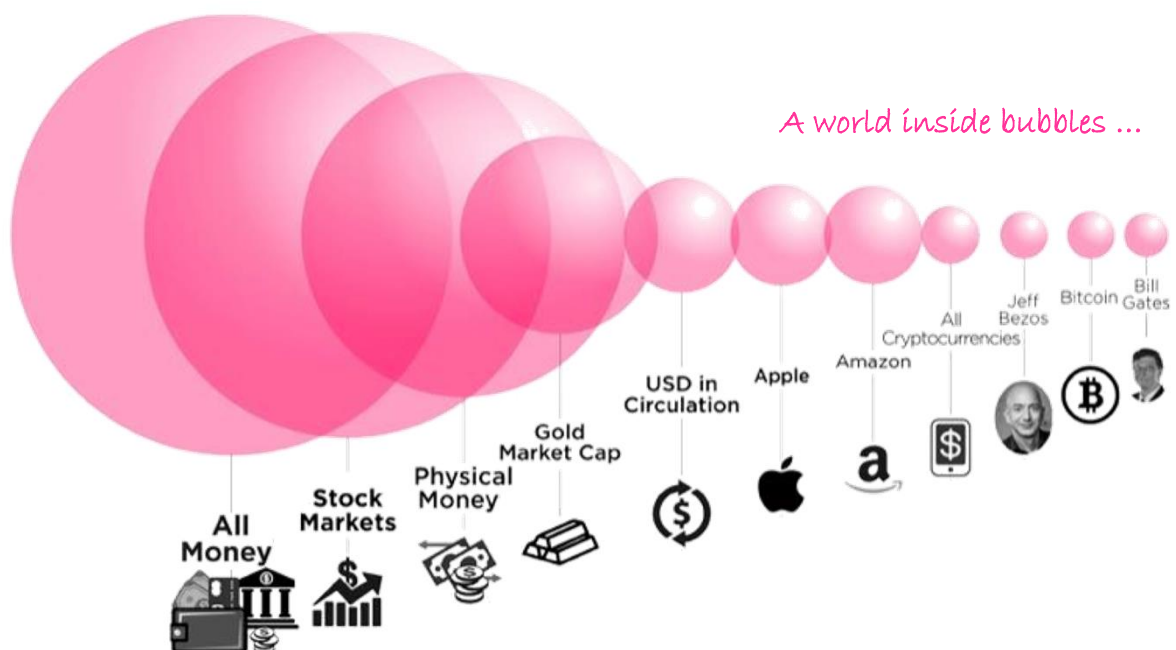


# KADU



## TRON Crypto ETFs

September 2021



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## TRON ETN listing on Deutsche Börse

TRON has cleared regulatory approval to list its Layer-1 token, via VanEck TRX ETN (Exchange Traded Note), with expected trading debut on Xetra in September. Owing to regulatory constraints on crypto assets, there have only been a handful of crypto ETPs (ETC or ETN) successfully listed on mainstream international stock exchanges, mainly for Bitcoin and Ether in Canada and European markets. The latest addition of TRX listing is a fresh testimony to the success of TRON's industry leading ecosystem and its drive to expand global roadmap yielding fruition.











## Grand vision: Global settlement layer & cross-chain

Three years on since its mainnet inception in 2018, TRON has evolved into a leading global network with more than 52 million global user accounts, by far the most popular public blockchain. It is home to nearly one-third of the total stablecoins in circulation globally and processes on average over US\$6 billion in daily transfer volume (YTD), beating incumbent payment industry leaders by an order of magnitude. Based on the latest open letter from its founder Justin Sun, TRON is crystalizing a grand vision that would capitalize on its dominance in cross-border transfer and transform its Layer-1 into the Global Settlement Layer with cross-chain operability for the next generation payment system. To millions of underbanked global populations, it can serve as a more inclusive and superior alternative vis a vis the outdated SWIFT system.

## Industry comparison: Stablecoins & TVL

Based on its on-chain activities and user metrics, TRON protocol has become one of the most active open blockchains globally with an integrated ecosystem encompassing Layer-1 protocol and smart contracts for a diverse range of use cases including APENFT and BTFS storage system. It is particularly worth highlighting that TRON has surpassed Ethereum in USDT circulation since April 2021 with \$33 billion currently, accounting for about 50% of total global supply. Moreover, TRON ranks global top-3 in terms of total value locked (TVL) with a peak value of \$14 billion this year. In comparison across key on-chain metrics, TRON stands out as the most compelling in terms of Capitalization to TVL and stablecoin circulation.

