



Why Invest in Space Exploration & Innovation?

For Informational Purposes Only | As of March 31, 2021

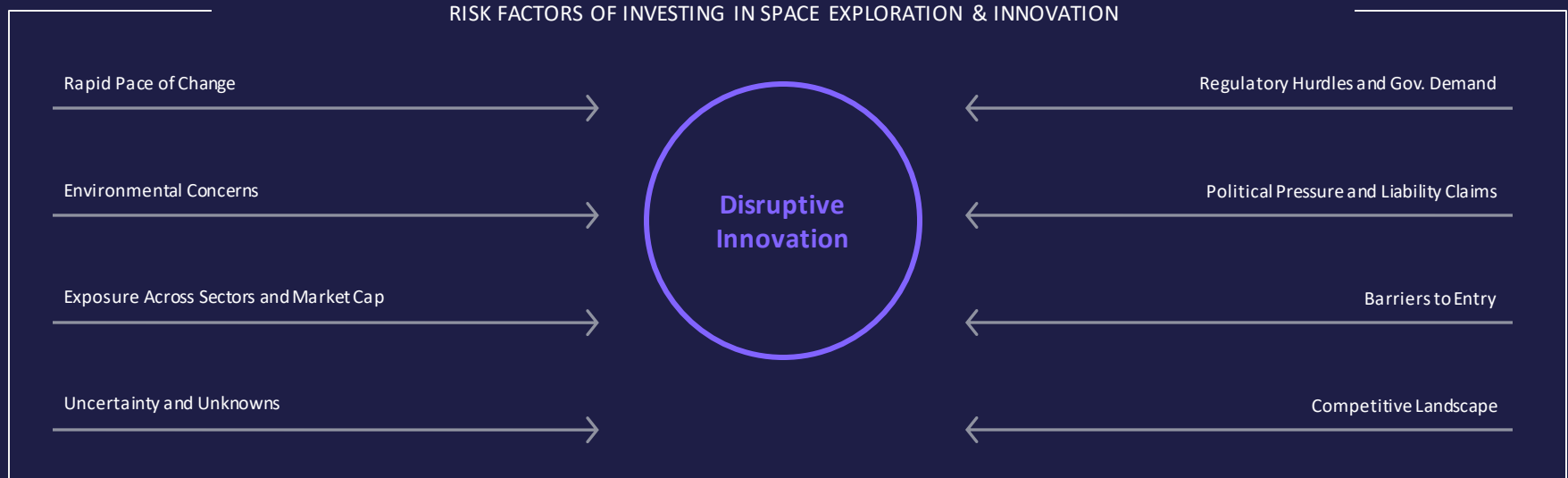
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ARKX 



Risks of Investing in Space Exploration & Innovation

Please note, companies that ARK believes are capitalizing on disruptive innovation and developing technologies to displace older technologies or create new markets may not in fact do so. ARK aims to educate investors and seeks to size the potential investment opportunity in space exploration and innovation, noting that risks and uncertainties may impact our projections and research models. Investors should use the content presented for informational purposes only, and be aware of market risk, disruptive innovation risk, regulatory risk, and risks related to certain innovation areas. In addition, the potential growth or displacement of market industries discussed herein may not translate to favorable investment performance. **Please read risk disclosure carefully.**



→ Aim for a cross-sector understanding of technology and combine top down and bottom up research.

