

# Polkadot Analysis

*June 2021*



**LEGAL DISCLOSURES**

THE INFORMATION CONTAINED HEREIN IS PROVIDED FOR INFORMATIONAL AND DISCUSSION PURPOSES ONLY AND IS NOT, AND MAY NOT BE RELIED ON IN ANY MANNER AS, LEGAL, TAX OR INVESTMENT ADVICE OR AS AN OFFER TO SELL OR A SOLICITATION OF AN OFFER TO BUY AN INTEREST IN ANY FUND OR SPECIAL PURPOSE VEHICLE MANAGED BY BLOCKCHANGE MANAGEMENT LLC OR BLOCKCHANGE VENTURES MANAGED FUNDS (“BLOCKCHANGE”) (EACH AN “INVESTMENT VEHICLE”). A PRIVATE OFFERING OF INTERESTS IN AN INVESTMENT VEHICLE WILL ONLY BE MADE PURSUANT TO SUCH INVESTMENT VEHICLE’S SUBSCRIPTION DOCUMENTS, WHICH WILL BE FURNISHED TO QUALIFIED INVESTORS ON A CONFIDENTIAL BASIS AT THEIR REQUEST FOR THEIR CONSIDERATION IN CONNECTION WITH SUCH OFFERING. THE INFORMATION CONTAINED HEREIN MUST BE KEPT STRICTLY CONFIDENTIAL AND MAY NOT BE REPRODUCED OR REDISTRIBUTED IN ANY FORMAT WITHOUT THE APPROVAL OF BLOCKCHANGE. NOTWITHSTANDING THE FOREGOING, EACH INVESTOR AND PROSPECTIVE INVESTOR (AND EACH EMPLOYEE, REPRESENTATIVE, OR OTHER AGENT THEREOF) MAY DISCLOSE TO ANY AND ALL PERSONS, WITHOUT LIMITATION OF ANY KIND, THE TAX TREATMENT AND TAX STRUCTURE OF AN INVESTMENT VEHICLE AND ITS INVESTMENTS AND ALL MATERIALS OF ANY KIND (INCLUDING OPINIONS OR OTHER TAX ANALYSES) THAT ARE PROVIDED TO SUCH INVESTOR OR PROSPECTIVE INVESTOR RELATING TO SUCH TAX TREATMENT AND TAX STRUCTURE, PROVIDED HOWEVER, THAT SUCH DISCLOSURE SHALL NOT INCLUDE THE NAME (OR OTHER IDENTIFYING INFORMATION NOT RELEVANT TO THE TAX STRUCTURE OR TREATMENT) OF ANY PERSON AND SHALL NOT INCLUDE INFORMATION FOR WHICH NONDISCLOSURE IS REASONABLY NECESSARY IN ORDER TO COMPLY WITH APPLICABLE SECURITIES LAWS.

AN INVESTMENT IN AN INVESTMENT VEHICLE WILL INVOLVE SIGNIFICANT RISKS, INCLUDING LOSS OF THE ENTIRE INVESTMENT. THE INTERESTS IN AN INVESTMENT VEHICLE WILL BE ILLIQUID, AS THERE IS NO SECONDARY MARKET FOR INTEREST IN AN INVESTMENT VEHICLE AND NONE IS EXPECTED TO DEVELOP. THERE WILL BE RESTRICTIONS ON TRANSFERRING INTERESTS IN AN INVESTMENT VEHICLE AND THE INVESTMENT PERFORMANCE MAY BE VOLATILE. BEFORE DECIDING TO INVEST IN AN INVESTMENT VEHICLE, PROSPECTIVE INVESTORS SHOULD READ THIS MEMORANDUM AND PAY PARTICULAR ATTENTION TO THESE RISK FACTORS. THE FEES AND EXPENSES CHARGED IN CONNECTION WITH AN INVESTMENT IN AN INVESTMENT VEHICLE MAY BE HIGHER THAN THE FEES AND EXPENSES OF OTHER INVESTMENT ALTERNATIVES AND MAY OFFSET PROFITS. INVESTORS SHOULD HAVE THE FINANCIAL ABILITY AND WILLINGNESS TO ACCEPT THE RISK CHARACTERISTICS OF AN INVESTMENT VEHICLE’S INVESTMENTS.

