



TRACE4EU
CONSORTIUM

Trace4EU-ERD Use Case





What is ERD ?

TRACE4EU Electronic Registered Delivery

01

What is ?

Electronic **Registered Delivery (ERD)** refers to **services** ensuring the secure and reliable transmission of **electronic data and document** between parties.

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Importance of Legal Equivalence

Legal equivalence of Electronically Delivered documents with those delivered using traditional approaches **is a must**, as its **absence significantly reduces applicability** to use cases.

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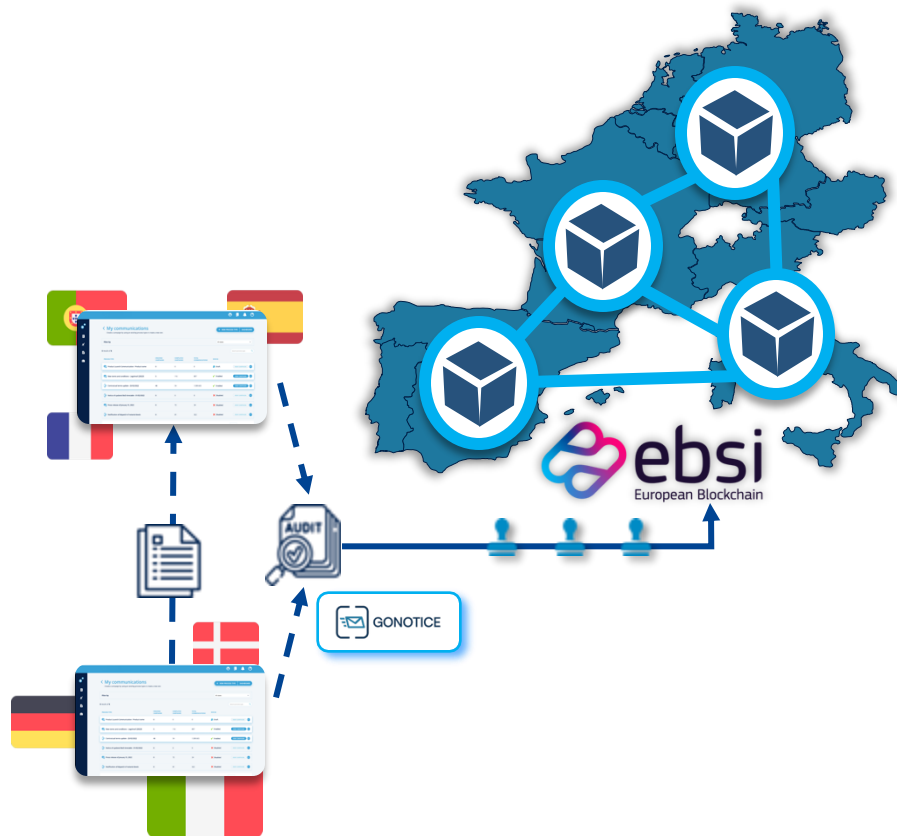
ERD regulatory context

ERD services are regulated by the **art.43 and 44 of the eIDAS Regulation** (Electronic Identification, Authentication and Trust Services), **introduced in 2016**. They are provided by QTSPs, and enable **secure and legally binding electronic communications**.



