



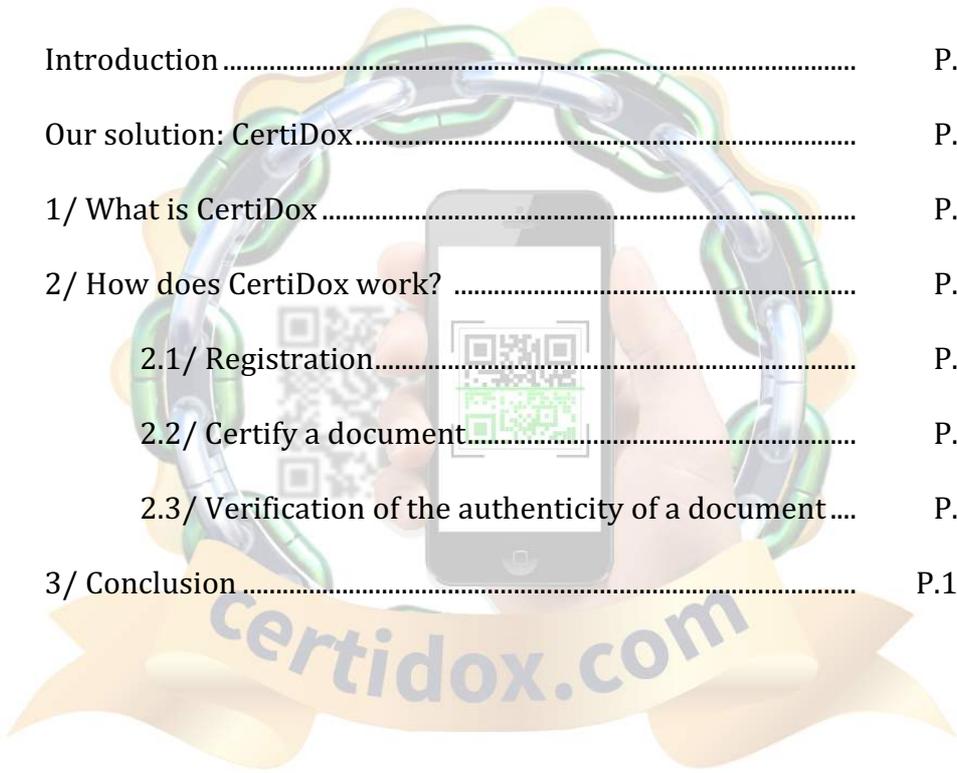
**Never be a victim again
of fake news
falsified documents
and counterfeit products!**



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Introduction

At a time when hackers have unlimited means to counterfeit documents and disseminate fake news by e-mail and via social media,

How can I be sure that documents in my possession are authentic and are still valid?

Financial markets under the attack of hackers

These attacks are a concern since

- A survey published by Statista in January 2022 reveals that only 26% of Americans to tell the difference between real and fake news¹
- More than 5,700 articles published on the financial blog “Seeking Alpha”² between 2005 and 2015 were fake news and manipulation attempts to raise the price of the shares they spoke about,
- Fake news published about e.g. VINCI³ in France or ANZ, AVON, FITBIT, and TWITTER^{4 5} in the U.S. caused turmoil on financial markets,

according according to a survey of the American Institute of CPAs (AICPA) published in June 2017⁶,

- 58% of people questioned said fake financial news is a serious threat to their financial decision-making,
- 33% classified the threat as “*very serious*”,
- 77% said it’s important to make financial decisions quickly when new financial news becomes available,
- 40% said it’s “*very important*” to act fast.

Five years later, according to Statista

- More than two-thirds of Americans (67%) believe that fake news creates a lot of confusion,
- Almost a quarter (24%) believe that they create some confusion.

