Hi [contact.firstname],

Welcome to the September 2022 edition of the BRI Newsletter. We hope you find this content useful. As always, if you have any comments or recommendations for content in future editions or would like to contribute content, please let me know:
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From the editor's desk

Douglas Heintzman, Chief Catalyst, BRI

As we get closer to Web3 and Blockchain World in November, I thought I would dedicate this newsletter to start looking at how Web3 and Blockchain are impacting various industries. The first industry I thought we should look at is energy. Energy is top of mind because the instability in the world of oil and gas markets continues to wreak havoc on the world. We are facing the prospect of a cold and uncomfortable winter in Europe and a reduction in manufacturing capabilities, and because of the sanctions on Russian oil and gas production, and climate change are driving the need to control carbon emissions. Both are backdrop to an industry that will be in transition over the next decade as alternatives to fossil fuels become more affordable and transportation becomes electrified.

There are many use cases where blockchain is proving cost, quality, and time advantages. They include rebuilding supply chains, re-engineering processes across up, mid, and down streams, tracking carbon, coordinating contracts between partners, assuring land and royalty rights, digitizing oil and gas post-trade settlement, streamlining payments, creating new market opportunities, creating new business models, payment rails, credential monitoring, lifecycle parts tracking, and book and claim systems, to name a few. There are companies in the energy industry that are in pilot or production in all of these.

Blockchain based tracking and tracing of carbon is an especially critical issue as it not only facilitates regulatory compliance and a basis for ESG ratings, but for transparency in data and the tokenization of carbon credits allow a market to exist where a price is put on carbon emissions, capture and mitigation. Carbon can be traded as a commodity. Tracking fractional ownership allowed by blockchain tokenization also will make the carbon credit market much more accessible to many more people.

Finally, the emerging transactive energy market, where energy generation and storage are distributed, distributed, and vehicles, appliances, and utilities all contract with each other for generation, storage and demand response, will rely heavily on blockchain and web3 technologies.

Many of these use cases are detailed in our paper "Blockchain Revolution in the Oil and Gas Industry". Distributed power is explored in "Distributed Power" and transactive energy is explored in "Distributed Power". Our conversation on these and many other topics will continue at Web3 and Blockchain World.

A couple of weeks ago I presented at the 6th annual Blockchain in Oil and Gas Conference in Houston, Texas. The Blockchain in Energy Consortium was convened by Blockchain for Energy (B4E). B4E is a consortium of some of the world's leading energy companies who are combining their resources and co-investing in developing blockchain solutions for the energy industry. I thought that it would be a great idea to invite B4E's president Rebecca Hofmann to be this month's guest contributor.

Guest Contributor:

Rebecca Hofmann
President
Blockchain for Energy

Game Changer: Blockchain in the Energy Industry

Blockchain is a game changer in the energy industry. The ability to take measurements from the field, ledger them, automate transactions, and engage multiple stakeholders is transformative. Take for example a system we developed that uses smart sensors and blockchain technology to provide secure data in the commodity transport (water hauling) supply chain. This solution creates a single source of truth between trucking companies and their customers. Drivers are paid in real time, the moment the transaction occurs in the field, and approved — within certain tolerances. It was then validated with a smart contract on a blockchain. The system creates the approval and the invoice, then the invoice is sent directly for payment. The results produced a 30% recovery in personnel hours and 10 times return on investment. Furthermore, it stopped contract leakage from an over rounding practice by the trucking companies.

This sort of approval automation solution is only the tip of a huge iceberg. At Blockchain for Energy we are working on solutions for carbon credit management, carbon credit ownership rights of seismic entitlements, integrated joint venture management, authorization for expenditure, joint interest billing and ESGs. The possibilities for the use of blockchain in our industry are limitless, but to obtain the maximum benefit, it is important that we thoughtfully consider the risks and rewards and then proceed with caution.

One important principle that we and our members prioritize is the avoidance of vendor lock-in and platform dependence. The high degree of standardization and composability of Web3 and blockchain means that or members can use a mix of technologies for each application and can easily change technologies without disrupting the system. The design point is that the value created by these new systems flow to the stakeholders and not to the platform owners.

