

BLOCKCHAIN FOR BUSINESS
Panel Discussion
Association of Corporate Counsel
Chicago Chapter

September 2019

Speakers

André Frieden, Chief IP/Licensing Counsel and Chief Compliance Counsel of Wipro

André Frieden manages the global IP law group at Wipro, a publicly traded multinational information technology company with over \$7.5 billion in annual revenue. He provides strategic guidance regarding the company's rapidly growing patent and trademark portfolios, manages Wipro's global and regional IP/software licensing programs, and advises executives in key business units and geographies on IP-focused growth and risk management strategies. He also negotiates many of the company's leading technology offerings in automation and artificial intelligence and supports key digital transformation initiatives as well as IP-based alliances in the U.S., Europe and APAC. Previously, Mr. Frieden served as lead in-house IP counsel at large privately-held and publicly-traded companies. Prior to that, he worked at two major law firms, where he represented Fortune 100 companies, research institutions, startups and governmental organizations on a wide range of IP, IT and e-commerce matters. He has published extensively on topics relating to IP protection, software licensing, cross-border tech partnerships, and cybersecurity/data privacy. His legal education includes an LLM in IP Law, a Juris Doctor, and a certificate in international legal studies. He holds three passports, speaks English, French, Portuguese and Spanish, and works from Wipro's offices in Chicago, Bangalore and London.

Wulf Kaal, Professor, University of St. Thomas School of Law; Principal, Kaal Consulting

Wulf Kaal is a leading expert at the intersection of law, business, and emerging technology. His research focuses on innovation, technology, emerging technology applications, smart contracts, technology strategy, decentralized infrastructure products, decentralized commerce, hedge funds, and dynamic regulatory methods. Kaal advises international policymaker, governments, medium to large enterprises, startups, and venture capital funds on emerging technology solutions. Kaal is a leading expert and the most widely published proponent of blockchain innovation in law and corporate governance as well as dynamic regulation and associated regulatory applications to improve and expand innovation, including through blockchain technology and smart contracting. As a consultant, Kaal assists clients with emerging technology projects. He regularly advises major corporations and private investment funds regarding various aspects of financial markets and their interaction with cryptocurrencies. He also assists major international law firms in complex litigation involving private investment funds, alternative investments and crypto assets.

Speakers

Peter Nadimi, Senior Counsel, McDonald's

Peter Nadimi is Senior Counsel at McDonald's Corporation. At McDonald's Corporation, Peter supports McDonald's Global and US IT/Digital, Marketing and Strategy organizations, as well as other McDonald's organizations, with their deployment of technologies into domestic and international markets and procurement of technologies. He also leads McDonald's Open Source Software Governance Program. Prior to McDonald's Corporation, Peter was in-house counsel at a health information technology company and an associate in the corporate department of an international law firm. Peter is a graduate of the University of Minnesota-Twin Cities and the University of Iowa College of Law.

Stacie Hartman, Co-Chair Financial Services Group, Steptoe & Johnson LLP

Stacie Hartman, co-chair of the firm's Financial Services Group, is a trial lawyer and litigator who represents clients in complex litigation nationwide with an emphasis on financial markets. Stacie leads major cases in courts around the country and in enforcement proceedings before the Commodity Futures Trading Commission (CFTC), Securities and Exchange Commission (SEC), and financial exchanges, as well as in investigations by the US Department of Justice (DOJ). She has a strong track record of helping her clients avoid prosecution completely or obtain settlements at record-low penalties. Stacie's recent cases have involved allegations of market manipulation, spoofing, self-trading, disruptive trading practices, false statements, failures to supervise, and uncommercial order entry, among others. Stacie combines her extensive knowledge of the financial markets and trading strategies with many years' experience litigating patent cases to handle IP litigation in the derivatives industry.

Speakers

Alan Cohn, Co-Chair, Blockchain and Cryptocurrency Practice,

Step toe & Johnson LLP

Alan Cohn counsels clients on a range of blockchain- and cryptocurrency-related issues, from regulatory best practices for cryptocurrency companies to legal issues associated with novel uses of blockchain technology. He represents a variety of different types of entities, from cryptocurrency trading platforms to investment funds to startups developing new blockchain protocols, as well as corporations interested in exploring potential applications of blockchain technology. Before joining Step toe, Alan served in senior policy positions at DHS for almost a decade, most recently as the Assistant Secretary for Strategy, Planning, Analysis & Risk and second-in-charge overall of the DHS Office of Policy. Alan received his J.D. from Georgetown University Law Center cum laude and his A.B. from Columbia University.