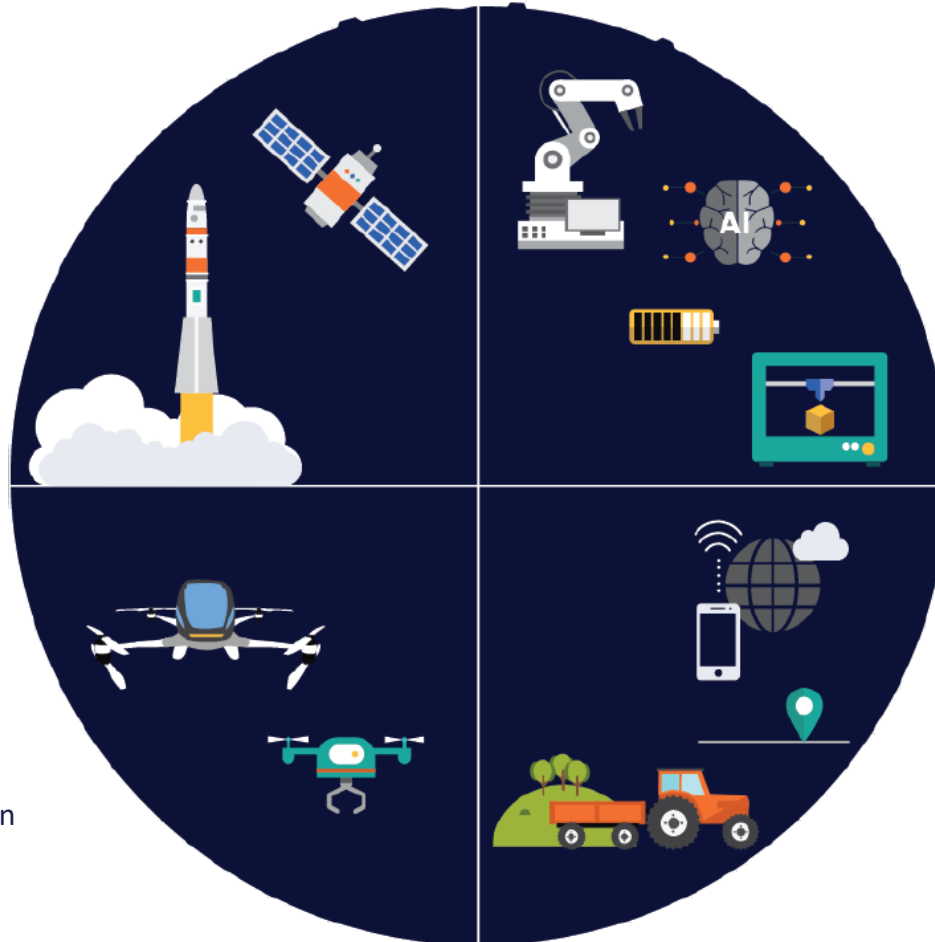
→ Aim to understand the regulatory, market, sector, and company risks. (See Risk and Disclosure at the end)



ARK's Breakdown Of The Space Ecosystem

Orbital Aerospace

Companies that launch, make, service, or operate platforms in orbital space



Enabling Technology

Companies that create the technologies required for successful value add aerospace operations

Suborbital Aerospace

Companies that launch, make, service, or operate platforms in suborbital space

Aerospace Beneficiaries

Companies that stand to benefit from aerospace activities

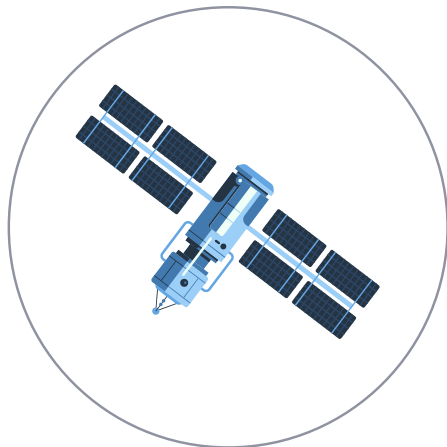


Orbital Aerospace Is A Big Idea

Satellites could bolster GDP growth as their networks launch and leverage data for terrestrial businesses.

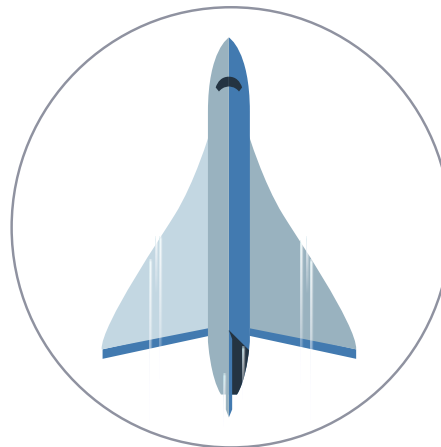
Global Connectivity

Roughly 50% of the global population lacks internet connectivity, but with more satellites, cloud computing will go global.



Hypersonic Point-to-Point Travel

As long-haul flight times collapse from 10+ hours to 2-3 hours, the global economy could transform.



Multiplanetary Species

Humans have been living on the International Space Station for 20 years. Within a decade, humans could inhabit the moon and Mars.



