

MESC2017

Medical Enterprise Systems Conference
Baltimore, MD
August 15-18, 2017



Be more for health care innovation.

BLOCKCHAIN'S TRANSFORMATIONAL POTENTIAL FOR MEDICAID

SESSION ID #: 2-2

DAY: FRIDAY, AUGUST 18, 2017

ROOM: 307

AGENDA

- I. Blockchain in Healthcare
- II. Illinois – Healthcare Provider Registries
- III. Delaware – “Smart” Pre-Authorization
- IV. Panel and Audience Q&A

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SPEAKERS

Mike Wons, CTO, State of Illinois

Corey Todaro, COO, Hashed Health

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Blockchain Healthcare Provider Registries

*Illinois Blockchain Initiative (IBI)
Partnership with Hashed Health*

August 18, 2017

Government's Role in Enabling Blockchain



Developing an Ecosystem for Growth and Collaboration

Although, the long-term benefits of Blockchain for industries, the economy and society are clear, Blockchains and DLTs are still very much nascent technology. Governments can play a role in catalyzing its maturity as a technology by supporting grassroots developer innovation.



Modernizing Governance for a Distributed Economy

Effective governance in a distributed economy will require legislative agility beyond what rules and regulations can provide. Modern governance will need to carefully balance a combination of broad policy principles, technology standards and "code".



Integrating Services for a Highly Efficient Government

A "hyperconnected" government enables unprecedented transparency, and efficiency, where services are tailored to individual's needs. Blockchain and DLT will be used to connect disparate entities within and across regional, municipal, and state entities around citizens, businesses and assets.

Insights - Design Principles for Government ¹



Trust & Integrity

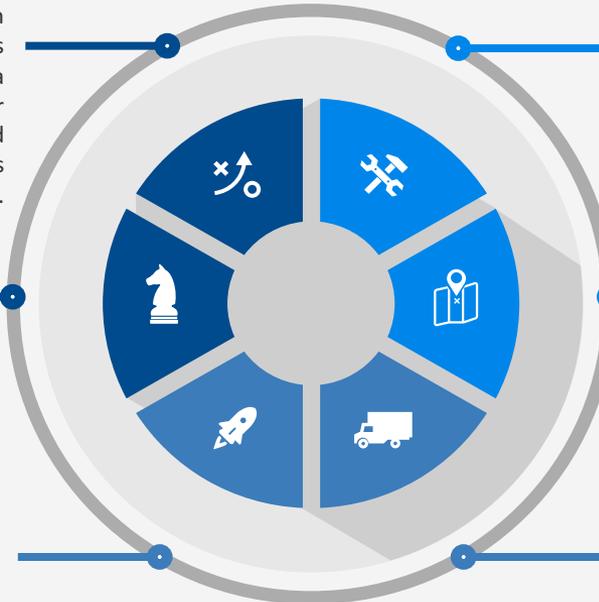
Trust is intrinsic in a distributed ledger system, encoded in every process and not vested in a single member. Its Blockchain's **immutable design properties** make data uniquely authoritative and nearly impossible to alter after entries are added. This increases confidence in integrity and reduces the need for federal, state and local governments to separately reconcile individual registries.

Shared Value Creation

Blockchains systematically align incentives so that value is generated through collaborative coordination. Systems that reward shared-value creation have the opportunity to more granularly and accurately **link policy-making efforts** to the needs of tax payers and voters.

Distributed Power

Blockchains can distribute power to citizens by decentralizing administrative control and **providing unparalleled personal information ownership**. Decentralized control strengthens the resiliency of democratic checks and balances. When information is equally distributed, data sovereignty empowers the citizen that creates it not the agency that stores it.



Embedded Security

With **strong cryptography and distributed computing** forming the basis for the underlying protocol, governments can ensure services are highly reliable and available. Securing citizen data is not a choice or investment to be made by leadership managing government; confidence, security and authenticity are hard coded into the system.

Privacy & Rights Preserved

The cryptographic nature of the protocol allows governments to **balance transparency and privacy**. Blockchains can help manage and cryptographically link owners with assets so that ownership is clear and rights are enforceable. By decentralizing data control, governments can vest privacy rights in the hands of the citizens that create it.

Inclusion & Participation

Not one participant controls a Blockchain and **everyone has consistent, equal access to all records** added to the ledger. An integrated government mechanized and automated by distributed ledgers allows leadership to focus its policy and administrative efforts on a governing process that is inclusive of all citizens and tailors services specifically their needs.

