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# Artificial Intelligence (AI) in Europe & India

Covering Policy and Standardization work

March 2023

# Outline

- About Project SESEI
- Standards vs Legislation
- AI - Introduction
- Policy Initiatives: EU & India
- Standardization: EU & India



# Project SESEI

# Project is a permanent presence in India

*SESEI (Seconded European Standardization Expert in India) is a local face for the European standardization community in India: Dinesh Chand Sharma*



**Why SESEI:** India is a major trade partners for Europe, Increasing role of standards to gain market access and Evolving & complex nature of regulatory and standardization landscapes, Sharing best practices, work together

**Sector: Digitization:** M2M/IoT, Security, 5G/6G, AI, Blockchain, Quantum technologies, NFV/SDN, e-Accessability, eHealth, Smart Grid, Smart Meter etc.! **Green & Clean technologies:** Clean Energy, Energy Efficiency (Green ICT), Environment, Circular Economy including Resource Efficiency, Waste Management, Sustainability (SDGs), Electric mobility; Emission, Green Hydrogen etc.

[www.sesei.eu](http://www.sesei.eu) , [www.sesei.in](http://www.sesei.in) , [www.eustandards.in](http://www.eustandards.in)

# Standards & Legislation

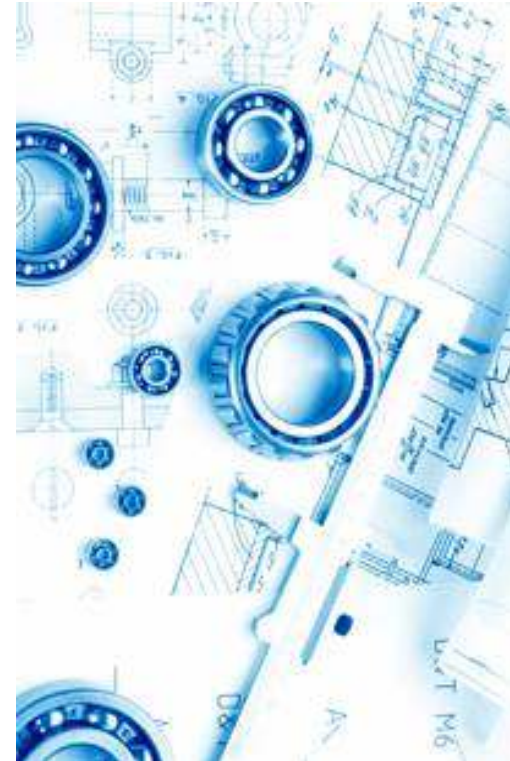
# What is a standard?

It is a document that defines technical or quality requirements with which current or future products, production processes, services or methods may comply



# Standards are :

- Always voluntary
- Consensus based
- Established by all interested parties
- Driven mainly by Industry
- Drafted by technical experts
- Approved by a recognized, independent standardization body







# Standards vs Législation

## Standards :

1. Voluntary & Consensual
2. Developed by independent organisations
3. Revised every 5 years
4. Provide specifications and test methods (interoperability, safety, quality, etc.)



## Legislation :

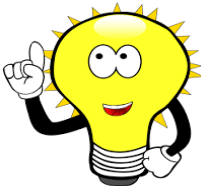
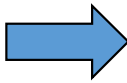
1. Mandatory & Imposed by Law
2. Established by public authorities
3. Revised when legislators decide
4. Gives requirements to protect public interests



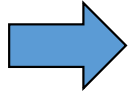
# How Standards are Made?



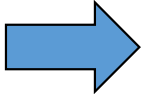
Anyone can suggest an idea for a new Standard



All ideas for new standards are assessed & stakeholders are consulted on the potential scope



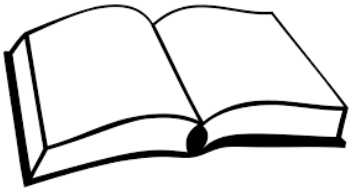
The Proposal is assessed and *if* approved a stakeholder group is formed



The Stakeholder group forms a committee to draft the standards



The draft is then issued for public consultation



Once the document passes final approval it is published



Standards are reviewed every five years some as early as two years from publication. The committee or drafting panel considers any comments they have received about standard and decides whether it needs to be withdrawn, confirmed or reconfirmed amended or revised. A decision to amend or revise the standard will lead to a new proposal for work



# AI: Policies/New Initiatives Europe & India



# AI - Introduction

- Because of Digitization, Big Data, Deep Data, Data Science capabilities and availabilities (M2M/IoT, Smart Cities, Industry 4.0 etc.):
  - Artificial Intelligence (AI) is emerging very fast these days and is affecting widely the entire industry e.g. automation, data management, integration of smart technology.