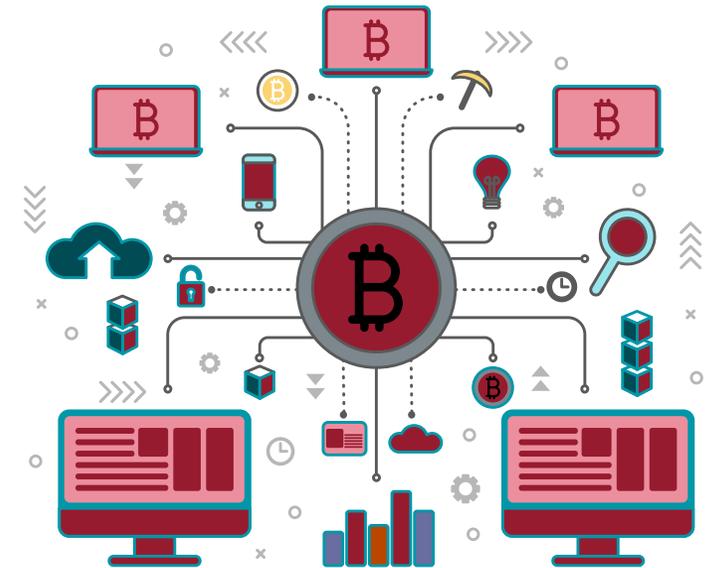
Will Turner, Partner,

Step toe & Johnson LLP

Will Turner has more than two decades of experience in corporate and securities law, primarily with application to cryptocurrency, fund formation, investment transactions, and mergers and acquisitions. He also advises clients on matters involving capitalizations, project finance, restructurings and joint ventures. Will is well-versed in securities offerings, '40 Act work, and corporate governance matters. He also advises clients on distribution, sales, technology and financial services commercial agreements. Will has represented a number of European companies and investors in their acquisitions, investments, commercial, and regulatory matters in the United States. He has led numerous fund and joint venture formations. Will received his J.D., cum laude, from Northwestern University School of Law and his B.A. with honors from the University of Chicago.

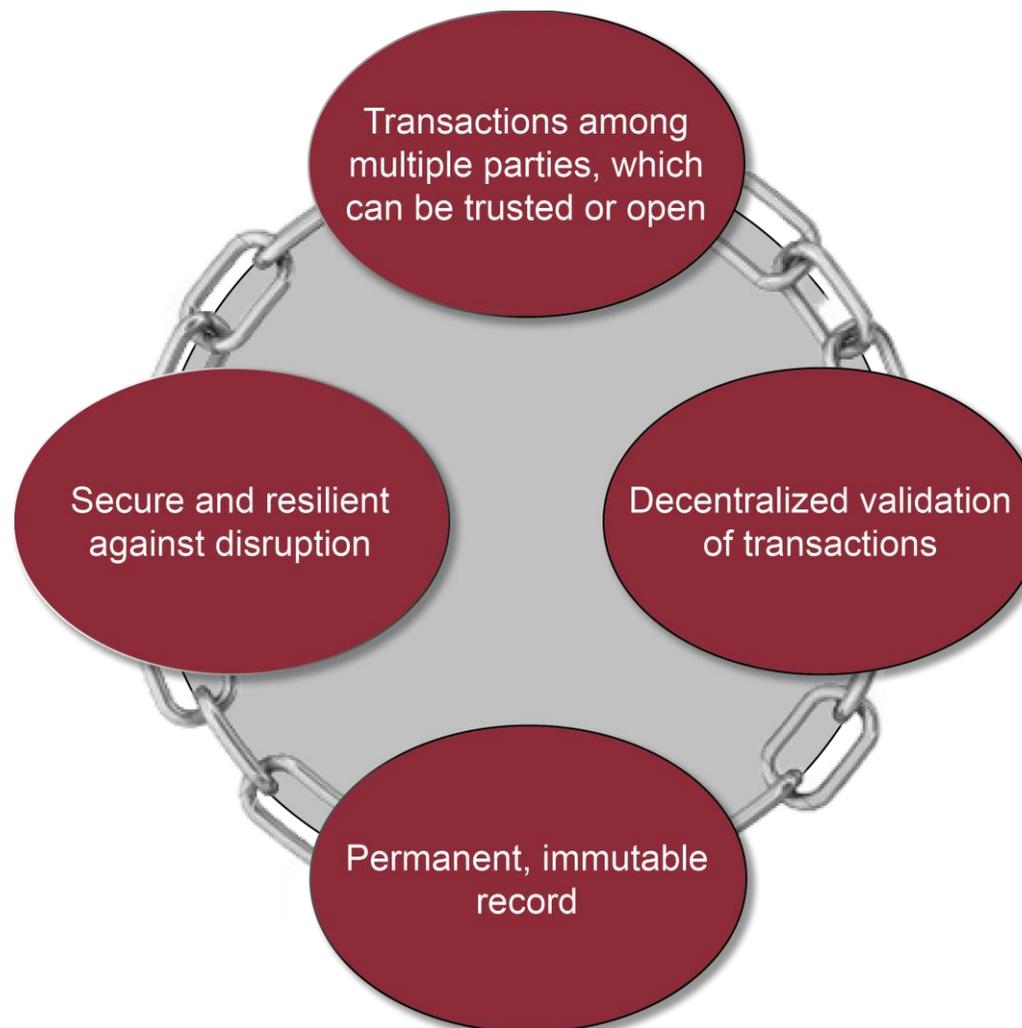
Panel Topics

- What is Blockchain?
- Blockchain Applications
- Impact of Blockchain on Existing Business Models
- Laws Affecting Blockchain Applications



What is Blockchain?

What is Blockchain?



