



## self-X Artificial Intelligence for European Process Industry digital transformation

### Deliverable

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#### D7.6 Report on the contribution to Standardisation- Intermediate version

**Deliverable Lead:** UNE

**Deliverable due date:** 31/10/2023 (M18)

**Actual submission date:** 31/10/2023 (M18)

**Version:** V2.0



Funded by  
the European Union

Document Control Page	
<b>Title</b>	<b>D7.6 Report on the contribution to Standardisation-intermediate version</b>
<b>Lead Beneficiary</b>	<b>UNE</b>
<b>Description</b>	<b>Report about how the selected results of the project will contribute to Standardisation activities and how the partners will be involved in such activities. Intermediate version to be provided at month 18</b>
<b>Contributors</b>	<b>UNE, MSI, CARTIF</b>
<b>Creation date</b>	<b>09/09/2023</b>
<b>Type</b>	<b>Report</b>
<b>Language</b>	<b>English</b>
<b>Audience</b>	<input checked="" type="checkbox"/> public <input type="checkbox"/> sensitive
<b>Review status</b>	<input type="checkbox"/> Draft <input checked="" type="checkbox"/> WP leader accepted <input checked="" type="checkbox"/> Coordinator accepted
<b>Action requested</b>	<input type="checkbox"/> to be revised by Partners <input type="checkbox"/> for approval by the WP leader <input type="checkbox"/> for approval by the Project Coordinator <input type="checkbox"/> for acknowledgement by Partners

Version	Author(s)	Changes	Date
0.1	Amanda SUO – UNE	Creation, First Draft	09/09/2023
1.0	Amanda SUO – UNE	Updated	09/10/2023
1.1	Laura - MSI	Revision	25/10/2023
1.2	Amanda SUO – UNE	Correction	25/10/2023
1.3	Amanda SUO – UNE	Final version	30/10/2023
1.4	EEA (Alejandro Cuadrado)	Ethical Review	30/10/2023
2.0	CARTIF	Final review	31/10/2023

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## Executive Summary

As part of WP7: Communication, Dissemination, and Standardisation, UNE is in charge of T7.3: Standardisation Activities [M1-M36], which includes T7.3.1: Standardisation Landscape and T7.3.2: Contribution to Standardisation.

The primary objective of this task is to facilitate market acceptance and use of the developed solutions. Other objectives include providing starting information for other WPs, ensuring compatibility and interoperability with existing market products through standards, and utilizing the Standardisation system as a tool for disseminating project results and interacting with market stakeholders. The Standardisation activities planned in this task to achieve the aforementioned objectives will be divided into two interdependent activities: the identification and analysis of relevant existing standards, and the contribution to ongoing and future Standardisation developments based on s-X-AIPI project results. The participation of a Standardisation Body, representing CEN and CENELEC, imparts expertise, knowledge, and relevance to the Standardisation system and its internal procedures.

- The first deliverable D7.2 created in the task T7.3.1 Standardisation landscape was an analysis of the applicable Standardisation landscape to identify standards that can be used throughout the project (submission at M6).
- The second deliverable D7.3 describes the first Phase (Phase I) of the Standardisation contribution/development process (T7.3 - Phase I, initial version; submission at M12).
- The third deliverable (D7.6) describes Phase II of the Standardisation contribution/development process (T7.3 - Phase II, intermediate version; submission at M18).
- The fourth deliverable (D7.7) describes all Standardisation contribution/development activities, including Phases I, II, and III (T7.3 - Phase III, final version; submission at M36).

The second (D7.3), third (D7.6), and final deliverable (D7.7) are developed in the T7.3.2 "Contribution to the ongoing and future Standardisation developments" deliverable, allowing the project to communicate and collaborate with the relevant Technical Committees and organizations (such as CEN/CLC JTC21 and ISO/IEC JTC/SC42 Artificial Intelligence, ISO/IEC JTC 1/SC 27 and CEN/CLC JTC 13 Cybersecurity and Data Protection). In the context of such a HE project, the development of expedited standards, such as CEN-CENELEC Workshop Agreements (CWA), is typically a viable option.

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## Summary and Scope

The Standardisation activities of T7.3.2 "Contribution to ongoing and future Standardisation developments" are anticipated to facilitate market acceptance and use of s-X-AIPI solutions, in addition to enhancing the project's development and exploitation strategy. To this end, after examining in D7.2 ("Standardisation landscape and applicable standards") the existing Standards and Technical Committees(TC) related to s-X-AIPI, D7.3 provides a brief summary of D7.2 regarding the International/European Standardisation landscape that is related to s-X-AIPI objectives and outlines the Initial Planning of T7.3.2 "Contribution to Standardisation developments"; D7.6 shall describe the actions taken and their results in relation to s-X-AIPI objectives

- *D7.3 Report on contribution to Standardisation-initial version (M7-M9)*, which outlines the initial planning for T7.3.2 "Contribution to Standardisation developments"
- *D7.6 Report on the contribution to Standardisation-intermediate version (M10-M18)*, which includes Communication and Interaction with relevant Technical Committees(TC), as well as actions taken and to be taken, in order to disseminate the project towards future Standardisation activities in the same field.
- *D7.7 Report on the contribution to Standardisation-final version (M19-M36)*, which includes activities such as participation in Standardisation working sessions, identification of standardizable topics, creation and design for a Future Standardisation Proposal, and contributions to the evolution of Standardisation.

D7.3 covers the initial phase (M7-M9) of T7.3.2's contribution to Standardisation, whereas D7.6 details communication and collaborations with the relevant TCs for s-X-AIPI during the intermediate phase (M10-M18). This document outlines both current and future efforts to pave the way for future Standardisation initiatives. It also establishes a timeline for the suggested actions and engagement with key Technical Committees (TCs) of CEN, CENELEC, ISO, and IEC.



## I. Introduction

D7.3 describes the initial phase of T7.3.2's contribution to Standardisation, whereas D7.6 describes communication and collaborations with the relevant TCs for s-X-AIPI during the intermediate phase (M10-M18). Therefore, this document describes both ongoing and upcoming efforts to pave the way for future Standardisation initiatives. In addition, it establishes a timeline for the recommended actions and engagement with the key Technical Committees (TCs) of CEN, CENELEC, ISO, and IEC.

This section offers a concise overview of D7.2, "Landscape of Standardisation."

A brief overview of the Standardisation landscape was provided in D7.2. To map the existing standards to the 14 relevant Standardisation Areas of the project, a thorough analysis was conducted. The following inferences can be made:

- A large number of International and European Technical Committees (TC), as well as standards and standards in development, are relevant to the s-X-AIPI project's future development and dissemination. There are two distinct types of the aforementioned Technical Committees. On the one hand, there are Technical Committees that can serve as a source of pertinent information for the development of the project, but for which no dissemination activities are planned. Alternatively, Technical Committees that may be directly interested in the project's findings and where dissemination activities can be carried out.
- The following Technical Committees may be most interested in the results of the s-X-AIPI project:
  - ISO/IEC JTC 1/SC 42 (CEN/CLC JTC 21) – Artificial Intelligence
  - ISO/IEC JTC 1/SC 40 – IT service management, IT and Data Governance
  - ISO/IEC JTC 1/SC 27 (CEN/CLC JTC 13) – Cybersecurity, Privacy and Data Protection
  - ISO/IEC JTC 1/SC 7 – Software and systems engineering
  - ISO/TC 184 - Automation systems and integration, CEN/TC 310 - Advanced Manufacturing Technologies
  - IEC TC 65 - Industrial-process measurement, control and automation
  - ETSI ISG SAI – ETSI Industry Specification Group on Securing Artificial Intelligence
- Ten Technical Committees (TC) associated with s-X-AIPI have been identified.
  - To be able to utilize the Standardisation system to disseminate the project's outcomes and connect/interact with market stakeholders.
  - Determining the communication/interaction strategy of s-X-AIPI with relevant TCs will be crucial. UNE would provide the necessary technical assistance for the communication or interaction.
- Several standards pertinent to the s-X-AIPI project have been identified as a result of the above-described study of the Standardisation landscape.
- Roughly forty standards are highly pertinent and could be viewed as requirements for compliance with the project's outcomes; they refer to Work Packages 1, 2, 3, 4, 5, and 6.
  - WP1 Coordination and Management
  - WP2 – Design and Architecture of self-X AI solutions integration in process industry plants
  - WP3 – Self-X abilities in AI Data pipeline components for human support
  - WP4 – Integrated technology of self-X components and autonomic managers
  - WP5 – Self-X AI apps prototype demo, user training and performance improvement in process industry
  - WP6 – Replicability and exploitation
  - In the future, it may be able to contribute to these standards by disseminating information regarding standards usage and the s-X-AIPI framework, which may include these standards.
  - It will also be possible to provide improvement suggestions and other types of feedback.
  - In the future, it may be possible to provide new expertise in AI integration, Big Data analytics, use case process understanding, modelling and digital platforms, industry automation, etc.

- ➔ These applicable standards, such as Standardisation Technical Specifications (TS) or Technical Reports (TR), may serve as guidelines or manuals for WP1, WP2, WP3, WP4, WP5, and WP6. They may be utilized for design guidelines and usability evaluation and analysis.
- ➔ This study will contribute to the establishment and development of guidelines for the Standardisation of AI technologies, AI data, AI systems and AI applications, not only for the s-X-AIPI project, but for all of Europe.