1. Adapted from: Tapscott, Don, and Alex Tapscott. Blockchain Revolution: How the Technology Behind Bitcoin Is Changing Money, Business, and the World. 2016.



Integrating Government: Proof of Concepts



Property Deed Recording

Cook County Recorder of Deeds will be the first land titling office in the US to record property transfer on the Blockchain. The goal is to expand the scope of the program, the extensibility of the solution while also providing the solution to other Illinois county recorders.



Academic Credentialing

Partnering with Illinois Universities to issue academic credentials/transcripts on a Blockchain. MVP focuses on credential verifications, with the goal of recording transcripts of all Illinois institutions on a distributed ledger for students, employers or professional credential verifiers.



Health Provider Registries

Healthcare payers spend over \$2.1b a year reconciling a few discrete health provider data fields issued by CMS, DEA and state boards. Provider data, starting with the state licensing board would be entered onto a distributed ledger acting as a single source of truth dataset for providers and payers.



Energy Credit Marketplace

Energy producers are issued tax credits when producing “green” energy. Program would include standing up a marketplace where REC could be traded. Credits would be granularly divisible. Potential to improve traceability and liquidity, providing better “green” energy policy outcomes.



Vital Records

Vital records such as birth events to be placed on a distributed ledger. Birth records allow the state to attest to verifiable digital identity claims tied to a person’s birth that could be managed on a distributed ledger, adding attributes to it as the citizen interacts with different agencies throughout his/her lifetime.