Distributed Ledger Functionality

Core distributed ledger functionality



Consistent, immutable recording of data

- Consensus is an ongoing process where ledgers are updated to hold the same data in the same order
- Historical data cannot be easily or secretly changed by any single actor, making it practically immutable



Distribution across a network

- Databases (ledgers) are replicated across network participants
- Validation of data is performed via a pre-defined algorithm rather than a central authority



Richer data sources

- Comprehensive and transparent audit trail
- Near real-time access to accurate data across multiple parties



Frictionless asset transfer

- Ability to record transfer of digital assets without central authority
- Efficient transaction processing with settlement flexibility

Complementary innovations



Encryption & signature validation

- Data “fingerprints” generated through one-way encryption makes checking data integrity fast
- In permissioned ledgers, identity and permissions are continually validated with each transaction



Smart contracts

- Allow business logic and workflows to be built into a distributed ledger
- Capable of updating the ledger (e.g., making payments) based on pre-defined conditions



Malleable and robust data environment

- Enhanced ability to manipulate, analyze and report data
- No single point of failure

Source: Oliver Wyman and JP Morgan, “Unlocking Economic Advantage with Blockchain”

Technical

Back-end database that maintains a distributed ledger openly

Business

Exchange Network for moving value between peers

Legal

A transaction validation mechanism not requiring intermediary assistance

What is Cryptocurrency?

Cryptocurrency: A type of digital or virtual currency that uses cryptography for security, there are currently hundreds of them

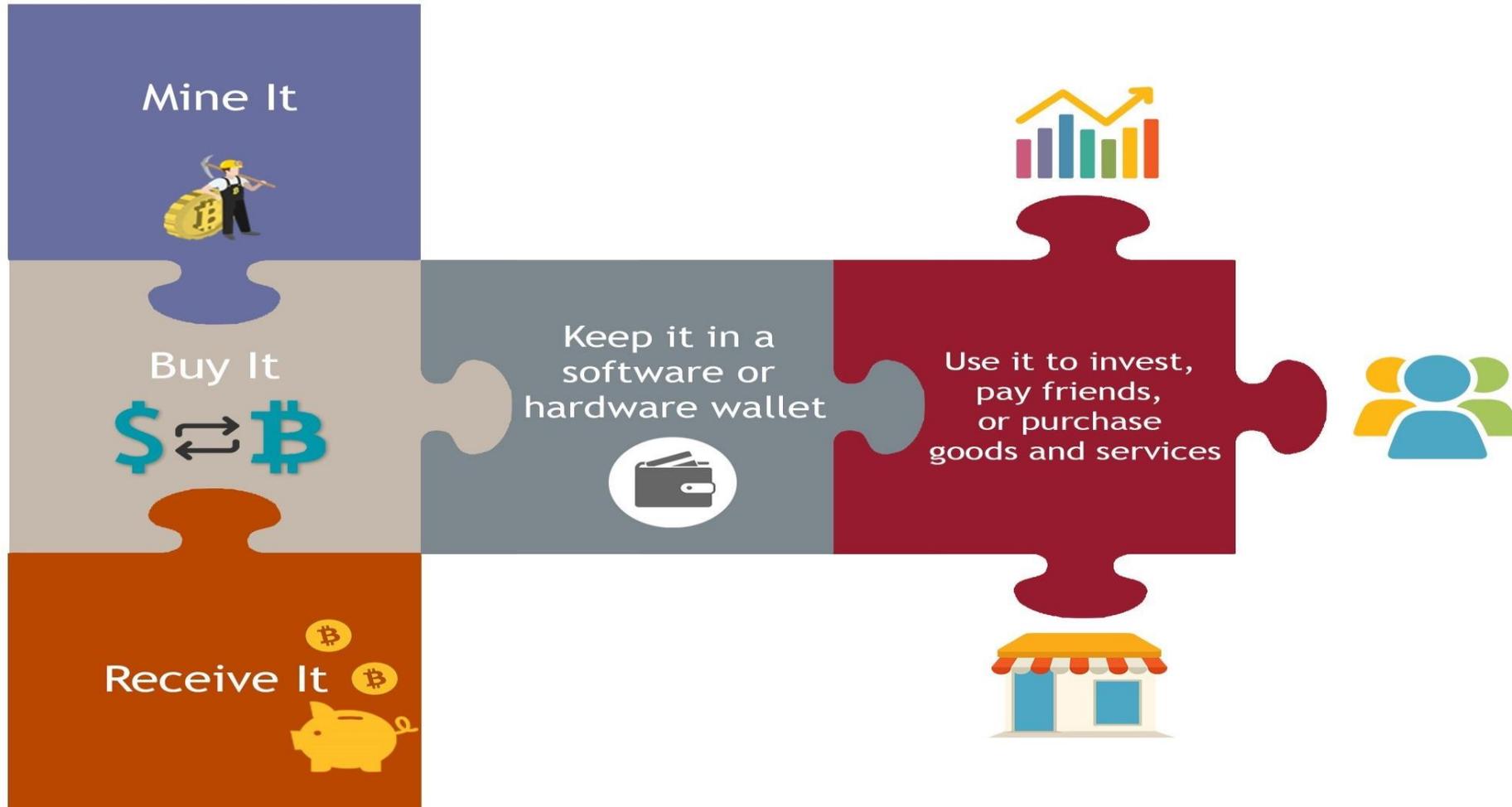


What is Bitcoin?