Exhibit 1: Leading peer comparison (as of 2021/8/16)

	(Unit: US\$ bn)			Market cap/TVL
	Market cap	TVL		
 <b>TRON</b>	9.1	10.1		0.9x
 <b>Polygon</b>	9.2	4.4		2.1x
 <b>Ethereum</b>	369.7	109.2		3.4x
 <b>Binance</b>	70.2	16.9		4.1x
 <b>Solana</b>	17.9	2.0		9.2x

Source: CoinMarketCap, TRONSCAN, DeFi Llama

## TRON supply mechanism: Deflation vs inflation

As an early adopter of Proof of Stake (PoS) mechanism, TRON protocol has foreshadowed the ongoing industry shift in favor of more efficient, scalable and green protocols vis a vis Proof of Work (PoW) that is most notably associated with Bitcoin and Ethereum. Its Delegated PoS model has not only yielded considerable gain in throughput and network efficiency, but also attractive staking return for token holders.

In terms of its token supply mechanism, there are two categories of transactions with opposing effect. In addition to its genesis supply of 100 billion TRX, new tokens are minted as incentive reward for essential on-chain maintenance such as block validation and community voting, which is approximately 1.8% of total circulation. On the offsetting side, the amount of token burn is equivalent to the gross fees generated from on-chain transactions. Consequently, the net supply of TRX depends on the Rewards-Burn dynamics on a daily basis. It's worth noting that TRX token supply became negative on multiple occasions in recent months, a deflationary scenario. Based on the year-to-date network performance, it is projected that total supply of TRX will increase by around 0.65% or 660 million tokens in 2021, effectively flattening its supply curve. In comparison, the annual inflation rate of Ether (ETH) ranges from 3% to 4%.

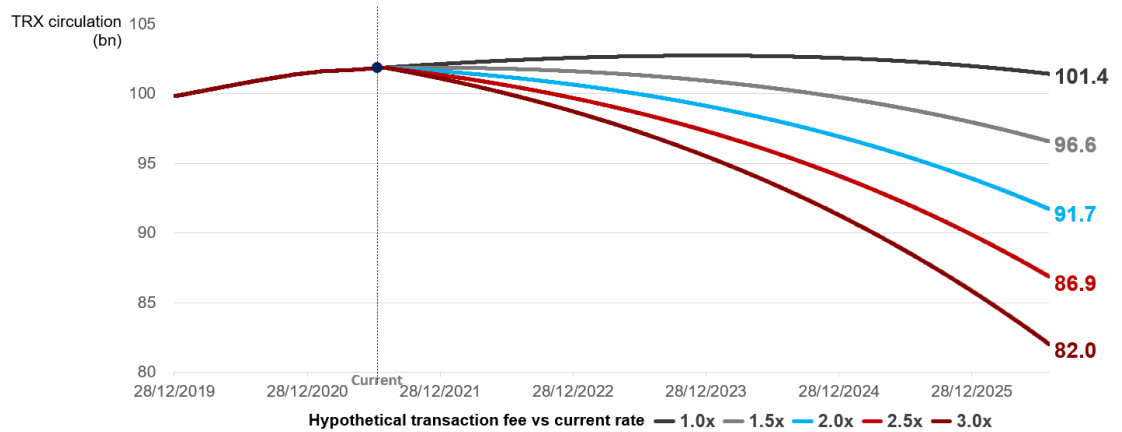
**Exhibit 2: Daily transaction fees (TRX, mn)**

		Fee rate per transaction				
		Current	1.5x	2.0x	2.5x	3.0x
Daily transaction count	Current	3	5	7	8	10
	1.5x	5	7	10	12	15
	2.0x	7	10	13	16	20
	2.5x	8	12	16	20	24
	3.0x	10	15	20	24	29

Note: Current fee level is based on daily average for the year-to-date period; source: TRONSCAN

TRON is well known to be the most inclusive blockchain network in terms of user friendliness with an average transaction fee of 0.82 TRX, by far the lowest in the industry, whereas Ethereum saw its peak daily average transaction fee fetching nearly \$70 per transaction. **TRON's ultra-low rate in transaction fee, strong user momentum and on-chain activities, together packs good recipes for a deflationary path.**