**Table 1 Summary of relevant Standards and TCs for the s-X-AIPI's Key Standardisation areas**

Key concept/Standardisation areas	Relevant Standards	TCs
AI concepts, terminology and AI system framework	ISO/IEC 22989, ISO/IEC 23053	ISO/IEC JTC 1/SC 42 (CEN/CLC JTC 21)
Data and Data Governance	ISO/IEC TS 4213, ISO/IEC 5259-2, ISO/IEC 5259-3, ISO/IEC 5259-4, ISO/IEC 5338, ISO/IEC 5339, ISO/IEC 5469, ISO/IEC 23894, ISO/IEC 24027, <b>ISO/IEC 24029-1</b> , <b>ISO/IEC 24029-2</b> , ISO/IEC 24668, ISO/IEC 38507, ISO/IEC 42001, ETSI SAI 002, <b>ETSI SAI 005</b>	ISO/IEC JTC 1/SC 42 (CEN/CLC JTC 21)  ISO/IEC JTC 1/SC 40
Accuracy robustness and Cybersecurity (Data Security)	ISO/IEC TS 4213, ISO/IEC 5338, ISO/IEC 5469, ISO/IEC 5059, ISO/IEC FDIS 23894, ISO/IEC 24028, <b>ISO/IEC 24029-1</b> , <b>ISO/IEC DIS 24029-2</b> , ISO/IEC 24668, ISO/IEC 25024, ISO/IEC 25059, ISO/IEC 42001, <b>ISO/IEC 20547-4</b> , <b>ISO/IEC TR 27563</b> , <b>ISO/IEC AWI 27090</b> , ETSI SAI 002, ETSI SAI 003, <b>ETSI SAI 005</b> , ETSI SAI 006	ISO/IEC JTC 1/SC 42 (CEN/CLC JTC 21)  ISO/IEC JTC 1/SC 27 (CEN/CLC JTC 13)  ETSI ISG SAI
Risk management system	ISO/IEC 5338, ISO/IEC 5469, ISO/IEC 23894, ISO/IEC 25059, ISO/IEC 38507, ISO/IEC 42001	ISO/IEC JTC 1/SC 42 (CEN/CLC JTC 21)
Data Quality management system	ISO/IEC 5259-1, ISO/IEC 5259-2, ISO/IEC 5259-3, ISO/IEC 5259-4, ISO/IEC 5259-5, ISO/IEC 5338, ISO/IEC 23894, <b>ISO/IEC 24029-1</b> , <b>ISO/IEC DIS 24029-2</b> , ISO/IEC 25059, ISO/IEC 38507, ISO/IEC 42001	ISO/IEC JTC 1/SC 42 (CEN/CLC JTC 21)  ISO/IEC JTC 1/SC 40  ISO/IEC JTC 1/SC 7
Technical documentation	ISO/IEC FDIS 23894, ISO/IEC 24027, ISO/IEC 42001	ISO/IEC JTC 1/SC 42 (CEN/CLC JTC 21)
Record keeping	ISO/IEC FDIS 23894	ISO/IEC JTC 1/SC 42 (CEN/CLC JTC 21)
Transparency and information to users	ISO/IEC FDIS 23894, ISO/IEC 24027, <b>ISO/IEC 24028</b> , ISO/IEC 38507, ISO/IEC 42001	ISO/IEC JTC 1/SC 42 (CEN/CLC JTC 21)  ISO/IEC JTC 1/SC 40
Human oversight	ISO/IEC FDIS 23894, ISO/IEC 38507, ISO/IEC 42001	ISO/IEC JTC 1/SC 42 (CEN/CLC JTC 21)
Ethical aspects and societal considerations	ISO/IEC TR 24368, ISO/IEC PWI 17866	ISO/IEC JTC 1/SC 42 (CEN/CLC JTC 21)
AI use cases and applications	ISO/IEC TR 24030, ISO/IEC 5339, ISO/IEC 5338	ISO/IEC JTC 1/SC 42 (CEN/CLC JTC 21)

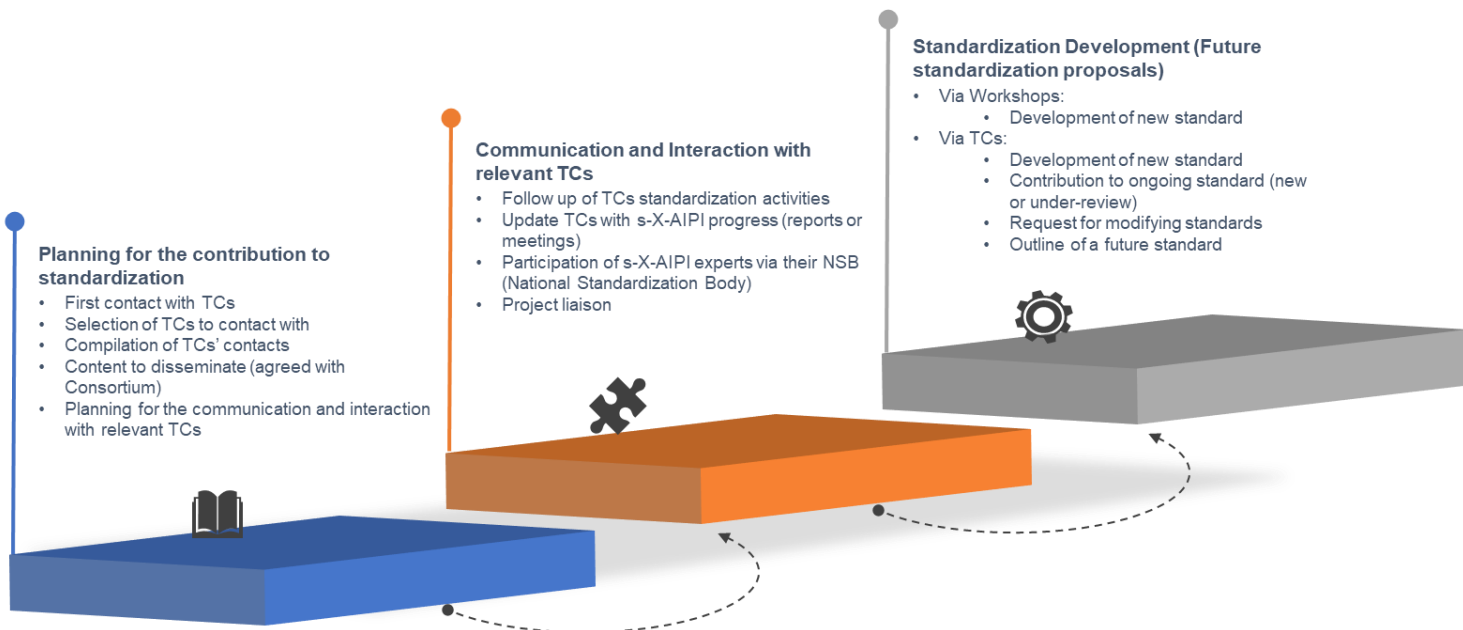
<b>Computational aspects and machine learning</b>	ISO/IEC TS 4213, ISO/IEC 5392, ISO/IEC TR 24372, ISO/IEC AWI TR 17903	<b>ISO/IEC JTC 1/SC 42 (CEN/CLC JTC 21)</b>
<b>Open source</b>	ISO/IEC 5230, ISO/IEC/IEEE 41062:2019	<b>ISO/IEC JTC 1</b> <b>ISO/IEC JTC 1/SC 7</b>
<b>Industrial-process measurement, control and automation</b>	IEC TS 62443-1-1, IEC 62443-2-1, IEC 62443-2-4, IEC 62443-3-2, IEC 62443-3-3, IEC 62443-4-1, IEC 62443-4-2	<b>IEC TC 65C</b> <b>ISO/TC 184 (CEN/TC 310)</b>

## 2. Strategy

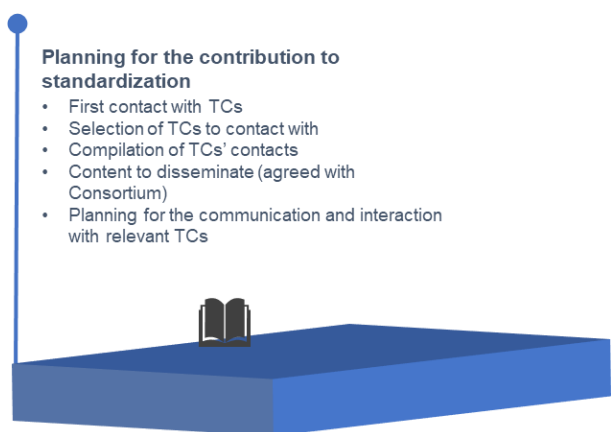
The contribution of the s-X-AIPI project to Standardisation is dependent on communication/interaction with relevant TCs. The main objectives of s-X-AIPI are to contribute to the development of new standards on specific topics, promote the incorporation of project outcomes into new or future standards that can be easily adopted by the international/European industry, and thereby increase the project's impact.

As shown in figure 1, the s-X-AIPI Strategy consists of three major phases: (I)Planning, (II)Communication and Interaction, and (III)Standardisation Development. Each phase is explained in the subsections 2.1, 2.2, and 2.3 that follow.

**Figure 1 Strategy of the Contribution to Standardisation**



### 2.1 s-X-AIPI Standardisation strategy: Phase I-Planning

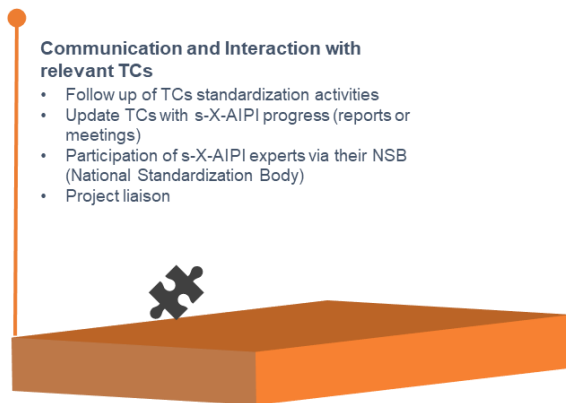


The first phase aims to initiate Standardisation Development by gathering initial information about the project's Standardisation possibilities or needs and establishing objectives for the Standardisation in order to plan communication and interaction with s-X-AIPI-related Technical Committees (TCs).

In this phase, **the first interaction will be made with TCs** in order to raise their awareness of s-X-AIPI and facilitate further communication.

These TCs have different categories of international/European stakeholders, so the Standardisation system is used as a targeted dissemination channel to disseminate their content. **There will be a request for feedback in order to collect any views, opinions, or suggestions regarding the project and the potentials or requirements for Standardisation.** In addition, these initial contacts will be helpful in determining the optimal method for initiating Standardisation Development, and this initial step will facilitate future communication between s-X-AIPI and TCs if this process is initiated within a TC.

## 2.2 s-X-AIPI Standardisation strategy: Phase II-Communication and Interaction with relevant TCs



s-X-AIPI will attempt to establish various relationships between s-X-AIPI and the relevant CEN, CENELEC, ISO, and IEC Technical Committees (TCs). To conduct/build these relationships, s-X-AIPI will use two factors to determine the most appropriate interactions: the impact/relevance of Standardisation work on the TCs and the feasibility of initiating Standardisation Development within a TC (as opposed to initiating Standardisation Development in a Workshop; details are provided below).

Among the ways to interact with TCs are:

### 1- Monitoring/Follow-up of the relevant TCs' activities.

This enables the initiation of Standardisation efforts that may be pertinent to s-X-AIPI and the detection of the development of significant existing underdevelopment standards. This can be accomplished by periodically monitoring the Standardisation activity resulting in D7.7 updates.