IN CONSIDERING ANY PERFORMANCE DATA CONTAINED HEREIN, YOU SHOULD BEAR IN MIND THAT PAST OR TARGETED PERFORMANCE IS NOT INDICATIVE OF FUTURE RESULTS, AND THERE CAN BE NO ASSURANCE THAT AN INVESTMENT VEHICLE WILL ACHIEVE COMPARABLE RESULTS OR THAT TARGET RETURNS WILL BE MET. YOU SHOULD ALSO BEAR IN MIND THAT PAST OR TARGETED PORTFOLIO CHARACTERISTICS ARE NOT INDICATIVE OF FUTURE PORTFOLIO CHARACTERISTICS AND THERE CAN BE NO ASSURANCE THAT AN INVESTMENT VEHICLE WILL HAVE COMPARABLE PORTFOLIO CHARACTERISTICS, USE OF LEVERAGE WILL BE COMPARABLE, OR THAT TARGET PORTFOLIO CHARACTERISTICS WILL BE ACHIEVED.

IN ADDITION, THERE CAN BE NO ASSURANCE THAT UNREALIZED INVESTMENTS WILL BE REALIZED AT THE VALUATIONS SHOWN AS ACTUAL REALIZED RETURNS WILL DEPEND ON, AMONG OTHER FACTORS, FUTURE OPERATING RESULTS, THE VALUE OF THE ASSETS AND MARKET CONDITIONS AT THE TIME OF DISPOSITION, ANY RELATED TRANSACTION COSTS, AND THE TIMING AND MANNER OF SALE, ALL OF WHICH MAY DIFFER FROM THE ASSUMPTIONS ON WHICH THE VALUATIONS CONTAINED HEREIN ARE BASED. CERTAIN RETURNS PRESENTED ON A GROSS BASIS DO NOT REFLECT ANY MANAGEMENT FEES, CARRIED INTEREST, TAXES AND ALLOCABLE EXPENSES BORNE BY INVESTORS, WHICH IN THE AGGREGATE MAY BE SUBSTANTIAL. ALL RETURNS PRESENTED ARE ANNUALIZED AND CALCULATED ON THE BASIS OF MONTHLY, QUARTERLY, OR ANNUAL INVESTMENT INFLOWS AND OUTFLOWS. NOTHING CONTAINED HEREIN SHOULD BE DEEMED TO BE A PREDICTION OR PROJECTION OF FUTURE PERFORMANCE OF AN INVESTMENT VEHICLE.

PROSPECTIVE INVESTORS SHOULD MAKE THEIR OWN INVESTIGATIONS AND EVALUATIONS OF THE INFORMATION CONTAINED HEREIN. EACH PROSPECTIVE INVESTOR SHOULD CONSULT ITS OWN ATTORNEY, BUSINESS ADVISOR AND TAX ADVISOR TO EVALUATE LEGAL, BUSINESS, TAX AND RELATED MATTERS CONCERNING THE INFORMATION CONTAINED HEREIN AND SUCH OFFERING.

EXCEPT WHERE OTHERWISE INDICATED HEREIN, THE INFORMATION PROVIDED HEREIN IS BASED ON MATTERS AS THEY EXIST AS OF THE DATE OF PREPARATION AND NOT AS OF ANY FUTURE DATE, AND WILL NOT BE UPDATED OR OTHERWISE REVISED TO REFLECT INFORMATION THAT SUBSEQUENTLY BECOMES AVAILABLE, OR CIRCUMSTANCES EXISTING OR CHANGES OCCURRING AFTER THE DATE HEREOF.