Trace4EU-ERD Solution

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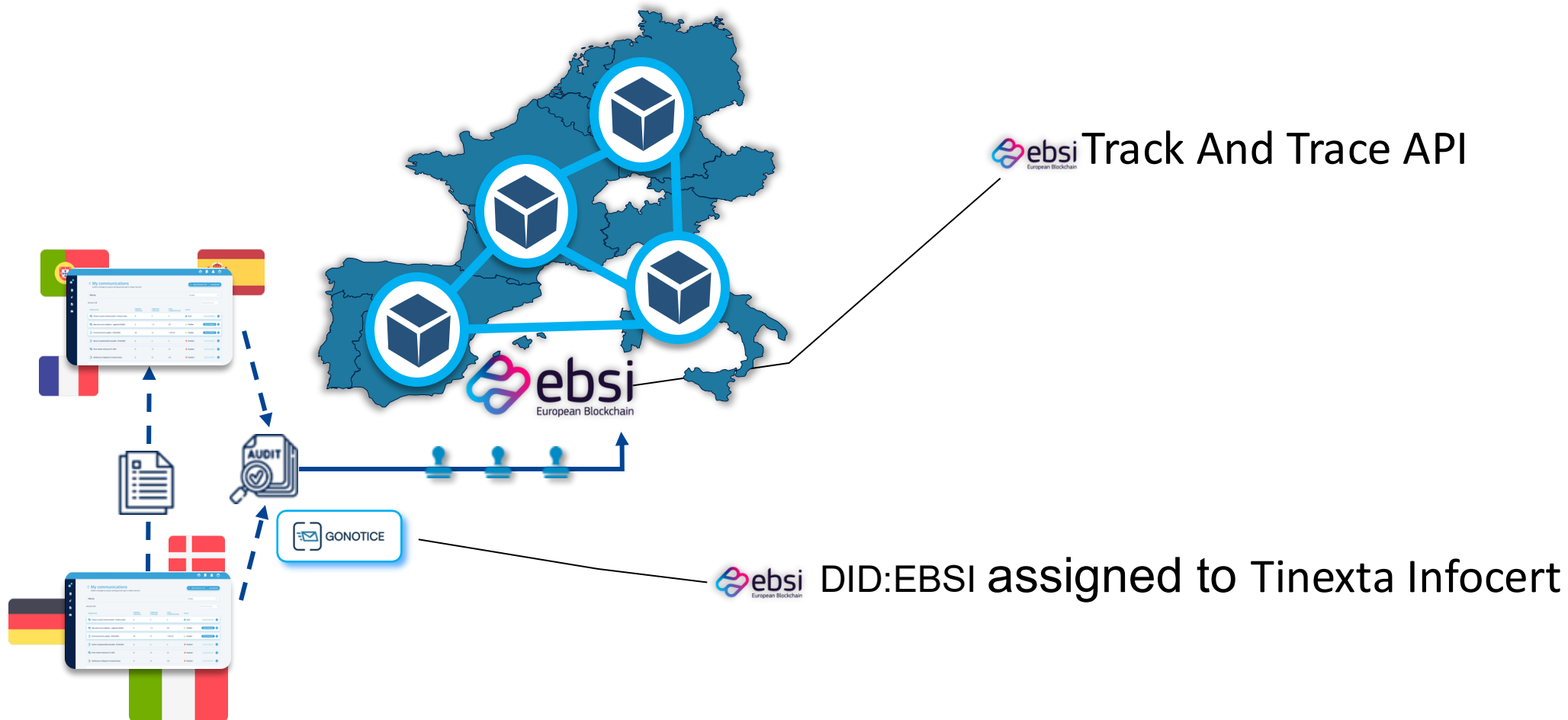


TRACE4EU-ERD adds the feature «notarize in EBSI» to Gonotice – an eIDAS qualified ERD SW platform, enabling the notarization in EBSI of the events collected during the exchange of documents. The solution goes beyond the pure legal equivalence in digital trust and is **applicable to every scenario** involving document exchange **among European stakeholders**.



EBSI Ingredients used in the Trace4EU-ERD recipe

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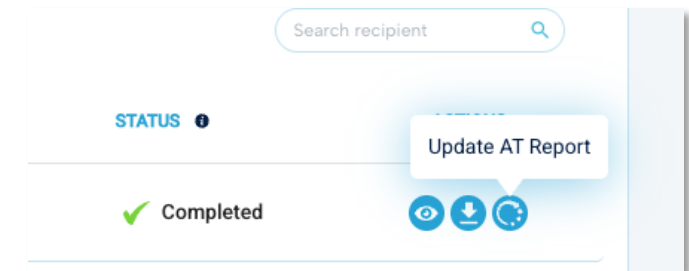


Lesson learned 1: the «DLT mining issue» in T&T and the developed fix

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Since **EBSI** is a ledger based on **DLT**, by design the **mining of blocks is not synchronous with the writing** to the ledger. This, combined with the fact that the **notarization verification is performed while the AT report is being generated**, has sometimes led to the **incorrect reporting of missing event notarizations** in the AT report itself.

This issue has been addressed by **adding the functionality to regenerate the AT report in the Trace4EU tenant**, which was not originally needed by the QERD product.



Lesson learned 2: regulatory context can change during a project lifecycle

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01

A revolution in the regulatory context: the publication of eIDAS2 in 2024

Last year the Commission has published the Regulation 2024/1183, which is the revision of the existing eIDAS regulation, with the aim of modernising and improving digital identity and trust services in the European Union. **Details are still evolving as the implementing acts of the new trust services are in drafting phase.**

02

The first change impacting digital identity: introduction of a new EU Digital Identity

eIDAS2 introduced EUDIW, the European digital wallet that will allow European Union citizens to securely manage their digital identity and related credentials, such as identity documents, driving licenses, health cards, and more, through a single application on smartphones or other devices. It will be a tool that can be used throughout the EU to interact with public and private services, both online and offline.

