

## Crypto Mining for Digital Gold is Turning Green

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Author: Roxanna Islam, CFA

### Summary

- Consumer mobile and connected device usage is growing rapidly in North America.
- As usage grows, technology disruption trends like 5G and Internet of Things (IoT) become more prevalent.
- For those who wish to invest in impactful technological trends, the tech disruption space could serve as a high growth alternative or addition to a broader investment in technology.

As global connectivity and digital communication grows, technology has become increasingly important in the economy—particularly disruptive technology or technology that drives significant, impactful growth. Disruptive technology is particularly attractive to some growth investors since the players are often newer companies with smaller market capitalizations that partner with more established firms to revitalize mature industries. For example, automation, 3D printing, and robotics are considered disruptors of traditional manufacturing processes, while digital payment services and blockchain technology are disrupting financial services. While those examples are mostly commercial applications, consumers actually play a large role in the evolution of tech disruption, particularly through their use of mobile devices. Specifically, this note focuses on how the growth in mobile devices, including cell phone and other internet connected devices, has created opportunities in disruptive technologies like 5G and Internet of Things (IoT). For those who wish to invest in impactful technological trends, the tech disruption space could serve as a high growth alternative or a complement to a broader portfolio of technology investments.

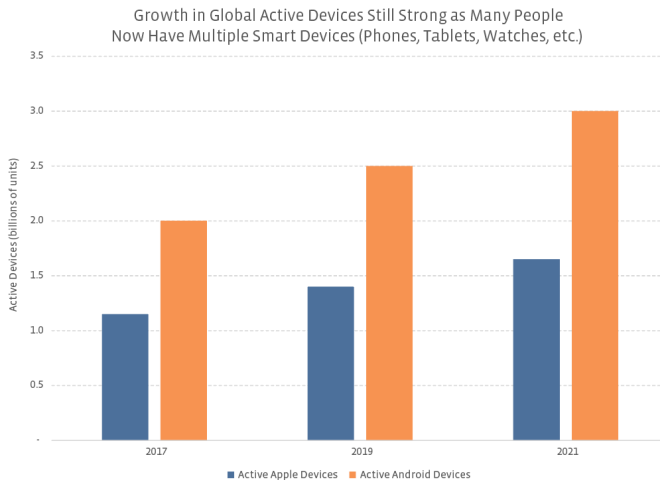
### Most Americans have multiple connected devices including TVs, computers, tablets, and watches.

With growing mobile penetration in American households, mobile and smart devices have undoubtedly changed the consumer experience from mobile banking to online shopping to remote work capabilities. Large technology companies like Apple Inc. (AAPL) and Alphabet Inc. (GOOGL) have reported a meaningful increase in active devices. In its 2021 first quarter earnings call, Apple cited 1.65 billion active devices with over 1 billion active iPhones globally.<sup>1</sup> An active device is any device (iPhone, iPad, Apple Watch, Mac, etc.) which engaged in an Apple service over the past 90 days. The growth in active devices referenced does not even fully account for replacement demand of iPhones (accelerated even more with the introduction of 5G devices) for which Apple cites double-digit growth for both switches and upgrades compared to last year. Similarly, Google announced that there were over 3 billion active Android devices in its Google Play Store at its Google I/O 2021 conference compared to 2 billion devices in 2017.<sup>2</sup> According to the Annual Internet Report released by Cisco Systems (CSCO), North America could have approximately 5 billion total networked devices/connections by 2023—up from 3 billion in 2018.<sup>3</sup> North America could likely also have the most devices/connections per capita (13.4 per capita) compared to the rest of the world (3.6 per capita).

