed SpaceX is considering an IPO at a significant valuation premium.

Pre-restructuring



Post-restructuring \$23bn sale of spectrum to AT&T, MVNO agreement with AT&T, \$19bn sale of spectrum to SpaceX (\$14bn of which was paid to Echostar in SpaceX equity).



SpaceX disclosures imply that current regulatory permissions for 144 Starship launches pa are likely to be increased *by an order of magnitude* over time

Starship has received regulatory clearances for 144 launches per annum, however, this implies a far lower utilisation rate at SpaceX Starbase Texas (12-13 launches per pad) than at SpaceX Kennedy Space Centre (44 per pad) or SpaceX Cape Canaveral (38 per pad), indicative of room to increase

SpaceX Kennedy Space Centre LC-39A :
 1 x Starship launch pad
 Regulatory clearance: 44 Starship launches pa
 → 44 launches per pad per annum

SpaceX Cape Canaveral SLC-37:
 2 x Starship launch pads
 Regulatory clearance: 76 Starship launches pa
 → 38 launches per pad per annum

SpaceX Starbase Texas (image shows expansion plan to two pads):
 2 x Starship launch pads
 Current regulatory clearance: 25 Starship launches per annum
 → 12-13 launches per pad per annum



- Furthermore, Starship manufacturing capacity implies that Texas launches will significantly exceed current regulatory permissioning at 12-13 pa
- Additionally this is combined with comments by Elon Musk that the longer-term plan is to build 1,000 Starships per annum

SpaceX Gigabay Florida is the manufacturing plant for LC-39A and SLC-37 Starships (119 launches pa)

However, SpaceX also plans an equivalent capacity Gigabay Texas, implying current 25 Starship launches pa from Texas is significantly below longer-term plan, suggested by Elon Musk at 1,000 Starships pa



SpaceX Is Building A New \$250 Million Facility In South Texas

Jannat Un Nisa July 20, 2025

According to filings with the Texas Department of Licensing and Regulation (TDLR), the new Gigabay will be a 700,000-square-foot industrial facility designed specifically for advanced manufacturing. The project is slated to begin construction on July 1 and is expected to be complete by late 2026. Dallas-based firm HDR is handling the design, continuing a trend of large-scale developments at the site.

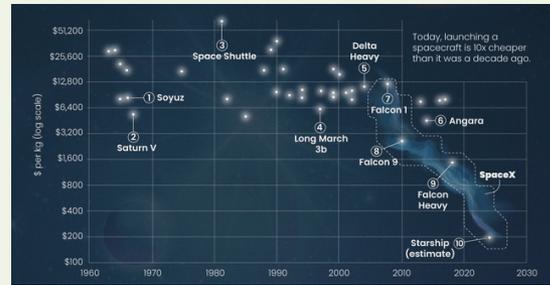
The latest expansion was hinted at earlier this year when Elon Musk shared a bold vision for Starship production: "We're aiming to build about three Starships a day," he reportedly said during a May presentation on X (formerly Twitter). That ambitious pace would mean manufacturing up to 1,000 Starships annually—a critical scale-up required to support Musk's long-term Mars mission strategy.

Sources: SpaceX corporate disclosures and management public statements, space sector public regulatory disclosures, GA-Courtenay research estimates

At 150 Starship launches pa 2026-2030, SpaceX is orientated to reach 95% of satellites launched, 48% of mobile bandwidth, \$3.3 trl revenue by 2040

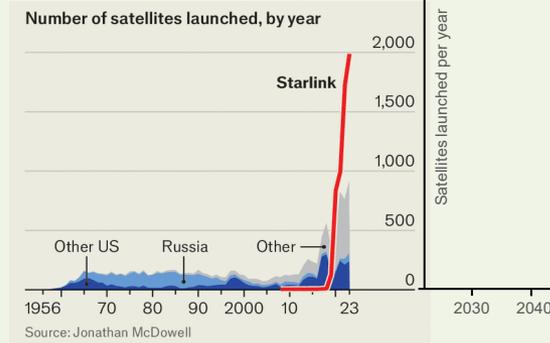
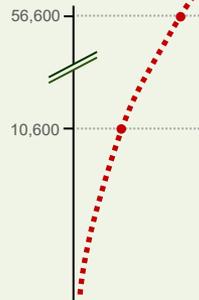
SpaceX Starlink poised to reach monopoly position of >95% of satellites launched

SpaceX reusable rocketry has reduced the cost of reaching orbit by more than 60x over two decades



SpaceX Starlink annual launches to reach 10k in 2030, and 56.6k by 2040

At 60 Starship V3 satellites per launch, 10k satellites will be launched in 2030 and 56.6k in 2040, handing to SpaceX a close to monopoly position of more than 95% of all satellites launched



Source: Jonathan McDowell

At 90 Gbps effective bandwidth per satellite, SpaceX Starlink is poised to deliver an equivalent of 5% of all mobile bandwidth worldwide by 2030 (A), and 46% by 2040 (B)

SpaceX's low cost to orbit implies Starlink mobile bandwidth as the lowest cost provider in both 2030 and 2040

By 2030, SpaceX Starlink cost of 150Gbps mobile bandwidth is implied at \$4,762 (C), versus current terrestrial mobile providers charging \$6,000 (D)

Bandwidth (YE2030)	
1,073	Cumulative Falcon 9 launches
606	Cumulative Starship launches
18,500	Falcon 9 payload capacity (kg, LEO)
75,000	Starship payload capacity (kg, LEO)
19,850,500	Falcon 9 cumulative upmass (kg)
45,450,000	Starship cumulative upmass (kg)
29	Falcon 9 V2 mini satellites per launch
60	Starship V3 satellites per launch
67,477	Cumulative satellites launched
10,002	Annual number of satellites launched
11,293	Cumulative satellites de-orbited
56,184	Total active satellites
1,162	Mass (kg) per satellite
11,119,880	Maximum constellation bandwidth (Gbps)
198	Gross bandwidth (Gbps) per satellite
25%	Capacity utilisation
49	Effective deployed bandwidth (Gbps) per satellite in each unit period of time
2,779,970	Total effective deployed bandwidth (Gbps) of Starlink fleet
5%	Actual capacity utilisation of mobile usage vs 150Mbps headline speeds A
370.7	Implied number of mobile phone bandwidth user units (m)
4.6%	Starlink bandwidth as a percent of total worldwide population if all used mobiles
333.6	Starlink revenue (\$bn) if all effective bandwidth at mobile pricing

Cost base (YE2030)	
650	Cost to manufacture satellite (\$/kg)
769	Launch cost per kg
1,419	Total satellite cost per kg
1.65	Total unit cost per satellite (\$m)
33,332	Total cost \$ per Gbps of bandwidth
7	Depreciation years
4,762	Annual cost \$ per Gbps of bandwidth C
60	At 150Mbps, breakeven ARPU per month
119	At 300Mbps, breakeven ARPU per month

Competitor comparison (YE2030)	
US mobile	
75	US mobile cost \$ per line/month
900	US mobile cost \$ per line/year
150	Mobile speed (Mbps)
6,000	Cost per Gbps of bandwidth D
28%	Premium (discount) vs Starlink
US cable	
75	US mobile cost \$ per line/month
900	US mobile cost \$ per line/year
300	Mobile speed (Mbps)
3,000	Cost per Gbps of bandwidth
-37%	Premium (discount) vs Starlink

By 2040, SpaceX Starlink cost of 150Gbps mobile bandwidth is implied at \$4,416 (E), versus current terrestrial mobile providers charging \$6,000 (F)