So, what does the future look like? Blockchain will allow companies to create whole new ways of interacting with business partners regulators and consumers. It will allow the industry to tackle the carbon problem collectively and proactively. Through collaboration on environmental, social and governance issues, industry consensus and proactive engagement with regulators, the industry can ensure that the transition to a low carbon environment is a smooth one — for the public, our shareholders, and our industry at large. Business is built on agreements. We see blockchain as a digital conduit and smart contracts as the transformational catalyst that will bring our industry into the new digital age. This will enable our member companies to be more efficient, provide greater operational visibility to regulators and consumers, and create new business models and revenue streams. Blockchain technologies can create a seamless and integrated way of working for our future. In the energy industry, those who remain unconvinced by the overlap of potential and practically ignore blockchain at their own peril.

Blockchain in Energy Headlines

- **Ethereum blockchain slashes energy use with 'Merge' software upgrade**
- **How Shell Is Using Web3 And Blockchain For Sustainability And Energy Transition**
- **Chevron Forming Carbon Capture Consortium In Singapore**
- Devon Energy Corporation Joins Oil and Gas Industry Consortium Blockchain for Energy
- **China exploring blockchain for energy trading**
- World Economic Forum launches a new Crypto Sustainability Coalition
- Saving the planet could be blockchain's killer app

Related BRI Research:

- BLOCKCHAIN REVOLUTION IN THE OIL AND GAS INDUSTRY
- OIL, NATURAL GAS, AND BLOCKCHAIN
- DISTRIBUTED POWER

- Link to Blockchain in Oil and Gas keynote presentation

Announcements

Finalists for the Web3 and Blockchain Transformation Awards will be announced on September 29, 2022, and winners will be recognized at the Blockchain Transformation Awards Gala in Toronto, Canada, on November 8, 2022. You can get tickets to the Gala here.

Web3 & Blockchain World | November 8-9, 2022
The worldwide enterprise leadership community for Web3 & Blockchain technology returns this November. W3B World brings together leading thinkers, builders, and pioneers to accelerate the Web3 & blockchain revolution. Register here.

The Liechtenstein Bankers Association (LBA), launched its new member engagement programme in support of its sustainability initiative. Members of the LBA can now mint NFTs which function as a vault locking away so-called Natural Carbon Tonnes and absorbing carbon dioxide emissions. The initial phase of the initiative is only open to employees of LBA members. After two months, the NFTs will become publicly available. You can find out more information about this innovative initiative here.

Hyperledger Announces Eight New Members, Including CaseyLabs, Banque de France and Central Bank of Nigeria, to Kick off Hyperledger Global Forum

BRI RESEARCH

New and upcoming research

A new research brief "What is Web3?" will be available later this week. It examines the core components and objectives of Web3 and the change in the business landscape it will bring about. Look for it in our our research library.

The Promise of Community-Owned Prediction Markets: Why Decentralized Crowds Networks Are Inevitable and Important to Society
This project examines blockchain-based prediction markets. Global permissionless protocols allow anyone to create a community-owned and operated marketplace to bet on the outcomes of future events, and whether countries will fulfill their climate change commitments on time.

Filecoin and the Future of Decentralized Cloud Storage: Disputing the Market for Data Storage and Retrieval Services
This project examines Filecoin and decentralized protocols that provide decentralized storage and retrieval services to the cloud computer. An alternative to traditional cloud storage, the Filecoin blockchain-based storage solution leverages a peer-to-peer architecture, creating massively scalable storage capacity without building massive new infrastructure. Instead of entrusting one company to store and manage access to your data and documents in a single jurisdiction, customers can split up and store their assets on different computers around the world.

The Digital Yuan and Cross-Border Payments
Members can get access this case study dige into the Chinese government's decision to pilot its sovereign cryptocurrency and launch of its digital yuan. The authors analyze China's digital currency electronic payment in terms of the government's joint venture with SWIFT, its Regional Comprehensive Economic Partnership, and the Belt and Road initiative and in the context of China's ongoing trade war with the United States and its allies. They cover the drivers of the technology, the People's Bank of China's careful testing of use cases, and the potential impact on Western financial and other organizations conducting operations with and within China.