### Exhibit 3: TRX supply curve scenario analysis

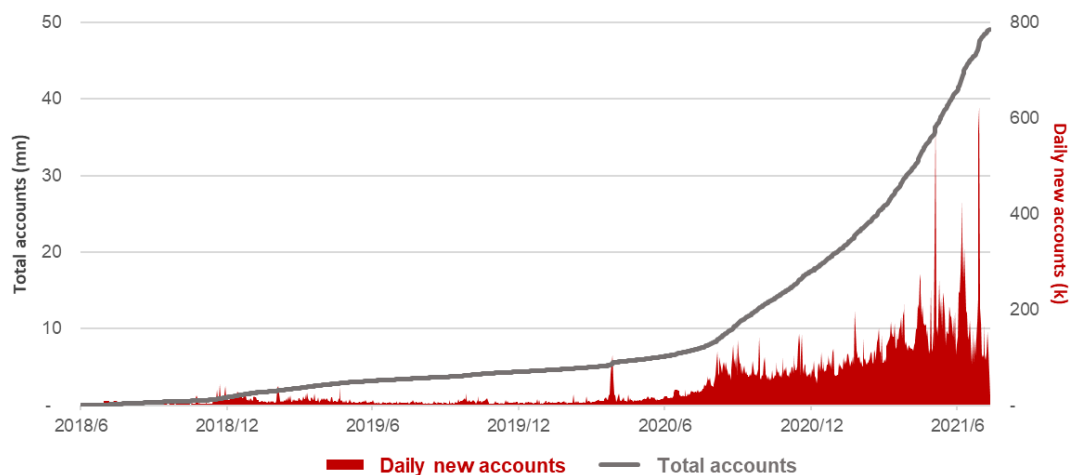


Note: Based on assumptions that daily transaction count grows at CAGR of 20%

## The most popular Web 3.0 ecosystem

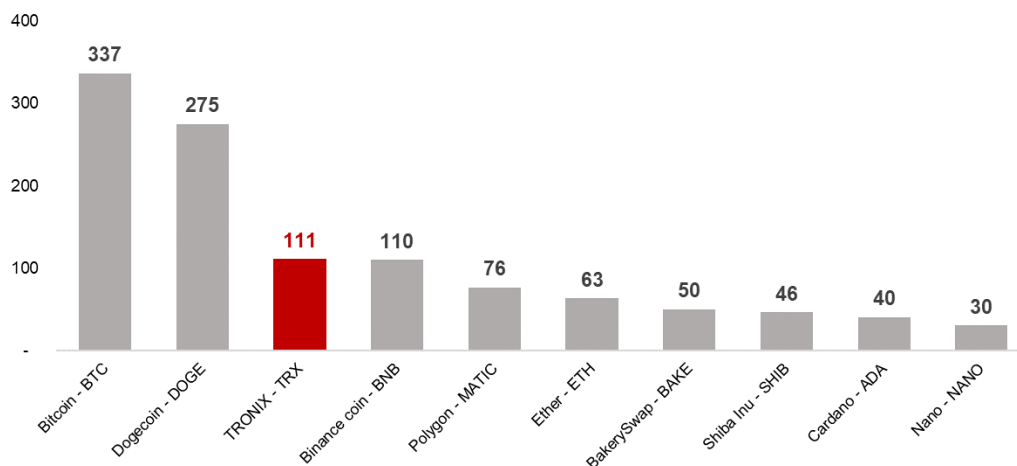
Following its mainnet launch in 2018, TRON protocol has since evolved into a leading global network that hosts more than 52 million global user accounts, by far the most popular public chain, and processes nearly \$6 billion in average daily transfer value during the year-to-date period, on par with Ethereum despite its inflated gas price. Total crypto assets on the TRON blockchain have flourished to more than \$50 billion in aggregate, while total value locked in Defi has surpassed \$10 billion, ranking TRON among the top-3 open blockchains globally.

