



## Permissioned Distributed Ledger (PDL); Proof of Concepts Framework

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# Contents

Intellectual Property Rights .....	5
Foreword.....	5
Modal verbs terminology.....	5
1 Scope .....	6
2 References .....	6
2.1 Normative references .....	6
2.2 Informative references.....	6
3 Definition of terms, symbols and abbreviations.....	6
3.1 Terms.....	6
3.2 Symbols.....	7
3.3 Abbreviations .....	7
4 PDL ISG PoC Framework.....	8
4.1 Rationale.....	8
4.2 Call for PoCs .....	8
4.3 PDL ISG PoC Proposal Review .....	8
4.3.1 General.....	8
4.3.2 Accepted PDL ISG PoC Proposals .....	8
4.3.3 Rejected PDL ISG PoC Proposals .....	9
4.4 PDL ISG PoC Proposal Acceptance Criteria.....	9
4.5 PDL ISG PoC Report .....	10
5 Overall Roles and Activities within PoCs.....	10
5.1 PDL ISG PoC Proposal Submission.....	10
5.2 General .....	10
5.3 ETSI CTI Role .....	11
5.4 Other roles and responsibilities.....	11
5.5 PoC activity process .....	12
<b>Annex A (normative): PDL ISG - PoC Proposal Template.....</b>	<b>13</b>
A.1 PoC Project Details .....	13
A.1.1 PoC Project.....	13
A.1.2 PoC Team Members.....	13
A.1.3 PoC Project Scope.....	13
A.1.3.1 PoC Goals .....	13
A.1.3.2 PoC Topics.....	13
A.1.3.3 Other topics in scope.....	14
A.1.4 PoC Project Stages/Milestones.....	14
A.1.5 Additional Details.....	14
A.2 PoC Technical Details .....	14
A.2.1 PoC Overview .....	14
A.2.2 PoC Architecture .....	14
A.2.3 PoC Success Criteria .....	14
A.2.4 Additional information .....	15
<b>Annex B (normative): PDL ISG PoC Report Template .....</b>	<b>16</b>
B.1 General .....	16
B.2 PDL ISG PoC Report .....	16
B.2.1 PoC Project Completion Status .....	16
B.2.2 PDL PoC Project Participants .....	16
B.2.3 Confirmation of PoC Event Occurrence.....	16
B.2.4 PoC Goals Status Report .....	16
B.2.5 PoC Feedback Received from Third Parties (Optional) .....	17

B.3	PDL PoC Technical Report (Optional) .....	17
B.3.1	General .....	17
B.3.2	PoC Contribution to PDL ISG.....	17
B.3.3	Gaps identified in PDL standardization.....	17
B.3.4	PoC Suggested Action Items .....	17
B.3.5	Additional messages to PDL .....	17
B.3.6	Additional messages to Network Operators and Service Providers?.....	18
History	.....	19

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## Foreword

This Group Specification (GS) has been produced by ETSI Industry Specification Group (ISG) Permitted Distributed Ledger (PDL).

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## Modal verbs terminology

In the present document "**shall**", "**shall not**", "**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](#) (Verbal forms for the expression of provisions).

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# 1 Scope

The present document specifies a framework for use within ETSI PDL ISG to coordinate and promote public demonstrations of Proof of Concept (PoC) validating key technical components developed in PDL.

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## 2 References

### 2.1 Normative 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.

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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] ETSI GR PDL 001: "Permissioned Distributed Ledger (PDL); Landscape of Standards and Technologies".
- [i.2] ETSI GR PDL 002: "Permissioned Distributed Ledger (PDL); Applicability and compliance to data processing requirements".
- [i.3] ETSI GR PDL 003: "Permissioned Distributed Ledger (PDL); PDL Application Scenarios".
- [i.4] ETSI Directives.

NOTE: Available at <https://portal.etsi.org/Resources/ETSI-Directives>.

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## 3 Definition of terms, symbols and abbreviations

### 3.1 Terms

For the purposes of the present document, the following terms apply:

**PDL ISG PoC proposal:** initial description of a PoC Project, submitted as a contribution for review and acceptance by the PDL ISG before the PoC Project starts

NOTE: See annex A.

**PDL ISG PoC report:** detailed description of the results and findings of a PoC project, submitted once the PoC Project has finished

**manufacturer:** company having a substantial capacity to develop and/or produce and/or install and/or maintain products to be used in, or directly or indirectly connected to, an electronics communications network

NOTE: An association or organization of such manufacturers also falls within this category. (Member categories from Rules of procedure in ETSI Directives [i.4].)

**PoC demo objective:** detailed description of one particular aspect that the PoC team intends to demonstrate and how it will be achieved

**PoC project:** activity oriented to perform a PoC according to the framework described in the present document

**PoC review team:** entity in charge of administering the PoC activity process

**PoC scenario report:** collection of PoC Demo Objectives

NOTE: See annex B.

**PoC team:** organizations participating in the PoC Project

**research institution:** non-for-profit organization, having research results among its primary activity objectives

NOTE: An association or organization of such research institutions also falls within this category. (Member categories from Rules of procedure in ETSI Directives [i.4].)