CERTAIN INFORMATION CONTAINED IN THIS PRESENTATION CONSTITUTES “FORWARD-LOOKING STATEMENTS,” WHICH CAN BE IDENTIFIED BY THE USE OF FORWARD-LOOKING TERMINOLOGY SUCH AS “MAY,” “WILL,” “SHOULD,” “EXPECT,” “ANTICIPATE,” “TARGET,” “PROJECT,” “ESTIMATE,” “INTEND,” “CONTINUE,” “BELIEVE,” OR HAVE A “CONVICTION,” OR THE NEGATIVES THEREOF OR OTHER VARIATIONS THEREON OR COMPARABLE TERMINOLOGY. DUE TO VARIOUS RISKS AND UNCERTAINTIES, ACTUAL EVENTS OR RESULTS OR THE ACTUAL PERFORMANCE OF AN INVESTMENT VEHICLE MAY DIFFER MATERIALLY FROM THOSE REFLECTED OR CONTEMPLATED IN SUCH FORWARD-LOOKING STATEMENTS. PROSPECTIVE INVESTORS IN AN INVESTMENT VEHICLE SHOULD NOT RELY ON THESE FORWARD-LOOKING STATEMENTS IN DECIDING WHETHER TO INVEST IN SUCH INVESTMENT VEHICLE.

SOME OF THE INFORMATION CONTAINED IN THIS MEMORANDUM HAS BEEN OBTAINED FROM SOURCES OUTSIDE BLOCKCHANGE. WHILE SUCH INFORMATION IS BELIEVED TO BE RELIABLE FOR THE PURPOSES USED HEREIN, NEITHER BLOCKCHANGE, NOR ANY OF ITS RESPECTIVE AFFILIATES OR PARTNERS, MEMBERS OR EMPLOYEES, ASSUME ANY RESPONSIBILITY FOR THE ACCURACY OF SUCH INFORMATION.

THE INFORMATION CONTAINED HEREIN IS STRICTLY CONFIDENTIAL AND IS PROPRIETARY TO BLOCKCHANGE, ITS FUNDS AND ORGANIZATION. SUCH INFORMATION IS BEING PROVIDED FOR INFORMATIONAL PURPOSES ONLY AND MAY NOT REFLECT THE ACTUAL RESULTS OF SUCH INVESTMENTS.

*Disclaimer: Blockchange Ventures I, LP and Blockchange Ventures II, LP (each, a “Fund” or “Blockchange Fund” and collectively the “Funds”) are investors in the DOT and KSM tokens that are part of the Polkadot network, and our General Partner is also an investor in DOT and KSM tokens as well as Parity Technologies Ltd. None of this is investment advice.*

## **Overview**

To understand Polkadot’s profound importance and inherent value, it is worth providing some macro context around how the Blockchain differs from the Internet. In many ways, Polkadot is a direct response to these differences and provides solutions to both the problems and opportunities that result. We believe this firmly positions Polkadot to become a key driver of the continued evolution and maturation of the blockchain space.

## **The Internet vs. the Blockchain**

There are two fundamental differences between the Blockchain and the Internet:

*Economic Incentives:* The Internet started as a collaborative network of networks, built over decades by a large consortium of scientists and researchers at institutions such as MIT, Stanford, UCLA, and the Department of Defense. The Internet’s creation was not driven by economic incentives, but by an ambition to build a single, universally accessible network.

The founding of the Internet, thus, did not deliver a direct economic windfall to the scientists, researchers, and institutions that collaborated to build it. Today, no one can own the protocols that compose the Internet. HTTP, SMTP, TCP/IP, VOIP, and others are a part of the public domain.

The origin and business design of the Blockchain could not have been more diametrically opposed. While we don't know the exact details of Bitcoin’s founding, we know it was initially created by a single person or a small group — and that they are now extremely wealthy. From the day that 10,000 Bitcoin tokens were exchanged for two pizzas, it became clear that tokenizing protocols meant it would be possible to build a protocol and own a part of it. And in the years that followed, we witnessed a massive accumulation of wealth for many of those who owned a part of it.

While that wealth creation may not have been the sole driving force behind the protocols that came after Bitcoin, it did lead to many smaller teams trying to build their own protocols and make their own marks. There was a Cambrian explosion of blockchains because there was a powerful economic incentive to create a better

blockchain. While there is still only one Internet (which nobody owns), there are already hundreds of discrete blockchains. And with them have come many new millionaires and billionaires.