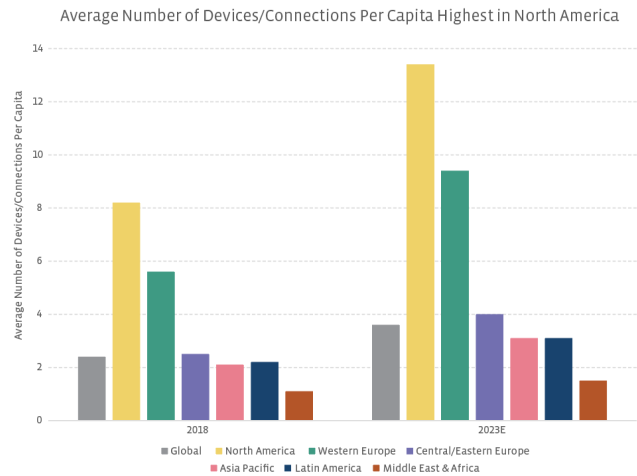
1. Apple Inc. (AAPL) - [Apple \(AAPL\) Q1 2021 Earnings Call Transcript](#)

2. The Verge - [There are over 3 billion active Android devices](#)

3. Cisco Systems - [Cisco Annual Internet Report \(2018–2023\) White Paper](#)



Source: Apple company filings, The Verge



Source: Cisco Annual Internet Report (2018-2023)

### Mobile connectivity is helping drive trends in tech disruption.

As mobile and smart device usage grows, telecom and cable providers are looking for more ways to invest in 5G systems, which offer faster speeds and greater bandwidth to meet the growing demand for internet connectivity. The increased capacity from 5G service should allow greater machine-to-machine (M2M) connections, which is also referred to as IoT. (IoT consists of connectivity between mobile phones, smart watches, TVs, smart homes, and autonomous cars, in addition to commercial applications like RFID tags and automated manufacturing.)

5G and IoT are among the tech disruption categories included in the S-Network North American Disruptor Index (SNNADX), along with blockchain, fintech, cybersecurity, artificial intelligence, and robotics companies. The tech disruptor universe offers a unique opportunity relative to the broad technology space as it is comprised of newer constituents (median age of approximately 15 years) that are below \$50 billion in market capitalization with a median of just over \$4 billion (and an average market cap of close to \$9 billion). Earlier stage, smaller cap companies could exhibit more growth potential, particularly when many of these benefit from strategic partnerships with established companies in banking, technology, and communications. On a one-year total return basis, SNNADX has returned over 59% compared to 39% total return for the S&P Technology Select Sector Index (IXT), which consists of larger cap technology companies with a mean and median market capitalization of \$42 billion and \$150 billion, respectively.<sup>4</sup>

### Bottom Line:

Technology disruptors have been changing the economic landscape as they introduce new products and services, fuel competition, and revitalize growth in mature industries. Increased usage of mobile devices and internet is only one factor among many which drives disruptive trends like 5G, Internet of Things, and fintech. As investors reflect on how their own internet and mobile device usage has grown over the past few years, consider looking beyond traditional blue-chip tech investments to the technology disruptor space.

*The [S-Network North American Disruptor Index \(SNNADX\)](#) is the starting universe for the SmartTrust Technology Revolution Unit Investment Trust. Series 8 of the UIT deposited on November 2, 2021. The UIT selects 30 stocks from SNNADX for inclusion in the portfolio.*

4. Performance data as of Friday, November 5, 2021

Index	Ticker	Total-Return Performance				
		30 Days	YTD	1-Year	3-Year	5-Year
<b>Healthcare</b>						
S-Network Healthcare Technology Index	HLTHX	7.71%	-1.70%	11.28%	127.86%	253.39%
S-Network Medical Breakthroughs Index	PMBI	8.34%	-5.11%	2.69%	43.04%	148.65%
S-Network Healthcare Innovation Index	PHIX	12.21%	-6.61%	2.30%	64.99%	179.13%
<b>Technology</b>						
O'Shares Global Internet Giants Index	OGIGX	6.63%	4.24%	14.58%	177.85%	320.67%
S-Network North American Disruptor Index	SNNADX	10.28%	28.75%	59.05%	113.52%	N/A
S-Network US Disruptor Index	SNUSDX	10.93%	23.55%	61.03%	114.86%	236.15%
S-Network Tech Target Index	SNTECH	6.26%	15.33%	40.58%	73.11%	172.58%
<b>Water</b>						
S-Network Global Water Index	JGI	6.35%	20.02%	31.45%	69.09%	96.03%
S-Network Global Water Works Index	JWW	2.07%	11.41%	19.82%	51.50%	78.35%
S-Network Global Water Technology Index	JWT	10.75%	29.11%	43.84%	83.93%	108.05%
<b>Smart Climate Risk</b>						
S-Network Smart Climate Risk 50 Index	SNSC50	5.40%	18.09%	23.92%	64.95%	137.77%
S-Network Smart Climate 50 Index	SNSC250	6.09%	21.86%	30.49%	67.49%	142.69%
<b>Blockchain and Cryptocurrency</b>						
Alerian Galaxy Global Blockchain Equity, Trusts & ETPs Index	BCHAIN	13.38%	54.62%	122.42%	N/A	N/A
Alerian Galaxy Global Cryptocurrency-Focused Blockchain Equity, Trusts & ETPs Index	CRYPTO	19.38%	102.11%	440.63%	N/A	N/A
<b>Other</b>						
S-Network Streaming & Gaming Index	STREAM	7.52%	9.04%	25.06%	127.54%	N/A
S-Network Emerging Infrastructure Builders Index	EIBI	-1.01%	3.67%	20.40%	28.06%	46.27%
S-Network Space Index	SPACE	3.41%	24.08%	41.40%	25.71%	62.10%
S-Network MicroSectors Gold Miners Index	MINERS	8.95%	-11.48%	-21.11%	67.65%	N/A
S-Network Global Travel Index	TRAVEL	6.57%	16.35%	42.12%	N/A	N/A