**service provider:** organization participating in a PDL infrastructure, and providing means for it to run

NOTE: An association or organization of such service providers also falls within this category. This category includes public and private organizations, for- and non-for-profit. (Member categories from Rules of procedure in ETSI Directives [i.4].)

## 3.2 Symbols

Void.

## 3.3 Abbreviations

For the purposes of the present document, the following abbreviations apply:

CDPR	Compliance to Data Processing Requirements
CTI	Centre for Testing and Interoperability
DAO	Destination Advertisement Object
EG	Expert Group
ICT	Image Constraint Token/Information & Communication Technology
ISG	Industry Specification Group
PDL	Permissioned Distributed Ledger
PKI	Public Key Infrastructure
PoC	Proof of Concept
URL	Universal Resource Location
WG	Working Group
WI	Work Item

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## 4 PDL ISG PoC Framework

### 4.1 Rationale

The ISG PDL is committed to start from already available experiences in the field of permissioned distributed ledgers, leveraging on them, and seeking for the definition of open and well-known operational mechanisms to validate, scale, build consensus, operate, automate, assure, manage events these infrastructures. A key element of the intended group activity is related to the execution of proof-of-concept demonstrations. While any given PoC demonstration event impacts its immediate audience, it is expected the cumulative set of PoC demonstration events provides a measure of industry impact from these PDL concepts.

The objective for the PoCs is to build commercial awareness and confidence and encourage development of an open ecosystem by integrating components from different players.

This framework outlines:

- rationale for PDL ISG PoCs;
- PDL ISG PoC process;
- submission, format and criteria for PDL ISG PoC Proposals;
- review and acceptance criteria of PoC Proposals;
- PDL ISG PoC Report format and requirements;
- ETSI support for PoC team.

These PoCs shall be scoped taking the PDL use cases as a working basis and address the technical challenges and approaches being progressed.

### 4.2 Call for PoCs

The ETSI PDL ISG calls for PoC proposals during the lifetime of the ISG. Details will be made publicly available on the ETSI PDL ISG portal.

### 4.3 PDL ISG PoC Proposal Review

#### 4.3.1 General

The PDL PoC Review Team is responsible for administering this PDL ISG PoC process. The PDL PoC Review Team shall collect and distribute the PDL ISG PoC Proposals and announce the accepted PDL ISG PoC Proposal based on the review against the PDL ISG PoC acceptance criteria of clause 4.4.

ETSI Centre for Testing and Interoperability (CTI) will further evaluate the PoC according to the criteria acceptance principles and provide the PDL PoC Review Team with a confirmation of meeting the acceptance criteria (as in clause 5.1) as required by clause 4.4.

The PDL PoC Review Team will provide a response to the PoC team within 30 days after receipt of the PDL ISG PoC proposal.

#### 4.3.2 Accepted PDL ISG PoC Proposals

The PDL PoC Review Team will send an email to the PoC team to confirm the acceptance of the PDL ISG PoC Proposal.

The PDL PoC Review Team will send an email to the 'PDL\_POC@LIST.ETSI.ORG' list to announce each accepted PDL ISG PoC Proposal to the PDL ISG community.



The PDL PoC Review Team will post accepted PDL ISG PoC proposals on a publicly accessible ETSI PDL ISG portal. A "List of Accepted Proposals" will be kept on the ETSI PDL Wiki page.

Accepted PDL ISG PoC proposals are expected to be executed by the PoC team and a PoC Report is also expected to be submitted by the PoC team at completion.

### 4.3.3 Rejected PDL ISG PoC Proposals

The PDL PoC Review Team will send an email to the PoC team to notify them that the PDL ISG PoC proposal has been rejected with the reason based on the criteria of clause 4.4.

No further action will be taken by the PDL ISG on rejected proposals. PoC teams may submit revised PDL ISG PoC Proposals for future consideration.

NOTE: This should be reported to the PDL management list and informally to the next meeting.

## 4.4 PDL ISG PoC Proposal Acceptance Criteria

The criteria for acceptance of PDL ISG PoC proposals are:

- 1) The PDL ISG PoC proposal shall contain the information requested in the format of the PDL ISG PoC Proposal Template of clause A.1, referred to as the PoC team. This will be checked by ETSI CTI and the PoC Review Team.
- 2) The organizations participating in a PoC team shall include at least:
  - a) two manufacturers; or
  - b) one manufacturer plus a research institution; or
  - c) one manufacturer or research institution and employing, for all PoC purposes, open-source components.

In all cases, the PoC team shall include a service provider, and this service provider shall be a member of the ISG PDL (refer to clause A.1.1).

- 3) The PDL ISG PoC team proposal shall address at least one goal relevant to PDL i.e. related with PDL application scenarios or use cases, PDL requirements, or the suitability of PDL architecture aspects (refer to clause A.1.3.1). The output of the PoC should provide feedback to the ISG PDL that should support the improvement of the output of the existing WIs. Alignment with existing activities is required.
- 4) The PDL ISG PoC team proposal shall indicate the venue where the PoC will be demonstrated (e.g. PoC team member lab, industry trade show, etc.) (refer to clause A.1.5).
- 5) A PoC team project timeline shall be provided (refer to clause A.1.4).

Any PDL ISG PoC proposal which meets these required elements will be accepted.

A summary table of Use cases from [i.2] and requirements [i.3] is shown in table 1.