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The second change potentially impacting EBSI as a ledger: the introduction of EL & QEL

eIDAS2 introduces the recording of electronic data in electronic ledgers as a trust service. Electronic ledgers can be either qualified (QEL) or non-qualified – (EL).

EBSI as a ledger for eIDAS2

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01

Electronic Ledgers for eIDAS2

Electronic ledgers are defined as services, provided by QTSPs, that offer a sequential chronological ordering of data records, guaranteeing the integrity and accuracy of both the records themselves and their chronological order ... two typologies of electronic ledgers can be distinguished: centralised and distributed. The Regulation takes a neutral position regarding such typology or even the technology used...

02

EBSI today viewed from eIDAS2 perspective

EBSI, considering it as a pure ledger instance, **falls into the category of "Electronic ledgers"** as, thanks to its DLT based implementation, offers exactly «*a sequential chronological ordering of data records, ensuring the integrity and accuracy of both the records themselves and their chronological order*». Presently **it cannot be a QEL**, as it is **not provided by QTSPs**.

03

Potential opportunity/competition challenge from ELs and QELs to EBSI

The new eIDAS services will create **new european instances of ELs and QELs**, potentially **competing*** with the current instance of the **EBSI Ledger**, also in track and trace. At the same time, **the importance of electronic ledgers in today's digital services landscape is recognized** and they are beginning to be regulated in EU.

* While the qualification aspect could be teoretically addressed by transforming EBSI into a QTSP, it is unlikely that the risk of competition from new European ledger instances can be completely avoided. **However**, in line with the meaning of its acronym, **EBSI is not merely a European ledger instance, but a European infrastructure composed of multiple components — not just a ledger**, consider, for example, the API layer. **In our opinion, this is the aspect EBSI should strategically leverage to address the possible future competitive challenge posed by ELs and QELs, turning a potential competition into synergy.**

Impact of Regulatory changes on the Trace4EU-ERD UC implementation

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01

eIDAS trust services, leveraged by GoNotice

Qualified digital signatures, Qualified e-seals, Qualified Timestamps, and ERD trust services unchanged in eIDAS2 -> no impact

A new EU Digital Identity

GoNotice leverage an Infocert **tool to identify users**, named **eIDGateway**, acting as a bridge between the technical session of GoNotice and different ways to identify users, **both sender and recipient**. Today eIDGateway supports (also, not only...) user identification using the current italian eIDAS1 implementation (SPID) and using CIE, the Electronic Italian Identity Card.

eIDGateway is already designed to support identification using the EUDIW PID, when it will go in production phase. -> no impact

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Future evolutions of EBSI infrastructure addressing the risk of competition challenge from ELs and QELs

The **GoNotice** implementation utilizes a **highly modular architecture built upon AWS Lambda functions**. Moreover, it **communicates with EBSI exclusively through the Track and Trace API**, introducing a **two-layer abstraction that decouples GoNotice's core logic from EBSI**. -> negligible/minimal future impacts





Demo steps

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Demo Environment:

Trace4eu tenant configured in an isolated sandbox of the GoNotice stage instance (GoNotice is multitenant..).

Demo steps:

1. Log-in Trace4EU Tenant sandbox
 1. Relationship with eIDGateway
2. Configuration options offered by a process type
 1. Channel Types
 2. Certified events
3. Sending a new communication
 1. Configuration options (authentication of recipients)
 2. Delivery status monitoring
4. Navigating an existing AT report (communication events recorded)
 1. Notarization mining issue, an example
 2. The same report after regeneration





European
Commission



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THANK YOU!

A future challenge for ERDs addressable leveraging an EU ledger as eBSI

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The cross-ERDs Audit Trail challenge

A modern ERD service like GoNotice tracks the events of the delivery process in its internal Audit Trail (AT). Due to the presence of multiple QTSPs operating as ERD service providers in EU, in cases where sender and recipients may use different ERD services, communication events **will be saved in separate Audit Trails**.

This fact could **necessitates** the **logical integration from 2 to 'n' ATs**, as in the case of one-to-many delivery, **ATs managed by different QTSPs**.