### Exhibit 4: Global user account growth on TRON network



Source: TRONSCAN

**Exhibit 5: Top-10 most frequently mentioned tokens on Twitter (60 seconds)**



Source: CoinTrends.com

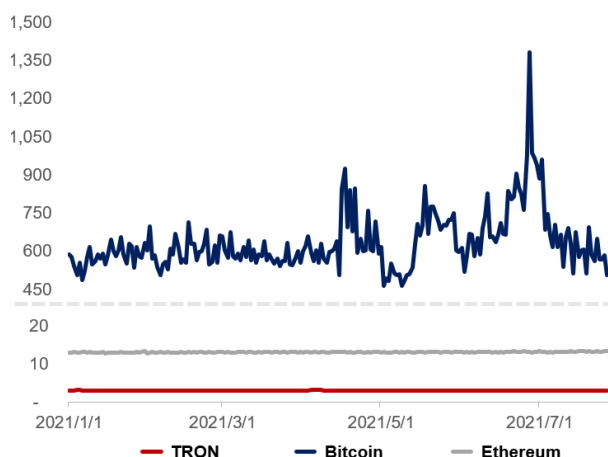
## The most inclusive blockchain in the world

In comparison with Bitcoin and Ethereum, TRON enjoys considerable advantage with lower cost and faster throughput. Its mass appeal to a rapidly expanding global userbase is not only manifested by cost effectiveness to dApp vendors but also as an inclusive payment solution to the underbanked populations internationally:

### I. Cheaper, faster and more energy-efficient:

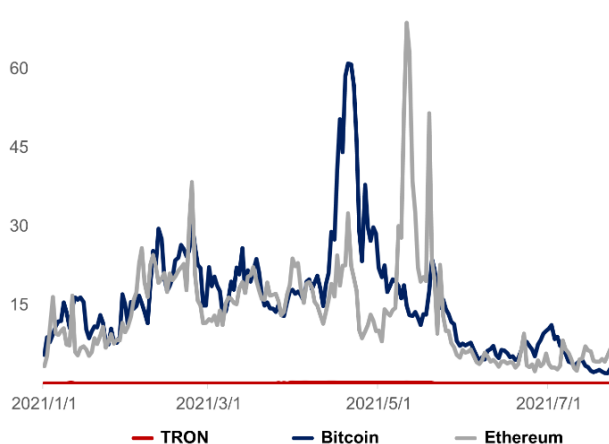
Average block generation on TRON takes about 3 seconds, compared to 10.5 minutes and 13.2 seconds for Bitcoin and Ethereum respectively. Thanks to DPoS consensus mechanism, TRON is among the most green protocols where users enjoy the lowest transaction fee of \$0.06 on average, in contrast to the astronomical fees at Bitcoin and Ethereum respectively.

**Exhibit 6: Average block time (seconds)**



Source: Messari, Etherscan

**Exhibit 7: Average fee per transaction (US\$)**

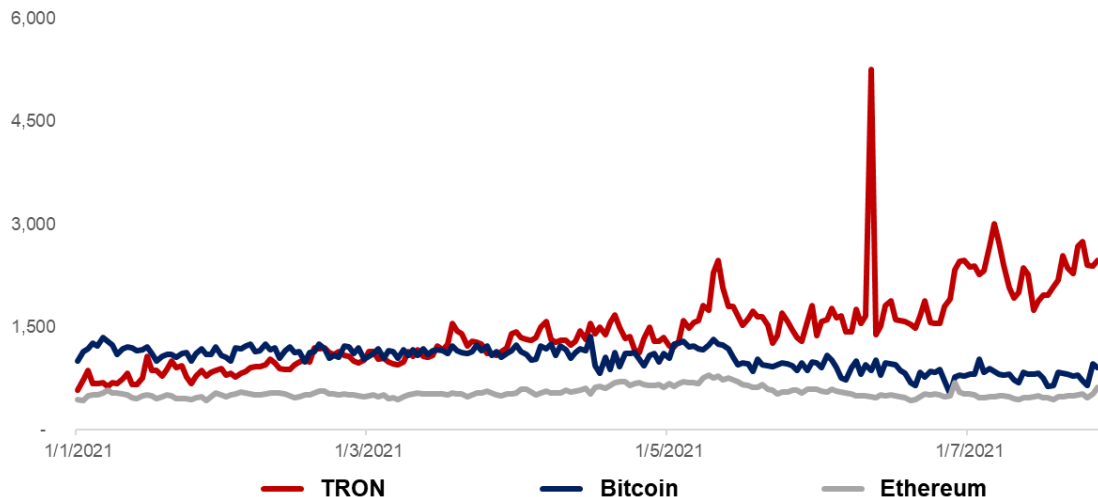


Source: TRONSCAN, Messari, Etherscan

## II. Industry leading user ecosystem:

TRON hosts one of the largest and most active on-chain user bases, with global accounts exceeding 52 million, average daily active addresses (DAA) of 1.4 million and peak DAA of 5.3 million, vis a vis the average DAA of Bitcoin and Ethereum at 1.0 million and 0.5 million respectively.