Healthcare Provider Registries: Problem Statement

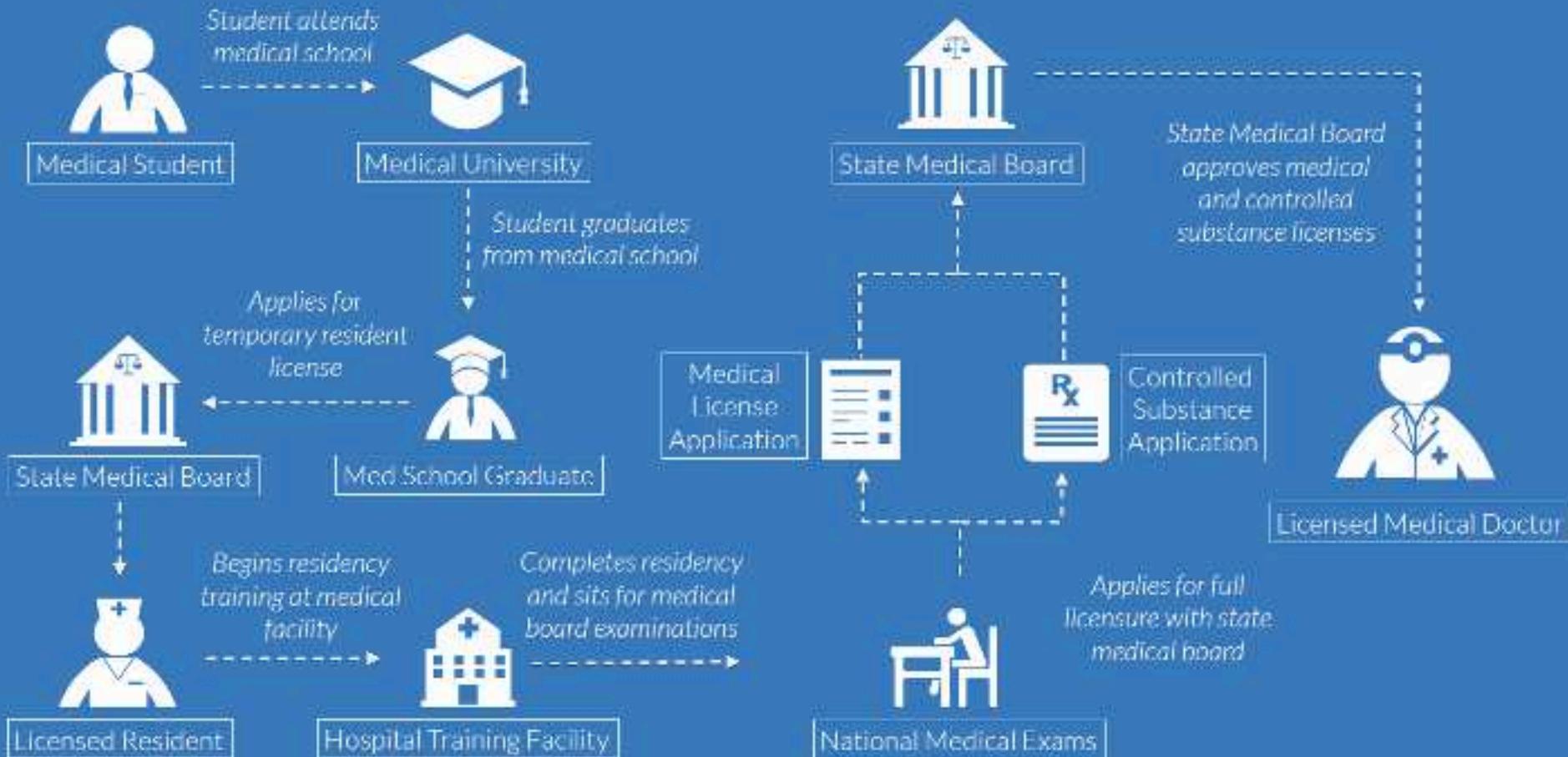


Health Provider Registries

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- For physician practices, networks and health systems, the process of provider credentialing is lengthy and costly and can take in excess of 120 days.
- This lengthy process has a direct financial impact, impeding the ability of a physician to provide services and receive payment for those services.
- Provider credentialing is the first step and is directly related to revenue cycle processes.