¹ <https://www.statista.com/topics/3251/fake-news/#dossierKeyfigures>

² https://www.lesechos.fr/13/04/2017/LesEchos/22425-112-ECH_seeking-alpha-de-nouveau-au-coeur-d-un-scandale.htm

³ Vinci shares plunge on publication of fake press release: <https://www.bbc.com/news/business-38071474>

⁴ Twitter shares soar after buyout story appears on bogus Bloomberg site : https://www.theregister.co.uk/2015/07/14/twitter_shares_jump_on_fake_buyout_story/

⁵ https://www.ege.fr/download/etude_EGE-Ophois_mars2018.pdf

⁶ <https://www.accountingweb.com/practice/clients/why-fake-financial-news-is-becoming-a-real-problem>

Even market regulators are targets

In October 2018, a fake website "am and-fr.org" pretended to be the AMF French market regulator and invited a financial institution to download a document that contained malware.

Disinformation influences on our Democracy too, such as e.g., the 2016 U.S. presidential election and the U.K.'s Brexit vote

- According to a poll conducted by Ipsos on behalf of BuzzFeed⁷ published in 2016, false news would fool Americans more often than they think (about 75% of the time). And the percentage is even higher among those who say they use Facebook as the main source of information.
- Despite government investigations, there was no change in trust in Facebook and Twitter according to Ipsos in its study published on September 28th, 2017⁸.

This problem is also a concern for the European Commission...

Mariya Gabriel, European Commissioner for Digital Economy and Society welcomed in September 2018 the self-regulatory Code of Practice of the platforms and the advertising companies to fight the spread of fake news in the EU *"as a step in the right direction"*⁹.

And she added "I urge online platforms and the advertising industry to immediately start implementing the actions agreed in the Code of Practice to achieve significant progress and measurable results in the coming months. I also expect more and more online platforms, advertising companies, and advertisers to adhere to the Code of Practice, and I encourage everyone to make their utmost to put their commitments into practice to fight disinformation."

... and for the SEC

Joe Mont reports in his article *"SEC renews its offensive against fake news"*¹⁰ published on the website of "Compliance Week".

⁷ <https://www.buzzfeednews.com/article/craigsilverman/fake-news-survey#.ihanXkvx3>

⁸ <https://www.ipsos.com/en-us/news-polls/trust-news-sources-2017-10-23>

⁹ http://europa.eu/rapid/press-release_STATEMENT-18-5914_en.htm

¹⁰ <https://www.complianceweek.com/sec-renews-its-offensive-against-fake-news/2701.article>

Counterfeits affect us in our everyday life too.

How can I be sure that an official document, such as a power of attorney or a diploma, is authentic, has not been modified, and is still valid?

It is indeed very easy to counterfeit a document: you've just to

- Scan it,
- Change its content with image editing software,
- Print the fake document.

As for a diploma, the less gifted can buy one with a credit card on websites accessible from a search engine.

A report on FOX NEWS¹¹ valued this “fake degree business” at \$1 billion.

And that's just the tip of the iceberg!

Foodwatch published an alarming article on its website on March 25, 2021: “The reality of fake food: Foodwatch uncovers the hidden world of food fraud”.¹²

This survey explains that food fraud is increasing every year in all European countries.

Thus, in 2020 alone, *“around 12,000 tons of illegal and potentially dangerous products were seized before being marketed on supermarket shelves”* according to this NGO.

This awareness is global as evidenced by this report broadcast on the American television channel ABC under the title *“Food Fraud? Watchdog Group Raises Concerns¹³”* in which Dr. Markus Lipp, Senior Director for Foods Standards of the United States Pharmacopeial states that “products are not always what they say they are”. No product is spared.

Fraud affects all categories of products, including those bearing the "organic" label.

It is indeed very tempting for a fraudster to earn even more money by usurping the “Organic Agriculture” label.

¹¹ <https://vimeo.com/289833489>

¹² <https://www.foodwatch.org/en/news/2021/the-reality-of-fake-food-foodwatch-uncovers-the-hidden-world-of-food-fraud/>

¹³ <https://abcnews.go.com/Nightline/video/food-fraud-watchdog-group-raises-concerns-18290097>

Our solution: CertiDox

1/ What is CertiDox?