**Exhibit 8: Daily active addresses (k)**

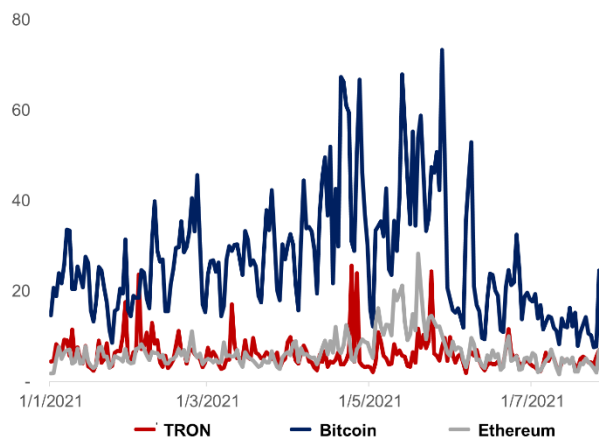


Source: TRONSCAN, Messari, Etherscan

## III. Most popular protocol for cross-border transfer:

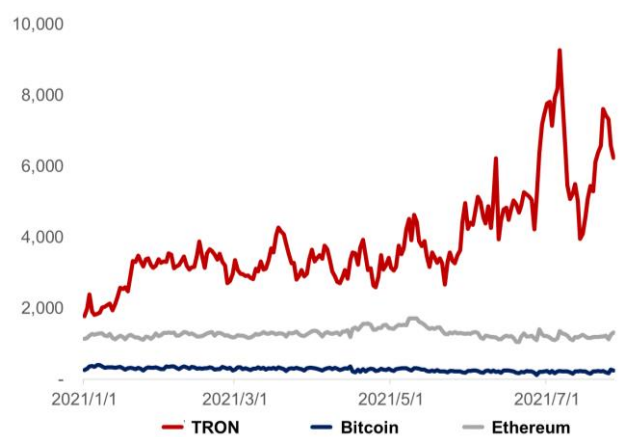
TRON and Ethereum are running neck-to-neck on average daily transfer value at \$6.1 billion and \$6.7 billion respectively, both with the same peak value of c. \$25 billion. In terms of transaction count, TRON outnumbers both Bitcoin and Ethereum by a wide margin, with 3.9 million average daily transactions vs 0.3 million and 1.3 million for Bitcoin and Ethereum for the year-to-date period.

**Exhibit 9: Daily transfer volume (US\$ bn)**



Source: TRONSCAN, BitinfoCharts

**Exhibit 10: Daily transaction count (k)**



Source: TRONSCAN, Messari, Etherscan

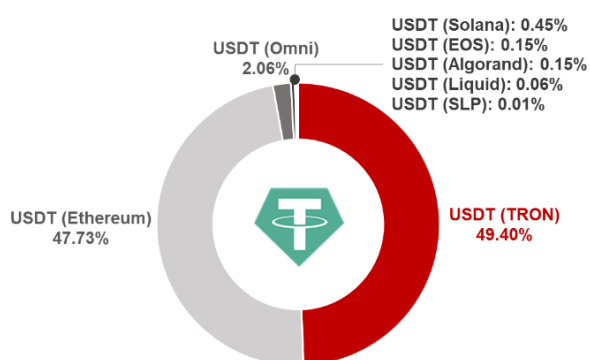
Note: Unless otherwise specified, all the figures are over the period from 2021/1/1 to 2021/7/27

## King of the stablecoin supply (USDT)

TRC20 is the TRON protocol (ERC20 equivalent) to facilitate on-chain transactions in stablecoins, including USDC, USDT and TUSD. At present, USDT ranks no. 1 with total supply of \$64.2 billion, while USDC comes second with \$27.2 billion and TUSD no. 6 with \$1.94 billion.