Bandwidth (YE2040)	
1,998	Cumulative Falcon 9 launches
9,596	Cumulative Starship launches
18,500	Falcon 9 payload capacity (kg, LEO)
75,000	Starship payload capacity (kg, LEO)
36,963,000	Falcon 9 cumulative upmass (kg)
719,700,000	Starship cumulative upmass (kg)
29	Falcon 9 V2 mini satellites per launch
60	Starship V3 satellites per launch
633,702	Cumulative satellites launched
56,623	Annual number of satellites launched
327,861	Cumulative satellites de-orbited
305,841	Total active satellites
2,474	Mass (kg) per satellite
111,616,617	Maximum constellation bandwidth (Gbps)
365	Gross bandwidth (Gbps) per satellite
25%	Capacity utilisation
91	Effective deployed bandwidth (Gbps) per satellite in each unit period of time
27,904,154	Total effective deployed bandwidth (Gbps) of Starlink fleet
5%	Actual capacity utilisation of mobile usage vs 150Mbps headline speeds B
3,720.6	Implied number of mobile phone bandwidth user units (m)
46.5%	Starlink bandwidth as a percent of total worldwide population if all used mobiles
3,348.5	Starlink revenue (\$bn) if all effective bandwidth at mobile pricing

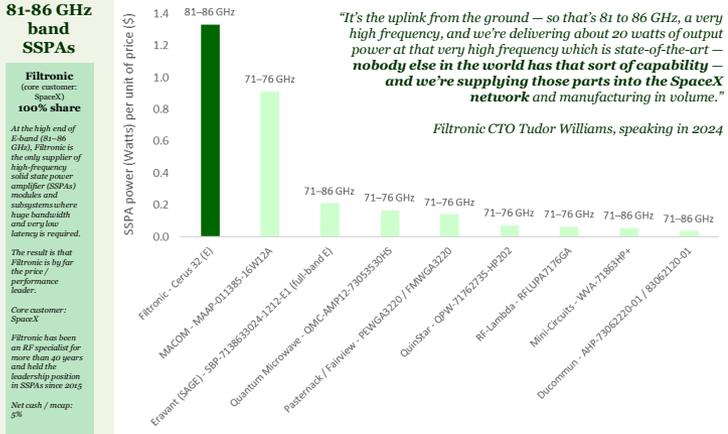
Cost base (YE2040)	
650	Cost to manufacture satellite (\$/kg)
490	Launch cost per kg
1,140	Total satellite cost per kg
2.82	Total unit cost per satellite (\$m)
30,913	Total cost \$ per Gbps of bandwidth
7	Depreciation years
4,416	Annual cost \$ per Gbps of bandwidth E
55	At 150Mbps, breakeven ARPU per month
110	At 300Mbps, breakeven ARPU per month

Competitor comparison (YE2040)	
US mobile	
75	US mobile cost \$ per line/month
900	US mobile cost \$ per line/year
150	Mobile speed (Mbps)
6,000	Cost per Gbps of bandwidth F
38%	Premium (discount) vs Starlink
US cable	
75	US mobile cost \$ per line/month
900	US mobile cost \$ per line/year
300	Mobile speed (Mbps)
3,000	Cost per Gbps of bandwidth
-32%	Premium (discount) vs Starlink

\$3.3 trl of targetable revenue at mobile equivalent pricing/Gbps

Case study: Filtronic, monopolistic supplier to SpaceX Starlink in solid state power amplifier (SSPAs), also stands to realise meaningful uplift

At the high end of E-band (81–86 GHz), Filtronic is the only commercially available supplier of SSPAs – and by far the price/performance leader



“Everything becomes critical – the packaging, the interconnects, the thermal, the yield – it is the ability to integrate 32 MMICs (Monolithic Microwave Integrated Circuits) repeatably that others cannot industrialise.”

Filtronic CTO Tudor Williams, speaking in 2024

The required volume of Filtronic module orders can be backed out from SpaceX Starlink’s capacity build

The model output (illustrative purposes only): Filtronic net income exceeds £40m by 2030, compared to its current market capitalisation of £280m (5x PE)

Starlink ground stations (YE2030)

Inputs	
56,184	Total active satellites
198	Avg effective user-link capacity per satellite (Gbps)
25%	Utilization factor (0-100%)
105	Throughput per E-band SSPA chain (Gbps)
16	Antennas per gateway site (count)
2	Chains per antenna (count)
1.50x	Availability/weather/maintenance diversity multiplier
150	Minimum sites for backbone access/latency/regulatory
4	# Filtronic modules per RF chain
3,173	Spares / field replacements of # Filtronic modules
Outputs	
32	Chains per gateway (site)
3,364	Per site throughput (Gbps)
2,779,970	Aggregate traffic to be backhauled (Gbps)
1,240	Required gateway sites
161,834	# Filtronic modules

Starlink ground stations (YE2040)

Inputs	
305,841	Total active satellites
365	Avg effective user-link capacity per satellite (Gbps)
25%	Utilization factor (0-100%)
194	Throughput per E-band SSPA chain (Gbps)
20	Antennas per gateway site (count)
2	Chains per antenna (count)
1.50x	Availability/weather/maintenance diversity multiplier
150	Minimum sites for backbone access/latency/regulatory
4	# Filtronic modules per RF chain
17,274	Spares / field replacements of # Filtronic modules
Outputs	
40	Chains per gateway (site)
7,754	Per site throughput (Gbps)
27,904,154	Aggregate traffic to be backhauled (Gbps)
5,398	Required gateway sites
880,952	# Filtronic modules

Confirmatory signalling: SpaceX takes 10% stake in Filtronic as part of as part of a long-term strategic supply and co-development agreement

24 April 2024

Filtronic plc
("Filtronic" or "the Company")

Strategic Agreement with SpaceX for Starlink constellation

Filtronic secures a long-term partnership with SpaceX in the LEO space market

Filtronic plc (AIM: FTC), the designer and manufacturer of products for the aerospace, defence, space and telecoms infrastructure markets, is delighted to announce that it has entered into a strategic partnership and commercial agreement (the "Strategic Partnership") with Space Exploration Technologies Corp. ("SpaceX"), which designs, manufactures, launches and operates the world's most advanced rockets and spacecraft. The Strategic Partnership includes the ongoing supply of E-band Solid State Power Amplifiers ("SSPA") in addition to the development and supply of similar products at other frequency bands within SpaceX's Starlink platform.

The Strategic Partnership contract was executed with an initial irrevocable purchase order of \$10.7m (£15.8m) to supply E-band SSPA modules, scheduled for delivery in FY2025, with further order flow expected to continue thereafter to support the ongoing deployment of SpaceX's Starlink constellation, which provides high-speed, low-latency high-speed internet to users all around the world.

As part of the Strategic Partnership, the Company has issued a total of 21,717,109 warrants to SpaceX across two tranches to enable SpaceX to subscribe for up to a maximum of 10% of the Company's existing share capital, with such warrants expected to vest on a variable basis, with full vesting of the warrants once approximately \$50m (£48m) of orders have been placed by SpaceX. The two warrant tranches, which are split equally, are detailed below:

Tranche 1: a maximum of 5% vesting on a variable basis from order flow of the E-band SSPA platform; and
Tranche 2: a maximum of a further 5%, also vesting on a variable basis, for order flow of products developed at alternative frequency bands which would involve partnering with SpaceX on new product development.

26 August 2025

Filtronic plc
("Filtronic" or "the Company")

Filtronic secures \$62.5m order with SpaceX for next generation technology
 High power GaN solution to enhance low Earth orbit satellite connectivity

Filtronic plc (AIM: FTC), the designer and manufacturer of advanced RF solutions for the space, aerospace and defence, and telecoms infrastructure markets, is pleased to announce that it has secured its largest single order to date of £47.3m (\$62.5m) from SpaceX for the Company's next generation, proprietary gallium nitride ("GaN") E-band product.