Medical Provider Journey: State License





Healthcare Provider Registries: Proto-Type Solution

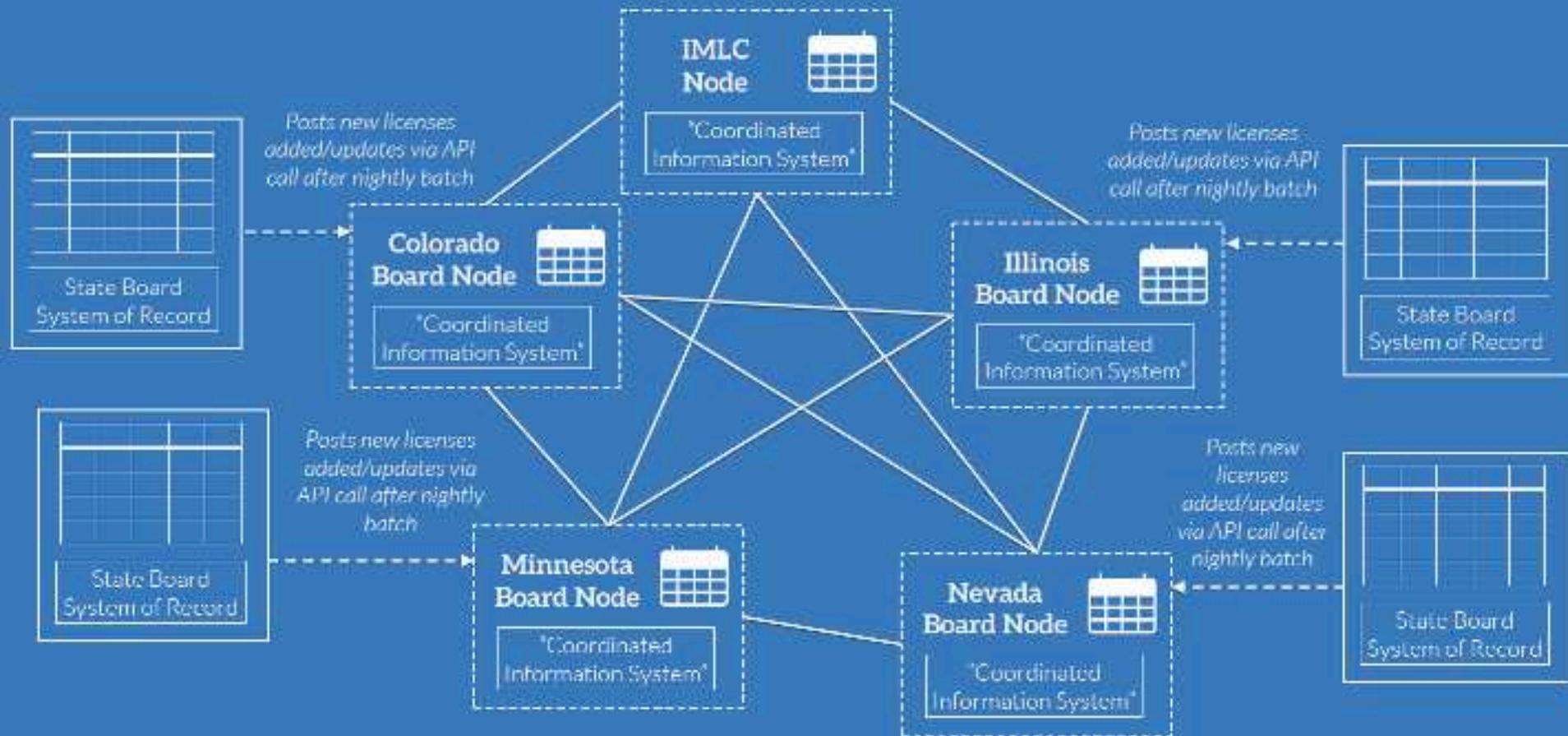


Health Provider Registries

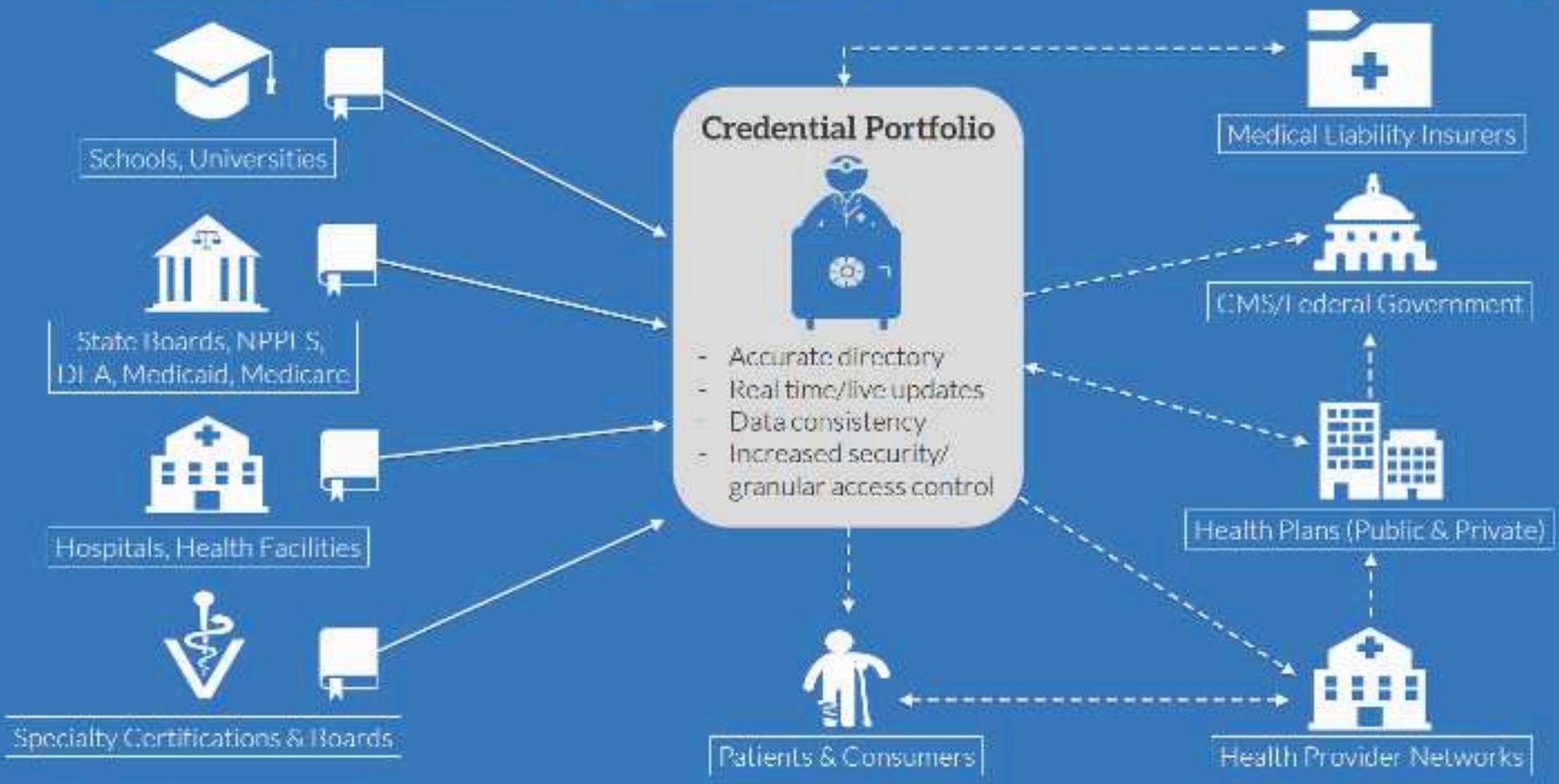
Healthcare payers spend over \$2.1b a year reconciling a few discrete health provider data fields issued by CMS, DEA and state boards. Provider data, starting with the state licensing board would be entered onto a distributed ledger acting as a single source of truth dataset for providers and payers.