### 2- Further communication with the TCs to track the s-X-AIPI's implementation and update the s-X-AIPI's status.

This may be accomplished through reporting, meetings with related TCs, or joint events. On the one hand, this action contributes to the further dissemination of the project and can guide the beginning of the Standardisation Development, while on the other hand, this further contact is mandatory with the TCs directly covering (if applicable) the subject that s-X-AIPI will be promoting to undergo Standardisation Development.

**3- Involvement/Participation of s-X-AIPI Partners in TCs;** Standardisation is an open activity, and all stakeholders can participate in TCs by designating their National Standardisation Body. This option permits a **more in-depth monitoring** of a TC's Standardisation activity and is useful if Standardisation Development is to be initiated within the Standardisation TC. Some s-X-AIPI Partners are already engaged in one or more of these identified TCs.

### 4- Establish a formal Project Liaison between the s-X-AIPI project and the TCs.

It is only suggested when the work of the Standardisation TC is closely related to the project's primary objectives and a direct technical contribution from the project is anticipated. The project liaison figure is recognized in CEN / CENELEC, but it is ineffective in ISO / IEC; this must be taken into account because,

according to the D7.2 conclusions, there is no formal Standardisation activity at the European level for a number of relevant topics.

## 5- Informing and Educating TCs

Other specific actions pertain to communicating the project to the relevant TCs. The objective is to acquaint the TCs with the s-X-AIPI project while attempting to involve them and considering their potential opinions. For these purposes, the possible actions are as follows:

- Dissemination of the s-X-AIPI's progress by delivering progress reports to the relevant TC Secretaries/Convenors. This could be the case for product or system-related TCs, and UNE's knowledge of Standardisation contact information allows it to perform this task with ease.
- Attending relevant TC meetings to present the project and establish personal relationships with relevant industry representatives. This would be highly recommended in the case of CEN/CLC JTC 21 'Artificial Intelligence' and/or CEN/CLC/JTC 13 'Cybersecurity and Data Protection', and it could be managed by UNE, with the participation of the s-X-AIPI Coordinator and Partners to present the technical aspects of the project also being of interest.

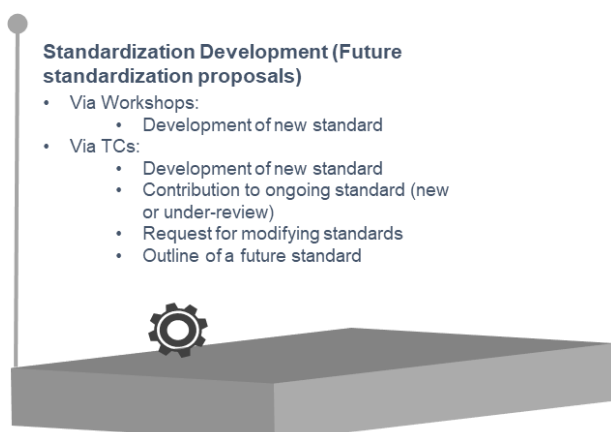
## 6- Requesting details from TCs

This may help to engage the TCs in the s-X-AIPI project and bring the project closer to the European Standardisation system. This facilitates cooperation between both parties. This action may include, for instance, general and specific questions to a TC regarding s-X-AIPI project issues, as well as questions regarding the possibility of Standardisation.

**Table 2 Summary of possible actions for the project dissemination**

#	Dissemination Action	Involved partner(s)
1	<b>Monitoring/Follow-up of TC's Standardisation efforts</b>	UNE
2	<b>Participation in a TC</b>	Coordinator, Partners
3	<b>Transmitting/delivering reports to TCs</b>	UNE
4	<b>Project presentation at TCs' meetings</b>	UNE, Coordinator, Partners
5	<b>Information request to TCs</b>	UNE
6	<b>Information regarding Workshops and conferences for TCs</b>	UNE

## 2.3 s-X-AIPI Standardisation strategy: Phase III-Standardisation Development



The ultimate goal of s-X-AIPI's Standardisation efforts is to facilitate market acceptance of the results by transferring these results and findings to widely recognized market standards. With the assistance of the respective Partners, the results that are feasible for a Standardisation development procedure will be identified. Different options for contributing to Standardisation are considered based on the type of results (nature, availability, and IPR) and the Standardisation context (existence of closely related standards and TC reactions):

**I-** Standardisation Development: Developing a new standard **within a Workshop**.

A Workshop on Standardisation is a group of entities with a shared desire to develop a standard for a particular issue. It is the same as Standardisation TC, but the number of participants is typically smaller and the working procedures are quicker and more adaptable. When there is a need to develop a precise standard in an innovative field that is not covered by existing TCs or when these committees are not interested in developing such a standard (e.g., it does not fit into their Work Programme), a Standardisation workshop is created. If the subject is similar to the field covered by a Standardisation Technical Committee, the TC will be notified and the Standardisation Workshop can be initiated.

The Standardisation Workshop will henceforth be referred to as the CEN Workshop or CENELEC Workshop, as the Standardisation Workshop option is primarily of interest to s-X-AIPI in the European context. The standard produced by a CEN / CENELEC Workshop is typically referred to as CWA, CEN Workshop Agreement, or CENELEC Workshop Agreement. The nature and timeline of CWA's development are highly compatible with the R&I project structure.

## 2- Standardisation Development: Developing a new standard **within a TC**.

It may be desirable or necessary to standardize the s-X-AIPI results within a TC in order to undergo a Standardisation development process. Examples of possible outcomes include:

- a) Developing a new standard within a TC.  
When an s-X-AIPI result is to be promoted to a standard in a field covered by a Standardisation TC and that committee decides to include this development in its Work Programme. The resulting standard would have the backing of the Standardisation TC, but the work must be adapted to the internal timeline of the Standardisation TC and may extend beyond the project's timeline.
- b) Contributing to an ongoing standard.  
As a result of monitoring the Standardisation landscape, it may be found that s-X-AIPI results are covered by an ongoing standard but that these results do not fit in with the current standard draft. Standards that are being developed as part of a new initiative and already published standards that are transitioning into a new version as part of a review process contain standard gaps.
- c) Request a modification or amendment to a standard that is not currently under development or review.  
The gap can be found within the Standardisation TC, in the form of published standards that are not undergoing revision. In this case, the Standardisation TC could be subject to a fully justified modification request.
- d) A Future Standard outline.  
Only when there is no clear view of the contribution to Standardisation on a comprehensive roadmap (due to a lack of consensus within the Consortium or a lack of anticipated results, for example).



### 3. Strategy Implementation

Next, the actions and approach to be carried out for the implementation of each of the steps of the strategy are detailed in this section.

#### 3.1 Implementation of the Planning step

The relevance of the TCs identified in D7.2 'Standardisation Landscape' shall be considered for the implementation of the actions described in 2.1. It should be noted that s-X-AIPI will innovate in the following among the Standardisation Areas/Topics identified in D7.2:

**Key (concept) Standardisation Areas:**

<b>1</b>	<b>AI concepts, terminology and AI system framework</b>
<b>2</b>	<b>Data and Data Governance</b>
<b>3</b>	<b>Accuracy, robustness (trustworthiness), and Cybersecurity(Data Security)</b>
<b>4</b>	<b>Risk management system</b>
<b>5</b>	<b>Data Quality management system</b>
<b>6</b>	<b>Technical documentation</b>
<b>7</b>	<b>Record keeping</b>
<b>8</b>	<b>Transparency and information to users</b>
<b>9</b>	<b>Human oversight</b>
<b>10</b>	<b>Ethical aspects and societal considerations</b>
<b>11</b>	<b>AI use cases and applications</b>
<b>12</b>	<b>Computational aspects and machine learning</b>
<b>13</b>	<b>Open source</b>
<b>14</b>	<b>Industrial-process measurement, control and automation</b>

Table 2 covers the Topics and TCs identified in **D7.2** and the relevant TCs proposed to contact with (defined in Chapter 2.1):

**Table 3 Identification of the relevant TCs to be contacted**

Key concept/Standardisation areas	Relevant Standards	TCs	Contacted
AI concepts, terminology and AI system framework	ISO/IEC 22989, ISO/IEC 23053	ISO/IEC JTC 1/SC 42 (CEN/CLC JTC 21)	YES
Data and Data Governance	ISO/IEC TS 4213, ISO/IEC 5259-2, ISO/IEC 5259-3, ISO/IEC 5259-4, ISO/IEC 5338, ISO/IEC 5339, ISO/IEC 5469, ISO/IEC 23894, ISO/IEC 24027, <b>ISO/IEC 24029-1, ISO/IEC 24029-2</b> , ISO/IEC 24668, ISO/IEC 38507, ISO/IEC 42001, ETSI SAI 002, <b>ETSI SAI 005</b>	ISO/IEC JTC 1/SC 42 (CEN/CLC JTC 21) ISO/IEC JTC 1/SC 40	YES
Accuracy robustness and Cybersecurity (Data Security)	ISO/IEC TS 4213, ISO/IEC 5338, ISO/IEC 5469, ISO/IEC 5059, ISO/IEC FDIS 23894, ISO/IEC 24028, <b>ISO/IEC 24029-1, ISO/IEC DIS 24029-2</b> , ISO/IEC 24668, ISO/IEC 25024, ISO/IEC 25059, ISO/IEC 42001, <b>ISO/IEC 20547-4, ISO/IEC TR 27563, ISO/IEC AWI 27090</b> , ETSI SAI 002, ETSI SAI 003, <b>ETSI SAI 005</b> , ETSI SAI 006	ISO/IEC JTC 1/SC 42 (CEN/CLC JTC 21) ISO/IEC JTC 1/SC 27 (CEN/CLC JTC 13)	YES