The first production units from this contract will ship in FY2027 and are expected to deliver material revenues in FY2027 and FY2028. In recognition of SpaceX agreeing to this substantial order of new technology, the warrants relating to the original Strategic Partnership agreement for next technologies (Tranche 2) have been extended to include E Band GaN alongside other bands in development. The vesting criteria has also been amended to double the volume of products required for full vesting and now vests on product delivery rather than on the placement of the purchase order, ensuring closer strategic alignment in the outlook period.

SpaceX strategic partnership with Filtronic is for the ongoing supply of E-Band SSPAs and related products for SpaceX Starlink

SpaceX to be awarded 10% of Filtronic equity upon \$60m of orders being placed. SpaceX order placement requirement for SSPAs and next generation products.

Filtronic receives \$62.5m order for next generation products from SpaceX, delivering material revenue increase from 2027

Order volume requirement increased for full warrant vesting

Capacity build: Filtronic is executing a scale-up in manufacturing capacity to meet sustained high-volume demand

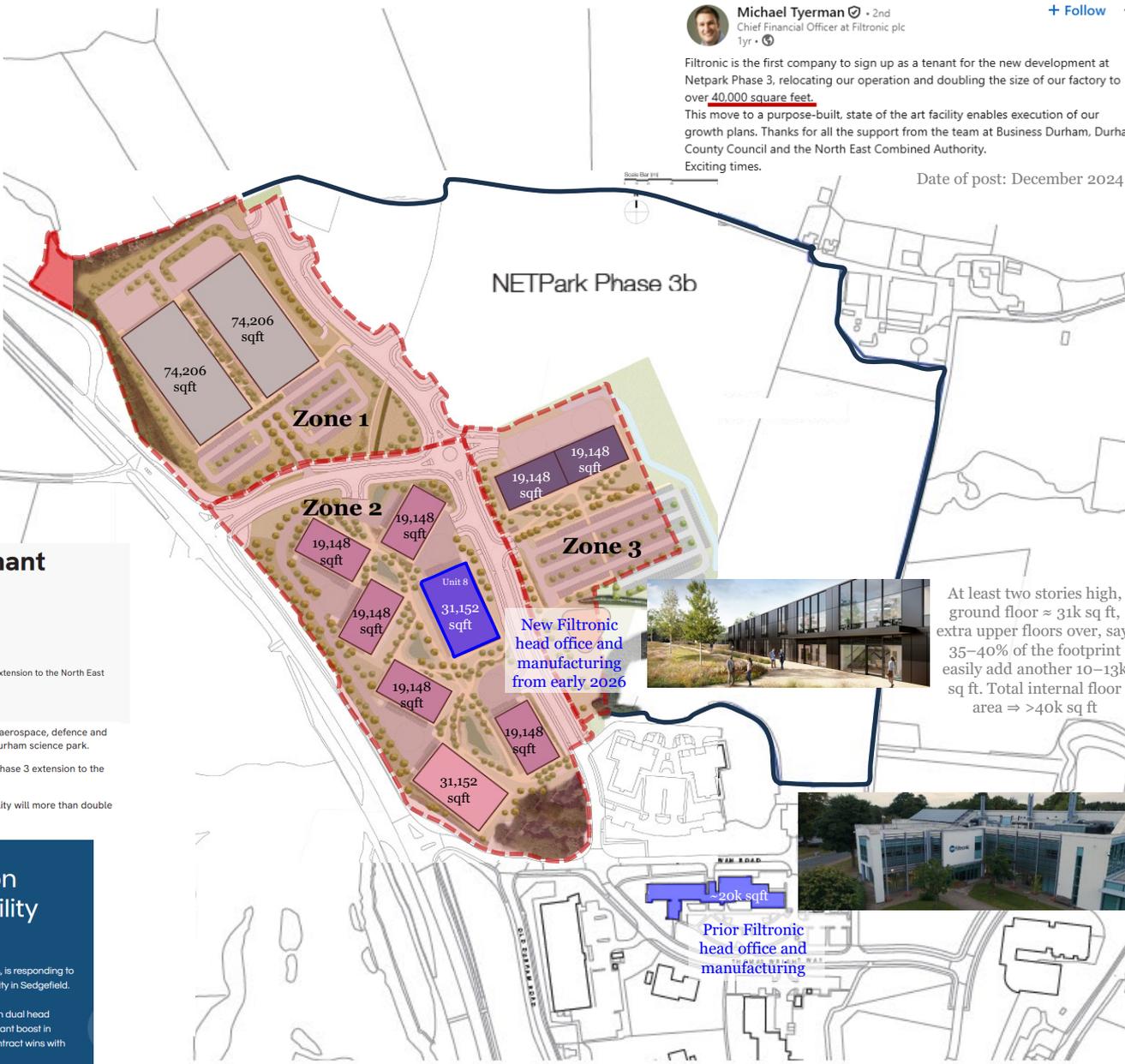
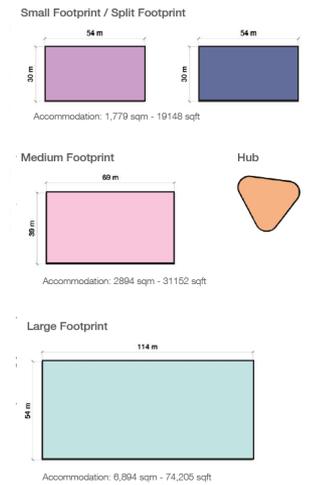
- Late 2024:** New dual-head production lines at NETPark increase throughput by 50–75%, supporting 24/7 high-mix, high-yield manufacture of E-band SSPAs for SpaceX and other customers
- H1 2026:** A new, much larger Sedgefield facility to become fully operational—more than doubling footprint, cleanroom area and test capability—and positioning Filtronic for multi-year volume expansion and next-generation module production.

Confirmatory site plan – from 2026, Filtronic will have more than doubled its manufacturing capacity again, following a 75% increase in 2024

Michael Tyerman • 2nd
 Chief Financial Officer at Filtronic plc
 1yr • [Follow](#)

Filtronic is the first company to sign up as a tenant for the new development at NetPark Phase 3, relocating our operation and doubling the size of our factory to over 40,000 square feet. This move to a purpose-built, state of the art facility enables execution of our growth plans. Thanks for all the support from the team at Business Durham, Durham County Council and the North East Combined Authority. Exciting times.

Date of post: December 2024



Major milestone as first tenant signs up for £100million science park expansion

Filtronic will move into custom-built headquarters within the £100million Phase 3 extension to the North East Technology Park (NETPark) at Sedgfield in 2025.

Categories: Finance and investment
 Published by **Fraser Serie** on 06/09/2024

A leading tech firm which supplies components and subsystems to space, aerospace, defence and telecoms is the first tenant to sign up for a new unit in a growing County Durham science park.

Filtronic will move into custom-built headquarters within the £100million Phase 3 extension to the North East Technology Park (NETPark) at Sedgfield in 2025.

An existing tenant of the park, the award-winning manufacturer's new facility will more than double its operational footprint.

Oct 23, 2024 - 1 min read

Filtronic expands production ahead of purpose-built facility launch

Filtronic, the UK leader in high performance RF and mmWave technologies, is responding to growing demand by installing two new production lines at its NETPark facility in Sedgfield.

The introduction of these additional production lines — each equipped with dual head capability — will increase productivity by 50-75 per cent, marking a significant boost in capacity as the company continues to grow, driven by a series of major contract wins with global industry leaders.



