

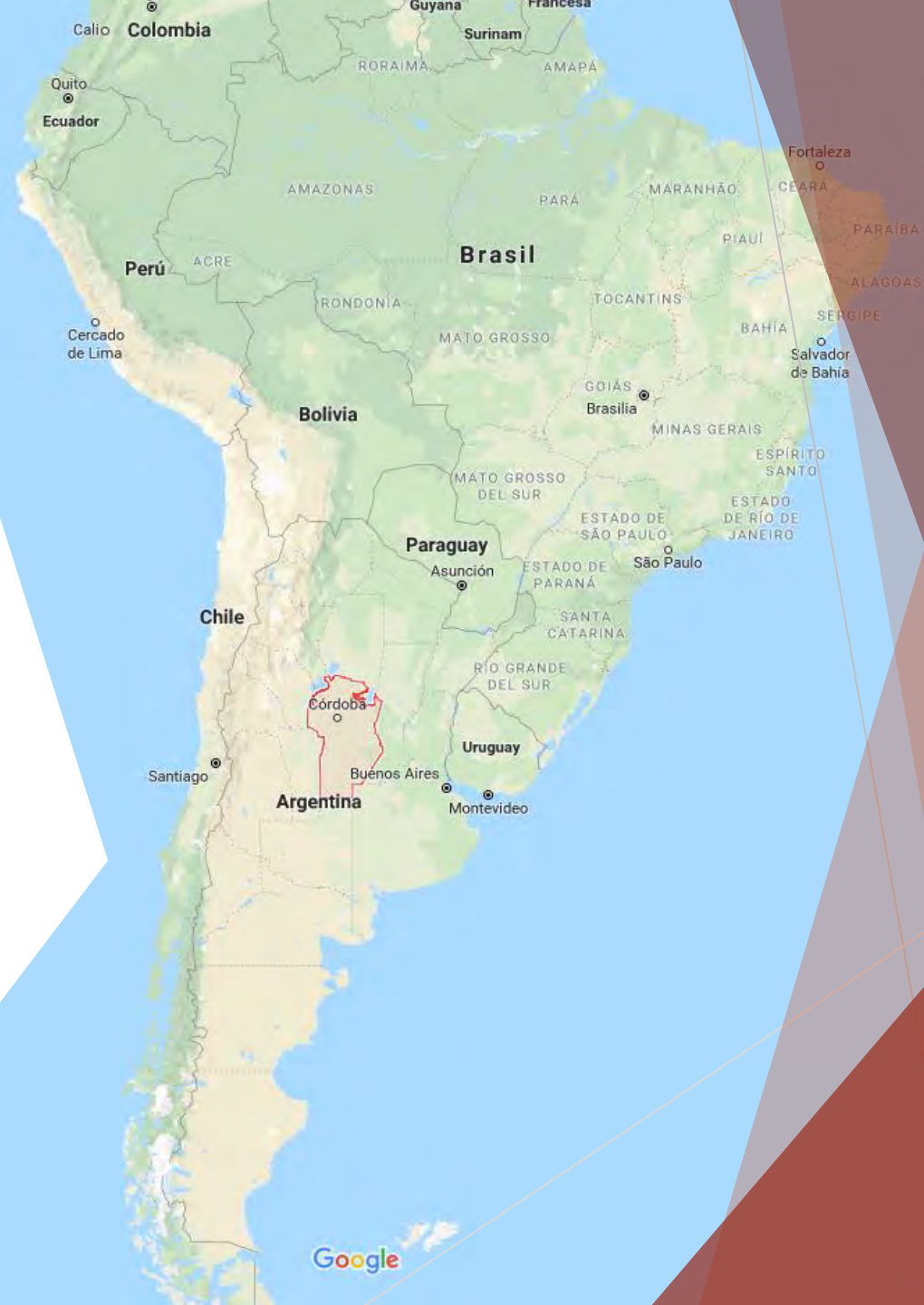
National Notary Association
Convention - LAS VEGAS 2018



Blockchain: Threat or Opportunity for Notaries?