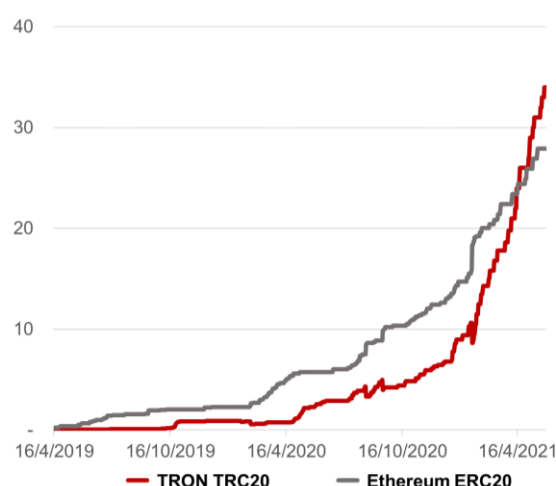
It is impressive that TRC20 USDT has overtaken ERC20 USDT since April 2021, in a short order of less than two years since its launch in 2019. Currently TRON is home to the largest USDT circulation with c. \$33 billion, representing around 50% of global market share.

Exhibit 11: USDT issuance by chains (as of 2021/8/4)



Source: Coin98 Analytics

Exhibit 12: TRON vs Ethereum (bn)



Source: TRONSCAN

## Next generation global payment system

Traditional cross-border payments are built on centralized platforms with high entry barriers. Cross-border fund transfer in particular entails a long list of intermediaries, including financial institutions and infrastructure service providers such as SWIFT. Since its inception in the 1970s, SWIFT has played a key role in cross-border payment system by regulating inter-bank communication through its payment messaging protocols. Owing to a largely antiquated technological foundation that predates the digital era, SWIFT has increasingly proven to be inadequate in a digitalized world with its high cost, low efficiency and susceptibility to hacking risk.

As illustrated below, TRON Layer-1 protocol is structured as a superior alternative with its real time settlement (instant global P2P payment) and near zero fee. It also significantly lowers the entry barrier for businesses and users alike by virtue of a temper-resistant and open-source global network, as well as improved security and system operability (i.e. digital wallet). Unlike traditional cross-border payment system





As illustrated below, TRON settlement protocol enjoys tremendous advantage across key performance metrics over traditional payment systems. There is little coincidence that TRON has emerged as the most popular platform for cross-border P2P transfer in 2021, with \$6.1 billion in average daily transfer value and 3.9 million in average transaction volume (vis a vis 0.27 million and 1.3 million for Bitcoin and Ethereum respectively). **It is the most inclusive blockchain network as evidenced by its average on-chain transfer size that is estimated to be about 2% of Bitcoin and 30% of Ethereum for the year-to-date period.**

#### Exhibit 17: Competitive advantages over traditional payment systems

	TRON	Paypal	Western Union	Banks
Type	Blockchain	Third-party payment	P2P payment	Traditional banks
Cross-border transfer fees	<b>\$0.062 per transaction<sup>1</sup></b>	5% min. fee: \$0.99; max. fee: \$4.99 (pay with PayPal balance or bank account)	Depends on the amount, speed, countries of sender and receiver, etc. (e.g. charges range from \$7 to \$102 when send money from US to China)	10.66% (average cost of sending \$200 via banks in 2021Q1)
Cross-border transfer speeds	<b>Instant</b>	Instant	Usually within minutes	2-3 days

Note: <sup>1</sup>Average fee per transaction over the period from 2021/1 to 2021/7; source: TRONSCAN, Paypal, Western Union, The World Bank, Investopedia, PaymentsJournal