- The core function enables plans and individual providers to create and exchange “digital data assets” which can be securely distributed to network members via a permissioned, distributed ledger system.
- By “tokenizing” provider updates, the system creates trackable data assets which can be distributed to multiple network participants.
- The reporting of the all asset changes to the distributed ledger ensures that provider data is up-to-date and consistent across multiple entities as well as internal, siloed data systems.

Potential System of Record Architecture



Health Provider Vault Concept



Today's Discussion: Blockchain Will Improve Healthcare...

The Healthcare Provider Registries migration to leverage Blockchain technology will fundamentally improve the efficiency and validity of claims processing and improve the credentialing directly related to improved revenue cycle process management across the healthcare system.

Healthcare Provider Registries Summary:

- Providers must be credentialed and approved to treat patients, write prescriptions and receive payment
- The process of synchronizing which providers are credentialed for certain payers and patients is inefficient
- Often times, over 20 percent of the data in a payer's directory is incorrect

Benefits the state via:

- Reduced time and cost to credential
- Improved claim processing
- Reduction in fraudulent reimbursements
- Business attraction and expansion
- Policy and regulatory reduction, and new policy creation
- Pilots to drive emerging technology adoption and improve healthcare delivery in Illinois

SPEAKERS

Mark Jacobs, State of Delaware

Vince Albanese, State of Delaware

Robin Dufresne, CSG Government Solutions

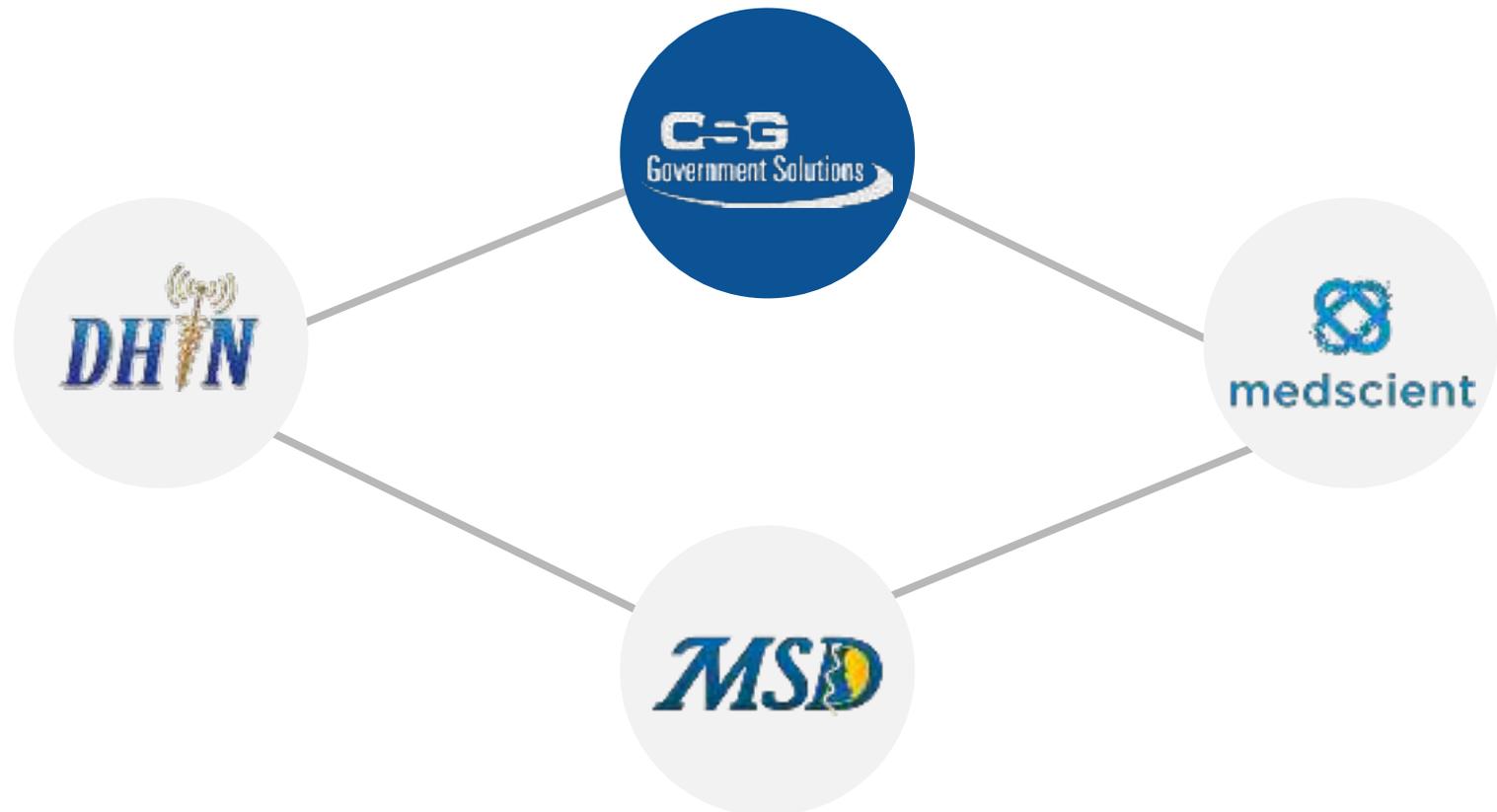
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Blockchain's Transformational Potential for Healthcare