Decentralized Resource Governance
Members can get access to this research brief which summarizes the findings of a substantial research project worked on by two Blockchain Research Institute Fellows, Consulting Group, and the Blockchain Research Institute and funded by Input Output (IO). It proposed a new form of stewardship, called the decentralized resource governance (DRG) model.

A Taxonomy of Digital Assets
Members can get access to to this research brief which lays out a taxonomy of nine digital asset categories, including tokens for commodities, natural assets, platform governance, and smart contracting protocols.

Read Latest Research

ECOSYSTEM NEWS

Members and Partners

- Solana and Cosmos team up for Nibiru to scale faster than Ethereum
- Starbucks to Offer NFT-Based Loyalty Program Using Polygon's Blockchain Technology
- Cardano successfully deploys the Vasil hard fork to its mainnet
- LG Shuns Ethereum, Picks Hedera for Television NFTs
- **Ethereum Token Issuance Plummets 95% Following Merge**

Industry Headlines

- **World Economic Forum launches coalition to use web3, blockchain for positive climate action**
- BNB Chain, Google Cloud Team Up to Advance Growth of Web3 and Blockchain Projects
- Web3 - A Transformative And Disruptive Multi-Trillion-Dollar Opportunity To Service Billions
- **Crypto Biz: DID you see what Africa is doing with Web3?**
- **Billions of People to Use Blockchain Tech Soon: Pantera Capital CEO**
- The Ethereum Merge Is Done, Opening a New Era for the Second-Biggest Blockchain

BRI NEWS & INITIATIVES

Book Series

Buy our books on Amazon.com or Amazon.ca

Our latest book

Digital Asset Revolution: How Blockchain Is Decentralizing Finance and Disrupting Wall Street

The Hon. J. Christopher Giancarlo, former chairman of the US Commodity Futures Trading Commission, sees the book as "a wake-up call for financial and business leaders everywhere."

Tyler Winklevoss, co-founder and chief executive officer of Gemini Trust Company LLC, calls it "an important book for enterprise leaders to better understand blockchain and how digital assets will change the future of business."

Available on Amazon

Thoughtful Articles

Alex Tapscott published two interesting articles on Fortune.

- The recent crackdown on Tornado Cash sets a dangerous precedent. Here's why it could be the beginning of an all-out 'war on code'
- The crypto crash resembles the Panic of 1907, with Sam Bankman-Fried in the role of J.P. Morgan

Webinars

The Blockchain Research Institute hosts regular webinars featuring blockchain experts.

New Directions Webinar Series

Watch our webinar series exploring digital policy and strategy in government for the next era of the digital age.

Each webinar in the series discusses a technological theme and how it intersects with government policy, featuring leading experts in blockchain, government policy, digital identity, healthcare, and more.

Check out our past Webinars

Podcasts

Watch out for our upcoming podcast series on all things Web3
In the run up to Web3 & Blockchain World the BRI will be hosting a limited time series on Web3 and its impact in many industries.

Episode one: **"What is Web3?"** (a special double episode) featuring an interview with Andre Wlodawski-Barrier will drop soon.

Watch the latest episode of Don and Alex Tapscott's podcast series, "What's On Tap". Now available on Apple Podcasts, Pocket Casts, RadioPublic, and Breaker.

Watch the latest Episode

COURSERA Online Courses

Enrol in our online courses produced in partnership with INSEAD Business School.

Discover how blockchain is transforming business, government, and society with our suite of online courses hosted on COURSERA. Anyone can enrol in our Blockchain Revolution specialization, which includes four courses taught by Don Tapscott and Alex Tapscott. Blockchain: Business Models in the Age of Digital Assets, Blockchain Revolutions: Decentralizing, covers everything you need to know about the disruption, opportunities, and implications of blockchain across industries and business sectors.

About the Blockchain Research Institute

Navigate, accelerate, and lead the blockchain revolution.

The Blockchain Research Institute is a global think-tank exploring the promise of blockchain technology for business, government, and society. Our syndicated program is funded by an international community of Member organizations, including enterprises, governments, and technology start-ups from around the world.

We're always looking for new organizations to collaborate with, through a number of initiatives...

- BRI Member Program
- Blockchain Fellows Program
- Web3 and Blockchain World Conference

For all inquiries, please email douglas@blockchainresearchinstitute.org