About the Presenter: Dr. Luis Crespo

Personally: Born and raised in
Córdoba, Argentina



About the Presenter: Dr. Luis Crespo

...as the Eldest of 10 (2 boys and 8 girls)



About the Presenter: Dr. Luis Crespo

Professionally:



- BA in Finance Universidad Nacional de Córdoba (Argentina)
- BA in Computer Sciences Universidad Tecnológica Nacional (Argentina)
- MBA Stanford University (USA)
- BA in Social Sciences - History Universidad de Belgrano - Buenos Aires Argentina
- PhD in Social Sciences Universidad de Belgrano - Buenos Aires Argentina

About the Presenter: Dr. Luis Crespo (Cont'd)

- 24 years at **HOLDERBANK/HOLCIM** (Argentina, Brazil, Germany, Switzerland, USA) as CIO, CFO, and IT Advisor to the CEO of HOLDERBANK CORPORATE OFFICE.
- 4 years at the **World Bank** - Y2K Mitigation and Electronic Government for the Provincia de Córdoba - Argentina, as Secretary of Information Technology.
- 2 years for the **Interamerican Development Bank (IDB)** as an Information Technology Consultant.
- 2008-Present: Partner at **E-NDEAVOR PROGRAM MANAGEMENT INC.**, Scenario-based Planning Modelers for British Gas UK, India, and Panama; assisted in creating the fifteen models for the Panama Canal Authority to successfully achieve financing for the new Locks expansion.
- Partner at **DDA - DIGITAL DOCUMENTS ADVISORS LLC, DOCUMENTSFOREVER INC.** and **INSTITUTO INTERAMERICANO PARA LA ARMONIZACIÓN LEGISLATIVA Y TECNOLÓGICA DEL DOCUMENTO LEGAL DIGITAL** since 2014



Robert T. Sakowitz : Co-Presenter

- ▶ President and CEO of HAZAK CORPORATION, Houston, Texas, a Corporate Consulting company for Business Strategies, Business Development, and Marketing.
- ▶ Partner at DDA - DIGITAL DOCUMENTS ADVISORS LLC, DOCUMENTSFOREVER INC. and INSTITUTO INTERAMERICANO PARA LA ARMONIZACIÓN LEGISLATIVA Y TECNOLÓGICA DEL DOCUMENTO LEGAL DIGITAL since 2014
- ▶ Formerly President and Chief Executive Officer of *Sakowitz, Inc.*, a chain of high-end fashion specialty stores.
- ▶ Served on the Boards of Directors of:
 - ▶ *The Federal Reserve Bank of Dallas,*
 - ▶ *Texas (Houston Branch Chairman),*
 - ▶ *Continental Air Lines,*
 - ▶ *Morse Shoe Company, Galleria Bank,*
 - ▶ *DiCentral Corp,*
 - ▶ *The City of Houston Municipal Arts Commission,*
 - ▶ *The Greater Houston Convention and Visitors Bureau (Member and Chairman),*
 - ▶ *The University of Houston Center for Public Policy,*

Robert T. Sakowitz : Co-Presenter (Cont'd)

- ▶ Served on the Boards of Directors of:
 - ▶ Co-Chaired both the *Southwest Delegation of the 1980 White House Conference on Small Business*, the *1981 Texas State Conference on Small Business*,
 - ▶ *Texas Sesquicentennial for Houston and Harris County (Chairman)*,
 - ▶ *City of Houston- Industrial Development Corporation*, the *City of Houston*,
 - ▶ *Health Facilities Development Corporation*,
 - ▶ ***The Harris County Improvement District No. 1; (“Uptown Houston Corp”)*** ,
 - ▶ ***Co-Founder of “Women on the Move” of the Texas Executive Women***,
 - ▶ Continues to serve on Boards of *FreshBrewGroup*,
 - ▶ ***Texas A&M University, Galveston, (“TAMUG)***, *The Coronado Club of Houston*,
 - ▶ Founding Director and Governor of *The Jefferson Awards for Public Service*,
 - ▶ Consultant to the *E-ndeavor Program Management Corporation*.
- ▶ Decorated with the *Chevalier du **L’Ordre** National du Merit*, the *Republic of France*, the *Cavaliere del Ordine al Merito* by the *Republic of Italy*, and numerous other Awards and Recognitions.
- ▶ *Harvard University, BA, History, Cum Laude*

Are we living the end of hardcopies for Documents?