- Bitcoin is a **form of digital currency**, created and held electronically
- White Paper, “Bitcoin: A Peer-to-Peer Electronic Cash System,” by Satoshi Nakamoto laid out the **principles of bitcoin**, including its underlying technology, the blockchain
 - Meant to **solve problems associated with the digital transfer of value**, including the double-spend problem and the Byzantine Generals computing problem
 - As such, bitcoin is the **first blockchain application**
- It is **decentralized** - no one central authority (e.g., a bank) or governance body (e.g., a foundation or board of directors) controls it



How do you obtain & use Bitcoin?



What is a Stablecoin?

- Stablecoins are cryptocurrencies that attempt to peg their market value to an external "stable" asset
- Stablecoins may be pegged to a currency like the U.S. dollar, other fiat currency, or a commodity
- Stablecoins can achieve their price stability via collateralization (backing) or other trust mechanism (not backed)
- Notable examples of fiat-backed Stablecoins include
 - Tether
 - TrueUSD
 - USDCoin
 - Gemini Dollar



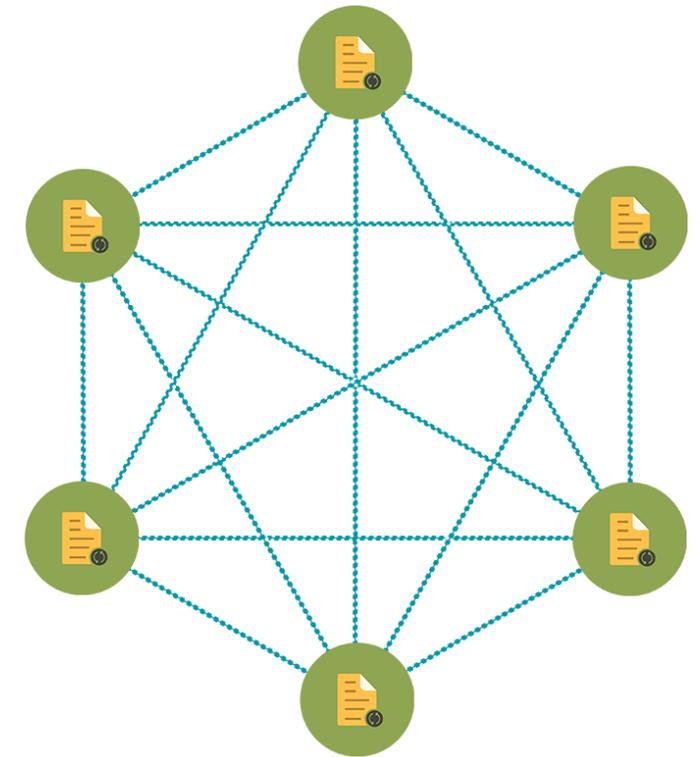
What is a Private or Permissioned Blockchain?

- Public (Permissionless) blockchains: access to read blockchain information, transact, and participate in the consensus process is open to anyone in the world
- Private (Permissioned) blockchains: access to read blockchain information, transact, and participate in the consensus process is controlled or limited
 - Can set permissions for specific users, a whole company, or even a consortium
 - Useful for database management and auditing where public readability is not necessary
- E.g., Hyperledger, Ethereum (enterprise), Symbiont, R3 Corda, Ripple, Bloq/Vulcan



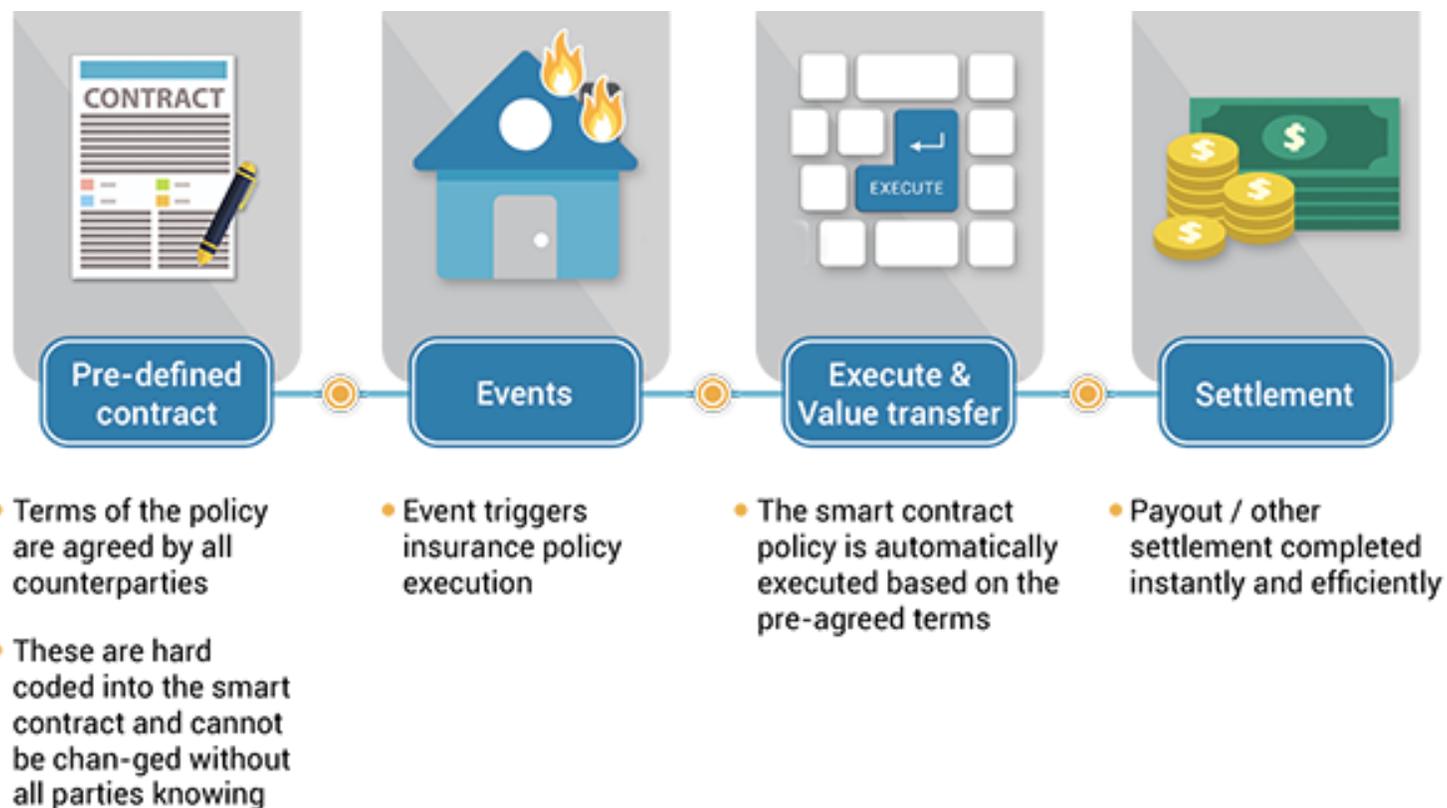
What is a Smart Contract?