Challenge

Identify a bold target where the assets we have in Delaware could model a meaningful solution to a real healthcare problem.

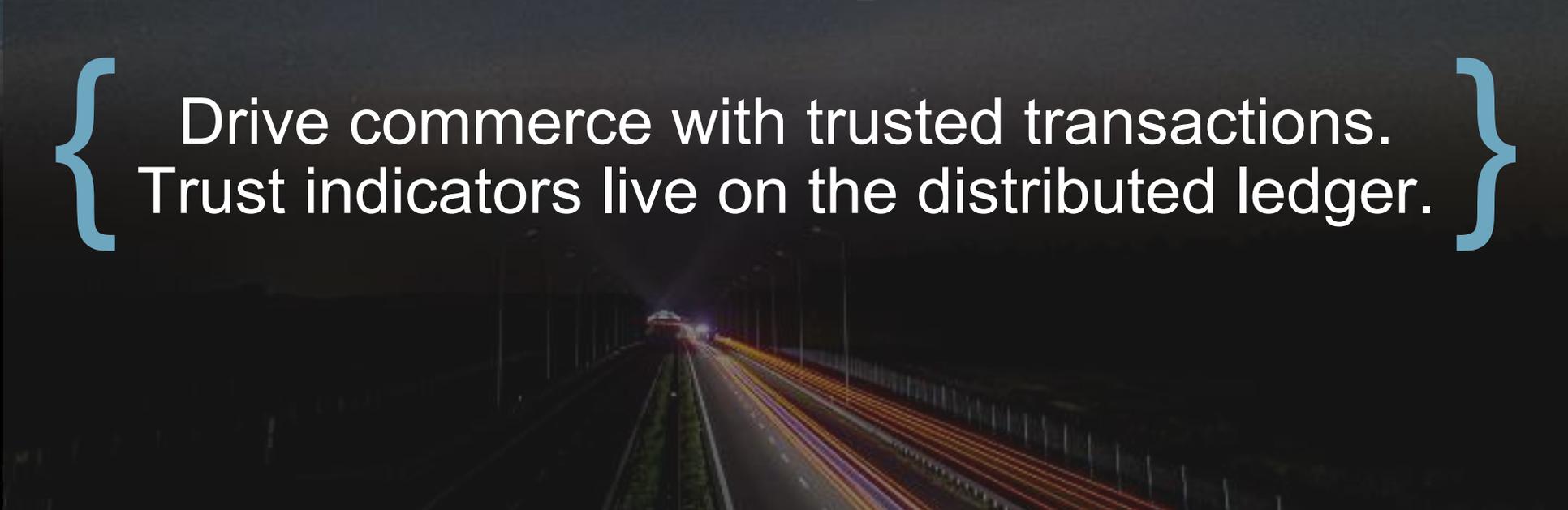
The solution must be holistic and solve the needs of both payers and providers.