- ▶ Paper has been the king of documents for more than 3000 years.
- ▶ All legal, historic and family documents were executed and stored using some form of paper.
- ▶ The first revolution was the Gutenberg mobile type printing press.
- ▶ The next revolutions were photography, motion pictures, telegraph, telephone, teletypewriters, copier machines and fax machines.
- ▶ The Internet (fast, secured?, instantaneous) changed the way that we communicate, do business and entertain ourselves in a very permanent and dynamic process.
- ▶ Smartphones accelerate the internet process, changing the way we interact with the world.
- ▶ **And now**

the next revolution is dealing with a digital world -
and Blockchain





Video Produced by The Centre for International Governance Innovation. www.cigionline.org - <https://www.youtube.com/watch?v=3xGLc-zz9cA>



THE BLOCKCHAIN'S MAIN CHARACTERISTICS

The way it tracks and stores data

- The Information is stored in batches, called **“blocks”**
- These blocks are linked together in a chronological fashion to form a continuous line
- If you want to change Information in one of the existent blocks, you cannot; you must create a new one which shows the desired change in the new one (the general ledger principle - the only way to track the data-changes over time)
- This is then decentralized and distributed across a large network of computers (many copies of each blockchain)
- This System Architecture reduces the ability for data tampering and **“hacking” accurately**



THE BLOCKCHAIN MAIN CHARACTERISTICS

The General Ledger and Double Entry Bookkeeping



- ❑ Luca Pacioli (1447 - 1517) was an Italian mathematician and Franciscan Friar.
- ❑ He is referred to as “The Father of the Accounting and Bookkeeping” because he was the first person to publish a work on the Double Entry System of book-keeping on the European Continent.
- ❑ This, and any general ledger, contains all the accounts for recording transactions relating to a company's assets, liabilities, owners' equity, revenue, and expenses; the basis of Capitalism.
- ❑ The mathematical basis is the accounting equation:

$$\text{Assets} = \text{Liabilities} + (\text{Shareholders' or Owners' equity})$$

THE **BLOCKCHAIN'S** MAIN CHARACTERISTICS:

It promotes the creation of trust in the data while replacing “paper” with digital copies of the original document

- A cryptographic puzzle (algorithm) must be solved, thus creating the block
- The computer that solves the puzzle shares the solution with all the other computers in “**the**”/a network (**proof-of-work**)
- The network verifies the proof-of-work
- If it is correct the block will be added to the “**chain**”

This process ensures that we can trust each and every block in the chain



THE BLOCKCHAIN'S MAIN CHARACTERISTICS -cont'd

No more Intermediaries?

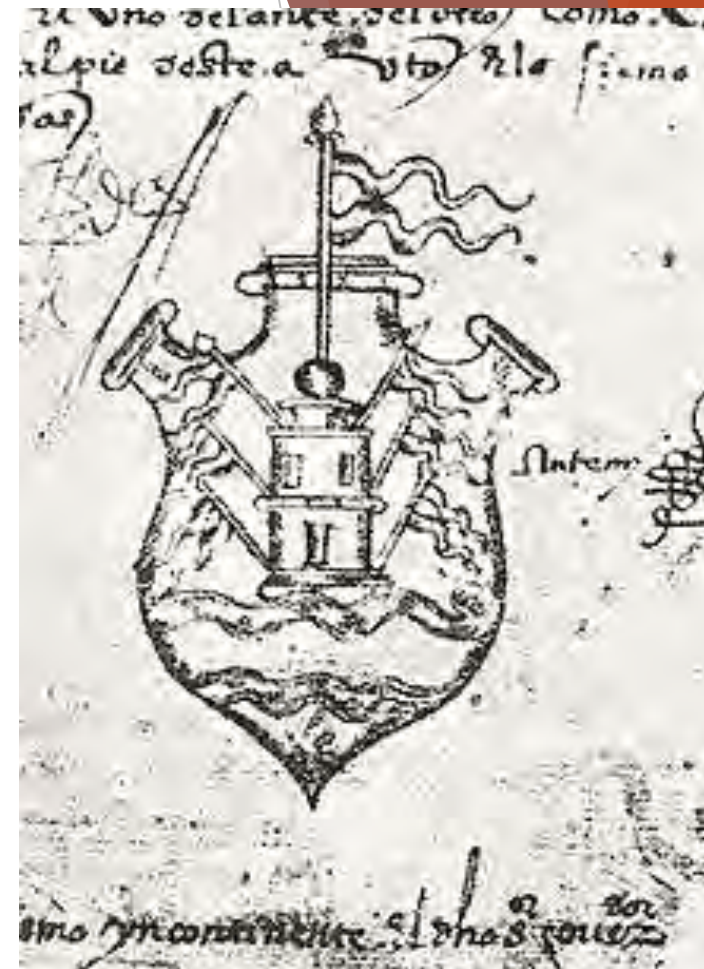
- It provides the opportunity for different ways to register, preserve and expose Information to all the parties involved in a transaction, without the traditional intermediaries.
- There are different types of blockchains:
 - Private
 - Public
 - Hybrid (Public/Private)
- Sharing Information or executing a contract between two or more parties will not require intermediaries due to this new concept and facility for **“Trust”**