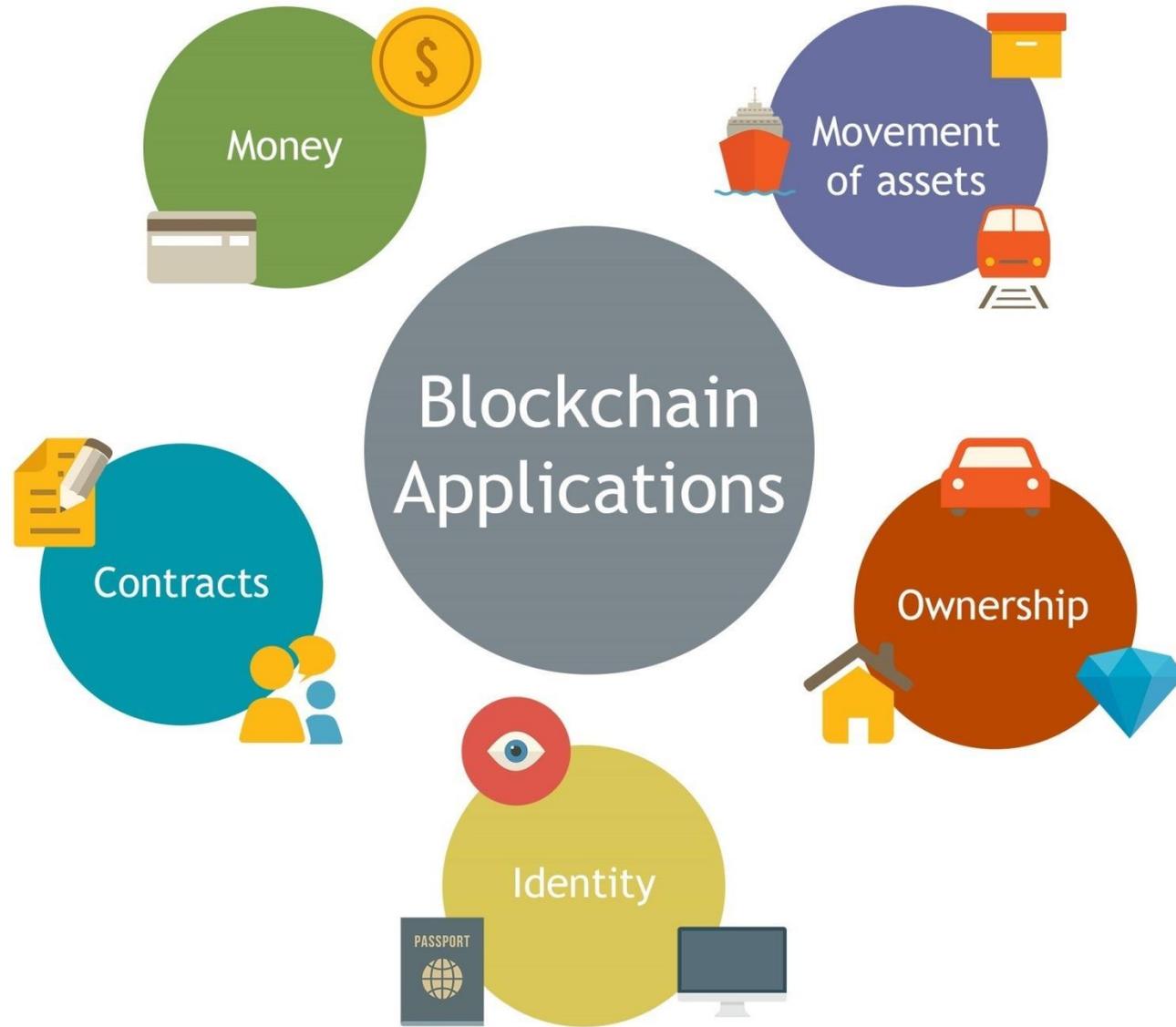
- In the simplest form, a digital instantiation of an existing contract
- Existed before blockchain: smart legal contract, digital contract, smart contract code, etc.
- Unique benefits of blockchain-based smart contracts:
 - Decentralized control
 - Enables transactions in a low trust environment
 - Transparent
 - Lessens the parol evidence problem



What is a Smart Contract?

