



Blockchain

Presentation to the Banking & Insurance Committee

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The 3 Pillars of Blockchain Technology

➔ Decentralization

➔ Transparency

➔ Immutability

What is Blockchain?

- Distributed ledger technology
- Uses advanced cryptographic techniques
- Creates a secure ledger of information
- Prevents unauthorized modification, addition or removal of data
- Advantages of data security and creation of a clear audit trail
- Immutable and does not require oversight by a central authority
- Removes the need for trust between 3rd party organizations allowing collaboration between competitors
- Ability to create a more secure, efficient, cost-effective, and customer-friendly experience
- Transparency & Accountability

Insurance

How can blockchain help?



Smart Contracts



Claims



Enable industry collaboration



Smart Contracts

Distributed ledgers enable the coding of simple contracts that will execute when specified conditions are met.

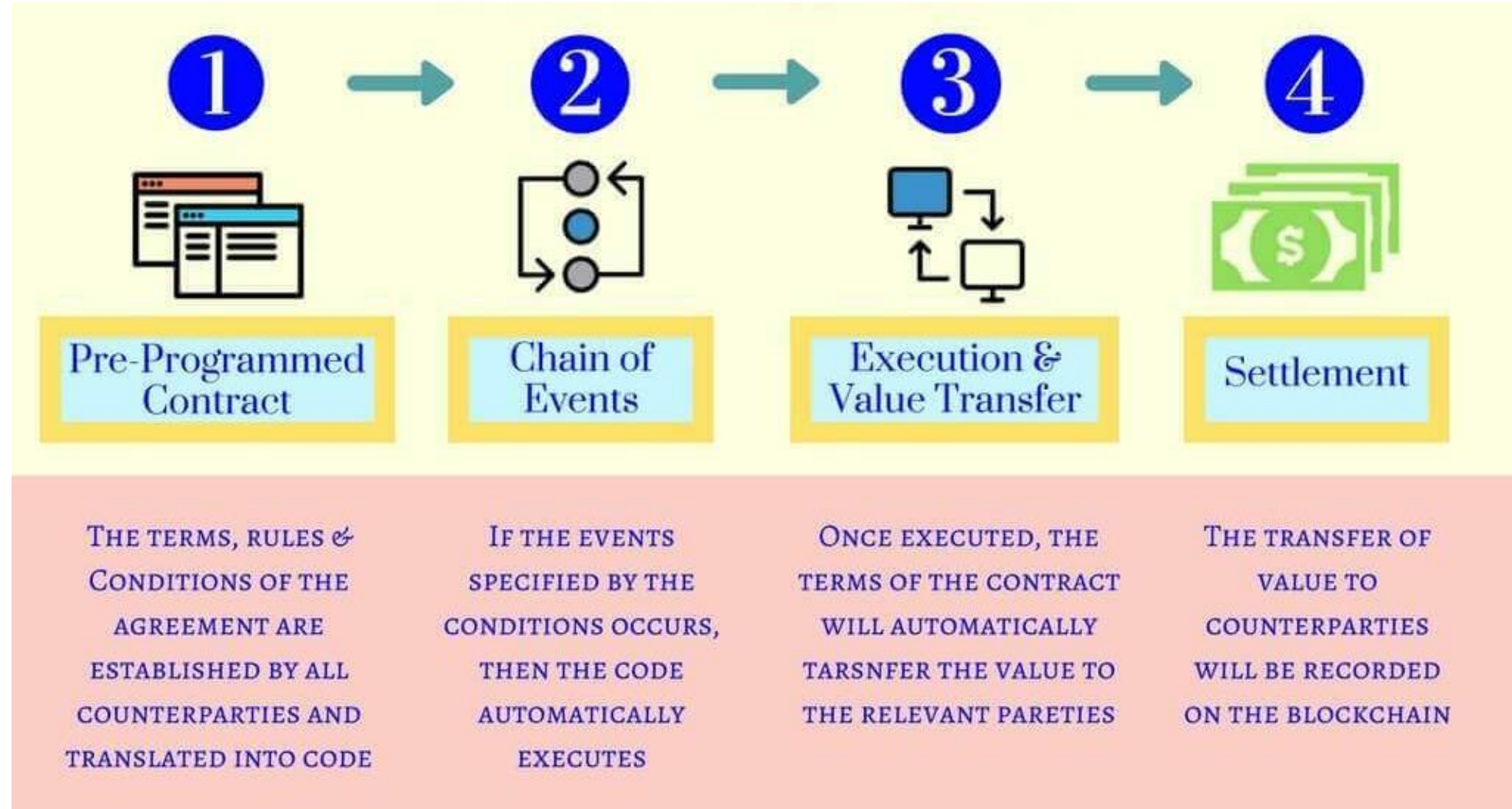


Governance

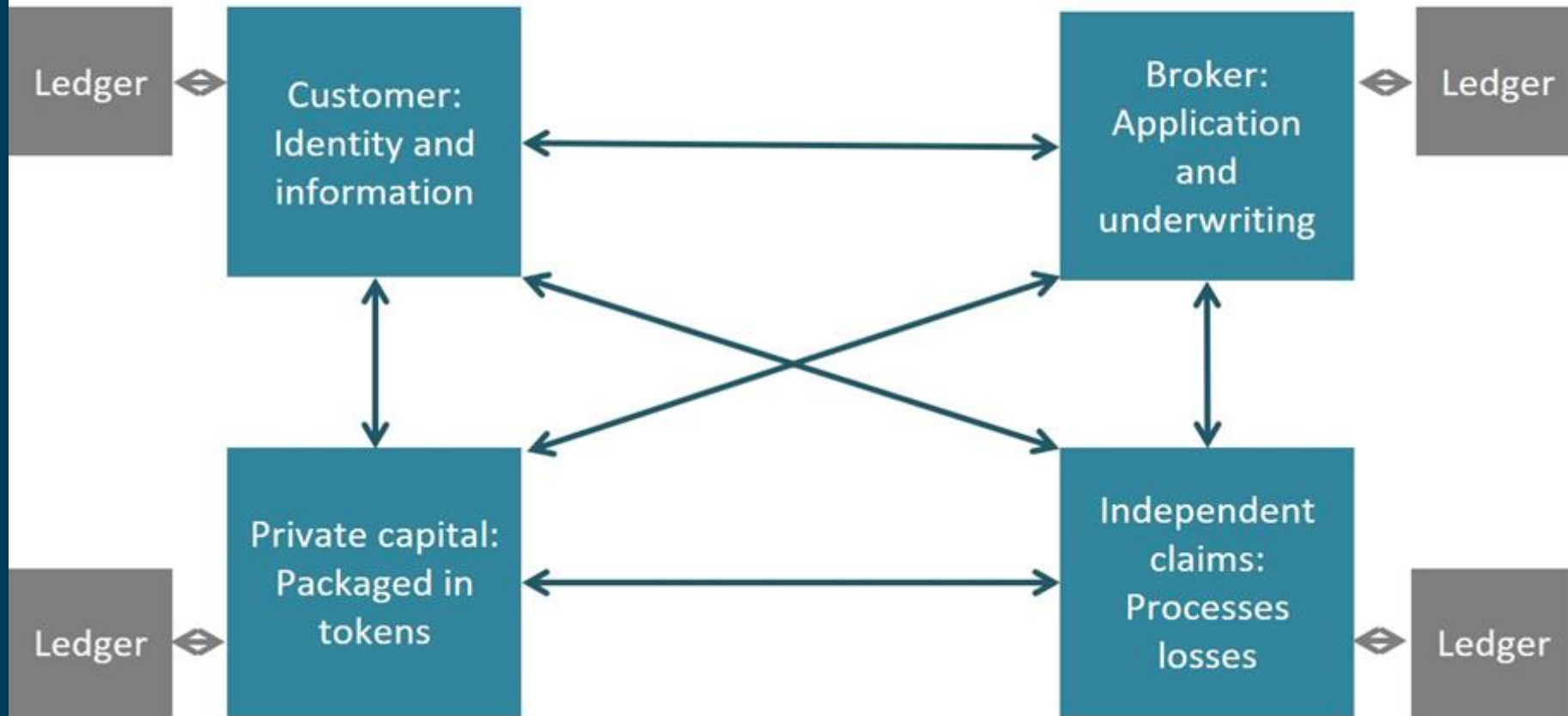
By making the results fully transparent and publicly accessible, distributed database technology could bring full transparency.