Certidox is a platform based on QR CODE (Quick Reply Code) and NFT (Non-Fungible Token) technologies.

Certidox consists in

- A **back-office platform** (*dedicated for issuers of press releases and other documents*) accessible in secure mode via the web to certify their documents. **An API is available for issuers who wish to implement Certidox into their system to certify their authentic documents on the fly.**
- **An App for Smartphones and Tablets** to scan the QR code displayed in the CertiDox label and thus check the authenticity and validity of a press release, document, or product.

The CertiDox app can be downloaded for free on Google Play and Amazon (*for Android devices*) as well as on App Store (*for Apple devices*).

The App technology has been adopted because

- **Apps are user-friendly**
 - No need to read any manual: just tap on the icon of the Certidox app and scan the QR code of the document you wish to check,
 - With your Smartphone / Tablet, you can scan a document at any moment anywhere.
- **The Smartphone is the most popular tool used by people**

According to EMARKETER¹⁴, the number of mobile phone Internet users worldwide is estimated at 2.73 billion in 2017. Of that group, 87.4% use a smartphone for mobile Internet access.
- **The origin of Apps is traceable**

Google, Amazon and Apple require guaranties from the editor before publishing an app.

¹⁴ Worldwide Internet and Mobile Users: eMarketer's Updated Estimates and Forecast for 2017–2021
<https://www.emarketer.com/Report/Worldwide-Internet-Mobile-Users-eMarketers-Updated-Estimates-Forecast-20172021/2002147>

2/ How does CertiDox work?

2.1/ Registration

IMPORTANT: registration is only necessary if you wish to have your press releases and other documents certified.

The CertiDox back-office platform is accessible via the Internet in secured mode by registered users only.

CertiDox manages 2 different kinds of users:

TRIAL USERS for test purpose

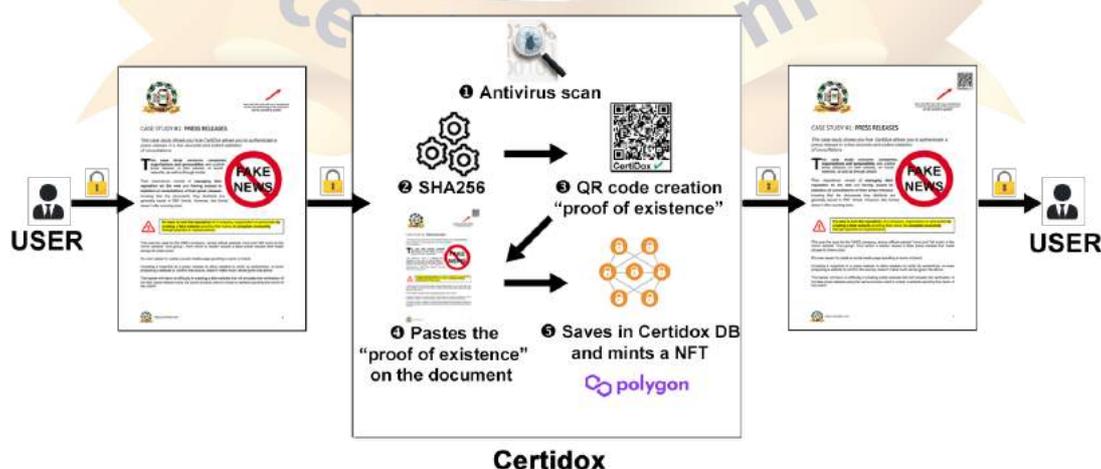
- They don't need to prove your identity,
- They can see the way Certidox is working.

AUTHENTICATED USERS benefiting from the Certidox authentication service

- They must submit proof of their identity,
- Certidox certifies the authenticity of their documents.

2.2/ Certify a document

Certidox processes PDF documents to avoid any risk of altering their content and their layout.