***“Artificial intelligence (AI) refers to the simulation of human intelligence in machines that are programmed to think like humans and mimic their actions”***

- AI applies to a variety of sectors : smart manufacturing, robots, autonomous cars, virtual reality, healthcare, interactive speech interfaces, visual recognition, data analysis/manipulation, home appliances, cybersecurity or spatial programming.
- Over 60%-70% of the companies expect AI to have a high or a very high impact on business areas that are “entirely unknown to the company today”.



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# AI Policies/New initiatives: Europe

## EU strategy on AI:

- Published on 25th April 2018, in Commission Communication on AI for Europe.
  - to achieve a major boost in investment in AI-related research and innovation and in facilitating and accelerating the adoption of AI across the economy.

## European AI alliance & high-level expert group on AI:

- In June 2018, EC launched “European AI alliance”, a multi-stakeholder forum, within the framework of the European Strategy on AI to share best practices, contribute to AI **ethics guidelines**, network and encourage activities related to AI development.
- AI alliance supported by High-Level Expert Group on AI (AI HLEG), appointed by EC to assist with policy development.
- In April 2019, AI HLEG presented [Ethics Guidelines for Trustworthy Artificial Intelligence](#). It included seven requirement categories (accountability, human agency, technical robustness, privacy and data governance, transparency, non-discrimination, and societal well-being)
- In June 2019, AI HLEG published its second deliverable “[Policy and investment recommendations for trustworthy Artificial Intelligence](#)”.
  - It covers 33 recommendations to guide Trustworthy AI towards sustainability, growth and competitiveness, as well as inclusion – while empowering, benefiting and protecting human beings.



# Continue...Europe

## Coordinated Plan on AI

- In December 2018, EC presented a Coordinated Plan on AI with Member States to foster the development and use of AI.
  - to maximise impact of investments at EU and national levels, to encourage synergies and cooperation across the EU, including and to foster the exchange of best practices.
  - In April 2021, EC has published revised "[Coordinated Plan on AI](#)" which was built on the collaboration established between the Commission and Member States during the 2018 Coordinated Plan.

## White Paper on Artificial Intelligence:

- In February 2020, EC launched [White Paper on AI – “A European approach to excellence and trust”](#)
  - It outlines Europe's plans to regulate AI sector, adding to and expanding on Commission's aims to better prepare Europe for the digital age. It contains the Commission's framework for a formal regulatory body focused on “AI” but doesn't propose specific rules or laws to be adopted.
  - In Sep. 2022, EC delivered on the objectives of White Paper with the [Proposal for an AI Liability Directive \(AILD\)](#).
- In April 2021, Commission published its **AI package**, proposing new rules and actions to turn Europe into the global hub for trustworthy AI. This package consisted of:
  - [Communication on Fostering a European Approach to Artificial Intelligence; Coordinated Plan with Member States: 2021 updated; Proposal for an AI Regulation](#) laying down harmonized rules for the EU (Artificial Intelligence Act) and relevant [Impact assessment](#).



Enabling Europe-India Cooperation on Standards

# AI Policies/New initiatives: India

## Task force on AI

- In August 2017, Commerce Ministry established a **Task force on AI** to kick-start the use of AI for India's economic transformation.
  - [Task Force gave its report on 19th January 2018](#)

## National strategy on AI

- In June 2018, Government think-tank, NITI Aayog unveiled its **discussion paper on national strategy on AI** which aims to guide R&D in new and emerging technologies.
  - Identified five sectors including Healthcare, Agriculture, Education, Infrastructure and Transportation that can benefit from the adoption of AI
- As a follow up, in Feb 2021, NITI Aayog has also released "**Responsible AI for All**" approach document.
  - [Part-1](#) aims to establish broad **ethics principles** for design, development and deployment of AI in India – drawing on similar global initiatives but grounded in the Indian legal and regulatory context.
  - [Part 2 - Operationalizing Principles for Responsible AI](#) was released in August 2021 which identifies the various mechanisms needed for operationalizing seven principles identified in Part-1.
  - [Part 3 - Responsible AI for All: Adopting the Framework – A use case approach on Facial Recognition Technology \(FRT\)](#): establishes a framework for responsible and safe development and deployment of FRT within India



# Continue...India

## 4 Committees formed by MEITY (Ministry of Electronics & IT):

- In Feb 2018, MEITY formed **4 committees** to prepare a roadmap for AI
  - Committees addressed citizen centric usage, data platform, skilling, reskilling, R&D, legal, regulatory, ethical and cybersecurity. Committees' reports are available [here](#)

## National AI Portal:

- In May 2020, Ministry of Electronics and IT (MeitY) along with National e-Governance Division (NeGD), and NASSCOM launched '[National AI Portal](#)':
  - AI Portal serves as a platform for AI-related news, learning, publications, events, and activities in India and abroad.
- **Centre of Excellence (CoE) for AI by NIC:**
  - CoE in AI by NIC has been established with the motto of 'Inclusive AI' for responsive governance, to work towards improving Govt. service delivery to citizens.