		ETSI ISG SAI	
<b>Risk management system</b>	ISO/IEC 5338, ISO/IEC 5469, ISO/IEC 23894, ISO/IEC 25059, ISO/IEC 38507, ISO/IEC 42001	ISO/IEC JTC 1/SC 42 (CEN/CLC JTC 21)	YES
<b>Data Quality management system</b>	ISO/IEC 5259-1, ISO/IEC 5259-2, ISO/IEC 5259-3, ISO/IEC 5259-4, ISO/IEC 5259-5, ISO/IEC 5338, ISO/IEC 23894, <b>ISO/IEC 24029-1</b> , <b>ISO/IEC DIS 24029-2</b> , ISO/IEC 25059, ISO/IEC 38507, ISO/IEC 42001	ISO/IEC JTC 1/SC 42 (CEN/CLC JTC 21) ISO/IEC JTC 1/SC 40 ISO/IEC JTC 1/SC 7	YES
<b>Technical documentation</b>	ISO/IEC FDIS 23894, ISO/IEC 24027, ISO/IEC 42001	ISO/IEC JTC 1/SC 42 (CEN/CLC JTC 21)	YES
<b>Record keeping</b>	ISO/IEC FDIS 23894	ISO/IEC JTC 1/SC 42 (CEN/CLC JTC 21)	YES
<b>Transparency and information to users</b>	ISO/IEC FDIS 23894, ISO/IEC 24027, <b>ISO/IEC 24028</b> , ISO/IEC 38507, ISO/IEC 42001	ISO/IEC JTC 1/SC 42 (CEN/CLC JTC 21) ISO/IEC JTC 1/SC 40	YES
<b>Human oversight</b>	ISO/IEC FDIS 23894, ISO/IEC 38507, ISO/IEC 42001	ISO/IEC JTC 1/SC 42 (CEN/CLC JTC 21)	YES
<b>Ethical aspects and societal considerations</b>	ISO/IEC TR 24368, ISO/IEC PWI 17866	ISO/IEC JTC 1/SC 42 (CEN/CLC JTC 21)	YES
<b>AI use cases and applications</b>	ISO/IEC TR 24030, ISO/IEC 5339, ISO/IEC 5338	ISO/IEC JTC 1/SC 42 (CEN/CLC JTC 21)	YES
<b>Computational aspects and machine learning</b>	ISO/IEC TS 4213, ISO/IEC 5392, ISO/IEC TR 24372, ISO/IEC AWI TR 17903	ISO/IEC JTC 1/SC 42 (CEN/CLC JTC 21)	YES
<b>Open source</b>	ISO/IEC 5230, ISO/IEC/IEEE 41062:2019	ISO/IEC JTC 1 ISO/IEC JTC 1/SC 7	YES
<b>Industrial-process measurement, control and automation</b>	IEC TS 62443-1-1, IEC 62443-2-1, IEC 62443-2-4, IEC 62443-3-2, IEC 62443-3-3, IEC 62443-4-1, IEC 62443-4-2	IEC TC 65C ISO/TC 184 (CEN/TC 310)	TBD

UNE contacted the Committee Manager/Secretary and/or Chair/Convenor of each relevant TC. Also has support from the coordinator and partners to summarize relevant progress and validate information to prevent the dissemination of any confidential material.

At M18, these initial contacts are anticipated.

### 3.2 Implementation of Communication and Interaction with relevant TCs step

Implementing the actions outlined in 2.2 begins with monitoring the work of the relevant TCs identified in Deliverable **D7.2**. This monitoring will also include the analysis of Workshops for European Standardisation. Monitoring of the relevant Standardisation activity will be continuous over the duration of the s-X-AIPI project, but it is possible to set tentative formal dates:

- ✓ M10-18 (prior to the first interaction with the TCs)
- ✓ M24 (to be aligned with the needs of the Standardisation development process described in 2.3)
- ✓ M36 (to be aligned with the needs of the Standardisation development process described in 2.3)

The Standardisation TCs listed in Table 1 will be updated in s-X-AIPI with the relevant progress. This will be done by updating the report/information provided in the first contacts while keeping the possibility of **virtual/face-to-face interaction** open (e.g., attending a TC meeting if feasible).

The programming of these updates depends on how the reactions to the first contacts proceed and on when the relevant results of s-X-AIPI are delivered.

The relevant s-X-AIPI project planning dates to be considered for providing the TCs with updated report/information:

**Table 4 Tentative schedule of project reviews**

Review number	Tentative timing	Planned venue of review	Comments
<b>RV1</b>	M9	Demonstrator's location	Review Meeting 1
<b>RV2</b>	M24	Demonstrator's location	Review Meeting 2
<b>RV3</b>	M36	Demonstrator's location	End of the project

*Note: It is important to know very well the s-X-AIPI project planning, for taking advantage of the moment. For example, there will be some Workshops and conferences that could be interesting to disseminate. According to the planning there are also some especially important dates along the development of the project that could be interesting to take into account for dissemination purposes. It is also important to know when the relevant TCs are going to meet, in order to foresee any relevant action that could be carried out.*

Simultaneously, if an opportunity arises for a **virtual/face-to-face interaction**, it would be done when and where feasible. The Coordinator / Partners' involvement will be required in explaining the technical details.

Further interaction with relevant TCs (participation of s-X-AIPI members in these TCs and consideration of a Project Liaison) will be determined based on the results of the Communications/interactions described in 2.2 and the approach of the Standardisation Development described in 2.3.

### 3.3 Implementation of Standardisation Development step

Based on the identification of standardizable results, the Standardisation landscape at the moment (the result of the interaction with TCs and the monitoring of their Standardisation work) and the progress of the project, the most appropriate roadmap will be selected and conducted among the options described in 2.3.

s-X-AIPI provides for a dedicated **Standardisation work session** to work on identifying standardizable outcomes and deciding the roadmap. This session could take place during a project meeting, virtual or face-to-face. M18 is a tentative date for this Standardisation work session.

The Standardisation Development is considered valuable for the market uptake of the s-X-AIPI results and for the project's impact beyond the financing period. The decisions taken, the actions carried out and the results obtained will be duly recorded in D7.7.

## 4. Summary of the Strategy Implementation

### 4.1 Schedule for the strategy implementation

With the information presented above, and the 'contribution to standardisation' Strategy detailed in D7.3, a timetable for the implementation of the strategy can be formulated to develop deliverables D7.6 "Report on contribution to standardisation - intermediate version" (Communication and interaction with TCs) and D7.7 "Report on contribution to standardisation - final version" (Future standardisation proposals), to be completed in M18 and M36, respectively.

**Table 5 Summary of the strategic actions towards the Contribution to Standardisation**

No.	Action	Technical Committee	Responsible	Date
1	First contacts with TCs in Table 1	All selected TCs	UNE (content provided by the Coordinator)	M13-M18
2	Monitoring/Following up of TCs Standardisation activities	All selected TCs	UNE	Continuous (M1-M36)
3	Participation in a TC	Most relevant TC, (e.g., CEN/CLC JTC 21, CEN/CLC JTC 13, etc.)	Coordinator/Partners	If relevant, when TC meets
4	Delivering report to TCs	All selected TCs	UNE (content provided by the Coordinator)	M9(RV1) M18 M24 (RV2) M36 (RV3) Whenever it is demanded
5	Presentation of the project in TCs meetings	Most relevant TC, (e.g., CEN/CLC JTC 21, CEN/CLC JTC 13, CEN/TC 310, etc.) other if requested	UNE and Coordinator/Partners	M18-M24
6	Requesting information to TCs	All relevant TCs	UNE, in the basis of Partners requests	When relevant
7	Information to TCs on Workshops and Conferences	All relevant TCs	UNE	M18-M24 When relevant
8	Virtual / Face-to-face interaction with relevant TCs	All relevant TCs	UNE and Coordinator/Partners	M10-M24 When relevant
9	Standardisation work session (Workshop, TC involved and interested)	Implicated and interested TCs	UNE	M18-M24
10	Standardisation Development (Preparation of CWA-CEN Workshop Agreement)	Implicated and interested TCs	UNE and Coordinator/Partners	M24-M36

**Table 6 Schedule for delivering D7.3, D7.6 and final D7.7**

Deliverable	Title	Due date
D7.3	Report on Initial Planning of T7.3.2 "Contribution to Standardisation developments"	M9
D7.6	Report on the Communication and Interaction with relevant TCs	M18
D7.7	Future Standardisation Proposals	M32/34
Final D7.7	Report on the Contribution to Standardisation (Final report on the Communication/interaction with relevant TCs)	M36

## 4.2 Summary of Actions and Results

### 4.2.1 M1-M6 Standardisation Landscape

Post the submission of D7.2, titled "Report on Standardization landscape and applicable standards" at M6, UNE attended the "s-X-AIPI M6 Partner Meeting." During this gathering, we emphasized the standardization activities undertaken between the periods M1 to M6.

### 4.2.2 M7-M12 Strategy Planning (Ahead of Communication/Interaction with TCs)

As we embarked on the M7 phase, UNE laid out a Strategic Plan focusing on contributions to standardization for the forthcoming M7-M36 duration. Detailed insights into these activities can be found in the presentation "s-X-AIPI\_12M-WP7\_T7.3 Standardization\_UNE.pptx", which was highlighted during the M12 meeting and is included in **Annex A**. This presentation encapsulates our achievements from the M1–M6 timeline and delineates our prospective standardization-strategies for M7–M12.

### 4.2.3 M13-M24 Communication/Interaction with TCs

Even though we are currently in month 18, in this section, we present the actions that we have undertaken so far and the planned future actions that are anticipated to be executed within this period. This encompasses our extensive communication and collaboration with Technical Committees (TCs) to ensure alignment with industry standards and the broader stakeholder community. The proactive engagement has been pivotal in streamlining our standardization endeavors and facilitating meaningful exchanges that influence our project direction. Detailed schedules, interactions, and outcomes will be periodically updated as we progress towards month M24.