SMART CONTRACTS

>>>>>How It Works<<<<<<



What Blockchain Insurance Might Look Like





1.

Enter flight details

Provide information on flight number, departure date, country of residence



2.

Personalize coverage

Choose coverage amount, conditions and confirm



3.

Purchase

Upon payment, the record is stored on the blockchain and no changes can be made by the insurer after



4.

Flight delayed >2 hours

Smart contract confirms with a public flight database ('Oracle') that a delay has happened



5.

Instant payout

Automatic, hassle-free compensation triggered and customer is notified when plane lands

Banking

Federal and State Control

Historic Laws being molded to fit unforeseen technologies

Federal:

- Securities and Exchange Commission, Commodity Futures Trading Commission, FinCEN
 - “money services businesses” register with FinCEN

Kentucky:

- Department of Financial Institutions
 - “money transmitters” are licensed through DFI





What Does Kentucky Need?

Establish a Study Group made up of industry professionals to:

- Identify the existing blockchain industry in the state along with economic growth and development opportunities.
- Identify successful blockchain applications currently used in industries to determine whether Kentucky can assist our key employers in this area
- Assess workforce needs and academic programs required to build blockchain technology expertise across all relevant industries.
- Make recommendations to the Governor and the Legislature that will promote innovation and economic growth by reducing barriers to and expedite the expansion of the use of blockchain by our financial and insurance industries.

Thoughts on Kentucky Law and Regulation

- Legislatively recognize blockchain and protect property interests
- Examples of this “foundational” first step:
 - Tennessee 47-10-201/202

47-10-201. As used in this part:

- (1) "Distributed ledger technology" means any distributed ledger protocol and supporting infrastructure, including blockchain, that uses a distributed, decentralized, shared, and replicated ledger, whether it be public or private, permissioned or permissionless, and which may include the use of electronic currencies or electronic tokens as a medium of electronic exchange; and
- (2) "Smart contract" means an event-driven computer program, that executes on an electronic, distributed, decentralized, shared, and replicated ledger that is used to automate transactions, including, but not limited to, transactions that:
 - (A) Take custody over and instruct transfer of assets on that ledger;
 - (B) Create and distribute electronic assets;
 - (C) Synchronize information; or
 - (D) Manage identity and user access to software applications.

47-10-202.