## Smart contract & DeFi ecosystem

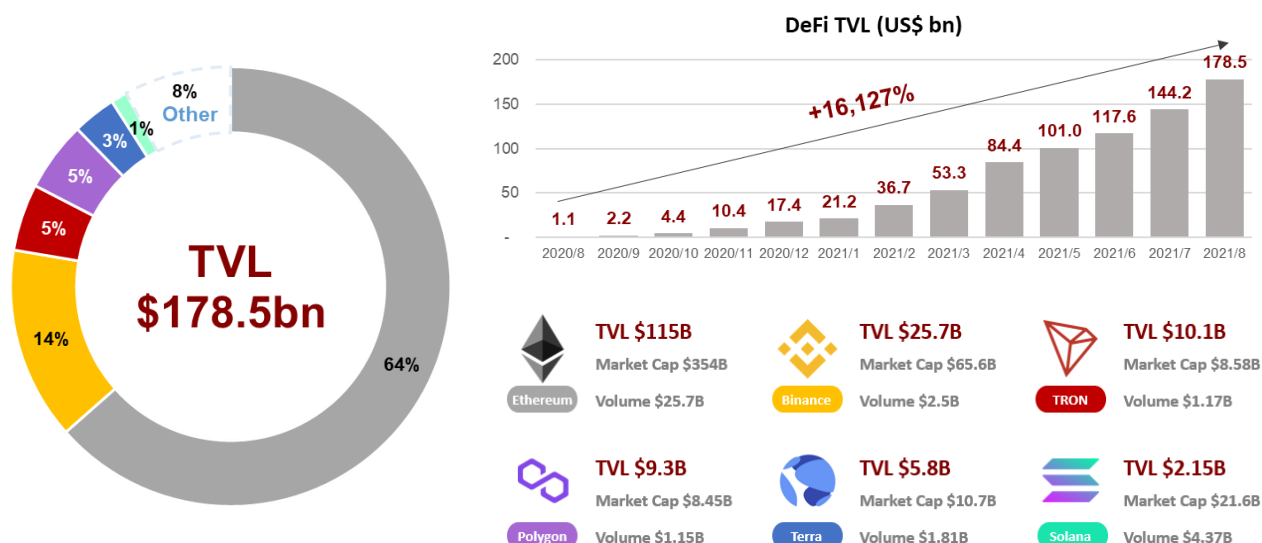
As the fastest-growing open blockchain across the world, TRON has successfully enriched an integrated ecosystem with multi-layer protocols and a robust portfolio of smart contracts covering the full spectrum of Defi, NFT and Gamefi use cases. Leveraging its 52 million strong global userbase, TRON's Defi TVL currently stands above \$10 billion with a peak read of \$14 billion this year, among the global Top-3.

#### Exhibit 18: Select TRON smart contract ecosystem

Infrastructure	NFT	Storage	Liquidity
TRONSCAN TronGrid SUN Network SHASTA TRON IDE TRON DAPP HOUSE	APENFT Tpunks Blockchain Cuties MIXMARVEL	BitTorrent WinkLink <small>RANK 57 Mcap \$1.51B</small> <small>RANK 149 Mcap \$250M</small>	JustSwap POLONI DEX TronTrade ZethyrSwap Unifi USWAP socialswap FX Newdex
DeFi	Stablecoin	Gaming	Wallet
SUN Pool X Pearl Finance GaussFans Mrweb JUST Centric Swapz ISwap Bankroll JustLend TRON LENDING CrossWallet FreeCoin OpenOcean TronPad JackPool tBridge Corn Golden Eggs	tether USD Coin JUST Stablecoin TUSD HUSD	Evolution Land Polker Fishing Master BlockLords TronKingdom CHAIN2 ARENA Pixel Farm play Hora 888Tron	TronLink Ledger SafePal Trust Wallet Huobi Wallet klever Atomic Wallet MATH TOKEN POCKET