**Table 7 Summary of actions and results, period M13-M24**

No.	Action	Technical committee	Responsible	Date	Description	Results
1	First contacts with TCs in Table 1	All selected TCs	UNE	M12	UNE contacted the selected TCs (in Table 1), its <i>Committee Manager/Secretary and/or Chair/Convenor</i> of each TC. These first contacts were anticipated from M13.	The relevant TCs' first contacts were identified and established, to raise awareness among these TCs about s-X-AIPI project and to facilitate future communication between s-X-AIPI and TCs. Feedback was asked to gather any views, opinions or advice regarding s-X-AIPI project and the possibilities or needs for Standardisation.
2	Monitoring/Following up of TCs Standardisation activities	All selected TCs	UNE	M12-M24	D7.2 "Standardisation landscape" was updated with regard the information on existing standards and project standards. It was found that some of the previously identified project standards are now published standards, and there is also some new project standard. The updated document D7.2 was published on the <a href="#">website</a> of s-X-AIPI for information of all Partners.	D7.2 (Standardisation landscape) updated, D7.3 (Planning) submitted, and s-X-AIPI Partners informed.
3	Attending to TC meetings	<i>CEN/CLC JTC 13</i>	UNE, Coordinator	M12-M24	Attended to the webinar of CEN-CENELEC "Cybersecurity JTC 13 Horizontal standards"	Detected an opportunity to develop the Guideline or Good Practice for Industrial AI's Security (Cybersecurity in AI domain)

				(previously: NOV 2023)	with the implicated CEN TCs and stakeholders	
4.1	Delivering reports to TCs (1)	All selected TCs	UNE, Coordinator	From M12 until now	<p>Since the first s-X-AIPI's Review Meeting with EU Commission project officers held on May 2023 (M9), UNE has been working in coordination with T7.2 and T7.4 leaders in order to define the communication with selected TCs. With respect to this, the following documents have been issued:</p> <ul style="list-style-type: none"> <li>a) List of contacts of Committee Manager/Secretary and/or Chair/Convenor of the selected TCs (see <a href="#">this document D7.6</a>). In a first stage of communication will be focused in these TCs.</li> <li>b) Content of the communication mail to the selected TCs, explaining briefly s-X-AIPI and offering information exchange.</li> <li>c) Brochure of s-X-AIPI. (see <a href="#">Annex A</a>).</li> </ul> <p>When is necessary:</p> <ul style="list-style-type: none"> <li>d) PPT about the Standardisation activities in the period M1-M12. (see <a href="#">Annex B</a>, "Standardisation T7.3 - Standardisation outcomes. Activities carried out in M1-M6 &amp; Implementation Plan in M7-M12")</li> <li>e) PPT about the Standardisation activities, presented in the s-X-AIPI M18 periodic Meeting in M18. (see <a href="#">Annex C</a>).</li> </ul>	Communication to the selected TCs defined, including a project Brochure and/or PPT to inform them about s-X-AIPI and to get feedback from them.
4.2	Delivering reports to TCs (2)	All selected TCs	UNE, Coordinator	From M12 until now	<p>Sent the information of the project to the selected TCs and Received some replies from them</p>	<p>June 2023: Reply from the <i>Secretary of ISO/IEC JTC1/SC40 'Additive Manufacturing'</i> indicating that:</p> <ul style="list-style-type: none"> <li>- <i>ISO/IEC JTC1/SC40's</i> interest on collaboration with the s-X-</li> </ul>

						<p>AIPI's Standardisation activities;</p> <ul style="list-style-type: none"> <li>- <i>ISO/IEC JTC1/SC40</i> will be informing its members about s-X-AIPI (and will be distributing the PDF we have provided via live link);</li> <li>- <i>ISO/IEC JTC1/SC40</i> strongly recommends aligning activities of the s-X-AIPI project with regard to Standardisation early on, to avoid possible duplications and to ensure that the interest of all stakeholders active in the field of Data management &amp;Data governance for given topics are taken into account.</li> </ul>
4.3	Delivering reports to TCs (3)	All selected TCs	UNE, Coordinator	From M12 until now	Sent the information of the project to the selected TCs and Received some replies from them	<p>August 2023: Reply from Secretary of <i>CEN/CLC JTC 13/WG 6</i> 'Cybersecurity and Data Protection – Product security', indicating that: Their interests on the s-X-AIPI Standardisation activities, to develop CWA/TS on Good practices for Data security in AI industry.</p>
4.4	Delivering reports to TCs (4)	All selected TCs	UNE, Coordinator	From M12 until now	Pending the response from TCs	Pending the response from TCs
5.1	Presentation of the project in TCs meetings	<i>CEN/CLC JTC 13</i> and <i>WG6</i>	UNE	M24 (TBD)	<p>Mail sent to <i>CEN/CLC JTC 13/WG 6</i> Convenor, in order to request participation in the <i>WG6</i> meeting in Nov 2023. Brief description of the project was given, together the intention of participating: to present s-X-AIPI project and to study Standardisation possibilities in a very general way. Presentation of the project was attached, together the link to the s-X-AIPI website and the link to the Deliverable D7.2 "Standardisation landscape and applicable standards".</p>	Pending the response from <i>CEN/CLC JTC 13/WG 6</i> , we look forward to a call or meeting with them to present the project and discuss in detail the potential contribution to the Standardisation on Cybersecurity for AI and data.
5.2	Presentation of the project in TCs meetings	<i>CEN/TC 310</i>	UNE	TBD	<p>Mail sent to <i>CEN/TC 310</i> Convenor, in order to request participation in the TC meeting in November 2023. Brief description of the project was given, together the intention of participating: to present s-X-AIPI project and to study Standardisation possibilities in a very general way. Presentation of the project was attached, together the link to the</p>	Pending the response from <i>CEN/TC 310</i>

					s-X-AIPI website and the link to the Deliverable D7.2 “Standardisation landscape and applicable standards”.	
5.3	Presentation of the project in TCs meetings	CEN-CENELEC-ETSI Coordination Group on Smart Manufacturing (SMa-CG)	UNE	TBD	Participation of Amanda Suo (UNE) in this meeting	TBD
5.4	Presentation of the project in TCs meetings	<i>CEN/TC 310</i>	UNE	TBD	Participation of Amanda Suo (UNE) in the <i>CEN/TC 310</i> meeting)	TBD

#### 4.2.4 M25-M36 Development of Standardisation Process (Collaboration with TCs, Project Partners, and Stakeholders to create the Potential Standard-Type Document)

As of the 18th month of the s-X-AIPI project, the standardisation processes are firmly underway. As an indication of the forthcoming developments and to ensure clarity of mind, we have drafted a provisional schedule for the M13-M24 phase. It is imperative to comprehend that the activities outlined in this plan are preliminary approximations and may be modified in light of the project's advancement and feedback from stakeholders.

In Phase III, which is designated as "Contribution to Standardisation – Final Version" and spans the M25-M36 period, we will outline an exhaustive strategy for the upcoming responsibilities. This section is intended to summarise our thorough efforts to conform to industry standards, emphasising the significance of the undertaking and its potential impact on the wider industry.

We are preparing for the "s-X-AIPI Standardisation Workshop" beginning with M24. The objective of this workshop is to collect insights from all project partners, including specialists from the affiliated TCs. The goal is to leverage the most efficient approaches or outcomes that arise from the s-X-AIPI initiative. Consideration of the transformation of critical deliverables originating from the most effective use cases or methodologies into a CWA, which is a document that replicates standard specifications, constitutes a substantial portion of this procedure.


In the forthcoming D7.7, each and every nuance pertaining to the standardisation trajectory will be exhaustively documented and clarified.



**Annex A. s-X-AIPI Brochure**



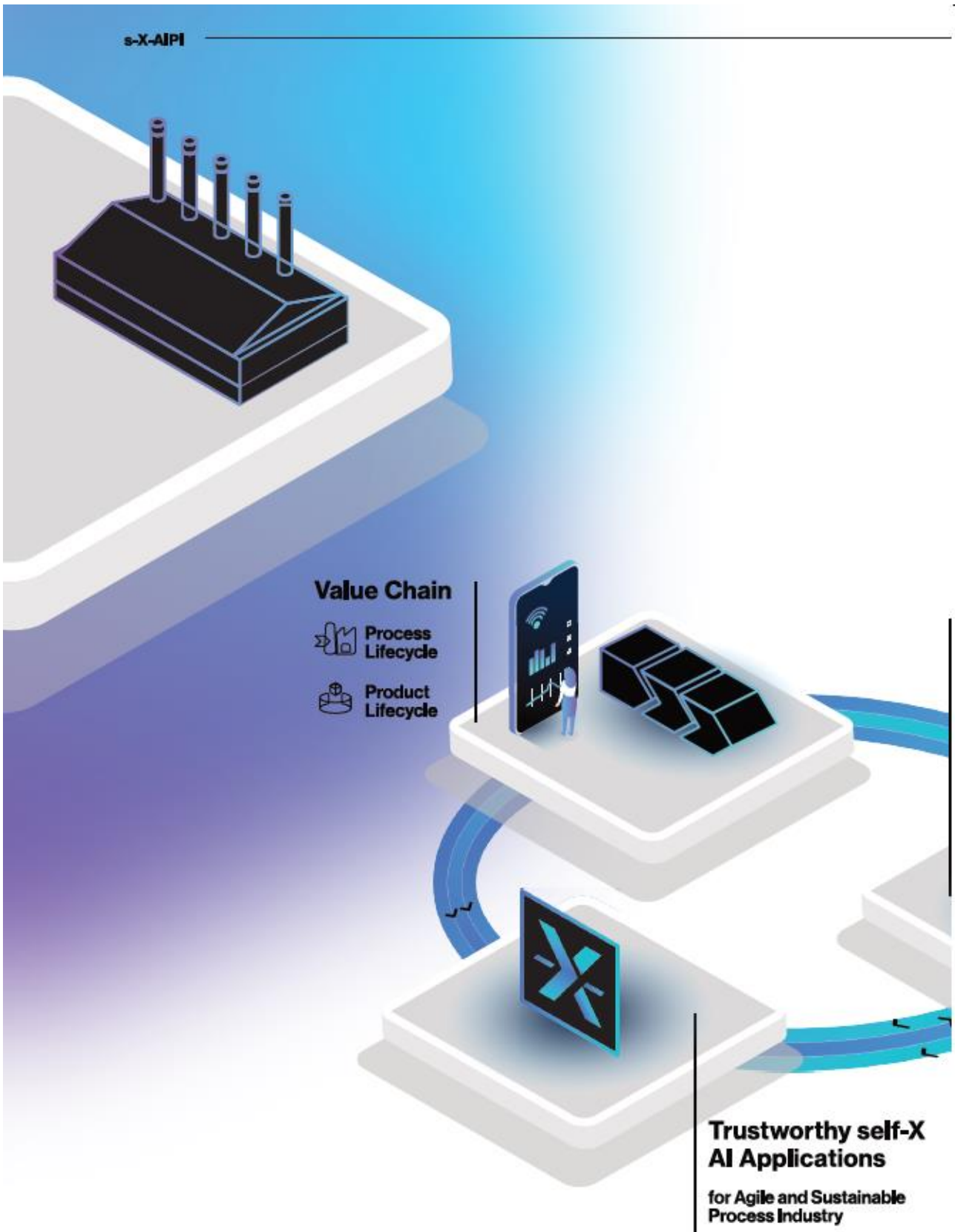
**An innovative  
self-improving  
toolset  
of trustworthy  
AI technologies**

  
**14**  
Partners

  
**6**  
Countries

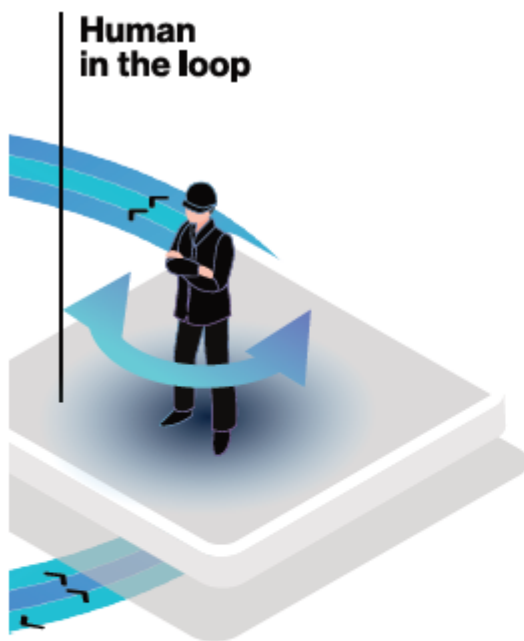
  
**5,3M€**  
Budget

  
**36**  
Months



# The Project

s-X-AIPI Horizon Project will research, develop and test an **innovative toolset of custom trustworthy self-X AI technologies for the European Process Industry.** These applications will minimize human involvement in the loop and exhibit self-improving abilities.