These many and varied blockchains have created a second order problem: Unlike the Internet, these discrete blockchains are independent and cannot communicate or transact with each other.

*Security Standards:* At their core, both the Internet and the Blockchain enable the frictionless transfer of digital data between entities. In the case of the Internet, that data is information. It is text, images, videos, credit card numbers, GPS coordinates, purchase intent, and even the social graph. But a key difference lies in the data that is transferred on the Blockchain. That data is value, such as a stablecoin, a store of value, a contingent payment (wagers or bets), a title of ownership, a form of intellectual property, and more.

This fundamental difference has had a profound impact on the design of the Blockchain, and presented its architects with ongoing, second order challenges. Moving value, or money, requires a higher level of security than moving data. The requirement for more security places a burden on any new blockchain — it must provide security at scale before it is operating at scale. If it can't, it will face the existential risk of failing to protect the value which is moving between its users. To provide that security, the blockchain must bootstrap a network of miners/validators, which can be costly in time and resources.

These two foundational differences — (1) economic incentives that lead to many protocols, which don't communicate with each other; and (2) the need for security at scale before a protocol has reached scale — create a gravitational pull that demands a solution. Unlike the Internet, blockchains need adequate security, communication, and transactional capability between chains from the moment they launch.

We believe Polkadot not only has identified this mounting problem and the right approach, but also has committed to solving it with the right team and the right technology. Crucially, we believe it has endeavored to do so at exactly the right time, with nearly unsurpassable resources and capital.

### **The Expansion of the Blockchain — and Blockchains**

If we are correct in our belief that the Blockchain is another Internet, it will not be a zero-sum game. The more blockchains there are, the larger the market size will be. We believe it is

already clear that the market for blockchain solutions is going to be massive, perhaps on a historic scale.

A lot of blockchains is a good thing — it may even be a *very* good thing. Hyper-specialized and use case-specific blockchains will lead to more and better solutions to known and unknown problems.

The two greatest threats to the potential size of the market, however, are interoperability (both for communications and transactions) and post-launch security. Polkadot, we are convinced, is a transformative foundational technology for the entire blockchain ecosystem because it presents simultaneous solutions to both issues.

As blockchain technology continues to expand and diversify, it leads toward an increasingly fragmented landscape of walled off solutions and capabilities. Each blockchain is built discretely and independently of the others and this creates a world of inward-looking solutions that cannot connect or transact with each other.

Polkadot is explicitly designed to demolish these walls. It enables interoperability among blockchains by providing a common frame of reference across all chains to which it is connected. At the same time, it substantially mitigates security concerns around emergent chains as they attempt to launch and scale, removing a key obstacle to new chain adoption and addressing a fundamental downside of blockchain proliferation.

This combination of interoperability plus security is profound: it doesn't just remove potential brakes on the broader sector's utility and efficiency, but it stands to greatly facilitate the success of specialized and focused applications of blockchain technology. We believe this has the potential to contribute to the continued acceleration of the Blockchain while positioning Polkadot as one of the fulcrums of the entire space.

### *The Blockchain's Silos of Decentralization*

The initial participants in the Blockchain built general purpose blockchains such as Ethereum, Tezos, Hashgraph, Solana, Near, and more, all of which we have invested in. But as the space has begun to mature, a second path of iteration has leveraged the power of the blockchain to create decentralized, self-managing capabilities and done so to address a specific use case or industry. We are seeing a wide range of examples like Provenance (Figure's blockchain) for credit and lending; Filecoin for file storage; Flow for gaming and Non-Fungible Tokens (NFTs); and Bitclout for social networking and creator coins. Our Funds are also investors in these blockchains. Even existing general-purpose chains like Ethereum and Solana may someday find themselves increasingly specialized once the dust settles. For example, both seem to be emerging as leading destinations for Decentralized Finance (DeFi).