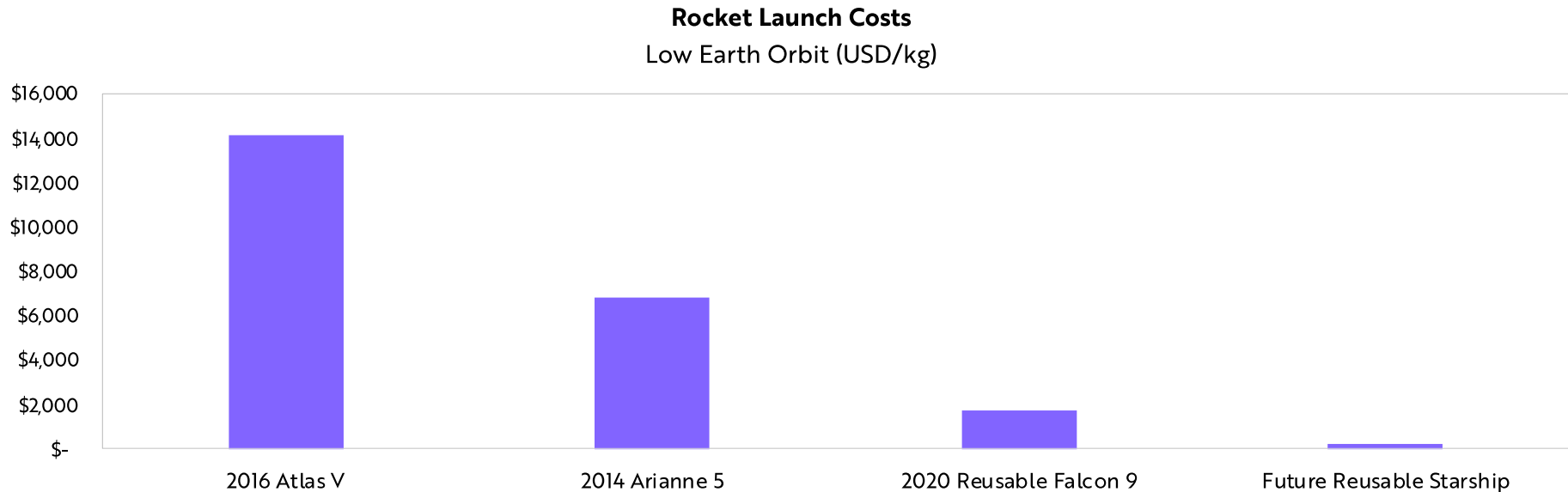
Forecasts are inherently limited and cannot be relied upon.

Source: ARK Investment Management LLC, 2020 based on data sourced from: Global connectivity source: https://www.bondcap.com/pdf/Internet_Trends_2019.pdf, ISS source: <https://www.nationalgeographic.com/science/2020/10/humans-have-lived-on-international-space-station-20-years-straight/>.



Rocket Reusability Could Lower The Cost Of Launches By An Order Of Magnitude

Thus far, SpaceX has flown the same Falcon 9 rocket booster eight times successfully.

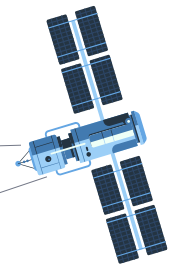
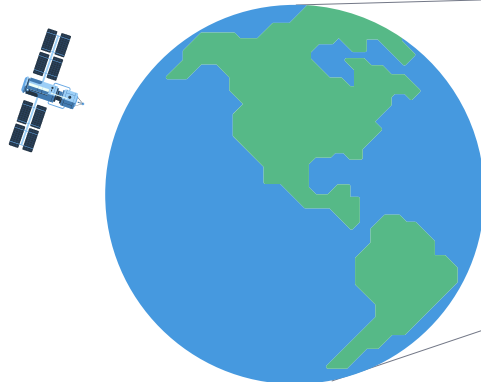




Lower Satellite Launch Costs Could Enable Continuous Global Coverage With Low Latency

While satellites launched into geostationary orbit (GEO) attempted to offer global coverage, latency limited their ability to provide a compelling broadband internet offering. Today, companies are beginning to launch thousands of satellites in low earth orbit (LEO) and enabling continuous global coverage with low latency.

LEO
~300 miles
<40 ms latency*



GEO
~22,000 miles
700 ms latency*

*Note: Latency is measured in milliseconds (ms).