**Self-X AI applications** combine new intelligent data pipelines with an autonomic Manager to develop self-improving AI systems.

This toolset aims to fully **accelerate the digital transformation** of process industries towards a sustainable and more agile future, minimise impact from internal and external influences, and facilitate the human in the loop roles.

K

Toolset





s-X-AIPI

# Use Cases

Demonstration at four representative industrial use cases will generate a **showcase portfolio of trustworthy AI technologies** (data sets, AI models and applications) integrated into an innovative toolset available for industry and research.



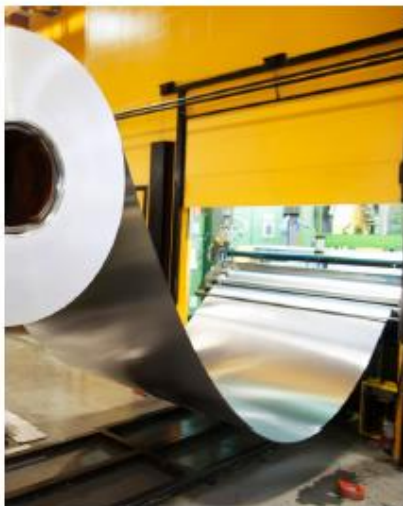


## Steel

SIDENOR steel use case focuses on the optimised use of scrap to produce high-quality steel products, avoid downstream surface quality problems and reduce process energy intensity.

## Asphalt

EIFFAGE asphalt use case focuses on circularity of the value chain, the quality control of feedstock and the final product and the overall sustainability of the process.



## Pharmaceutical

RCPE pharmaceutical use case focuses on the prediction of optimal settings in manufacturing of chemicals and active pharmaceutical ingredients involving solid/liquid suspensions, through ML based control strategy and report to human-in-the-loop.



## Aluminium

IDALSA aluminium use case focuses on the optimisation of recycling processes from scrap, decreased melting power on time, metal yield optimisation, and liquid aluminium quality improvement resulting in a decreased rate of downstream quality rejections.

s-X-AIPI

# Consortium

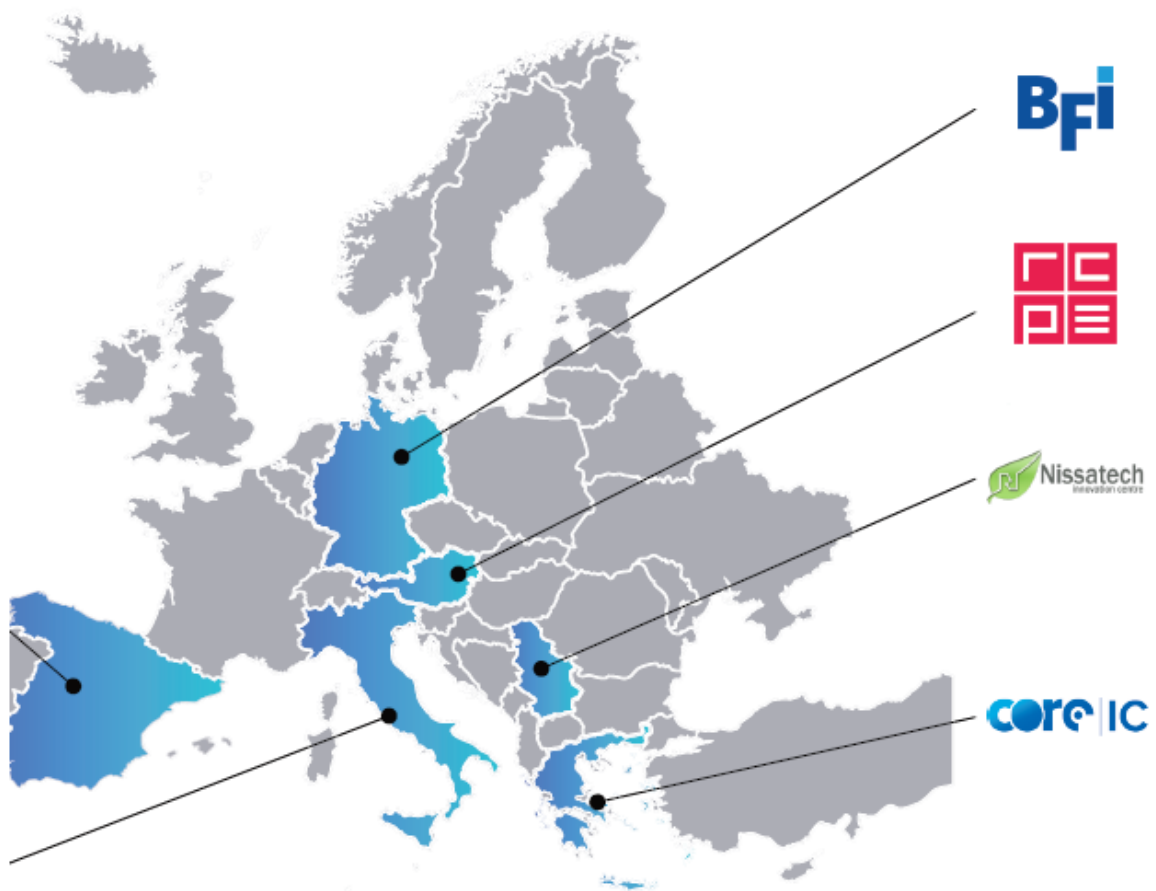
The Consortium is composed by 14 partners across 6 European countries including SMEs, large industries, leading research institutions and standardization bodies.



<b>Productivity increase</b>	<b>Scrap reduction</b>	<b>Cycle time reduction</b>
<b>↑ 5-30%</b>	<b>↓ 20%</b>	<b>↓ 4%</b>



self-X ARTIFICIAL INTELLIGENCE FOR EUROPEAN PROCESS INDUSTRY DIGITAL TRANSFORMATION



CO2 reduction	Resource Reduction	Recycling target
↓ 0.8-35kt/y	↓ 2-15%	30-75%



**Project  
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**Dissemination and  
Communication Manager**

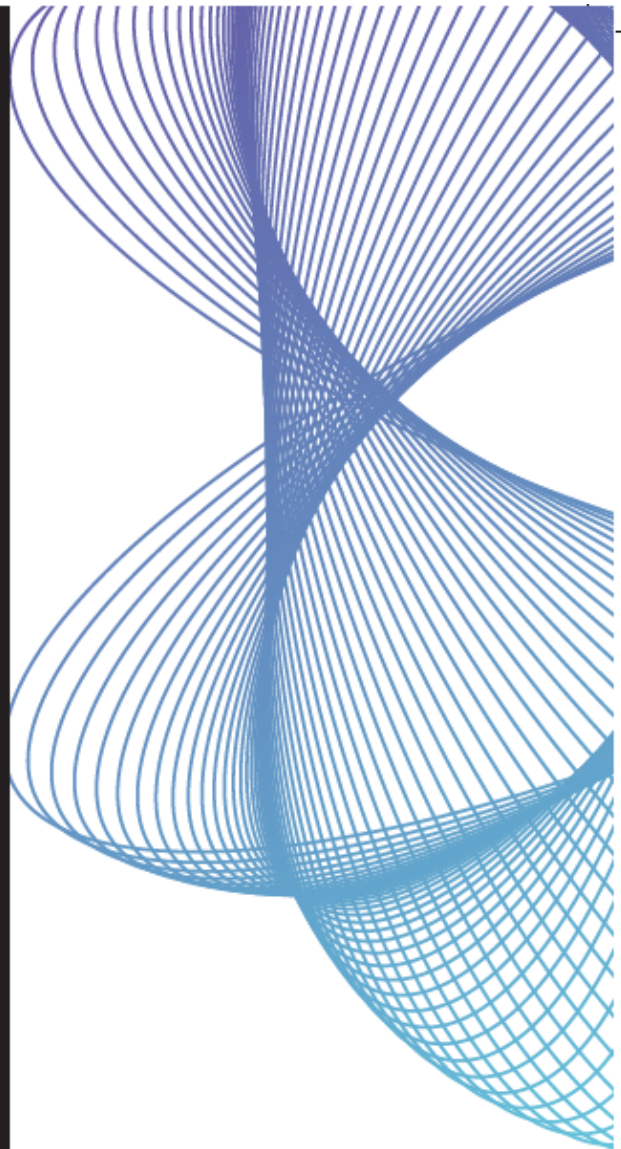
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**Annex B. PPT: s-X-AIPI M12 T7.3 Standardisation activities**

**S-X-AIPI**

**WP7 – Communication, Dissemination and Standardization**

10<sup>th</sup> May 2023, 12M Project meeting  
AIMEN Technology Centre

Co-funded by the European Union

CORE-IC

1

**WP7 Communication, Dissemination & Standardization**

- I. WP7 overview
- II. Tasks 7.1 & 7.2
  1. Overview
  2. Work performed
  3. Risks
  4. KPIs status
  5. Next steps: main actions in next 6 months
- III. **Task 7.3**
  1. **Achievements/progress (main actions in last 12 months, M1-M12)**
  2. **Next steps: main actions in next 6 months**
  3. **Risks**
  4. **Partners participation**

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2

**S-X-AIPI**

**Task 7.3**  
**Standardization activities**

UNE

Standardization activities

- 1- PROGRESS
- 2- NEXT STEPS
- 3- RISKS
- 4- PARTNERS PARTICIPATION

UNE

**Standardization activities - Overview**

**Leadership**

T7.3 Standardization activities (Lead: UNE, participants: AI)

**Main Goal**

The main goal of the standardization activities is to facilitate the acceptance and utilization by the market of the developed solutions, to provide starting information for other WP's, ensure compatibility and interoperability with what already exists in the market through standards, as well as to use the standardization system as a tool for dissemination of the project results and interaction with the market stakeholders.