At least two stories high, ground floor ≈ 31k sq ft, extra upper floors over, say, 35-40% of the footprint easily add another 10-13k sq ft. Total internal floor area => >40k sq ft



Prior Filtronic head office and manufacturing

Case study: Anduril capacity build disclosures for underwater autonomous vehicles; Kraken Robotics revenues to be transformed upward

Anduril has announced the build of an autonomous underwater vehicle (AUV) factory in Rhode Island, US, opening in 2025, and with a plan to produce more than 200 AUVs per annum for the US military



Anduril to Open Large Scale Production Facility for Autonomous Underwater Vehicles

6/17/2024

By Anduril Industries

The Rhode Island production facility will enable Anduril to increase production to 200 AUVs per year and create more than 100 jobs over the next five years. The factory announcement comes amid growing demand for Anduril's AUVs, including an \$18.6 million contract with the U.S. Navy.

Anduril Industries is announcing a new manufacturing facility to support large-scale production of its Dive-LD family of autonomous underwater vehicles (AUVs) at Quonset Point, Rhode Island. By investing in a scaled production facility ahead of need, Anduril will be able to stay ahead of customer demand and deliver on orders with unprecedented speed.

“More than 200 underwater autonomous vehicles per year, opening in [late] 2025”

AUVs are transforming maritime deterrence by providing an affordable, distributed, and adaptable undersea capability that complements the U.S. and allied submarine fleet. Developing, manufacturing, and fielding these systems at scale on an operationally-relevant timeline will be critical. The 100,000-150,000 square foot production facility will enable Anduril to immediately increase production capacity for its Dive-LD family of AUVs to more than 200 hulls per year. Anduril plans to create more than 100 jobs within five years of the facility opening in 2025.

US is testing the Anduril Ghost Shark off the California coast, and the Rhode Island factory is also designed to produce Ghost Sharks



Aria Alamalhodaei - 12:12 PM PDT · September 10, 2025

SVP Of Maritime, Shane Arnott, said Ghost Shark can be rapidly “missionized in country,” meaning that governments can plug in their own payload modules as needed. Anduril has already produced a U.S. payload that is being tested off the California coast, and it has stood up a 150,000-square-foot factory in Rhode Island to produce Ghost Sharks in the U.S. if a contract materializes.

Sources: GA-Courtenay research, Kraken, Anduril corporate disclosures, The Australian

Assuming the US military awards Anduril a contract at a size proportional to Anduril’s Rhode Island capacity build, Kraken Robotics grow net income by up to US\$136m relative to its current US\$1.2bn market capitalisation

Ghost Shark, Anduril’s underwater autonomous vehicle (AUV) uses US\$8m of components monopolised by Kraken Robotics (SeaPower batteries + sensors) per vehicle

Australia

Pilot - 2022: Anduril and the Australian Defence authorities sign the initial US\$100 million co-development contract for Ghost Shark

Large award - 2025: **Australian military awards Anduril a US\$1.1bn contract** to build Ghost Sharks

Anduril Australian manufacturing capacity build for underwater autonomous vehicles: 7,400 sq m

Production volume not formally disclosed, the Australian newspaper states “dozens” of underwater autonomous vehicles over 5 yrs.

Assume 12 Anduril Ghost Sharks per year

$$12 \times \text{US\$}8\text{m} = \text{US\$}96\text{m}$$

implies US\$96m annual revenue contribution to Kraken

United States

Pilot - 2024: Anduril awarded US\$19m contract with US Navy for underwater autonomous vehicles.

Large award - Yet to be announced: However, **US military budget is 17x the size of the Australian military budget**

Anduril US manufacturing capacity build for underwater autonomous vehicles: 11,600 sq m

Disclosed as sufficient to manufacture **over 200 underwater autonomous vehicles per year.**

Assume 125 Anduril Dive-LDs and 75 Ghost Sharks per year

$$125 \times \text{US\$}1.4\text{m} = \text{US\$}175\text{m}$$

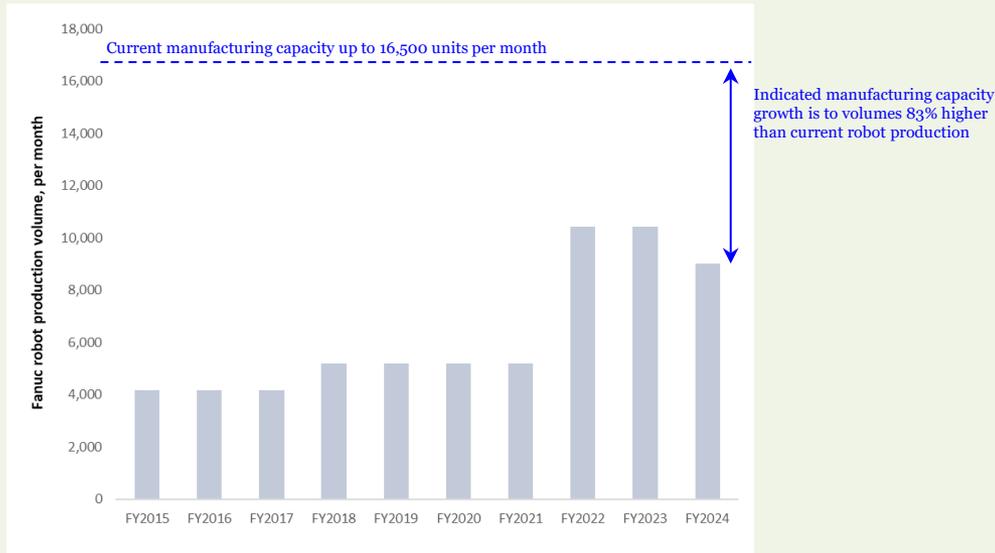
$$75 \times \text{US\$}8\text{m} = \text{US\$}600\text{m}$$

implies US\$775m annual revenue contribution to Kraken

Kraken Robotics has a path to US\$875m per annum incremental revenue contribution from Anduril orders alone, at 30% EBITDA margin implies US\$136m of net income gain relative to current US\$1.2bn market cap

Case study: Fanuc, global market leader in industrial robotics, is extremely well positioned within the ongoing shift of AI technologies to the factory floor

Fanuc's capacity expansion is indicative of an internal budget plan for volumes 83% higher than current robot production



Fanuc management, January 2022: "the evaluation of achieving a production capacity of **16,500 units per month**, without new constructions, is ongoing"

Fanuc 2024 annual report: "Fanuc has succeeded in increasing the number of units that can be produced by 50%, this has resulted in a production capacity of **more than 15,000 units per month**."

FANUC CORPORATION
Q&A Summary of the Telephone Conference
on Financial Results for the Third Quarter ended December 31, 2021
(January 26, 2022)

Q: ROBOTS are being manufactured both in FANUC Headquarters and Tsukuba. What are your plans for enhancing production capacity in these sites, as well as in the Mibu area?

A: The monthly production capacity of ROBOTS is 11,000 units, and it seems that manufacturing at full capacity is on the horizon. By using free space within the company and improving efficiency, prospects are clear for increasing the monthly production volume to approximately 14,000 units. Also, the evaluation of achieving a production capacity of 16,500 units per month, without new constructions, is ongoing.

Still, as the robot market is expected to expand dramatically, such enhancements are seen as being limited, and will cover demands only for the next few years. Building a new ROBOT factory in Tsukuba is contemplated as the next step. If demands increase even further, there is a possibility to consider using Mibu as an option for additional production.

Increasing the Capacities of the Tsukuba ROBOT Factories

The Tsukuba Robot Factory #1 began operation in August 2018 and has significantly increased its production capacity in order to meet strong demands for robots. FANUC has succeeded in increasing the number of units that can be produced by approximately 50% compared to what was initially planned, by making a series of revisions in the manufacturing process. This has resulted in a production capacity of more than 15,000 robots per month when combined with the production in the Headquarters' Factories.

