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ETSI GR PDL 017 V0.0.2 (2023-06)

**Group REPORT**

Permissioned Distributed Ledger (PDL);

Application of PDL to Regulation 910/2014 (eIDAS) Qualified Trust Services

<

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# Foreword

This Group Report (GR) has been produced by ETSI Industry Specification Group <long ISGname> (<short ISGname>).

# Modal verbs terminology

In the present document "**should**", "**should not**", "**may**", "**need not**", "**will**", "**will not**", "**can**" and "**cannot**" are to be interpreted as described in clause 3.2 of the [ETSI Drafting Rules](https://portal.etsi.org/Services/editHelp%21/Howtostart/ETSIDraftingRules.aspx) (Verbal forms for the expression of provisions).

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# Executive summary

# Introduction

# 1 Scope

The present document describes the features of a PDL to be applicable as a qualified electronic ledger and in support for eIDAS trust services. The document analyses the properties that a PDL can have to be an enabler for eIDAS, for authentication and identification, and also for using eIDAS in other areas of the Digital Economy.

# 2 References

## 2.1 Normative references

Normative references are not applicable in the present document.

## 2.2 Informative references

References are either specific (identified by date of publication and/or edition number or version number) or non‑specific. For specific references, only the cited version applies. For non-specific references, the latest version of the referenced document (including any amendments) applies.

NOTE: While any hyperlinks included in this clause were valid at the time of publication, ETSI cannot guarantee their long term validity.

The following referenced documents are not necessary for the application of the present document but they assist the user with regard to a particular subject area.

[i.1] <Standard Organization acronym> <document number><version number/date of publication>: "<Title>".

[i.2] etc.

# 3 Definition of terms, symbols and abbreviations

## 3.1 Terms

For the purposes of the present document, the [following] terms [given in ... and the following] apply:

## Trust Service tbc3.2 Symbols

For the purposes of the present document, the [following] symbols [given in ... and the following] apply:

## 3.3 Abbreviations

For the purposes of the present document, the [following] abbreviations [given in ... and the following] apply:

eIDAS tbc

# 4 Features of PDL

## 4.1 Common Context

## 4.2 Properties

Robustness

PDL communities

Discovery and PDL

# 5 Features of eIDAS Qualified Trust Services

## 5.1 eIDAS trust services

 What is a trust service

 eIDAS trust services

## 5.2 Policy and Security Best Practices

- Common security requirements aligned with NIS2

- Trust service specific practices

## 5.3 Audit and Supervision

## 5.4 Trusted List

# 6 PDL and eIDAS Trust Services

## 6.1 Introduction

Combining PDL community governance and eIDAS audit & supervision

(use concepts in PDL 15 & PDL 12 as relevant)

## 6.2 PDL as stand alone Trust Service

## 6.3 PDL in support of Time Stamping

## 6.4 PDL in support of Signature Validation

## 6.3 PDL in support of Certificate Validation

## 6.4 PDL in support of Identity Attribute Validation

## 6.5 PDL in support of Preservation Services

Applied to electronic signatures, seals or certificates

## 6.6 PDL in support of Electronic Registered Delivery Services

## 6.x Application to 3rd (non-EU) countries

# 7 General Conclusions

## 7.1 Benefits

- Application of eIDAS trust controls to permissioning

- Immutable history of timed events (e.g. validity update of certificates, signatures, attributes)

- Distributed trust through consensus mechanisms

## 7.2 Challenges and Risks

# 8 Benefits and Recommendations

## 8.1 Introduction

# 9. Bibliography

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Title of annex

Annex B:
Title of annex

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Change History

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