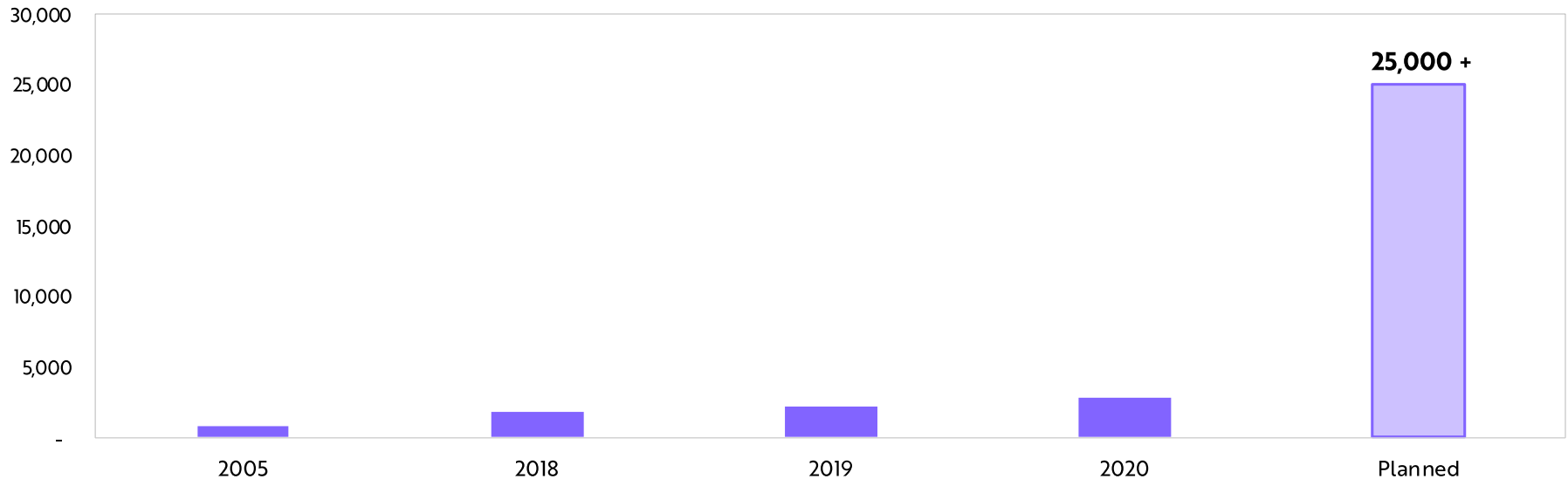
Source: ARK Investment Management LLC, 2020 based on data sourced from: "Satellites 101: LEO vs. GEO." Iridium Satellite Communications, 9 Sept. 2018, www.iridium.com/blog/2018/09/11/satellites-101-leo-vs-geo/, Jon Brodtkin Nov 2, 2020 9:09 pm UTC. "SpaceX Starlink Users Provide First Impressions and Unboxing Pictures." Ars Technica, 2 Nov. 2020, arstechnica.com/information-technology/2020/11/spacex-starlink-beta-a-tester-takes-user-terminal-into-forest-gets-120mbps/?utm_social-type=owned.



Thanks To Lower Launch Costs, The Number Of Satellites Scheduled For Orbit Has Increased Significantly

Satellites could bolster GDP growth as their networks launch and leverage data for terrestrial businesses.

Number of Active Satellites



Forecasts are inherently limited and cannot be relied upon.

Source: ARK Investment Management LLC, 2020 based on data sourced from: Union of Concerned Scientists Satellite Database. Planned satellite launches over approx. 10 years.



Sizing The Opportunity

Satellite Broadband Revenues Could Approach \$10 Billion Per Year In The US And \$40 Billion Globally During The Next 5-10 Years.

- According to ARK's research, the \$40 billion opportunity to serve populations without access is a fraction of the total addressable market for satellite broadband.
- The market for connected planes, trains, and motor vehicles is likely to reach \$36 billion in 2025.
- Governments globally are likely to add further to the demand for space services.
- In total, the satellite connectivity market could approach \$100 billion annually over the medium term.