At Tsukuba Robot Factory #1, the automated warehouse and transport lines have been expanded, assembly cells automated by robots have been set up, and the collaborative robot CRX has been introduced to the manual assembly process to improve the quality of bolt tightening and reduce the number of workers required. To ensure high reliability, assembled robots undergo rigorous testing, including continuous operation tests at a test site. By analyzing data on quality collected from the past, the operating conditions for the continuous operation tests have been revised, which has enabled the operating time to be shortened. This has significantly reduced test lead time and has improved the turnover rate. In recent years, demand has been rapidly growing for robots with high payloads, such as those for transferring battery units of electric vehicles. To meet this demand, FANUC has more than doubled the production capacity of the M-1000IA and M-2000IA robots with payloads exceeding 1-ton.

In November 2022, the finished products warehouse was expanded. Prior to this, robots to be shipped overseas were transported by truck to a logistics company near the port, where export packaging and vaning into containers were performed. With the new finished products warehouse, export packaging and vaning of small robots can be handled inhouse, and truck transport has been replaced by transport of containers by trailers which has improved loading efficiency. The reduction in the number of trucks helps to promote carbon neutrality and solve the "2024 driver problem" where there will be a shortage of truck drivers. The Tsukuba ROBOT Factories will continue to improve their supply capacities by increasing efficiency, and will stably supply the high quality robots that customers desire.



Tsukuba Robot Factory #1/Finished products warehouse

M-1000IA and M-2000IA production line

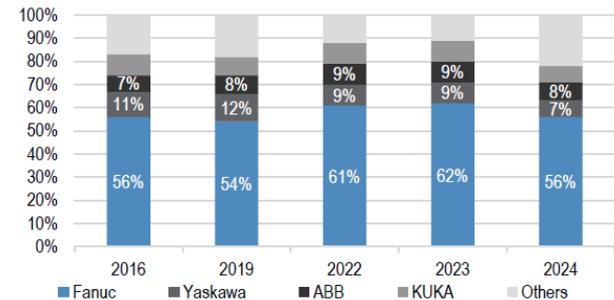
Fanuc is extremely well positioned with respect to the ongoing shift of AI technologies to robotics

The AI era is poised to significantly lift demand for Fanuc robotics:

- * **Task set expansion:** foundation model vision, force sensing, and policy learning is today empowering robots to tackle variant-rich, previously "unautomatable" steps (i.e. kitting, bin-picking, inspection, machine tending with irregular parts). More tasks achievable → more robots demanded.
- * **Friction collapse in robot deployment:** digital twin simulations and prompt engineered natural language programming shrink engineering hours and changeover times. Lower integration cost shortens payback periods → more robotics projects clear investment hurdle rates.
- * **Uptime optimisation:** predictive maintenance (e.g. servo, robot health) and tighter motion control raises robot availability x performance x quality of output, raising economics of robot deployment and incentivising additional orders.
- * **Political and demographic incentives:** onshoring incentive programs, labour scarcity, quality/traceability mandates raise the need for automation exactly where Fanuc is dominant – US industry.
- * **Winner-takes-all tailwinds:** As AI pushes autonomy to the edge, factories will value widely supported platforms. Fanuc's market dominant platform and service network is positioned to become the only "safe option".

Founded in 1972, Fanuc has held the global leadership position in industrial robotics since 2000, maintaining a stable US market share exceeding 50%

Figure 125: Industrial robot market share: US



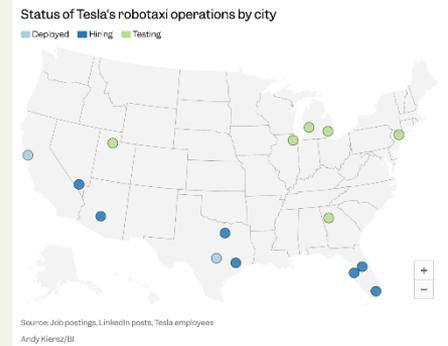
Source: Yaskawa Electric data, J.P. Morgan

Case study: autonomous vehicles, poised to deliver windfall profitability to Tesla, will also significantly increase volumes through urban toll roads

Autonomous vehicles are poised to deliver windfall profitability to Tesla

Tesla's self-driving robotaxis, achieving lowest cost provider dominant status by operating without LiDAR, have moved beyond proof of concept to deployment

As at November 2025, Tesla Robotaxis are deployed in two states, actively testing in a further six states, and Tesla has made job postings for testing in an additional seven states



Modelling Tesla AVs to charge \$0.50 per mile, 100k miles per year per AV, and an eventual market opportunity of 138m AVs worldwide, indicates a \$7 trillion per annum revenue opportunity

Self-driving cars	
Service revenue per year	
6,880 \$bn AV TAM worldwide (service revenue/year)	
0.050 \$m revenue per AV/year	
138 m TAM for AVs worldwide	
0.50 \$ per mile charged by AVs (service revenue)	
289,278 passenger km/year for each AV	
16.1 human car service multiplier per AV	
1,250 m vehicles worldwide in 2025	
77% utilisation uplift	
160,710 autonomous car km/year	
1.8 average AV occupancy with pooling	
16 hours/day autonomous car	
28 km/h average in-service speed	
12,000 km per year for non-autonomous cars	
1.5 persons average occupancy	
18,000 passenger-km/year	

Sources: Tesla corporate disclosures, GA-Courtenay research estimates

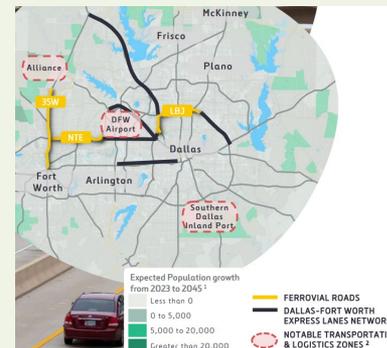
Ferrovial, long-term toll road assets (average duration to maturity 54 years)

Core asset the 407 ETR toll road is a 74 year concession across central Toronto



- over the last 10 years, toll charge per trip has been increased by 6% per annum
- Toronto population forecast to increase by 46% by 2046
- the population growth is expected mostly along the 407-ETR corridor with the land around it having been designated as a provincially significant employment zone resulting in the government devoting resources to the area to boost employment
- concession owned until 2098

Growth assets are multiple toll roads within Dallas



- over the last 10 years, toll charge per trip has been increased by more than 10% per annum
- the Dallas area is ranked no.1 in the US for population growth
- concession owned until 2060-2070

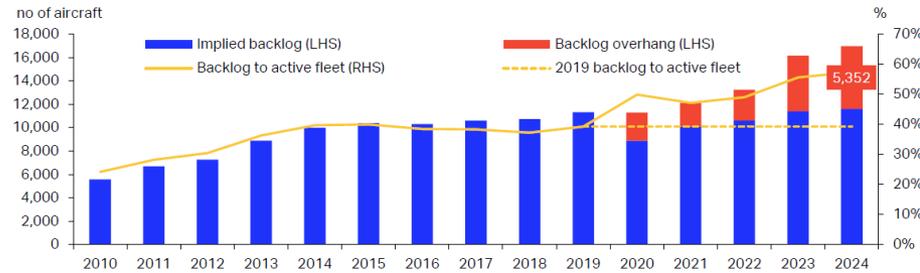
Sources: Ferrovial 2024 investor day, GA-Courtenay research

We estimate that in the scenario that autonomous vehicles are used for 64% of US vehicle miles travelled by 2040, this would increase by 38% total automotive urban miles travelled (autonomous frees parking land resulting in urban population increase, autonomous allows higher roadway volume per unit of road due to more precise driving, and autonomous through cheapening the cost of transit results in demand expansion), delivering significant additional long-term tailwind to Ferrovial toll road vehicle volumes

Case study: GE Aerospace, Safran, and Airbus – jet engine and aircraft manufacturers poised to capture significant backlog and servicing tailwinds