# Standardization



# Standards and common specifications (Artt. 40-41) of [Proposed Regulation on AI](#)

- ▶ **Harmonized standards** references is published in the OJ of the EU provide a presumption of conformity with the requirements of Ch. 2 (Artt. 9-15)
- ▶ **Common specifications** may be adopted by the Commission ([via implementing act](#)) where:
  - ▶ harmonized standards do not exist, or
  - ▶ relevant harmonized standards are insufficient or that there is a need to address specific safety or fundamental right concerns
- ▶ Involvement of **sectorial expert groups or bodies** to be ensured
- ▶ Providers to justify when they do not comply with common specifications (i.e., they have adopted **equivalent solutions**)

European Commission, The 'Blue Guide' on the implementation of EU product rules (OJ C272. 26.7.2016)



# European Commission: ongoing work on standardization

**Objective:** To have a large subset of harmonised standards available 3-6 months before the date of application of the future AI Act

## Main activities

- **Mapping research** about relevance of ongoing standardisation activities (JRC report)
- **Strong engagement** with European and international standardisation organisations and direct participation in certain strategic standardisation activities
- **Preparation of standardisation request to ESOs in support of safe and trustworthy AI**
  - [Draft standardisation request](#)
- **AI chosen as a test-case** to improve the standardisation system: driver for larger mobilisation of stakeholders and experts.



# CEN-CENELEC JTC 21 'Artificial Intelligence'

- Established by CEN and CENELEC in March 2021, based on recommendations presented in [CEN-CENELEC response to the EC White Paper on AI](#), [CEN-CENELEC Focus Group Road Map on Artificial Intelligence](#), and [German Standardization Roadmap for Artificial Intelligence](#).
- **[CEN-CENELEC JTC 21 'Artificial Intelligence'](#) is responsible for:**
  - development and adoption of standards for AI and related data, as well as provide guidance to other Technical Committees concerned with AI.
  - Identifying and adopting international standards already available or under development from other organizations like **ISO/IEC JTC 1 and its subcommittees, such as SC 42 Artificial Intelligence**.
  - producing standardization deliverables that address European market and societal needs, as well as underpinning EU legislation, policies, principles, and values.
- **CEN and CENELEC are expecting a standardization request on AI soon:**
  - For this purpose, a webinar was held on drafting harmonized standards specifically in support of the upcoming AI Act (download [recording](#) and [slides](#) of the presentation).



# European Telecommunications Standards Institute (ETSI)

## ETSI Industry Specification Group on Securing AI (ISG AI) :

- responsible for developing technical specifications to mitigate threats arising from deployment of AI throughout multiple ICT-related industries
- Published Standards:
  - **ETSI GR SAI 007 V1.1.1 (2023-03):** Explicability and transparency of AI processing
  - **ETSI GR SAI 013 V1.1.1 (2023-03):** Proofs of Concepts Framework
  - **ETSI GR SAI 006 V1.1.1 (2022-03):** The role of hardware in security of AI
  - **ETSI GR SAI 001 V1.1.1 (2022-01):** AI Threat Ontology
  - **ETSI GR SAI 004 V1.1.1 (2020-12):** Problem Statement

## ETSI ISG under the label Experiential Networked Intelligence (ENI):

- aims to help operators facilitate their network deployment by using AI techniques
- Published standards:
  - **ETSI GR ENI 018 V2.1.1 (2021-08):** Introduction to Artificial Intelligence Mechanisms for Modular Systems
  - **ETSI GR ENI 010 V1.1.1 (2021-03):** Evaluation of categories for AI application to Networks

[Read ETSI white paper on activities in the area of Artificial Intelligence \(AI\)](#)



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# BIS TC- LITD 30 on Artificial Intelligence

## Bureau of Indian Standards (BIS) Technical Committee- LITD 30 on Artificial Intelligence:

- **Scope:** Standardization in the area of AI and Big Data: National mirror committee of ISO/IEC JTC1/SC42 with same Title & Scope
- 7 working Groups/panel under LITD 30
  - LITD 30/panel 3: Levels of specification for AI systems
  - LITD 30/WG 1: Foundational Standards
  - LITD 30/WG 2: Data
  - LITD 30/WG 3: Trustworthiness
  - LITD 30/WG 4: Use cases and Applications
  - LITD 30/WG 5: Computational approaches and characteristics of AI systems
  - LITD 30/WG 6: Testing of AI-based systems
- **Published Standards:**
  - [IS/ISO/IEC/TR 24028 : 2020](#): Overview of trustworthiness in artificial intelligence
  - [IS/ISO/IEC/TR 24029-1 : 2021](#): Artificial Intelligence AI Assessment of the robustness of neural networks Part 1 Overview
  - [IS/ISO/IEC/TR 24030 : 2021](#): AI Use cases
  - [IS/ISO/IEC/TR 24372 : 2021](#): AI Overview of computational approaches for AI systems
  - [IS/ISO/IEC 24668 : 2022](#): Process management framework for big data analytics



thank you!

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