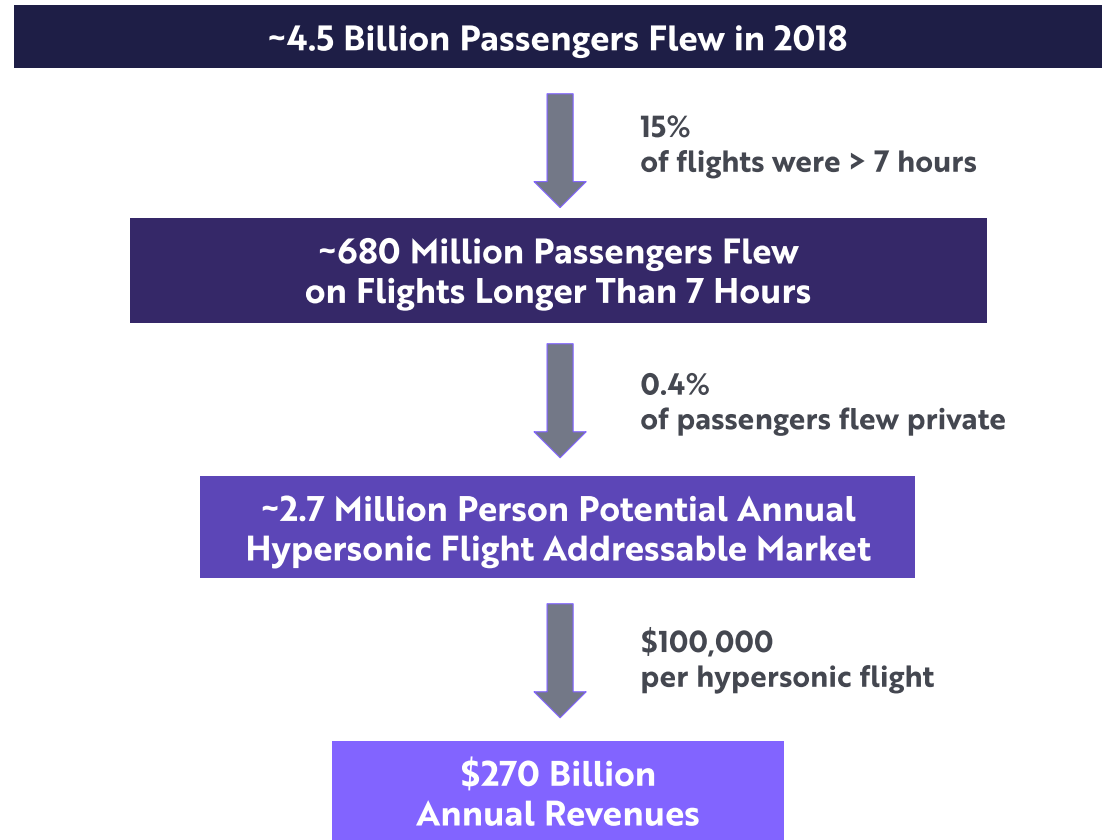
42 Million	÷	2.6	×	\$50	×	12	=	~\$10 Billion Annual Addressable Market
Americans without access to broadband		People Per Household		Average Monthly Broadband Bill		Months Per Year		
3 Billion	÷	5	×	\$5	×	12	=	~\$40 Billion Annual Addressable Market
People globally without access to broadband		People Per Household		Monthly Broadband Bill		Months Per Year		



Sizing The Opportunity

ARK Expects The Demand For Hypersonic Flight To Skyrocket.

- According to our research, passengers on short-haul flights are willing to pay roughly \$15,000 for every two hours saved on private planes.
- Based on the economics of the short-haul flight market, ARK estimates that passengers and businesses will be willing to pay \$100,000 to save 13 hours on a 2–3 hour private hypersonic flight from New York City to Japan.
- **If 2.7 million passengers were to pay ~\$100,000 for long-haul hypersonic flights, the market would scale to \$270 billion in revenues annually.**





5 REASONS INVESTORS SHOULD CONSIDER ARKX

- 1. Exposure To Innovation:** Aims for thematic exposure to “Space Exploration”, including orbital and sub-orbital aerospace, enabling technologies, and beneficiaries of aerospace activities, such as agriculture, Internet access, global positioning system (GPS), construction, and imaging.¹
- 2. Growth Potential:** Aims to capture long-term growth with low correlation of relative returns to traditional growth strategies.
- 3. Tool For Diversification:** Offers a tool for diversification due to little overlap with traditional indices. It can be a complement to traditional value/growth strategies.
- 4. Grounded In Research:** Combines top-down and bottom-up research in its portfolio management to identify space innovation companies and convergence across markets.
- 5. Cost Effective:** Seeks to provide a lower cost alternative to mutual funds with true active management in an exchange traded fund (ETF) that invests in rapidly moving themes.