Aren't Notaries intermediaries?

- ▶ **Notaries since the** early periods of legal written history.
- ▶ Writing and being witnesses of all the important events assuring legality ...
- ▶ Attesting to the signature of a document as an objective third party, as well as the fact that all parties who signed did so willingly, **under their own power...**

Will technology replace this last role?



Notarized document of the incorporation of The City of Cordoba de la Nueva Andalucia, circa 1573

Why is this question important for Notaries?

- ▶ The **idea of “removing”** intermediaries using technology is not a new trend--
- ▶ Internet / Digital Interactions
- ▶ Artificial Intelligence
- ▶ Identification technology (fingerprints, iris and facial recognition)
- ▶ And now, Blockchain Technology, as a process by which to possibly by-pass the function of a notary

How might it impact them?

- ▶ A notary public is a third-party witness who attests to signatures on important documents **for legal purposes, a “trust” role which** Blockchain might supplant. However, not only the signature of a document but also the fact that all parties who signed did so willingly, under their own power, and are who they say they are is an irreplaceable role.
- ▶ And this very important role- the Human Link- in our personal and business decisions, and chain of custody, cannot be replaced by technology alone.

The Traditional Chain of Custody definition (CoC), in legal contexts, refers to the chronological documentation or “paper trail” that records the sequence of custody, control, transfer, analysis, and disposition of physical evidence.

The Digital Chain of Custody is a new challenge because it can be easily altered when in the form of important electronic evidence. Digital evidence or electronic evidence is any probative information stored or transmitted in digital form that a party to a court case may use at trial. ...

As such, some courts have sometimes treated digital evidence differently for purposes of authentication, hearsay, the best evidence rule, and privilege.

- Tamper Proofing of Legal Digital Documents.
- Providing immutable Date and Time of the Creation of a Legal Digital Document
- Human Control that can demonstrate who owns the Legal Digital Document