There are now hundreds of public and private blockchains. We expect this space and the variety of blockchains to grow as more founders get rich and as more industries adopt blockchain use cases. Each new application of blockchain to a given opportunity or problem potentially brings with it a corresponding new, independent chain, resulting in growing fragmentation.

This fragmentation is only going to increase. We are still very early in the evolution and deployment of this technology, and most of the blockchains that will ultimately exist have yet to be created. The solution sets to which blockchains will be applied are perhaps not yet even at their conceptual stages. We believe that the specific iterations and adaptations necessary for the bulk of all blockchains haven't been invented either.

The incentives for these blockchains to be discrete are overwhelming. Each new entrant can identify the flaws in previous solutions and create purpose-built solutions to address them. Combined with the fact that this approach might also turn out to be extremely lucrative for their creators may also encourage more entrants to the space and further boost fragmentation.

### *One Chain to Rule Them All?*

Early blockchain pioneers identified the interoperability issue early, which has led to the rise of blockchain-as-development-platform type solutions with Ethereum being the most well-known. Instead of creating their own chains, developers can build on top of solutions like Ethereum. In theory, this means any solution built on Ethereum should be compatible and interoperable with all other Ethereum-based solutions.

Not surprisingly — particularly in such a rapidly evolving space — a dominant “one-chain-fits-all” approach comes with tradeoffs. Ethereum and its imitators can't be expected to have a universally generalizable solution to encompass all possible use cases. How could they, when so many of those cases still haven't been invented. As a result, it forces applications to make a difficult choice: either sacrifice customization for interoperability within Ethereum or forgo security and interoperability within Ethereum for the advantages of a customized blockchain.

Regardless of scalability issues specific to any discrete blockchain, the inherent scarcity of computational and storage resources on blockchains means that this tradeoff is likely to exist in perpetuity. But recent sector growth — especially in DeFi and NFTs — has highlighted the impracticality of the "one chain fits all" model. It is not only increasingly clear that these will both become massive markets, but also that their unique needs for features, security, and speed will differ significantly. For these reasons we believe that over the long term each of these two use cases will reside on a blockchain (or blockchains) that specifically addresses those needs. Today both of these sectors rely heavily on Ethereum. But even that is causing near term challenges.

There is an urgent need for new solutions. Since the summer of 2020, growing traffic from DeFi and NFT applications have made transaction fees on Ethereum prohibitively expensive. All users

and applications on Ethereum have been forced to pay higher transaction fees, independent of their particular use case. As a result, some use cases are priced out (e.g., smaller, high frequency exchanges or smaller DeFi or NFT transactions) by activity within applications that may be completely unrelated to their own.

This in part accounts for the recent surge of activity and interest we've seen on blockchains other than Ethereum. For example, Binance Smart Chain (BSC) has enjoyed a recent surge in DeFi activity from users looking to avoid Ethereum's congestion-driven fees. The Flow blockchain makes for a different set of tradeoffs than Ethereum's. As a result, Flow can provide a better fit for high-throughput, lower-value use cases such as gaming or NFT collection by presenting developers and founders with a different set of tradeoffs.

Some applications require vastly different technical features which make a one-chain-fits-all solution impractical. Some, for example, may require privacy preserving cryptography, which may be more difficult or expensive to implement on Ethereum than on a custom chain.

These are just a fraction of the examples demonstrating the need for purpose-built chains, but interoperability issues remain unresolved. Each new chain asks users and customers to adopt a given solution, and to place a bet on both the merits of the chain and its likelihood to gain enough traction to survive.

### *Scale as a Security Imperative*

Achieving some degree of scale is often critical to a new solution's economic success. Token economics make this especially clear in the blockchain space, where solutions that fail to attract participants run the risk of being economically unstable.

But the token mechanics underpinning a blockchain aren't simply an economic mechanism: they are core to the blockchain's security. Currently, each company building a blockchain needs to bootstrap its own security, competing with other chains to recruit validators from a relatively finite pool of miners or stakers. Lacking a scaled number of such validators makes all chains — even seemingly established ones — vulnerable if they lack an appreciable size to their miner or validator networks. This was made clear when in August of 2020, Ethereum Classic was “51%-attacked” three times in a single month.