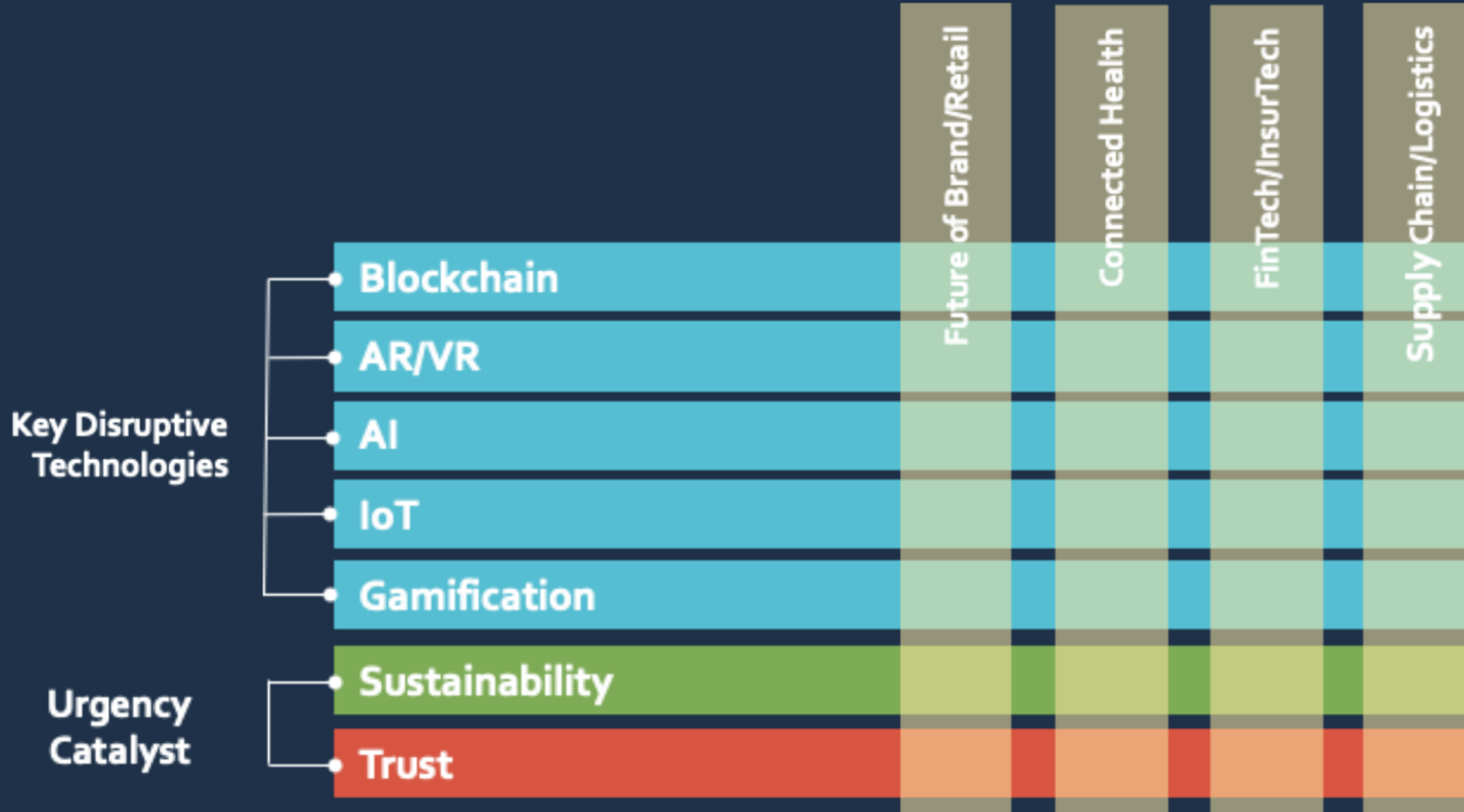
- (a) A cryptographic signature that is generated and stored through distributed ledger technology is considered to be in an electronic form and to be an electronic signature.
- (b) A record or contract that is secured through distributed ledger technology is considered to be in an electronic form and to be an electronic record.
- (c) Smart contracts may exist in commerce. No contract relating to a transaction shall be denied legal effect, validity, or enforceability solely because that contract is executed through a smart contract.
- (d) Notwithstanding any other law, a person that, in or affecting interstate or foreign commerce, uses distributed ledger technology to secure information that the person owns or has the right to use retains the same rights of ownership or use with respect to that information as before the person secured the information using distributed ledger technology. This subsection (d) does not apply to the use of distributed ledger technology to secure information in connection with a transaction to the extent that the terms of the transaction expressly provide for the transfer of rights of ownership or use with respect to that information.
- (e) No implication is made by, and no inference may be drawn from, the enactment of this part as to whether technologies not defined in § 47-10-201 that secure signatures, records, or contracts are considered to be in an electronic form or to be an electronic signature or electronic record, as applicable.