**Deliverables**

T7.3.1: Standardization Landscape  
'D7.2 Report on the Standardization landscape and applicable standards' (M6)  
T7.3.2: Contribution to Standardization:  
'D7.3 Report on the contribution to Standardization-intermediate version' (M9)  
'D7.6 Report on the contribution to Standardization-intermediate version' (M16)  
'D7.7 Report on the contribution to Standardization-final version' (M26)

**Collaborations**

Including engagement and communication activities within relevant Technical Committees for standardization, as well as contributions from s-X-AIPI project partners and interested TCs to ongoing and future standardization development (standards and normative initiatives) for standardization gaps identified during project development.

S-X-AIPI

UNE

5

**S-X-AIPI**

**ACHIEVEMENTS / PROGRESS**  
**Main actions in last 12 months (M1-M12)**

UNE

6

**1- Progress**

**1<sup>st</sup> DELIVERABLE OF T7.3: D7.2 REPORT ON STANDARDIZATION LANDSCAPE AND APPLICABLE STANDARDS (M6)**

- Circulated to partners for input
- Submitted to EC on M6

**RELEVANT STANDARDS AND TECHNICAL COMMITTEES RELATED TO S-X-AIPI**

- European and International Standardization bodies (CEN, CENELEC, ETSI, ...)
- Summary of Technical Committees (TCs) related to S-X-AIPI
- Summary of Standards related to S-X-AIPI

**2<sup>nd</sup> DELIVERABLE OF T7.3: D7.3 REPORT ON THE CONTRIBUTION TO STANDARDIZATION-INTERMEDIATE VERSION (M9)**

- Circulated to partners for input
- Submitted to EC on M9

**STANDARDIZATION DEVELOPMENT STRATEGY**

Strategy of the "T7.3.2 Contribution to standardization" activities:

- Proposing Actions for future standardization activities
- Establishing a development Schedule
- Specifying Responsible parties
- **Development of D7.6, M16**
- **Development of D7.7, M26**

S-X-AIPI

UNE

**D7.2 "Standardization landscape" Conclusions**

Objective	Main goal	Main activities carried out
<ul style="list-style-type: none"> <li>• D7.2 analyzes the standardization landscape for s-X-AIPI, identifies relevant standards and TCs, and provides an overview of standards development by relevant TCs (ISO/IEC JTC1/SC42, CEN/CLEC JTC21 AI).</li> </ul>	<ul style="list-style-type: none"> <li>• The project aims to incorporate standardization to increase acceptance and utilization of solutions in the market, provide information for other work packages, ensure compatibility with existing standards, and use standardization as a tool for dissemination and market interaction.</li> </ul>	<ul style="list-style-type: none"> <li>• Analysis of the standardization landscape:</li> <li>• Identification of existing standards relating to the project.</li> <li>• Preparation of the "List of Key Concepts" related to the aim of project, to act as a starting point for the identification of standardization areas.</li> <li>• Identification of published and under development standards relevant to the project and the related standardization organizations and committees.</li> <li>• Discussion of the applicability of standards with the consortium.</li> </ul>

S-X-AIPI

UNE



**Risks**

17

**3- RISKS**

18

**EC Regulatory risks:**

- **EC Standardization Requests**
  - when the European Commission (EC) submits requests for modifications or additions to proposed standards, it can indeed result in delays, increasing workload, and potentially even changing the initial scope of the project. Non-compliance with such requests can not only undermine the legitimacy of the standards but may also result in legal or financial consequences, which could compromise the overall project.
- **EC Priorities**
  - The EC's priorities can shift due to various factors such as policy changes, strategic reorientations, or changes in the economic or political climate. Such shifts could affect the relevance or applicability of the proposed standards, necessitating adjustments or, in more extreme cases, a complete change in direction for the standardization process.

UNE

**Partners participation**

**4- Partners PARTICIPATION**

- **A. Knowledge**
  - **Technical Committees (TC) and Standards of Their Interest:** Partners should have an understanding of the various technical committees (TCs) and the standards that are relevant to the project. This knowledge is crucial in aligning the project's goals with the standards that the committees uphold.
  - **Follow-up:** Regular follow-ups with the TCs and within the partnership are necessary to keep everyone updated on the project's progress and any changes in the relevant standards.
- **B. Support**
  - **When Preparing Information to Disseminate:** Partners can play a significant role in the preparation of information for dissemination. Their expertise can ensure that the information is accurate, relevant, and engaging for the target audience.
  - **When Presenting the Project in a TC Meeting:** The partners' support can be valuable during the presentation of the project in a TC meeting. They can provide insights, answer technical questions, and help make a compelling case for the project.
- **C. Participation**
  - **Joining to a TC:** Participation in a technical committee (TC) can give partners a direct influence on the standards development process. It also provides an opportunity for them to gain firsthand knowledge of the discussions and decisions that shape the standards.
  - **Requesting Information to TCs:** By actively requesting information from the technical committees, partners can stay informed about changes and developments in the standards that affect the project.

UNE

**Standards "Data"**

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**Data ecosystem**

**Figure 1. Data governance & management framework**

**Figure 2. Relationship between data governance, management and quality**

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**Data ecosystem**

Implementing a robust Data Governance Framework for successful digital transformation requires the use of data governance, management, quality, security and privacy standards, which provides 6 important benefits:

- 1. Interoperability
- 2. Usability
- 3. Recovery
- 4. Exploitation
- 5. Traceability
- 6. Privacy

**Data Governance** ISO/IEC 38508  
**Data Management** ISO/IEC 33000 ISO 8000-X  
**Quality of Data** ISO 28012  
**Data Security & Privacy** ISO/IEC 27001, 27002, ISO/IEC 27701

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**Data ecosystem**

**ISO/IEC 38505-1 Data Governance Schema**

**Data Governance**  
ISO/IEC 38505

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### Data ecosystem

**Data management ISO 8000-X**

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### Data ecosystem

Feature	Inherent	Dependent on system
Accuracy	X	
Completeness	X	
Consistency	X	
Credibility	X	
News	X	
Accessibility	X	X
Compliance	X	X
Confidentiality	X	X
Efficiency	X	X
Accuracy	X	X
Traceability	X	X
Comprehensibility	X	X
Availability	X	X
Portability		X
Recoverability		X

**Data quality ISO 25012**

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### Data ecosystem

Information Security	Privacy and Data Protection	Security and Privacy by Design/Defect
UNE-EN ISO/IEC 27001 - ISMS requirements UNE-EN ISO/IEC 27002 - ISMS Code of practice UNE-EN ISO/IEC 27031 - P31 in the public cloud	UNE-EN ISO/IEC 27701 Requirements of the ISMS Information Privacy Management System UNE-EN ISO/IEC 29100 Privacy framework ISO 29151/IEC Protection of personal information. Code of practice UNE-EN ISO/IEC 29134 Privacy process assessment ISO/IEC 29989-2018 Data de-identification techniques for privacy improvement	UNE-EN ISO 28000 Requirements of the ISMS Information Security Management System ISO/IEC 39190 Consumer protection. Privacy by design for consumer goods and services

**Data security & Data privacy**

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### UNE Specifications - Data Governance, Data Management and Data Quality

**UNE Specifications for Data Governance, Data Management and Data Quality**

The Data Office, the unit in charge of promoting the sharing, management and use of data throughout all productive sectors of the Spanish economy and society, in order to respond to the need for a reference framework to support both public and private organizations in their efforts to achieve adequate data governance, management and quality, has sponsored, promoted and participated in the generation of national UNE specifications in this regard. The specifications UNE 0077:2023 Data Governance, UNE 0078:2023 Data Management and UNE 0079:2023 Data Quality Management are designed to be applied jointly, enabling the conception of a solid and harmonized reference framework that promotes the adoption of sustainable and effective practices around data. Coordination is driven by data governance that establishes the necessary mechanisms to ensure the proper use and exploitation of data through the implementation and execution of data management processes and data quality management processes, all in accordance with the needs of the appropriate business process and taking into account the limitations and possibilities of the organizations that use the data.

- ESPECIFICACION UNE 0077:2023: <https://datos.unor.gva.es/portal/una-especificacion-une-0077-2023-rd071118>
- ESPECIFICACION UNE 0078:2023: <https://datos.unor.gva.es/portal/una-especificacion-une-0078-2023-rd071118>
- ESPECIFICACION UNE 0079:2023: <https://datos.unor.gva.es/portal/una-especificacion-une-0079-2023-rd071118>

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### Data ecosystem

Information Security	Privacy and Data Protection	Security and Privacy by Design/Defect
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- ESPECIFICACION UNE 0079:2023: <https://datos.unor.gva.es/portal/una-especificacion-une-0079-2023-rd071118>

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### Any questions?

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Co-funded by the European Union

### Thank you!

# Annex C. PPT: s-X-AIPI M18 T7.3 Standardisation activities

**S-X-AIPI**

**WP7 – Communication, Dissemination and Standardization**

04,05-Oct 2023, 18M periodic meeting

Co-funded by the European Union

**WP7 – Communication, Dissemination and Standardization**

- I. WP7 overview (CORE)
- II. Tasks 7.1 & 7.2
  1. Overview
  2. Achievements/progress: main actions in last 18 months (M1-M18)
  3. WP risks
  4. Used resources
  5. Next steps: main actions in next month (M19-M24, M24-M36)
- III. **Task 7.3 (UNE)**
  1. Overview .
  2. Achievements/progress: main actions in last 18 months (M1-M18)
  3. WP risks
  4. Used resources
  5. Next steps: main actions in next month (M19-M24, M24-M36)

**S-X-AIPI**

**S-X-AIPI**

**Task 7.3 Standardization activities**

UNE

**S-X-AIPI**

**Overview**

UNE

**Standardization activities - Overview**

- Leadership**
  - Task T7.3 Standardization activities (Lead: UNE, participants: AI)
- Main Goal**
  - The primary objective of standardization is to promote market acceptance and utilization of developed solutions and to serve as a foundation for other Work Packages (WPs).
  - It seeks to ensure compatibility and interoperability with existing market standards, emphasizing the need for alignment with what's already established.
  - Standardization acts as a pivotal tool for disseminating project results and fostering interactions with market stakeholders.
- Deliverables**
  - T7.3.1: Standardization Landscape
    - DT 2 Report on the Standardization landscape and applicable standards (IUG)
    - DT 3 Contribution to Standardization
    - DT 3 Report on the contribution to Standardization-intermediate version (IUG)
    - DT 4 Report on the contribution to Standardization-intermediate version (IUG)
    - DT 7 Report on the contribution to Standardization-final version (IUG) at the end of the project.
- Collaborations**
  - Involving engagement and communication activities within relevant Technical Committees for standardization, as well as contributions from s-x-AIPI project partners and relevant TCs to ongoing and future standardization development (standards and normative initiatives) for standardization goals identified during project development.