- Most efficient for simple “if-then” statements (e.g., automatic payments, life insurance, smart meters)





Blockchain in the Retail Industry



Blockchain in Supply Chain



Blockchain Services

- **Wipro builds and operates blockchain networks** to solve industry use cases, bringing together an ecosystem of industry participants to pilot and productionize business solutions.
- Wipro leverages knowhow and tools in **AI, Big data, IoT, Digital, and platforms** like the Connected Car platform and Wipro HOLMES™
- Wipro also creates the **business strategy for blockchain** and helps structure the use cases with a business value proposition.
- Wipro is instrumental in the **infrastructure design**.
- Wipro invests in blockchain related intellectual property (IP), including patents—but **obtaining patents in blockchain is challenging!**



Blockchain Services

- Patents: over **20 patent applications** so far covering blockchain-related functionality... But there are challenges:
 - Underlying architecture of blockchain lends itself to a wide variety of applications built on known, stand-alone technology (i.e., well beyond transactions of digital currency)
 - Blockchain is an assembly of older independent technologies (e.g., cryptography, smart contracting, distributed ledger design)
 - Finding Novelty (§ 102) and Nonobviousness (§103) means the functionality must be significantly innovative in its applicability
 - *Alice Corp. Pty. Ltd. v. CLS Bank International* was a 2014 case that limits the patentability of certain software-related patents (algorithms alone are abstract and not patentable)
- Related IP issues: Enforcement, commercial viability/licensing, trade secret protection, Open Source Software