1. Following capacity de-utilisation in the 2020 covid shock, there remains a very significant backlog in demand for new aircraft

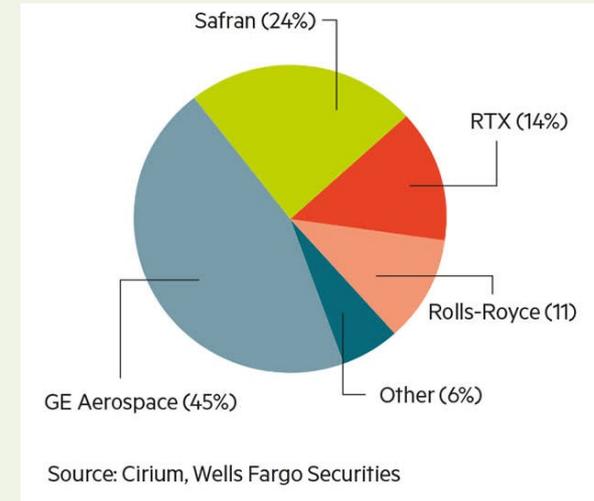
Chart 16: Aircraft shortage implied by increased backlog



Source: IATA Sustainability and Economics, Cirium Fleets Analyzer

2. Efficiency demands result in jet engine designs that run hotter. More efficient engines cheapen flights, significantly stimulating long-term demand, yet also require increased servicing, bolstering the profitability of jet engine companies such as GE Aerospace, Safran, which derive the majority of their profits from engine servicing

3. Jet engine manufacturers GE Aerospace and Safran hold an effective duopoly on commercial jet engine manufacturing



Source: Cirium, Wells Fargo Securities

Air & Space Magazine

The Hotter the Better

Make an engine that can run hotter and still survive, and you can get more thrust from the same amount of fuel

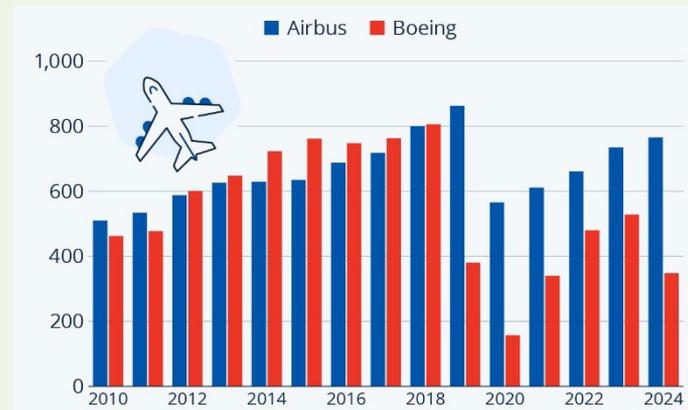
George C. Larson

- Hot-running engines cause more wear on turbine blades and affect the engine's lifecycle.
- Aircraft operators demand fuel-efficient engines, with engine performance crucial for efficiency.

Aircraft engines are designed to withstand very high internal temperatures during flight operations. There is a limit to how high the temperature can rise within the engine. With the ever-growing need to make the engines fuel-efficient, there is a constant need to increase the engine's internal temperature.

Hot-running engines mean more wear to the materials, particularly the turbine blades. Moreover, the engine's lifecycle is affected when it is frequently operated at high power.

4. Airbus and Boeing constitute a duopoly on airplane manufacturing; since 2019, Airbus has dominated



Source: Corporate disclosures, public domain articles and GA-Courtenay research

Case study: Aena airport – passenger volumes by commercial flight are implied at a 6.5% CAGR by airport capex plans, well above widely used World Bank estimates

The widely used World Bank estimates for the growth in passenger volumes by commercial flight imply a CAGR of 3.4% to 2030, and 3.2% to 2040

Growth (CAGR) in volume of passenger flights 2024-2030		Growth (CAGR) in volume of passenger flights 2024-2050	
2.87%	US, UK, Ger, Fra	2.38%	US, UK, Ger, Fra
1.87%	United States	2.08%	United States
3.39%	United Kingdom	2.54%	United Kingdom
4.83%	Germany	3.14%	Germany
9.13%	France	3.94%	France
6.51%	Japan	3.15%	Japan
6.33%	Brazil	4.10%	Brazil
7.79%	China	4.58%	China
11.81%	India	7.12%	India
1.60%	World ex US, UK, Gr, Fr, ex China, ex India	2.57%	World ex US, UK, Gr, Fr, ex China, ex India
3.37%	World	3.15%	World

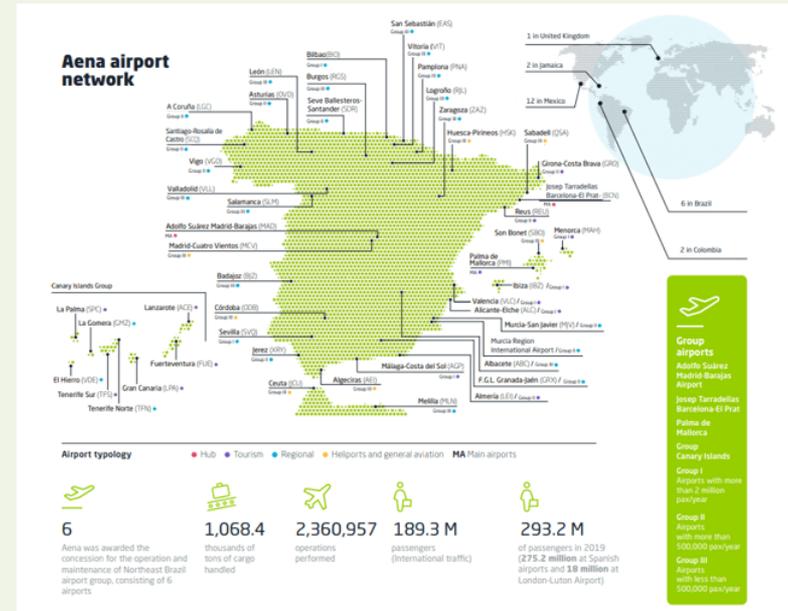
Passenger volume in commercial flights 2024-2030		Passenger volume in commercial flights 2024-2050	
3,069,000,000	US, UK, Ger, Fra	5,399,000,000	US, UK, Ger, Fra
1,098,000,000	United States	1,680,000,000	United States
171,000,000	United Kingdom	269,000,000	United Kingdom
146,000,000	Germany	246,000,000	Germany
152,000,000	France	246,000,000	France
146,000,000	Japan	224,000,000	Japan
171,000,000	Brazil	336,000,000	Brazil
1,098,000,000	China	2,240,000,000	China
366,000,000	India	1,120,000,000	India
3,069,000,000	World ex US, UK, Gr, Fr, ex China, ex India	5,399,000,000	World ex US, UK, Gr, Fr, ex China, ex India
6,100,000,000	World	11,200,000,000	World

However, the actual capacity announcements by the world's top 20 airports can be considered a greater reveal of "insider" estimates, and imply a 6.5% CAGR in passenger volumes by commercial flight to 2030

Airport	Announced expansion to (pax, m)	Timeline	Announced passenger capacity growth CAGR (%) to 2030
Total top 20	2,122		6.5%
Atlanta – Hartsfield-Jackson (ATL)	125	2030	2.6%
Dubai International (DXB)	150	2030	10.8%
Dallas/Fort Worth (DFW)	100	2030	3.3%
Tokyo Haneda (HND)	90	2030	0.0%
London Heathrow (LHR)	92	2031	0.4%
Denver International (DEN)	100	2040	1.5%
Istanbul Airport (IST)	150	2027	29.1%
Chicago O'Hare (ORD)	100	2028	7.7%
Delhi – Indira Gandhi Intl (DEL)	125	2030	4.6%
Shanghai Pudong (PVG)	130	2030	10.2%
Los Angeles (LAX)	100	2029	2.7%
Guangzhou Baiyun (CAN)	120	2026	0.0%
Seoul Incheon (ICN)	120	2030	2.5%
Paris Charles de Gaulle (CDG)	80	2030	0.0%
Singapore Changi (SIN)	140	2034	5.0%
Beijing Capital (PEK)	80	2030	-0.5%
Amsterdam Schiphol (AMS)	70	2030	0.0%
Madrid Barajas (MAD)	90	2030	5.2%
New York JFK (JFK)	80	2030	5.9%
Shenzhen Bao'an (SZX)	80	2027	26.5%