Trust

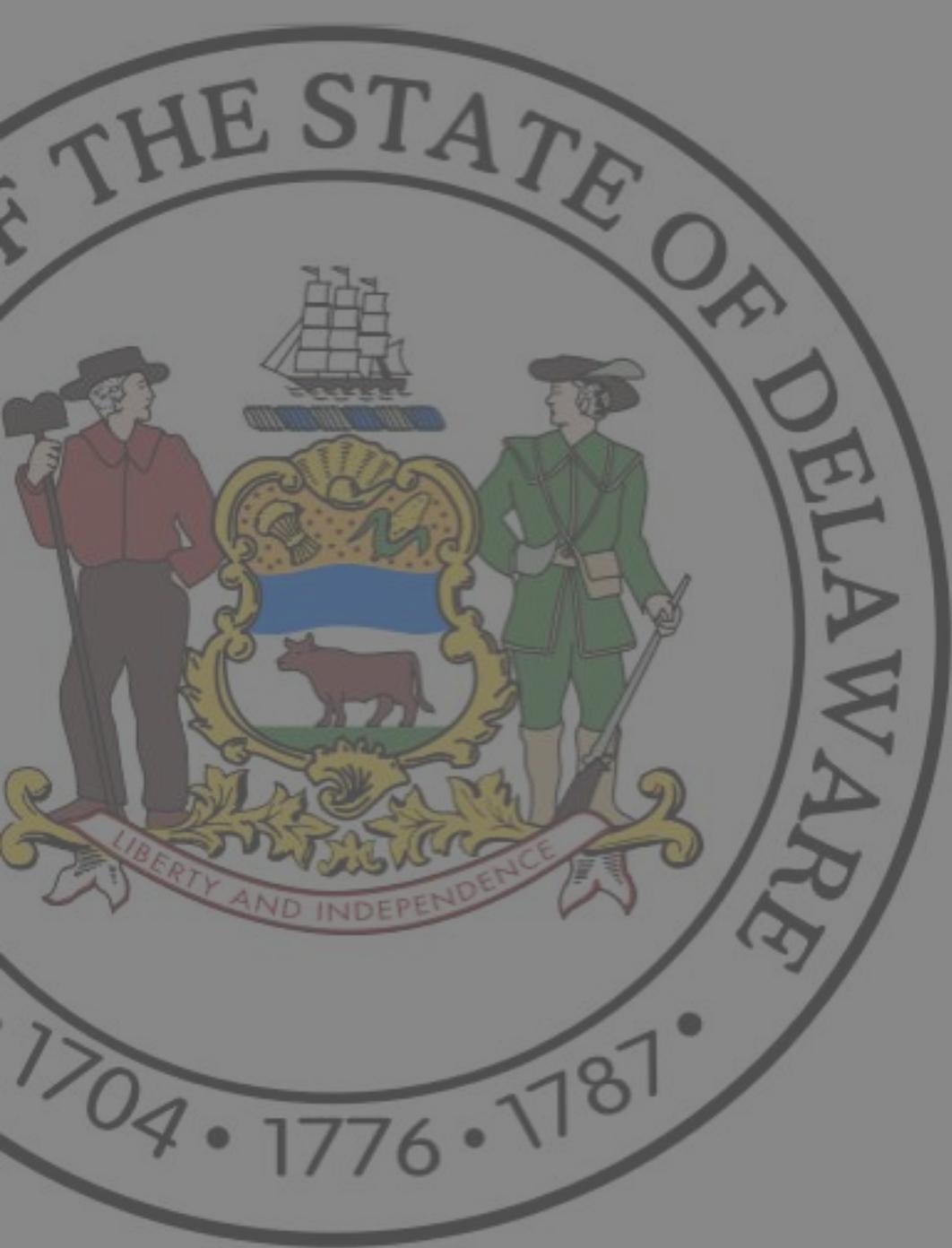
The currency of the future

{ Drive commerce with trusted transactions.
Trust indicators live on the distributed ledger. }



The Goal

- Create a trustworthy mechanism to facilitate healthcare transactions while protecting the intellectual property and experience of all stakeholders.
- Leave data where it is (not devote time to defining new standards for interoperability or moving vast quantities of data).



Delaware
provides the
ideal test
environment.