After **the user** has uploaded its document in secure mode,

Certidox

1. Scans the document to make sure it doesn't contain any virus,
2. Creates a SHA256 hash of the document,
3. Creates a unique QR code for the document (= "proof of existence"),
4. Pastes the QR code in a Certidox-label on the document,
5. Saves the document in a database with the SHA256 of the document before and after affixing the CertiDox label containing the QR code **AND** mints on the Polygon blockchain an NFT (Non-Fungible Token) containing the SHA256 of the document and the ID number of the issuer that has been dynamically encrypted with the CRYPT_BLOWFISH algorithm.

Once the process is completed, **the user** can download his document certified authentic by Certidox.

The QR code allows checking

- The simultaneous existence of the document in the CertiDox database and on the decentralized Polygon blockchain,
- The author of the document,
- The status of the document: "still valid" or "revoked".

IMPORTANT:

- SHA256 is the fingerprint of a document. Even if a single symbol is changed, the algorithm will produce a different hash value: this makes it suitable for verifying the integrity of your data.
- It is impossible to reconstruct a document from its SHA256¹⁵.
- The NFT, which only contains the SHA256, therefore contains no readable information on the certified authentic document, **which guarantees its confidentiality**.
- Documents certified authentic with Certidox cannot be consulted on the web but only through the CertiDox application

¹⁵ <https://www.n-able.com/blog/sha-256-encryption>

2.3/ Verification of the authenticity of a document

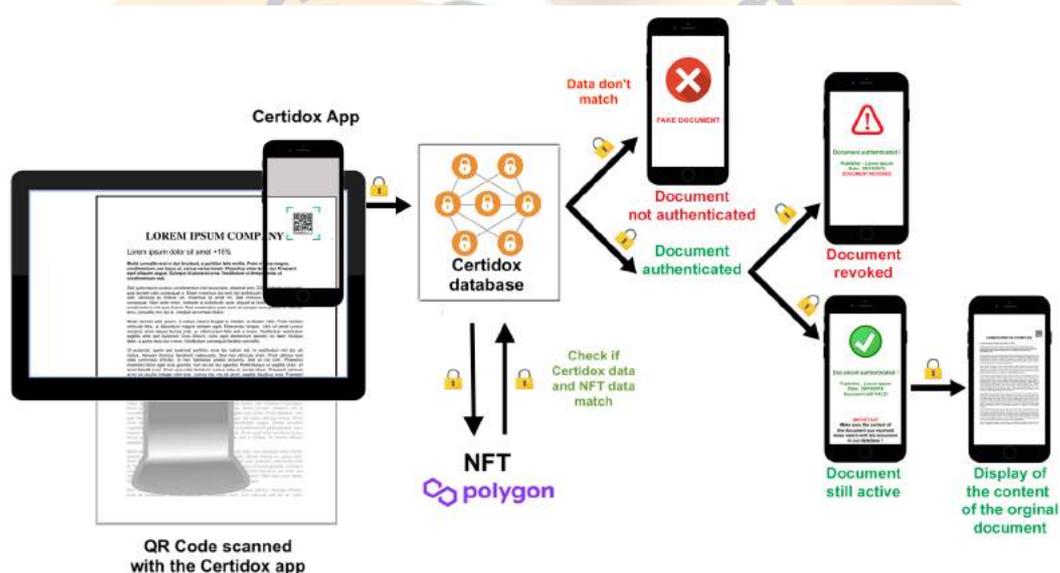
If you don't yet have the Certidox App, scan the Certidox QR Code affixed to the document whose you wish to check the authenticity with the camera of your Smartphone / Tablet: you will be redirected to the Apple Store (Apple) or Google Play (Android) to download the Certidox App for free.

To check if a document is authentic,

1. Launch the Certidox app on your Smartphone / Tablet,
2. Scan the QR code displayed on the document to be checked.



DOUBLE CHECK: The app requests Certidox servers to check if the document is present in its database and searches if a corresponding NFT (Non-Fungible Token) has been minted in the Polygon blockchain.