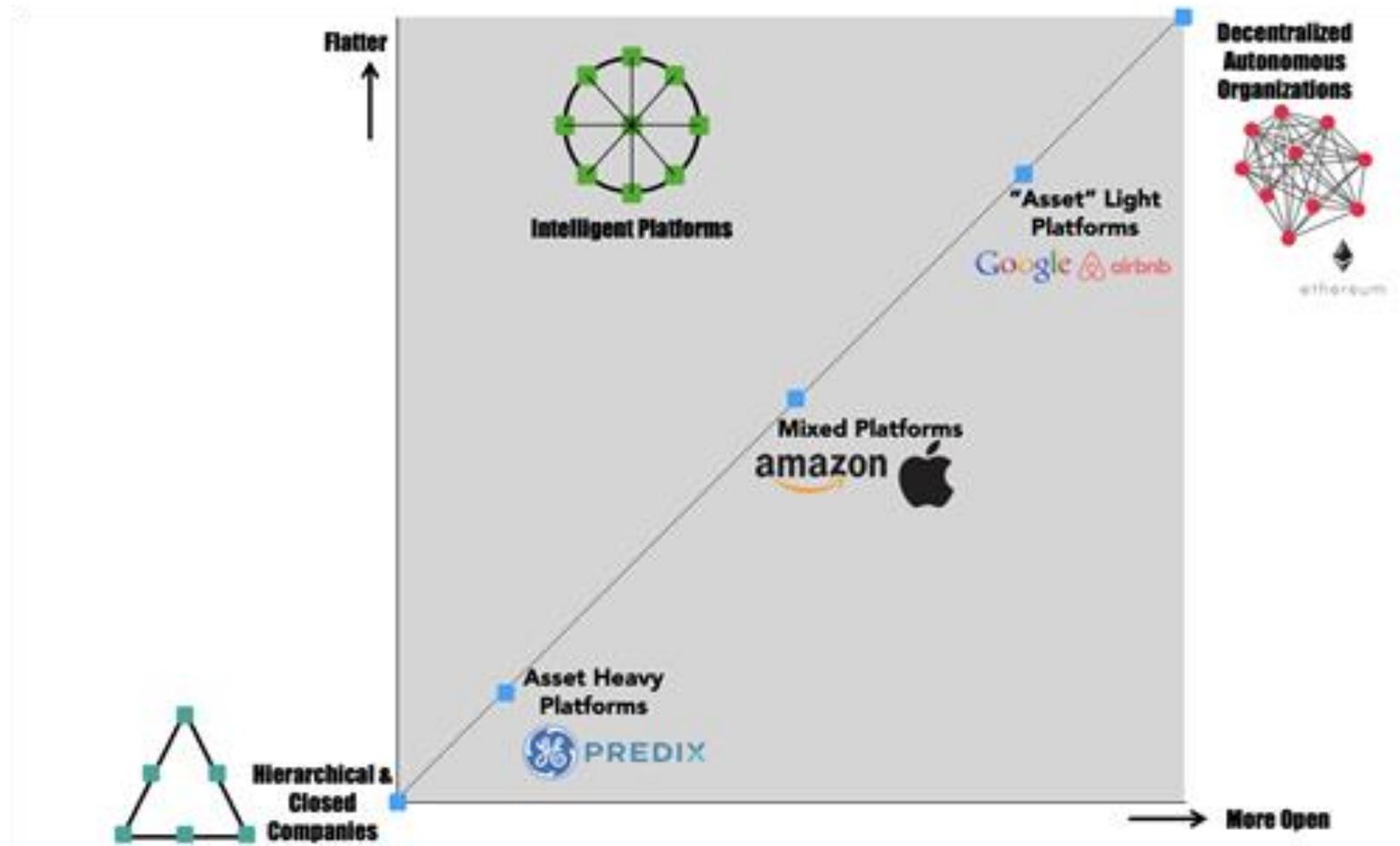
Potential Adoption

Figure 57: Adoption scenarios for Global Gross Value Added migration to blockchain

Gross value added, Current prices OECD, \$m	United States	European Union	Japan	United Kingdom	Australia	Mexico	Switzerland	Sweden	Poland	Norway	Denmark	Chile	Czech Republic	Hungary	Iceland	Total	Blockchain'able' portion, penetration rate:		
																	Low	Medium	High
Agriculture, forestry and fishing	223,859	263,155	53,509	18,194	33,861	40,419	5,114	6,965	14,194	7,494	2,859	8,820	5,022	5,194	1,247	689,913			
Mining and quarrying	436,008	117,115	3,233	42,334	98,047	87,751	842	2,647	8,593	99,058	4,203	28,870	1,522	267	20	930,522			
Manufacturing	2,068,080	2,571,458	851,347	283,035	92,456	217,632	128,979	82,655	89,979	34,999	37,635	27,579	49,357	27,354	2,527	6,565,089			
Electricity, gas, steam and air conditioning supply	260,644	312,942	90,955	39,911	35,609	19,741	-	12,155	16,201	9,130	3,980	5,786	7,153	2,370	835	817,462			
Water supply, sewerage, waste management	41,866	157,969	-	27,724	-	5,426	-	3,410	6,122	2,645	2,042	-	2,085	1,211	207	250,758			
Construction	664,001	889,622	279,195	165,742	119,666	90,583	36,271	30,454	35,952	25,903	11,485	19,503	10,368	5,065	1,119	2,384,983			
Wholesale and retail trade, repair of motor vehicles	1,675,586	1,822,123	647,629	286,138	123,679	205,104	97,927	54,979	88,834	32,021	30,397	22,085	19,135	11,845	1,871	5,119,412	12.5%	25%	50%
Transportation and storage	542,582	840,117	230,445	121,202	68,963	79,818	-	27,498	30,985	24,454	13,681	11,109	10,597	7,385	1,170	2,010,067			
Accommodation and food service activities	446,343	469,314	-	77,541	36,137	27,455	12,031	8,820	5,911	5,815	3,873	4,728	3,627	1,941	573	1,104,176	12.5%	25%	50%
Information and communication	1,035,296	810,853	251,856	164,537	38,469	28,340	-	28,442	18,877	17,123	11,869	4,113	9,134	6,023	950	2,425,953			
Financial and insurance activities	1,190,501	911,125	199,164	217,874	125,628	45,871	66,679	23,234	21,502	22,949	16,470	12,553	8,365	4,286	1,575	2,867,856	37.5%	75%	100%
Financial service activities	486,523	-	-	116,681	-	38,128	38,125	-	16,486	-	-	-	6,458	3,258	1,313	707,053			
Insurance, reinsurance and pension funding	460,938	-	-	67,217	-	4,250	28,554	-	2,977	-	-	-	1,245	353	173	565,788			
Auxiliary activities	243,039	-	-	33,976	-	3,493	-	-	2,039	-	-	-	662	675	89	284,056			
Real estate activities	2,076,838	1,845,942	531,750	299,340	172,100	137,797	-	42,887	25,187	29,844	26,377	-	15,374	9,209	1,978	5,214,707	12.5%	25%	50%
Administrative and support service activities	659,756	698,695	-	126,770	39,659	45,383	-	17,385	10,595	12,395	8,737	-	3,305	3,855	592	1,627,225	25%	50%	75%
Rental and leasing activities	181,934	-	-	25,191	-	5,501	-	-	2,060	-	-	-	876	900	251	216,812			
Employment activities	-	-	-	27,541	-	29,347	-	-	2,684	-	-	-	142	868	6	60,688			
Public admin and defence, compulsory social security	1,500,551	1,081,252	280,902	137,214	76,458	53,626	73,459	25,067	27,285	26,934	14,152	11,965	11,598	9,748	1,092	3,331,409	10%	20%	50%
Education	935,475	878,251	-	164,898	69,537	52,918	3,758	28,397	23,208	21,688	16,734	12,858	7,959	5,417	1,252	2,222,458			
Human health and social work activities	1,225,883	-	-	180,380	95,853	28,699	51,911	56,152	21,557	45,572	28,015	10,698	7,881	5,070	1,608	1,759,387			
Arts, entertainment and recreation	160,936	229,567	-	42,087	12,018	5,595	-	6,981	3,408	4,217	4,020	6,975	1,772	1,527	315	479,531			
Total activity	32,083,680	13,899,501	4,546,774	4,584,493	1,517,282	2,524,803	548,763	496,655	842,871	564,014	279,354	222,695	347,831	213,368	33,701	62,705,786	5.2%	10.4%	18.3%