Unfortunately, the siloed nature of the Blockchain means that there are two, related disincentives to adoption for the emerging blockchains: “*will this ever scale large enough to thrive?*” and since subscale solutions are at risk, “*will this be secure?*”

### **The Polkadot Solution: Have Your Cake and Eat It Too**

Polkadot allows companies and developers to use and create the blockchains best suited for their unique needs without the risk of ending up as an isolated and potentially irrelevant silo.



The Polkadot protocol also removes the scale-as-security challenge through an innovative approach to shared security, designed to enable the collective interoperability and security of chains without sacrificing performance or customization.

To do this, Polkadot has built a layer-0 “meta-protocol” capable of connecting the myriad of other layer-1 blockchains and applications. It provides a base layer on top of which can sit any blockchain — from narrowly focused solutions to layer-1s as broad as Ethereum itself. Polkadot keeps track of the status of every chain connected to it, without the requirement that those chains use the same design or structure. This might sound granular, but it has a profound impact on interoperability.

We believe Polkadot’s approach may go a long way toward solving the scalability problem holding back the wider adoption of blockchain technology. By allowing applications to run on their own layer-1 blockchains (and more generally, by spreading application activity and transactions across multiple blockchains), Polkadot can enable more decentralized and scalable blockchain applications. By splitting things up in this manner — rather than forcing all applications and activity to reside on a single blockchain — Polkadot allows transactions to run in parallel rather than one at a time. This could increase the overall speed and scalability of blockchain applications by as much as 1000x compared to Ethereum.

### *Three Network Effects*

One of the most compelling parts of Polkadot’s technical design is that each successive blockchain connected to the protocol will both benefit from and provide benefit to all the other blockchains in the network. Polkadot creates powerful network effects in three ways:

1. *Connectivity*: In the same way that Facebook becomes more valuable to all its existing users with each new user it adds, Polkadot becomes more valuable to every connected chain with each new chain that is connected, developing powerful network effects of connectivity and interoperability.
2. *Pooled Security*: Polkadot’s unique “pooled security” functionality allows all connected blockchains to tap into a shared pool of validators to better ensure network security. The security of each connected blockchain increases as more validators enter the shared pool.
3. *Substrate*: Polkadot offers developers an industry-standard toolset and framework called Substrate, which allows them to build blockchains that are highly customized for their specific use cases, far faster and with fewer developer and financial resources than any other alternative we have seen. Building a customized blockchain has historically taken months or years, but with Substrate, this process is condensed down to hours, days, and weeks. Because of Substrate’s speed-to-build advantage (and the trend

towards a future with many purpose-built blockchains), there has already been growth in the number of blockchains created with it — a trend we believe will only accelerate.

Most important, however, is our view that Substrate materially improves Polkadot's odds of becoming the leading interoperability protocol because Substrate chains are automatically compatible with Polkadot. In other words, every new blockchain built on Substrate will automatically increase the number of blockchains and the potential user base. This combination will create a third network effect for Polkadot.

### *An Internet Counterfactual*

Is the Polkadot solution set really that important?

In a word, "yes." To help illustrate it, imagine a counterfactual internet: one that isn't interoperable.

Asked to think of "The Internet," people will often envision some of their favorite sites and apps — Netflix, Facebook, Amazon, Uber, and so on. Today, all those sites operate on a single Internet, composed of HTTP, SMTP, TCP/IP and others.

Now imagine our counterfactual internet.

Let's say that the first internet had been purpose-built for shopping sites like eBay and Amazon. To get to Netflix, a user would have to use a second internet — let's call it Flixnet. Uber would run on top of Carnet, and PayPal on Paynet. In this counterfactual world, Google could only search websites on its own internet. And so on. In this hypothetical, an internet exists for each major use case, highly customized to address each creator's explicit needs. Instead of our universal, big-tent Internet that is capable of hosting myriad solutions, independent set-ups and configurations would be required for each solution.