Kentucky Money
Transmitter Act;
KRS 286.11 *et seq.*

- Amend KRS 286.11-003 (Definitions)
 - Subpart 16 (Definition of money) to exclude from the definition “virtual currency”.

Private Sector

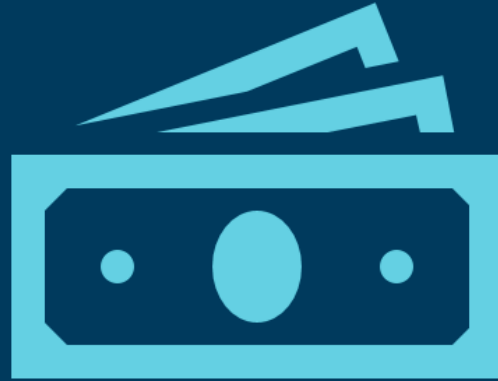
Strategic Pillars





Purpose

Create a thriving ecosystem of blockchain startups, enterprise companies, industry SME's, academics, developers, investors and regional government come together to define the future of blockchain in Supply Chain/Logistics and Financial Services.



Value

- Regional Economic Development and National Brand Building
- Attract technology and industry startups...and keep them in the region (don't lose them to the coasts)
- Advance capability in the region and create a critical mass of top talent
- Fill the gap in skilled labor pool

Two Focus Areas – Why?

Supply Chain/Logistics

- Critical Mass - Concentration of F500 and Middle Market Companies where Supply Chain and Logistics are critical to their operation (P&G, Kroger, Yum! Brands, Papa John's, Amazon Prime Cargo Hub, Cintas, DHL, TQL, etc.)
- Location in the country - one-day drive from 60% of the U.S. population, link Florida to Michigan
- Deep Functional and Industry Knowledge

Financial Services (Including Insurance)

Help to position Kentucky as a financial services destination by attracting blockchain startups focused on:

- Instant Settlements
- Improve Capital Optimization
- Reduced Counterparty Risks
- Improved Contractual Performance due to Smart Contracts
- Increased Transparency, Reduced Error Handling and Reconciliation

The Stage is Being Set

<https://www.westonhurd.com/governor-kasich-signs-blockchain-bill-into-law/>

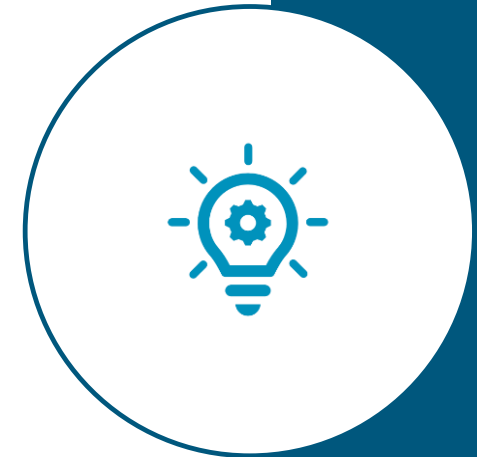
<https://www.safechain.io/>

<https://www.govtech.com/policy/Ohio-Proposal-Would-Clear-the-Way-for-Blockchain-in-Government.html>