Source: OECD, Credit Suisse estimates

Impact of Blockchain on Existing Business Models



Laws Affecting Blockchain Applications

Enterprise Blockchain (Technology Outsourcing) Issues

- Anti-trust and Competition
- Governance
- Industry-Specific Regulatory Issues
- Intellectual Property
- Privacy
- Smart Contracts Enforceability
- Trade Secrets

Crypto-Asset Regulation: US and Comparative Approaches

- The US is the leader in Anti-Money Laundering regulation, and one of the reference points for global Economic Sanctions compliance
- The US is not the leader in Securities and Commodities regulation, but global attention is focused on the US regulatory approach in these areas
 - Securities and Commodities regulation and guidance has been provided in a piecemeal fashion, and with an emphasis on “facts and circumstances” rather than specific rulemakings or guidelines
 - Most non-US jurisdictions have a single integrated financial regulator, enabling faster and more integrated regulation and guidance
- The US has the opportunity to lead on Taxation but so far has not taken advantage of this position
- US states continue to innovate, with some adopting more restrictive regulatory approaches and some experimenting with more permissive approaches

AML/Economic Sanctions

- The Financial Crimes Enforcement Network (FinCEN) has issued and updated guidance since 2013
 - FIN-2013-G001, Application of FinCEN's Regulations to Persons Administering, Exchanging, or Using Virtual Currencies (2013) (initial guidance)
 - FIN-2019-G001, Application of FinCEN Regulations to Certain Business Models Involving Convertible Virtual Currencies (2019) (consolidating 2013-2019 guidance and filling additional gaps)
- The Office of Foreign Asset Control has begun specifically identifying cryptocurrency addresses as part of its blocking orders
- The Treasury Department, leading the US presidency of the Financial Action Task Force (FATF), successfully pushed for greater application of AML controls to cryptocurrency
- Other countries are following the US lead, which will likely be accelerated by the changes to the FATF guidance



Securities Regulation

- The Securities and Exchange Commission (SEC) has issued guidance
 - Securities laws apply. *Report of Investigation Pursuant to Section 21(a) of the Securities Exchange 1934: Act of The DAO (July 2017)*
 - Bitcoin and Ethereum are not securities. William Hinman, *Digital Asset Transactions: When Howey Met Gary (Plastic)* (June 2018)
 - Other tokens may not be securities. FinHub, *Framework for “Investment Contract” Analysis of Digital Assets* (Apr. 2019)
 - These fixed-price tokens are not securities. No-Action Letters: Turnkey Jet (Apr. 2019), Pocketful of Quarters (July 2019)
 - Joint Staff Statement on Broker-Dealer Custody of Digital Asset Securities (July 2019)
- SEC qualified the Regulation A+ offering of Blockstack PBC (July 2019)



Securities Regulation – Non-US Jurisdictions

- E.g. Switzerland
 - Payment Tokens: Tokens which are intended to be used, now or in the future, as a means of payment for acquiring goods or services or as a means of money or value transfer. Synonymous with cryptocurrencies. *Not securities*.
 - Utility Tokens: Tokens which are intended to provide access digitally to an application or service by means of a blockchain-based infrastructure. *Not securities*.
 - Asset Tokens: Tokens that represent assets such as a debt or equity claim on the issuer; analogous to equities, bonds, or derivatives. *Securities*.
- Other non-US jurisdictions adopting this three-category approach.



Commodities Regulation

- The Commodity Futures Trading Commission (CFTC) has asserted jurisdiction over cryptocurrency early and continuously but its jurisdiction may be limited to anti-fraud jurisdiction in many cases
 - Coinflip Order (2015)
 - CFTC Backgrounder on Oversight of and Approach to Virtual Currency Futures Markets (2018)
- The Commodities Exchange Act provides that retail transactions in commodities on a leveraged basis must be regulated as futures—and therefore limited to licensed markets—unless there is “actual delivery” of the commodity within 28 days
 - CFTC proposed interpretation would require the buyer to take possession and control of entire amount purchased and use it freely without a retention of interest by the seller. Proposed Interpretation, Retail Commodity Transactions Involving Virtual Currency (Dec. 2017)
 - The 9th Circuit appears to have adopted this position. CFTC v. Monex (July 2019)



- The Internal Revenue Service (IRS) was one of the first taxing authorities to issue guidance regarding cryptocurrency, but then has been relatively silent
 - IRS Notice 2014-21: “For federal tax purposes, virtual currency is treated as property”
 - Treasury Inspector General for Tax Administration, *Additional Actions Needed to Ensure Taxpayer Compliance* (2016)
- There are a variety of open questions regarding taxation, for which no country has put forward a position that has generated consensus
 - Valuation, basis allocation, and tax treatment of sales, forks, airdrops, etc.
 - Information reporting for account holders, merchants, cryptocurrency exchanges, and other entities
 - Foreign Account Tax Compliance Act (FATCA) and Foreign Bank and Financial Accounts (FBAR) compliance



Questions?