Source: S-Network Global Indexes. All performance data as of November 5, 2021.

## Related Research:

[A Differentiated Approach to Disruptive Technology](#)

[Four Megatrends Elevating the Commercial Space Industry](#)

[Crypto Mining for Digital Gold is Turning Green](#)

[Investing in the Digital Transformation: Accessing Blockchain and Crypto Through Equity Investments](#)

[Strong Airline Demand Gives Wings to the Travel Industry](#)

## Underlying Index | Associated Product/Direct-Indexing Platform Availability

### Healthcare

[S-Network Medical Breakthroughs Index \(PMBI\)](#) | ALPS Medical Breakthroughs ETF (SBIO)

[S-Network Healthcare Innovation Index \(PHIX\)](#) | SmartTrust Healthcare Innovations Trust; Available on the C8 platform and the SMARtX platform

### Technology

[O'Shares Global Internet Giants Index \(OGIGX\)](#) | O'Shares Global Internet Giants ETF (OGIG)

[S-Network North American Disruptor Index \(SNNADX\)](#) | SmartTrust Technology Revolution Trust – Includes 30 stocks from SNNADX

### Water

[S-Network Global Water Index \(JGI\)](#) | Invesco Global Water Portfolio – Includes 25 stocks from JGI; Available on the C8 platform

### Smart Climate Risk

S-Network Smart Climate Risk 50 Index (SNSC50) | Available on the C8 platform and the SMARtX platform

S-Network Smart Climate Risk 250 Index (SNSC250) | Available on the C8 platform

### Blockchain and Crypto

[Alerian Galaxy Global Blockchain Equity, Trusts & ETPs Index \(BCHAIN\)](#) | Invesco Alerian Galaxy Blockchain Users and Decentralized Commerce ETF (BLKC)

[Alerian Galaxy Global Cryptocurrency-Focused Blockchain Equity, Trusts & ETPs Index \(CRYPTO\)](#) | Invesco Alerian Galaxy Crypto Economy ETF (SATO)

### Other

[S-Network Infrastructure Builders Index \(EIBI\)](#) | Available on the C8 platform

[S-Network Space Index \(SPACE\)](#) | Procure Space ETF (UFO), Procure Space UCITS ETF (YODA)

[S-Network MicroSectors Gold Miners Index \(MINERS\)](#) | MicroSectors Gold Miners 3x Leveraged ETN (GDXU), MicroSectors Gold Miners -3x Inverse Leveraged ETN (GDXD)

[S-Network Global Travel Index \(TRAVEL\)](#) | ALPS Global Travel Beneficiaries ETF (JRNY)

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### Alerian

alerman.com  
info@alerman.com | 972.957.7700  
3625 N. Hall St., Suite 1200, Dallas, TX 75219

### S-Network Global Indexes

snetworkglobalindexes.com  
info@snetworkinc.com | 972.957.7700  
267 Fifth Avenue, Suite 508, New York, NY, 10016