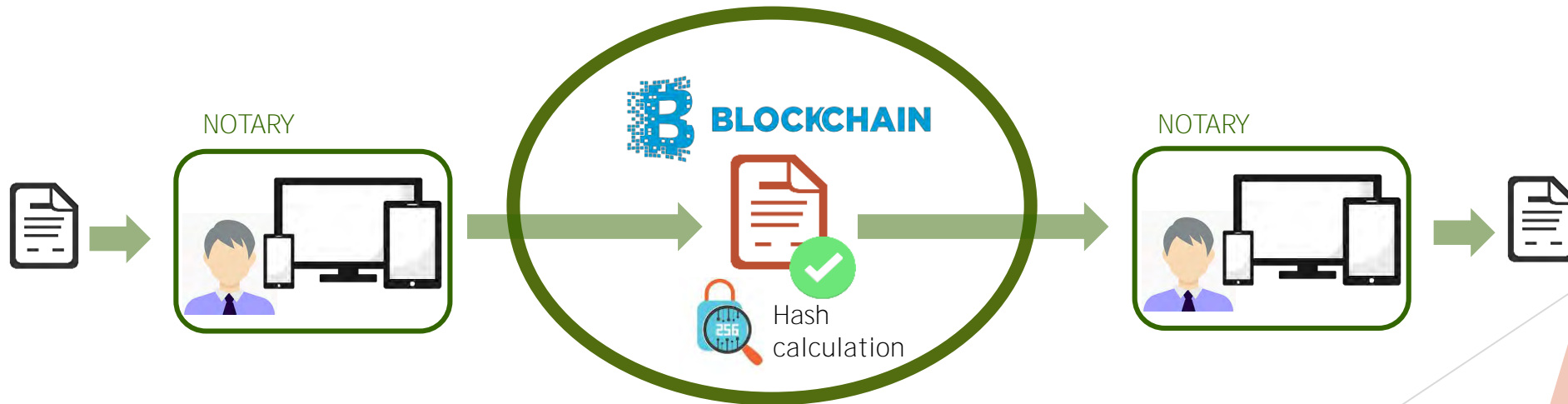
CHAIN OF CUSTODY

A new challenge for the Legal Digital Documents

CHAIN OF CUSTODY

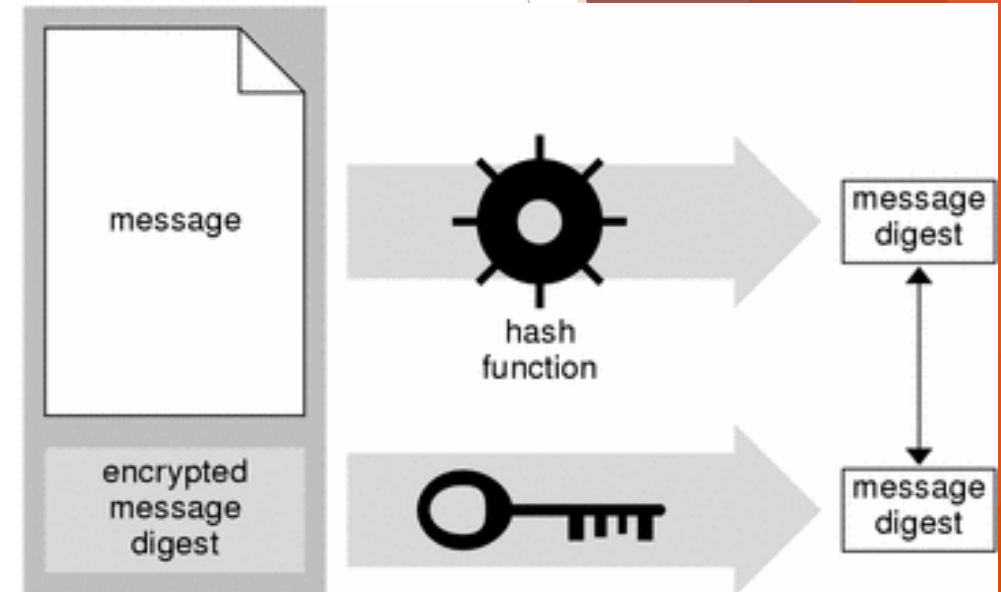
Changes from the traditional, using Digital Legal Documents

Challenges of the Legal Digital Document	Technological or Procedural Solution
Tamper Proofing the Document	Hash
Date and Time of the Creation of the Document	Immutable Timestamp using Blockchain
Document Ownership and Location	Notary



What is a Hash; why is it important?

- ▶ It is key (letter and numbers plain digital file) as a result of a mathematical function calculated using the content of a digital document (word, PDF, MP3, MP4, text, etc.)
- ▶ This key is unique for each document, and in court of law can demonstrate that the digital document submitted was not tempered.
- ▶ Recalculating the hash using the original document and comparing that the result (key) has the same value of the original key. If it has the same value, the document is acceptable (not tempered).