**S-X-AIPI** **UNE**

**S-X-AIPI**

**Achievements / Progress**

**Main actions in last 18 months (M1-M18)**

UNE

**Progress**

**1<sup>st</sup> DELIVERABLE OF T7.3:**  
"D7.2 report on standardization landscape and applicable standards" (M1)

- Circulated to partners for input
- Submitted to EC on M6

**STANDARDIZATION DEVELOPMENT STRATEGY**

- European and International Standardization basics (ISO/IEC, CEN, CENELEC, ETSI, ...)
- Summary of Technical Committee(TC) related to s-x-AIPI
- Summary of Standards related to s-x-AIPI

**RELEVANT STANDARDS AND TECHNICAL COMMITTEE(S) RELATED TO s-X-AIPI**

- Circulated to partners for input
- Submitted to EC on M6

**2<sup>nd</sup> DELIVERABLE OF T7.3:**  
"D7.3 "report on the contribution to standardization-intermediate version" (M2)"  
"D7.6 "report on the contribution to standardization-intermediate version" (M18)"

Strategy of the "T7.3.2 Contribution to standardization" activities

- Proposing Actions for future standardization activities, and,
- Establishing a development Schedule
- specifying Responsible parties.

**S-X-AIPI** **UNE**

**D7.2 "Landscape"**

Objective	Main goal	Main activities carried out
<ul style="list-style-type: none"> <li>D7.2 analyzes the standardization landscape for s-x-AIPI, identifies relevant standards and TCs, and provides an overview of standards development by relevant TCs (ISO/IEC JTC1/SC42, CEN/CLC JTC21 AI, ISO/IEC JTC1/SC27, GEN/CLC JTC13 Cyber security, CEN/TC Advanced automation Technologies, ...)</li> </ul>	<ul style="list-style-type: none"> <li>The project aims to incorporate standardization to increase acceptance and utilization of solutions in the market, provide information for other work packages, ensure compatibility with existing standards, and use standardization as a tool for dissemination and market interaction.</li> </ul>	<ul style="list-style-type: none"> <li>Analysis of the standardization landscape:                             <ul style="list-style-type: none"> <li>Identification of existing standards relating to the project.</li> <li>Preparation of the "List of Key Concepts" related to the aim of project, to act as a starting point for the identification of standardization areas.</li> <li>Identification of published and under development standards relevant to the project and the related standardization organizations and committees.</li> <li>Discussion of the applicability of standards with the consortium.</li> </ul> </li> </ul>

**Standardization Areas**

- AI (Artificial Intelligence)
- 5G and 6G (Telecommunications)
- Autonomous and Connected Vehicles
- Cloud (Cloud Computing)
- Cyber Security
- Healthcare
- Industrial (Industry 4.0)
- Internet of Things (IoT)
- Maritime
- Manufacturing
- Smart Cities and Communities
- Space
- Transportation
- Urban and Smart Mobility

**S-X-AIPI** **UNE**





### NEXT STEPS. C- What **ACTIONS** could be done?

C.1 Participation in Technical Committees (TC)	Monitoring/ follow-up of standardization activities by UNE.	Active Involvement/ Participation and contribution in TCs by CEN/ CENELEC, CORE, POLIMI, etc.	Initiation of a "Project Liaison" by the Consortium
C.2 Communication with Technical Committees	Presentation/ Information of periodic reports to TCs by UNE.	Presence and participation in TC meetings by ALL members	
C.3 Engaging with Technical Committees for information (LINE)	Engaging with TCs for the S-X-AIPI fosters a stronger alignment with the European Standardisation system, enhancing collaboration.	Such engagement may include specific inquiries related to S-X-AIPI and exploring avenues for potential standardization.	

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### NEXT STEPS

Identification of the relevant TCs to be contacted

TC	TC Name	TC Description	TC Status	TC Contact	TC Date	TC Type	TC Priority
1	...	...	...	...	...	...	...
2	...	...	...	...	...	...	...
3	...	...	...	...	...	...	...
4	...	...	...	...	...	...	...
5	...	...	...	...	...	...	...
6	...	...	...	...	...	...	...
7	...	...	...	...	...	...	...
8	...	...	...	...	...	...	...
9	...	...	...	...	...	...	...
10	...	...	...	...	...	...	...

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### S-X-AIPI Standardisation strategy: Phase III-Standardisation Development

- Standardisation Development: Developing a new standard **within a Workshop**.
- Standardisation Development: Developing a new standard **within a TC**:
  - Developing a new standard within a TC.
  - Contributing to an ongoing standard.
  - Request a modification or amendment to a standard that is not currently under development or review.
  - A Future Standard outline.

#### Standardization Development (Future standardization proposals)

- Via Workshops:
  - Development of new standard
- Via TCs:
  - Development of new standard
  - Contribution to ongoing standard (new or under-review)
  - Request for modifying standards
  - Outline of a future standard

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### NEXT STEPS. D- Schedule proposal for developing T7.3.2

Summary of the strategic actions towards the Contribution to Standardisation

No.	Action	Technical Committee	Responsible	Date
1	First contacts with TCs in Table 1	All selected TCs	LINE (content provided by the Coordinator)	M15-M24
2	Monitoring/ Following up of TCs Standardisation activities	All selected TCs	LINE	Continuous (M1-M24)
3	Participation in a TC	Most relevant TC, (e.g. CEN/ CEN/ CENELEC, JTC 13, CEN/ TC 215, etc.)	Coordinator/ Partners	If relevant, when TC meets
4	Delivering report to TCs	All selected TCs	LINE (content provided by the Coordinator)	M15 M24 (RV2) M28 (RV2) Whenever it is demanded
6	Presentation of the project in TCs meetings	Most relevant TC, (e.g. CEN/ CEN/ CENELEC, JTC 13, CEN/ TC 215, etc.)	LINE and Coordinator/ Partners	M15-M24
8	Requesting information to TCs	All relevant TCs	LINE, in the basis of Partners' requests	When relevant
7	Information to TCs on Workshops and Conferences	All relevant TCs	LINE	M15-M24
8	Virtual / Face-to-face interaction with relevant TCs	All relevant TCs	LINE and Coordinator/ Partners	When relevant
9	Standardisation work session (Workshop, TC ...)	Implicated and interested TCs	LINE	M15-M24
10	Standardisation Development (Preparation of CWA/ CEN Workshop Agreement)	Implicated and interested TCs	LINE and Coordinator/ Partners	M24-M28

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### NEXT STEPS. D- Schedule proposal for developing T7.3.2

Schedule for delivering D7.3, D7.6 and final D7.7

Deliverable	Title	Due date
D7.3	Report on Initial Planning of T7.3.2 "Contribution to Standardisation developments"	M9
D7.6	Report on the Communication and Interaction with relevant TCs	M18
D7.7	Future Standardisation Proposals	M22/M26
Final D7.7	Report on the Contribution to Standardisation (Final report on the Communication/ interaction with relevant TCs)	M36

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# CWA

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## 1. What is a cwa? Why to develop it?

A CEN WORKSHOP AGREEMENT (CWA) is a **document agreed** by the participants of a Workshop, which is designed to meet an immediate need and form the basis for future standardisation activity.

- Common content: guidelines, recommendations, best practices...

REASONS for developing a CWA:

- A system like S-X-AIPI is not covered by any Standardisation Technical Committee (i.e. CEN/ TC 310)
- To give more visibility to S-X-AIPI project within standardisation system and industry
- Possibility to use already done deliverables as a basis

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## 1. What is a CWA? Why to develop it?

WS and CWA EXAMPLES

**CEN/ WS SUSTINROADS - FP7 Project LCE4ROADS**  
CWA 17089:2016 "Indicators for the sustainability assessment of roads"

**CEN/ WS SustainWATER - FP7 Project E4Water**  
CWA 17031:2016 "Sustainable Integrated Water Use and Treatment in Process Industries – a practical guidance"

**CEN/ WS - Description and Assessment of Good Practices for Smart City Solutions – H2020 project SMARTER TOGETHER**  
Future CWA on good practices of Smart City Solutions

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- CEN/WS - Description and Assessment of Good Practices for Smart City Solutions – H2020 project SMARTER TOGETHER  
Future CWA on good practices of Smart City Solutions





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### 2. Principles and elements

A Workshop...

- is meant to meet a market need with an innovative technology
- operates separately from Standardisation TCs

A CWA...

- shall not conflict a European Standard
- cannot include legislative requirements or cover significant health and safety issues
- can be proposed for transformation into a European Standard

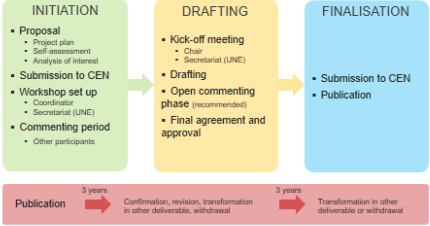


Detailed information on CWAs is available in [CEN/CENELEC Guide 29](#)




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### 3. development



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### 4. possible starting documents

Deliverable	PROS	CONS
D2.3	<ul style="list-style-type: none"> <li>Public document</li> <li>Matches CWA purposes (guidance)</li> </ul>	<ul style="list-style-type: none"> <li>Software-based tool cannot be included</li> </ul>
D2.5 S-X-AIPI	<ul style="list-style-type: none"> <li>Public document</li> <li>Matches CWA purposes (guidance)</li> </ul>	<ul style="list-style-type: none"> <li>Dependency of a web-based tool</li> </ul>
D3.6	<ul style="list-style-type: none"> <li>Lightweight discussion</li> <li>Lightweight = execution, 2 documents?</li> </ul>	<ul style="list-style-type: none"> <li>Confidential document</li> <li>Lots of information</li> </ul>
Others...?		<ul style="list-style-type: none"> <li>Avoid "safety" related aspects</li> </ul>

1<sup>st</sup> STEP  
DEFINE CLEAR SCOPE AND INDEX

*Just examples*

### Any questions?



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## Thank you!