Source: Top 20 airport disclosures, World Bank estimates

Aena, monopoly ownership of all Spanish airports; whilst landing charges are regulated, other charges (duty free rentals, taxi services, land development) remain unregulated



Favourable tailwinds: over the last 10 yrs, flights into Spain have increased at a 6% annualised growth rate; tourism has the highest elasticity of demand to lower cost in per passenger-km, Spain is delivering the highest economic growth in the Eurozone

Spain's economy keeps growing — why is the country doing so well?

PUBLISHED SAT, AUG 23 2025 2:00 AM EDT | UPDATED MON, AUG 25 2025 7:48 AM EDT

- Spain's gross domestic product surpassed expectations in the second quarter, growing 0.7%, above a forecast of 0.6%.
- Investment and consumption are the main key drivers for this growth, as well as a booming tourism sector.
- "Spain is a great outlier now in terms of growth. It's also a great place to invest." Spain's Finance Minister Carlos Cuerdo told CNBC.

Sources: Aena annual report, GA-Courtenay research, other corporate and public disclosures

Case study: US railroad tonnages to benefit from long term uplifts in volumes concurrently with industry consolidation increasing railroad pricing power

US onshoring of manufacturing is poised to significantly uplift railroad volumes

How Relocating Manufacturing from Asia to North America will Lead to Paradigm Shift in Rail and Logistics

The onshoring/reshoring phenomenon does offer great potential to grow rail business in the short term and strengthen the rail industry as a whole. However, improvements are needed to move forward.

Brian Gorton
Sep 11, 2024
From [Corvair Corporation](#)

Today, onshoring and reshoring continues to grow and flourish because companies believe that by manufacturing closer to customers, they will have better control over production and logistics, experience a shortened delivery timeline, receive significant cost reductions including reduced transportation costs, and other benefits.

However, the phenomenon of relocating manufacturing from Asia to North America will lead to a paradigm shift in logistics, and in railroading, in particular. It will cause managers to completely reexamine their transportation strategies, starting from mile zero, and consider some new alternatives such as rail freight for all of its advantages.

In theory, this new phenomenon should provide railroads with a bountiful growth opportunity resulting from their perceived proximity to the onshoring/reshoring ecosystem and its customers, such as heavy equipment, food, chemicals, wood, automobiles and other categories. However, that growth will not necessarily be automatic. The railroad industry will need to evolve in three key areas to maximize this onshoring/reshoring opportunity.

An America-first agenda will require a renewed focus on U.S. rail

02 May 2025

Stretching coast to coast over 140,000 miles of track, the US rail network is set to play a critical part in meeting the growing domestic demand for efficient goods transport.

President Trump's "America First" agenda is prioritising delivering America's economic needs through American industry. Meanwhile, geopolitical and economic uncertainty is causing more companies to onshore their operations in the United States. A KPMG survey, published in 2024, found that 81% of U.S.-based executives say their companies are bringing back more of their supply chains due to global challenges¹. This research was conducted ahead of the introduction of tariffs which will further amplify this trend.

Together, these factors should increase demand on the country's domestic rail networks. This is an opportunity of a scale that the sector hasn't seen in decades, including for the smaller, but critical, components of the network: its short line railroads.

According to our own research, the rail freight market in the US has seen nearly continuous growth in volumes over the last 20 years when excluding coal volumes. In addition, it has outpaced the growth in trucking in the US by around 40%. There's room for further expansion as for distances over 550 miles, where rail is typically the most cost-effective option, rail only accounts for about 50% of the freight transportation market.

December 2015: BNSF CEO states that if Norfolk Southern receives takeover approach, BNSF "would participate" either with counter offer for Norfolk Southern or with takeover of CSX

Buffett's BNSF Open to Bid for Norfolk to Challenge CP's Offer

By [Thomas Black](#)
December 10, 2015, 11:36 PM GMT Updated on December 11, 2015, 9:40 PM GMT

- ▶ Chairman Rose says N. America industry won't stop at one deal
- ▶ He prefers no consolidation, but would jump in if it begins

BNSF Railway Executive Chairman Matt Rose is open to making a competing offer for Norfolk Southern Corp., the company targeted by Canadian Pacific, and CSX Corp. also would be "very much in play." While BNSF doesn't favor fresh dealmaking, the carrier won't be sidelined if any occurs, Rose said Thursday in a telephone interview.

Putting Canadian Pacific together with Norfolk Southern would leave Jacksonville, Florida-based CSX at a disadvantage, inevitably making that railroad a target as well, Rose said. Canadian Pacific sees \$1.8 billion in merger benefits from a Norfolk Southern deal, which "quite frankly creates an uneven, unstable railroad network with CSX," he said.

"Then you've got two railroads in the west that would be looking at, 'Should one of us jump in with the NS assets or should the other one jump in on the CSX assets?'" Rose said.

A BNSF offer for Norfolk, Virginia-based Norfolk Southern would be akin to Union Pacific's efforts to step in during the 1990s to "provide a competitive bid when the Burlington Northern and Santa Fe were merging," Rose said. "If there is consolidation to be had, we would participate as well."

August 2025: Trump fires Surface Transportation board member who opposed prior railroad mergers

Trump fires Democratic member of Surface Transportation Board ahead of huge rail merger decision

BY [JOSH FUNK](#)
Updated 9:53 PM GMT-1, August 28, 2025



Share

President Donald Trump has fired one of two Democratic members of the U.S. Surface Transportation Board to break a 2-2 tie before the body considers the largest railroad merger ever proposed.

Board member Robert E. Primus said on LinkedIn that he received an email from the White House Wednesday night terminating the position he has held since he was appointed by Trump in his first term. The vacancy would allow Trump to appoint two additional Republicans to the board before its decision on the Union Pacific-Norfolk Southern merger, though the Senate would have to confirm them.

Primus was the only board member to oppose Canadian Pacific's acquisition of Kansas City Southern railroad when it was approved two years ago because he was concerned it would hurt competition. He was named Board chairman last year by former President Joe Biden and led the board until Trump, after his election, elevated Board member Patrick Fuchs to Chairman.

July 2025: Union Pacific announces takeover of Norfolk Southern

Union Pacific and Norfolk Southern to create \$250bn US rail giant in biggest deal of the year

Combined operator would be the first to carry cargo from the west coast to the eastern seaboard on its own tracks

Oliver Barnes in New York

Published JUL 29 2025

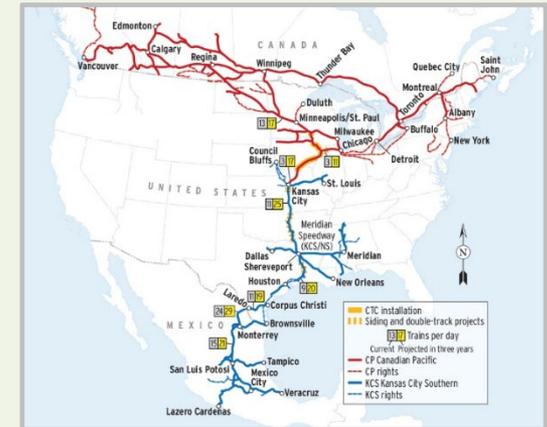
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US railroad operator Union Pacific has agreed to acquire Norfolk Southern in the biggest deal of the year, which will create a transcontinental rail juggernaut valued at \$250bn.