Orbital Aerospace Companies are companies that launch, make, service, or operate platforms in the orbital space, including satellites and launch vehicles. **Suborbital Aerospace Companies** are companies that launch, make, service, or operate platforms in the suborbital space, but do not reach a velocity needed to remain in orbit around a planet. **Enabling Technologies Companies** are companies that develop technologies used by Space Exploration related companies for successful value-add aerospace operations. These operations include artificial intelligence, robotics, 3D printing, materials and energy storage. **Aerospace Beneficiary Companies** are companies whose operations stand to benefit from aerospace activities, including agriculture, internet access, global positioning system (GPS), construction, imaging, drones, air taxis and electric aviation vehicles.



ARK Space Exploration & Innovation ETF (ARKX)

ARK defines “Space Exploration” as leading, enabling, or benefitting from technologically enabled products and/or services that occur beyond the surface of the Earth, including orbital and sub-orbital aerospace, enabling technologies, and beneficiaries of aerospace activities.

- Ticker: **ARKX**
- Fund AUM: **\$63 Million**
- Typical Number of Holdings: **40-50 U.S. Equities/U.S.-listed ADRs**
- Expense Ratio: **0.75%**

TOP 10 HOLDINGS

	Weight
TRIMBLE INC	8.7%
THE 3D PRINTING ETF	6.2%
KRATOS DEFENSE & SECURITY	5.8%
L3HARRIS TECHNOLOGIES INC	5.0%
JD.COM INC-ADR	5.0%
KOMATSU LTD	4.5%
IRIDIUM COMMUNICATIONS INC	4.5%
LOCKHEED MARTIN CORP	4.5%
THALES SA	4.0%
BOEING CO/THE	3.6%
	51.7%

MARKET CAPITALIZATION

Mega (\$100B+)	32.2%
Large (\$10-\$100B)	38.7%
Medium (\$2-\$10B)	18.6%
Small (\$300M-\$2B)	10.6%
Micro (\$50-\$300M)	0.0%

PORTFOLIO COMPOSITION

Aerospace Beneficiaries	40.3%
Orbital Aerospace	28.7%
Enabling Technology	25.2%
Suborbital Aerospace	5.8%

SECTORS

Industrials	47.2%
Information Technology	22.2%
Consumer Discretionary	13.4%
Communication Services	9.6%
Not Classified	7.6%

Holdings are subject to change and should not be considered as investment advice, or a recommendation to buy, sell or hold any particular security. The securities identified do not represent all of the securities purchased, sold or recommended for client accounts. It should not be assumed that an investment in the securities identified was or will be profitable.

Source: ARK Investment Management LLC; All data as of March 31, 2021.



