ETSI GS ZSM-016 0.0.1 (2022-12)

**Group specification**

Zero Touch Network and Service Management (ZSM);

Intent-driven Closed Loops

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# Foreword

This Group Specification (GS) has been produced by ETSI Industry Specification Group Zero Touch Network and Service Management (ZSM).

# 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](https://portal.etsi.org/Services/editHelp!/Howtostart/ETSIDraftingRules.aspx) (Verbal forms for the expression of provisions).

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# 1 Scope

The work item will specify capabilities to support the combination of closed-loop automation with intents originating from ZSM consumers, focusing on intent-driven governance and coordination of closed loops. The scope of this work includes use cases, additional requirements related to intent-driven aspects of ZSM009-1, as well as procedures and information models. This work item will create a normative specification covering stages 1 and 2. It will also identify and describe additions to ETSI ZSM002 v1.1.1 and ETSI ZSM009-1 v1.1.1, as needed. Related work in ETSI, other SDOs and open-source projects will be considered and used where applicable.

Editor’s note: TODO: update scope description as document matures.

# 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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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 necessary for the application of the present document.

[1] ETSI GS ZSM 002: “Zero-touch network and Service Management (ZSM); Reference Architecture”.

[2] ETSI GS ZSM 009-1: "Zero-touch network and Service Management (ZSM); Closed-Loop Automation; Part 1: Enablers "

## 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:

Editor’s note: TODO: where needed, provide definition of terms aligned with terminology used in industry and literature.

## 3.2 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:

# 4 Use Cases

Editor’s Note: This clause defines the use cases. Need to check for relevant use cases to be added here.

## 4.1 Requirements

Editor’s Note: This clause introduces the requirements for the selected use cases.

# 5 Requirements for intent-driven Closed Loops

Editor’s Note: This clause defines the requirements relevant to intent-driven Closed Loops within the ZSM framework architecture. The requirements are derived from ETSI GS ZSM 002 [1] and ETSI GS ZSM 009-1 v1.1.1 [2], as well as additional requirements identified in Annex A.

# 6 Intent-driven Closed Loops

## 6.1 Introduction

Editor’s Note: This clause introduces the concept of intent-driven Closed Loops.

## 6.2 Procedures

Editor’s Note: This clause defines the procedures for intent-driven Closed Loops.

## 6.3 Information Models

Editor’s Note: This clause defines the information models for intent-driven Closed Loops.

# 7 Governance and Coordination of intent-driven Closed Loops.

Editor’s Note: This clause defines the operations regarding how the entities coordinate, manage the life cycle, and configure the behaviour of intent-driven Closed Loops.

# 8 Additional Services

Editor’s Note: This clause defines additional services to ETSI GS ZSM 002 [1] relevant to intent-driven Closed Loops within the ZSM framework architecture identified in Annex A.

Annex A (informative): Analysis of ETSI ZSM GS 009-1 and ETSI ZSM GS 002 (and other relevant ETSI ZSM specifications and ETSI ZSM reports).

Editor’s Note: This clause identifies the gaps in the enabling closed loops areas such as Governance, Coordination, Services, Architecture, etc. that need to be addressed for realizing intent-driven closed loops.

Annex B (normative):

Annex (informative):  
Change History

| Date | Version | Information about changes |
| --- | --- | --- |
| 12-2022 | 0.0.1 | Approval of work item skeleton |
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