Source: CryptoRank

**Exhibit 19: Global on-chain DeFi TVL overview (2021/8)**

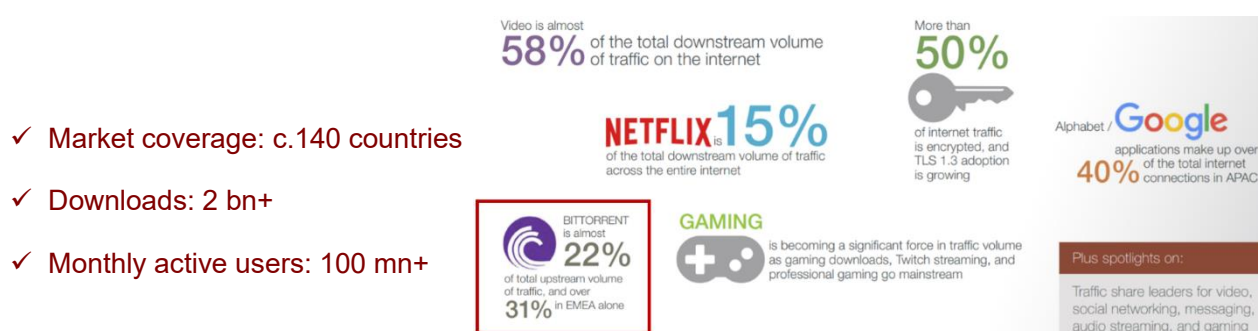


Source: CryptoRank, DeFi Llama, Defistation

## BTFS: Revitalizing BitTorrent ecosystem

TRON's strategic US acquisitions in recent years include BitTorrent, the world's most widely used P2P file sharing protocol founded in 2001. It enjoys an extensive global user ecosystem across nearly 140 countries with over 2 billion user downloads and more than 100 million monthly active users. Since its acquisition in 2018, TRON has further enhanced BitTorrent with TRON integration to revitalize its original P2P protocols with latest blockchain technology. As an offshoot of IPFS, BTFS is the next generation storage sharing protocol based on TRON and BitTorrent protocols, providing a secure and scalable fragmentized content storage and delivery system.

**Exhibit 20: BitTorrent global internet traffic share in 2018**



Source: Sandvine

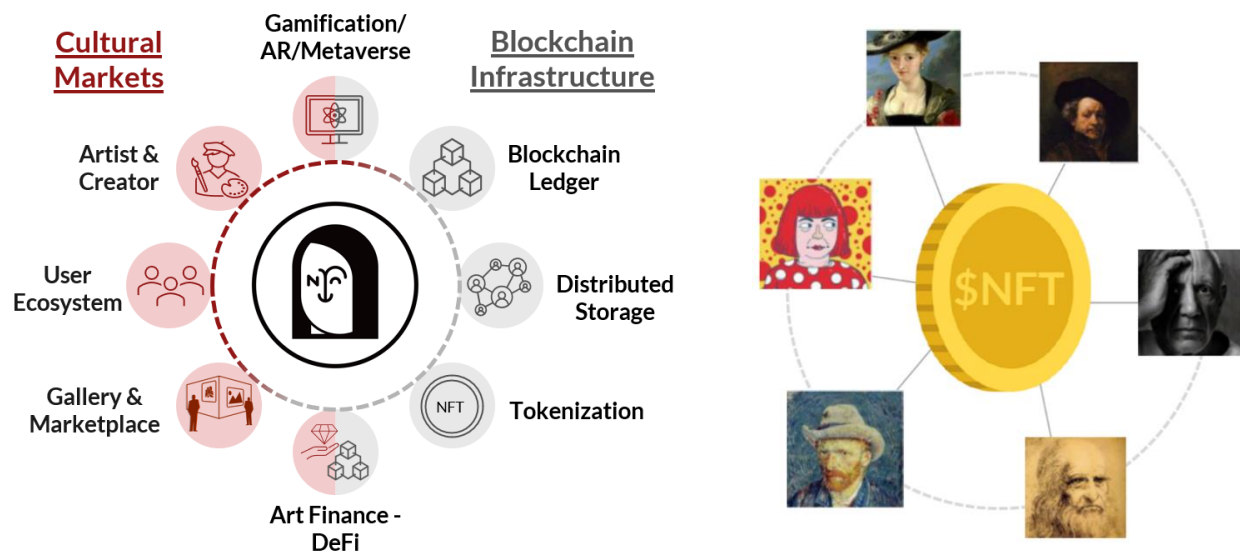
## BTTC: Cross-chain Layer-2 scaling solution

It is highly anticipated that BitTorrent Chain (BTTC), TRON's upcoming layer-2 protocol, will mark a significant milestone for TRON network and its entire value chain. As elaborated in the open letter from TRON founder Justin Sun, BTTC will answer the industry call to provide a seamless scaling solution to connect with Ethereum Virtual Machine. For the first time, it would enable cross-chain capability for dApp developers across Ethereum, BSC and TRON upon its launch by October 30, 2021 with BTT as its utility token.

## APENET: Connecting artists and token economy

NFT is the most popular emerging use case of blockchain since 2021, particularly with traditional art industry. TRON is among the early movers in the NFT space via active collaboration with global brands including Christie's. Most notably is its recent launch of APENFT, the world's first high-end crypto art investment community. Its vision is to serve as well-greased crypto gears that supports and propels the converging world of everyday life and the Metaverse in the not too distant future.

Exhibit 21: APENET and Metaverse



Source: TRON, APENFT

Other quote: Howmuch.Net

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