The largely stock-based tie-up, which would forge the largest railroad operator in the country with more than 50,000 miles of track across 43 states, comes as the industry grapples with weaker freight volumes as well as high fuel and labour costs.

A combination of Union Pacific, which operates west of the Mississippi River, and Norfolk Southern, in the east, would be the first operator in US history capable of carrying goods from the Pacific coast to the Atlantic on its own tracks. It would also help to ease a logjam around the main interchange point in Chicago.

Canadian Pacific – duopoly Canada railroads and a monopoly Canada-to-Mexico railroad

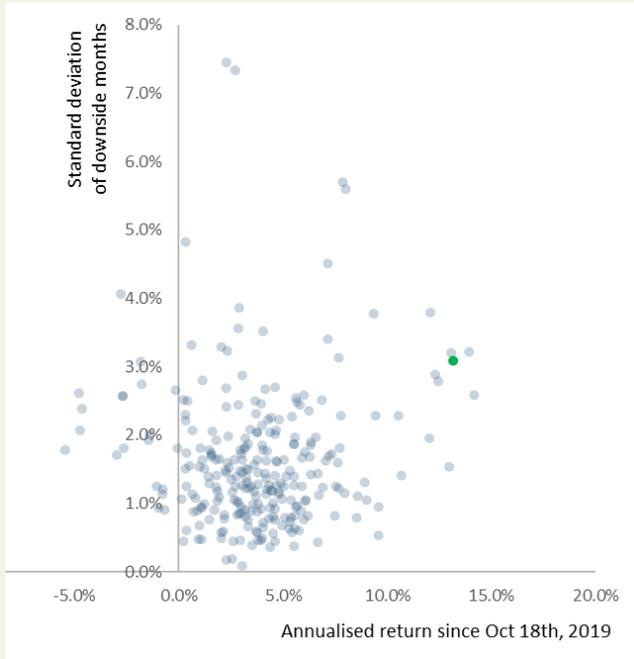


Source: public domain articles, Canadian Pacific corporate disclosures

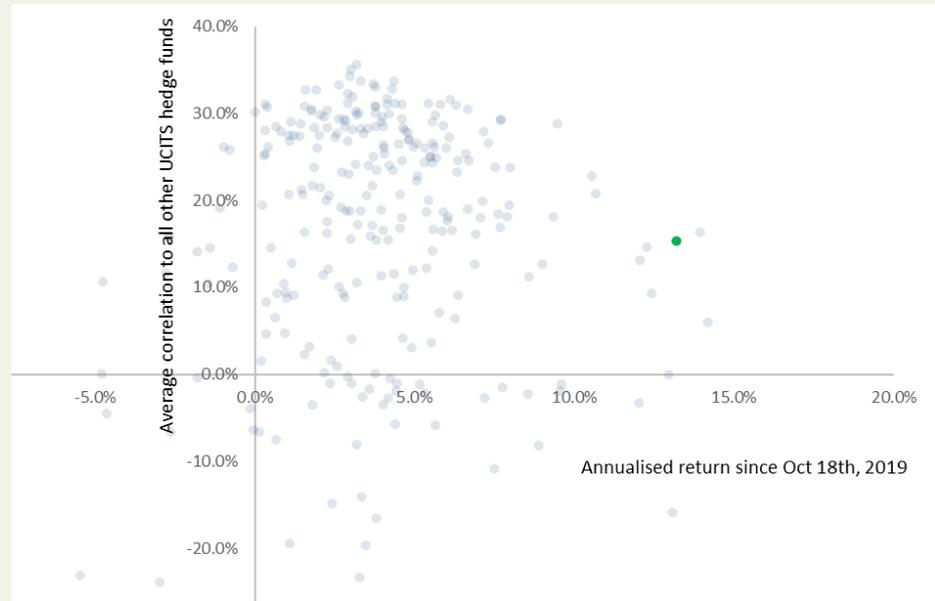
Attractive risk and de-correlation metrics; SSF is a portfolio diversifier

Period October 2019 (fund inception) to May 2025

Returns relative to risk: on a Sortino Ratio basis (return/down months SD), SSF ranks in the top one third (26th percentile) of all UCITS funds



De-correlation from other funds: SSF's leading performance is also concurrent with below average correlation to other UCITS funds and as such SSF also acts as a powerful portfolio *de-correlator*



Fund information

Inception date:	October 17 th , 2019
Manager focus:	GA-Courtenay Special Situations Fund is the only investment entity overseen by the fund manager and the fund manager is fully invested in the product
Structure:	UCITS (Irish domiciled)
Base currency and share classes:	Base currency: USD, other share classes: EUR, GBP and CHF
Administrator, auditor and custodian:	Administrator: US Bank, Auditor: Deloitte, Custodian: European Deposit Bank
Dealing:	Daily, 2pm
Strategy:	<ul style="list-style-type: none">• A portfolio of structurally advantaged equity special situation investments, enhanced by a positive carry hedge structure combining merger arbitrage yield with index put option protection• Extensive, internally developed, code-based proprietary systems that optimise both research throughput and execution agility• Intensive per situation due diligence through deep dive research• Historic success targeting highly accretive situations within both equity investments and merger arbitrage including competitive bidding situations, contingent value rights, and shareholder activism• Index put options held for market dislocation scenarios, downside beta neutralisation
Leverage tolerance:	<ul style="list-style-type: none">• Variable with opportunity set
Fee structure:	<ul style="list-style-type: none">• Annual management charge 75bps (institutional share classes)• Performance fee 20% with underperformance carried forward

Fund manager bio

Fund manager bio

- 2023 – present: Green Ash Partners, GA-Courtenay Special Situations Fund
- 2016 – 2023: Odey Asset Management (Special Situations Fund launches 2019)
- 2014 – 2016: D.E. Shaw & Co, Vice President, Special Situations Group
- 2000 – 2012: Tisbury Capital, Fortelus Capital (both special situations hedge funds)
- 1998 – 2000: Oxford University (Scholar, 1st class MA, Oriel College)



Key strengths

- Wide-ranging experience in situation assessment and relationship building across global developed markets
- Advanced search and history proprietary systems accelerate situation discovery, analysis and risk management
- Extensive due diligence competency through deep dive research
- Demonstrated ability to accrete situation economics by activist engagement

Opportunities to partner with GA-Courtenay Special Situations Fund

Product

GA-Courtenay Special Situations Fund:
our flagship UCITS hedge fund

Concentrated segregated accounts

Seeder class opportunity for focused offshore GA-Courtenay Fund

Opportunity

The GA-Courtenay Special Situations Fund remains a unique product proposition amongst UCITS hedge funds:

- Explicit focus on monopolistic businesses, formidable barriers to entry, long term growth tailwinds*
- Willingness and ability to safely gear equity book ~1.3x*
- Product downside protection using S&P500 options, allowing product to target double digit percentage returns whilst significantly mitigating impacts from market shock scenarios*
- No long-term performance drag from holding S&P500 put options, put option decay cost paid for by merger arbitrage yield*
- Builds on Adrian's more than 20 year special situations career experience and more than 6 years in overseeing GA-Courtenay Special Situations Fund*

GreenAsh Partners is also able to provide concentrated segregated accounts focused on individual or a selection of positions held by GA-Courtenay Special Situations Fund, alongside bespoke hedge structures. Please contact us for further information.

GreenAsh Partners is also in a position to agree selective seeder share class commitments for a prospective, focused offshore GA-Courtenay Special Situations Fund. Please contact us for further information.

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