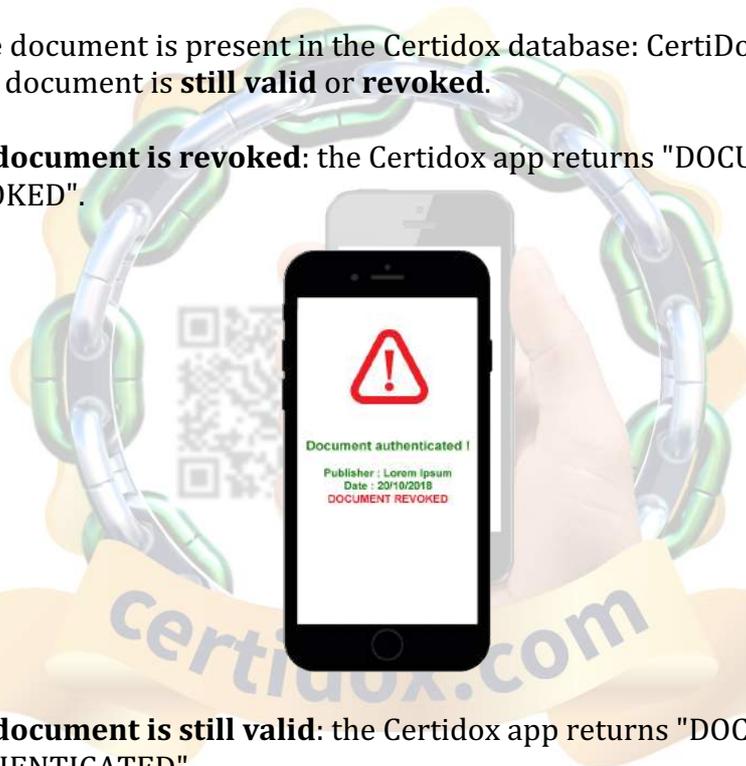


Case #1, Data contained in the Certidox database and the NFT don't match: the App returns the message "FAKE DOCUMENT"

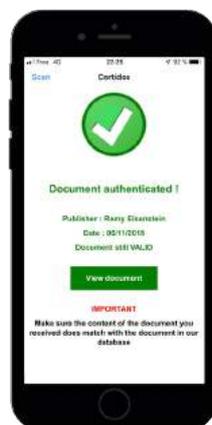


Case #2, the document is present in the Certidox database: CertiDox checks whether the document is **still valid** or **revoked**.

- **The document is revoked:** the Certidox app returns "DOCUMENT REVOKED".



- **The document is still valid:** the Certidox app returns "DOCUMENT AUTHENTICATED"



You are viewing the name of the person or organization that certified the document.

Tap on the “View document”-button to check if the content of the document displayed on your Smartphone / Tablet corresponds to the content of the document whose authenticity you are verifying.



3/ Conclusion

Certidox makes it possible to check in a few seconds the authenticity of a press release, a document (power of attorney, contract, order form, diploma), **or a product** of us an App that you have downloaded free of charge from the App Store (Apple), Google Play (Android) or Amazon which scans the QR Code affixed to it.

An App for Smartphones / Tablets offers all guarantees of security on its origin if you download it from App Store (Apple), Google Play (Android), or Amazon (Android).

It is possible to certify documents,

- **Either manually** using the Certidox back office platform,
- **Either on the fly** using the A.P.I. Certidox.

An NFT (Non-Fungible Token) is minted on the Polygon blockchain for each document certified authentic by Certidox. This NFT, which does not contain any information that can be read intelligibly by a human being, is compared with the information recorded on the Certidox database.

The authenticity of the document is confirmed if the information recorded in the scanned QR code matches the information recorded in the Certidox database and the NFT.

Certidox further indicates

- **The name of the issuer** of the press release, document or product,
- **If the press release, document, or certified product is still valid.**

The documents recorded in the CertiDox database are not accessible on the web to guarantee their complete confidentiality: **only scanning the QR using the Certidox App allows access to their content.**

An issuer may deactivate at any time the Certidox QR Code affixed to a press release or document he has certified as authentic.

<https://certidox.com>