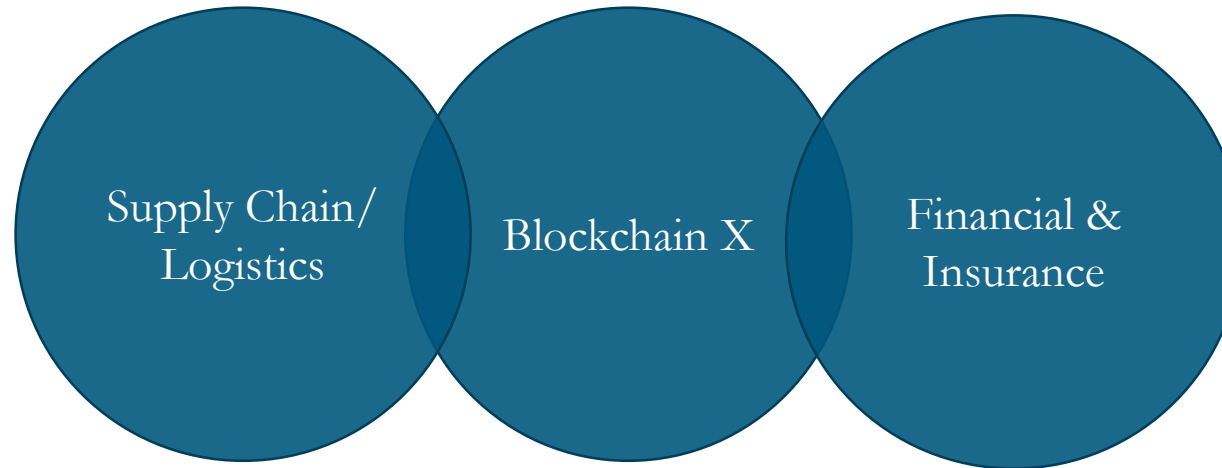
- The city of Seoul announced a \$108 million blockchain industry plan to be implemented between 2019-2023.
- The initiative will include the construction of a blockchain complex providing space to 200 blockchain companies.

<https://www.ucumberlands.edu/news/cumberlands-first-kentucky-offer-blockchain-degree>

<https://www.businesswire.com/news/home/20180806005612/en/Ohio-Moves-Forefront-States-Supporting-Blockchain-based-Businesses>



Vision – Create a Vibrant Ecosystem



Regional Govt	Industry Subject Matter & Functional Experts	Investors	Startups	Enterprise Companies	Technical SME's	Service Providers	Universities
<ul style="list-style-type: none">• Kentucky• Ohio• Indiana	<ul style="list-style-type: none">• Formers from Enterprise Companies	<ul style="list-style-type: none">• Local• Regional• National	<ul style="list-style-type: none">• Develop	<ul style="list-style-type: none">• P&G• GE• 5/3• Yum!• TQL• Etc.	<ul style="list-style-type: none">• Developers• Architects	<ul style="list-style-type: none">• Legal• Accounting• Real Estate	<ul style="list-style-type: none">• U of L• NKU• UK• EKU• Etc.



Q & A



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Greg has over 25 years of in-depth industry experience in product development, company formation/M&A, as well as market conduct/enforcement and regulatory relations. A longstanding member of the Federation of Regulatory Counsel, the International Association of Insurance Receivers and Insurance Regulatory Examiners Society, among others. He also serves as the Midwest Chapter President of Association of Insurance Compliance Professionals and chairs the Insurance Regulatory practice group of Multilaw, an international association of law firms.



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William “Bill” Repasky is a Member with Frost Brown Todd, LLC’s Louisville office. He focuses his practice on advising the financial services industry. He was formerly in-house counsel in Louisville for one of the nation’s largest banks and also for a leading credit/debit card processing company. He has delivered podcasts and lectures, and authored writings on the federal and state regulation of virtual currency related businesses. He obtained his law degree from Vanderbilt University and his undergraduate degree from the University of Michigan.



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Adam Koehler is an entrepreneur and startup consultant. He serves as the co-founder of Crypto Properties, a company focusing on the transformative power of blockchain technology in real estate. He is also the co-founder of dotloop, a digital documents company that was later sold to Zillow Group in a transaction of \$108 million. He is dedicated to helping the startup community grow in emerging technologies. In 2008 Koehler founded Reversed Out Creative, a digital agency focusing on assisting businesses with creative and digital application development. He also owns CovWorx Coworking in NKY that connects working spaces and communities with creative people and early stage businesses.