Blockchain Today

Camp 1: The big thinkers
Camp 2: The data brokers

Prior authorization

- Patient safety
- Patient satisfaction
- Patient confidence in their ability to make care on behalf of patient

Problem

- Lack of automated pre-authorization processes and real-time reply causes delays for approvals
- Higher denials can add to administrative and operating overhead

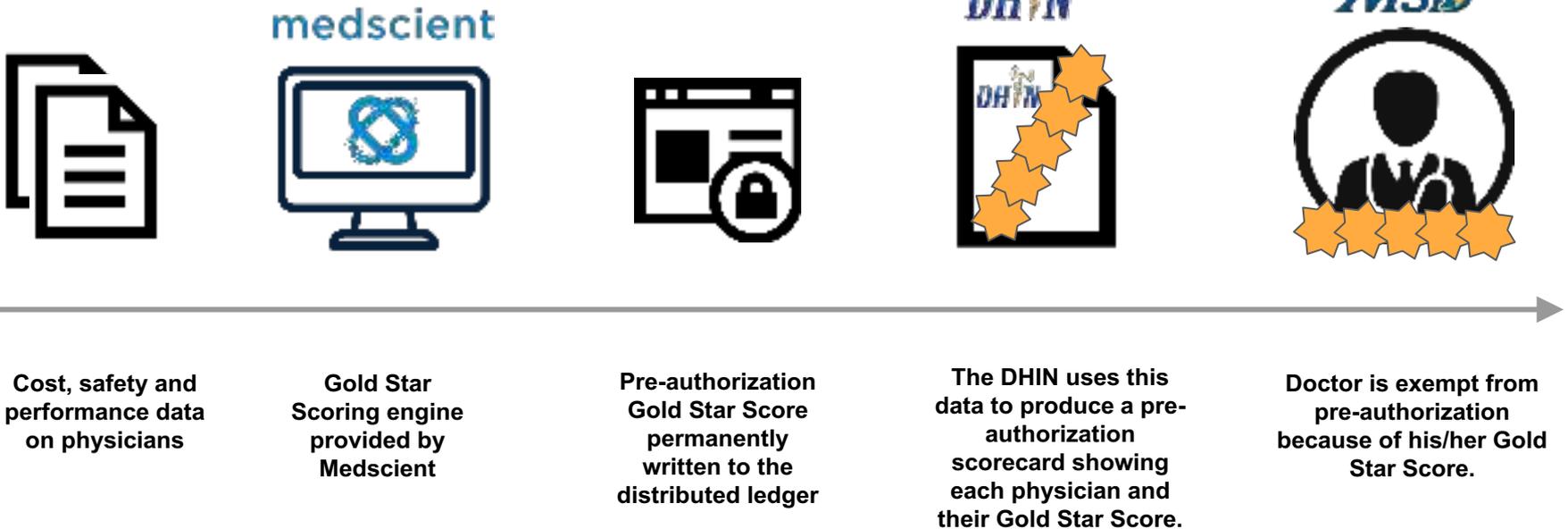
Smart Pre-Authorization

- Automates the process for pre-authorization providers, reducing delays
- Eliminates the need for paper or faxed forms
- Reduces administrative overhead
- Increases medication adherence
- Introduces innovation and new workflows
- Creates efficiency

Better Health Outcomes

- Patient satisfaction
- Patient receives treatment faster without delays

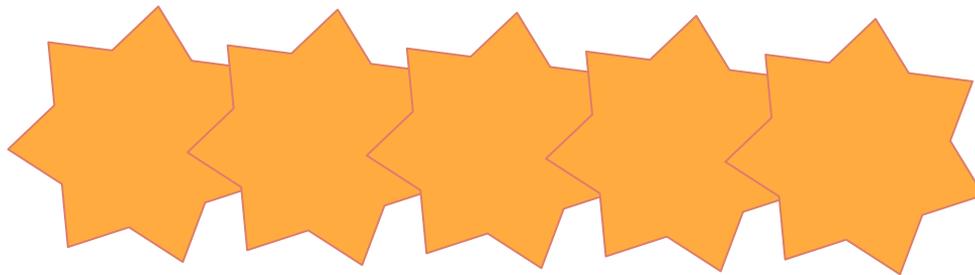
Smart Pre-Authorization



Proof of Concept

A small test group is formed:

- One set of doctors
- One type of treatment
- First Gold Star Scores awarded



Win-Win Solution

Doctors earn and continue to prove their exemption from pre-authorization.

- Data-driven accountability
- Results are more transparent
- Patients receive appropriate treatments
- Payers save money and manage risk

Questions?