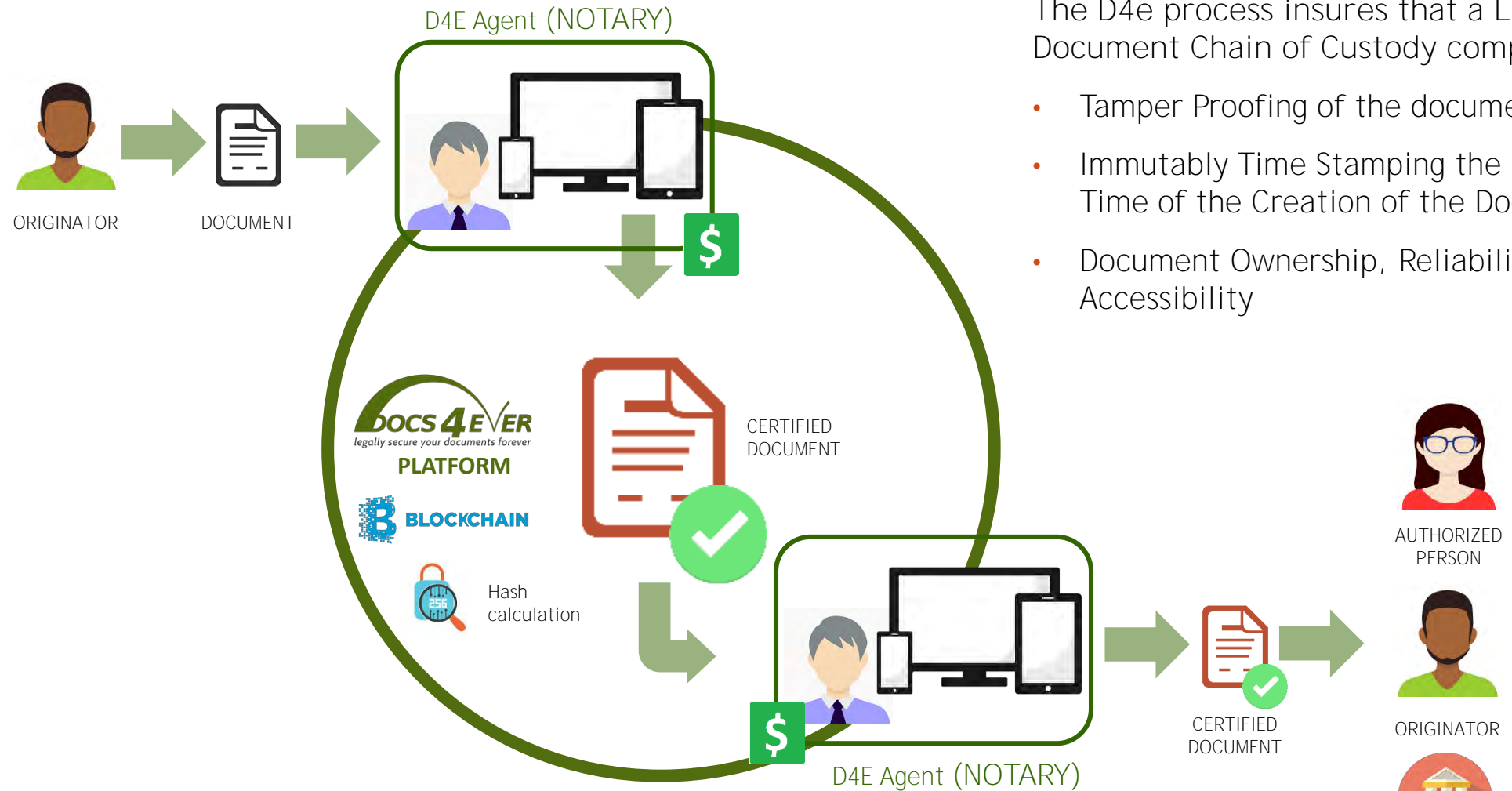
What is DocumentsForever (D4E), and how might it's capabilities and proposals be crucial for Notaries?

Because D4E understands that a Notary can and should be the Gatekeeper of the Chain of Custody to have a Judicially Realible Legal Digital Document

The logo for DocumentsForever (D4E) features the text "DOCS 4EVER" in a bold, green, sans-serif font. A thick green arch curves over the text, starting from the left side of the "D" and ending at the top of the "V" in "EVER".

DOCS 4EVER

D4E Chain of Custody



The D4e process insures that a Legal Digital Document Chain of Custody complies with:

- Tamper Proofing of the document
- Immutably Time Stamping the Day, Date and Time of the Creation of the Document
- Document Ownership, Reliability and Accessibility



FOR LEGAL USE

D4E differentiators include all aspects of transactions, helping Notaries to maintain their role in a Digital World:



YOU ARE INVITED!

- ▶ *We welcome any notary or Signing Agent who understands and wants to take part in this change on how documents are digitalized, stored, and accessible with legal validity.*
- ▶ Visit us at our booth for more information



Contact Info



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