Thematic Strategies Focused on Disruptive Innovation



ARKK
ARK Innovation ETF



ARKX
ARK Space Exploration
& Innovation ETF



ARKW
ARK Next Generation Internet ETF



PRNT
The 3D Printing ETF



ARKQ
ARK Autonomous Tech. & Robotics ETF



IZRL
Israel Innovative Technology ETF



ARKG
ARK Genomic Revolution ETF



ARKF
ARK Fintech Innovation ETF



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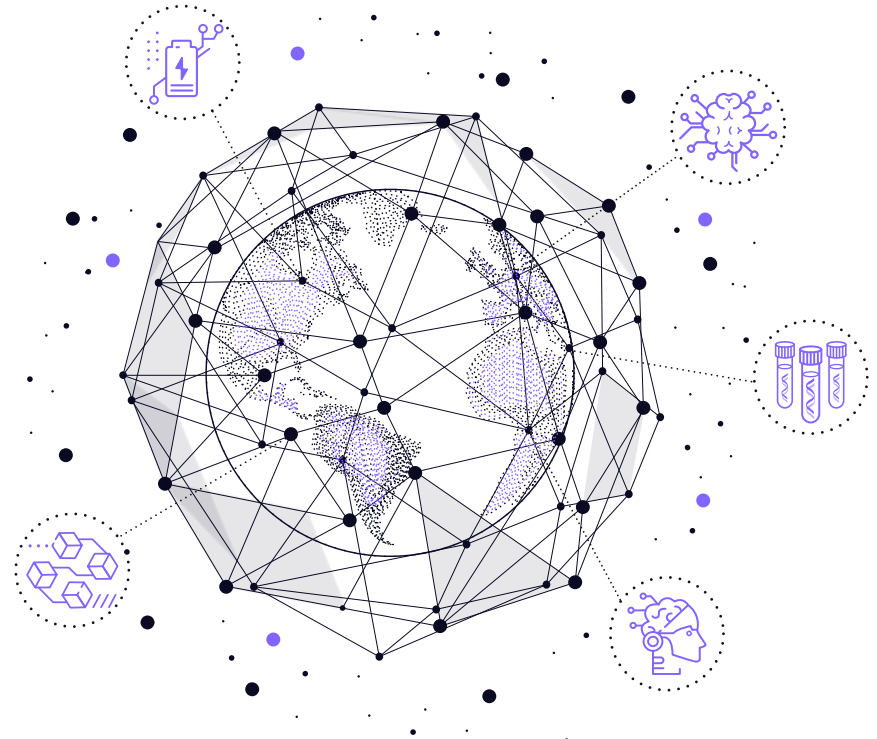
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Factsheet, prospectus, and latest performance reports are available for download on our website: ark-funds.com/investor-material

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Investors should carefully consider the investment objectives and risks as well as charges and expenses of an ARK ETF before investing. This and other information are contained in the ARK ETF prospectus and summary prospectus, which may be obtained by visiting www.ark-funds.com. The prospectus should be read carefully before investing.

Fund Risks: The principal risks of investing in ARKX: **Equity Securities Risk.** The value of the equity securities the Fund holds may fall due to general market and economic conditions. **Foreign Securities Risk.** Investments in the securities of foreign issuers involve risks beyond those associated with investments in U.S. securities. These risks are greater in emerging markets. **Industrials Sector Risk.** The industrials sector includes companies engaged in aerospace and defense, electrical engineering, machinery, and professional services. Companies in the industrials sector may be adversely affected by changes in government regulation, world events and economic conditions. In addition, companies in the industrials sector may be adversely affected by environmental damages, product liability claims and exchange rates. **Information Technology Sector Risk.** The information technology sector includes companies engaged in internet software and services, technology hardware and storage peripherals, electronic equipment instruments and components, and semiconductors and semiconductor equipment. Information technology companies face intense competition, have limited product lines, markets, financial resources or personnel, face rapid product obsolescence, are heavily dependent on intellectual property and the loss of patent, copyright and trademark protections may adversely affect the profitability of these companies.

Aerospace and Defense Company Risk. Companies in the aerospace and defense industry rely to a large extent on U.S. (and other) Government demand for their products and services and may be significantly affected by changes in government regulations and spending, as well as economic conditions, industry consolidation and other disasters. For other risks regarding the fund please see the prospectus. There can be no assurance that the ETF will achieve its investment objective. The ETF's portfolio is more volatile than broad market average. **Special Purpose Acquisition Companies (SPAC) Risk.** A SPAC is a publicly traded company that raises investment capital for the purpose of acquiring or merging with an existing company. Investments in SPACs and similar entities are subject to a variety of risks beyond those associated with other equity securities. Because SPACs and similar entities do not have any operating history or ongoing business other than seeking acquisitions, the value of their securities is particularly dependent on the ability of the SPAC's management to identify a merger target and complete an acquisition. ETF shares may only be redeemed directly with the ETF at NAV by Authorized Participants, in very large creation units. There can be no guarantee that an active trading market for ETF shares will develop or be maintained, or that their listing will continue or remain unchanged. Buying or selling ETF shares on an exchange may require the payment of brokerage commissions and frequent trading may incur brokerage costs that detract significantly from investment returns.

Additional risks of investing in ARKX include market, management and non-diversification risks, as well as fluctuations in market value and NAV. Shares of ARKX are bought and sold at market price (not NAV) and are not individually redeemed from the ETF. ETF shares may only be redeemed directly with the ETF at NAV by Authorized Participants, in very large creation units. There can be no guarantee that an active trading market for ETF shares will develop or be maintained, or that their listing will continue or remain unchanged. Buying or selling ETF shares on an exchange may require the payment of brokerage commissions and frequent trading may incur brokerage costs that detract significantly from investment returns.

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