In this hypothetical, we'd all be experiencing a model of competing standards and flavors, which would not only make everything more of a hassle but would have introduced material friction to adoption — vastly narrowing the field of solutions and innovation. If eBay and PayPal had operated on different internets, they could never have worked cohesively, and it is unlikely either would have achieved the same level of success apart as they have together.

We are so used to the Internet as it is, it's almost impossible to imagine what the Internet would have grown into if it had been developed without interoperability. Beyond the hassle, cost, and complexity — many useful combinations would never have happened. What use, meanwhile, would a search engine like Google have if it had only been able to search a single internet?

That very unfathomability is part of why we like Polkadot so much. Not just because it solves two core — perhaps *the* two core — problems. But because the blockchain landscape can't ever truly scale if it develops in a way that has neither adequate security nor allows individual solutions to be combined and cohabitate with other solutions. The Internet hasn't just opened our eyes to how inherently backward that would be, it has trained our expectations to demand a similar outcome.

### *A World-Class Team and Serious Momentum*

Polkadot's adoption is real and accelerating. Three years after committing its first line of code, Polkadot has outrun Ethereum's developer count at that same milestone as was recently shown by analysis from Electric Capital<sup>1</sup>. Staking milestones have followed a similar trajectory. Polkadot token holders have joined together in force to consistently make the network one of the largest by value of assets staked — resulting in stronger security and rewarding an already active community.

These proof points are important not so much because of competitive positioning, but because we believe the market for a Polkadot type solution is up for grabs. As mentioned earlier, this is such a new space, and we believe the majority of blockchains that will exist have yet to be created. The biggest opportunities and the biggest customers are still to come. Polkadot's ability to offer the upside of purpose-built chains (which can be created with Substrate) paired with the power of its interoperability and shared security is a trifecta that we believe will leverage its three network effects to result in a monopoly or oligopoly outcome.

Polkadot's success in executing its mission is enabled by one of the most impressive teams we have seen in the space. Parity Technologies was co-founded in 2015 by Dr. Jutta Steiner and Dr. Gavin Wood. Steiner was previously Ethereum's original Security Chief, while Wood was Ethereum's Co-founder and former CTO. Wood also invented the Ethereum Virtual Machine and the Solidity programming language — two foundational blockchain elements that power nearly half of the top twenty crypto-networks by value and supports hundreds of billions in market capitalization for the entire industry. During the summer of 2016, Wood announced the vision for Polkadot and its intent to build this protocol to connect all the world's blockchains and added Peter Czaban and Thiel Fellow Robert Habermeier as cofounders to build the protocol alongside Wood. It should be noted that Wood is also a part time General Partner at Blockchange Ventures.

The pedigrees of the Founders alone would garner attention, but they have also surrounded themselves with some of the leading technology talent in the blockchain ecosystem to tackle this difficult technical challenge and potentially dominate this massive market.

The vision and the team have allowed Polkadot community to assemble a deep war chest in cash and tokens, allowing years of runway to continue driving development and adoption.

---

<sup>1</sup> See Electric Capital Report [here](#).

While the solution itself is enough to draw the high levels of adoption that the Electric Capital analysis shows, having such a large capital pool to draw from gives them a powerful advantage over the competition and enables them to draw in the best projects, teams, and talent.

### *Summary*

The Blockchain, and the evolution of this Internet of Value, benefits from the ability to create customized blockchains for specific purposes. The emergence of special purpose blockchains, which we expect will significantly contribute to the next wave of innovation, should last for the foreseeable future. The resulting myriad blockchains and the many use cases that result from them could leave a new challenge.

Though we expect the emergence of special purpose blockchains to define the sector's next wave of innovation, a lack of interoperability between discrete blockchains will create friction to adoption and inhibit innovation.

Polkadot solves for the global interoperability, scalability, and security issues endemic to all blockchains while addressing application-specific solutions and needs. Its brilliance lies in the comprehensiveness of its solution: by addressing interoperability and security simultaneously, Polkadot removes potential brakes on the broader space's utility and efficiency and facilitates the success of specialized blockchain applications. We believe this positions Polkadot as one of the fulcrums of the entire sector.