
ISO/IEC JTC 1 "Information technology"

Secretariat: **ANSI**

Committee Manager: **Rajchel Lisa Mrs.**



SC 42 Business Plan 2020

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Description

This document is circulated for review and consideration at the November 2020 virtual JTC 1 plenary.

SC 42 Strategic Business Plan

Artificial Intelligence

Period Covered: November 2019 through September 2020

1 Executive Summary

Background and Overview

At the 32nd ISO/IEC JTC 1 Plenary in Vladivostok, Russia, Resolution 12 established SC 42 as a system integration entity for Artificial Intelligence subject to ISO TMB and IEC SMB approval. The resolution also appointed Mr. Wael William Diab (US) as Chair of the committee. ISO was assigned as the administrator of the committee. Ms. Heather Benko (ANSI) was appointed as the Committee Manager.

The inaugural meeting was held in Beijing, China, 18th – 20th April 2018, during which resolutions were adopted to address comments from the ISO TMB review. The resolutions and associated contributions were ratified by JTC 1 and provided to the ISO TMB and IEC SMB, who then completed the ratification and establishment of SC 42 in May of 2018. Specifically, a resolution (SC 42 N078 Beijing Resolution 2) for the inclusion of societal concerns in SC 42 program of work was passed. This resolution was approved by ISO TMB resolution 53/2018.¹

Further, a resolution (SC 42 N078 Beijing Resolution 1) to endorse the JTC 1 resolution (JTC 1 Vladivostok Resolution 13) to transfer the Big Data work program from JTC 1/WG 9 to SC 42 was passed. Based on the two resolutions and in consultation with the TMB Secretary, the JTC 1 Secretary transferred the Big Data program of work to SC 42 on May 7th 2018 and JTC 1/WG 9 was disbanded (SC 42 N088 and JTC 1 N13712).

The second, third, fourth and fifth plenary meetings were held in Sunnyvale, California on October 18th – 20th, 2018, Dublin, Ireland on April 8th – 12th, 2019 and Tokyo, Japan on October 7th – 11th, 2019, virtually on April 6th – 20th, 2020 respectively at the end of which a number of projects were approved and an updated structure for the program of work was established to reflect the approvals.

The scope of SC 42 is:

Standardization in the area of Artificial Intelligence

- Serve as the focus and proponent for JTC 1's standardization program on Artificial Intelligence
- Provide guidance to JTC 1, IEC, and ISO committees developing Artificial Intelligence applications

Scope of the Business Plan

This business plan focuses on the output of the committee since the last version submitted in 2019.

For SC 42 current performance and highlight please refer to the dashboard in the annex.

¹ IEC indicated that no further action is needed on their part as the original approval included societal concerns

2 Chairman's Remarks

Since its establishment, SC 42 has

- Resolved issues that were identified related to the program of work at the time of its creation. Specifically:
 - o Resolved issues around “societal concerns” which were reaffirmed by the ISO TMB and IEC SMB completing the approval for the establishment of SC 42
 - Ethics and societal concerns considered across the entire work program and 1 new project on the considerations/requirements and the mapping to AI trustworthiness initiated
 - o Resolved issue of transfer of the Big Data work program which is progressing well in SC 42/WG 2
- Identified, implemented and evolved the governance structure and program of work to address the AI ecosystem and various aspects of the data ecosystem for AI, Big Data and analytics
 - o 6 Working Groups that consist of 5 SC 42 WGs and 1 JWG administered by SC 42
- Collaboration with the JTC 1 SIF group re systems integration
- Provided feedback to key JTC 1 groups working on emerging activities
 - o JETI on various activities and survey
 - o Input to JTC 1 OSS AG survey
- Engaged in emerging JTC 1 work through assigning representatives to the various AGs (e.g. JTC 1 AGs on trustworthiness, data usage, quantum computing, JETI, digital twin etc.) of interest and cross-JTC 1 initiatives (e.g. PII). SC 42 is participating in a total of 11 areas under JTC 1
- Built an extensive network of liaisons for collaboration with internal and external organizations reinforcing the SC 42 mission as a system integration entity
- Conducted extensive outreach, this includes
 - o Development of an outreach deck, establishment of outreach AHG and training for ISO website
 - o Continuous outreach to ISO, IEC and JTC 1 committees interested in AI
 - o Press coverage with ISO and IEC communications staff as well as the JTC 1 press committee
 - Extensive IEC press and multimedia coverage
 - Collaboration with the ISO Communications staff for the fall edition of ISOFocus on AI
 - Participation in the ISO effort on 4th industrial revolution
 - o Representation of SC 42 at key industry events including AI track of GSC-22
 - o Invitation to keynotes at SC 42 plenaries such as European Commission AI Policy lead at the 3rd SC 42 plenary and METI's Deputy-Director General at the 4th plenary
 - o Outreach to external organizations including OECD, Consumers International, ITU etc.
- Engaged in key emerging ISO/IEC initiatives e.g. ISO SMCC, IEC SEG 10, IEC MSB AI WP feedback etc.
- Initiated use case ingest from all liaison partners including ISO and IEC TCs as well as external orgs

Since the last report, SC 42's key accomplishments and highlights include

- Publications
 - o **Big Data Foundational work published:** 5 projects including BDRA (ISO/IEC 20546, 20547-1, -2, -3, and -5)
 - o First **AI trustworthiness** project published: ISO/IEC 24028
 - o ISO/IEC 24030 **AI use cases** (>130) completed balloting and in publication preparation. It is anticipated to have publish by the JTC 1 plenary
- Growth by the numbers
 - o Projects: 21 active projects of which 11 new projects added to the work program in the last year
 - o Participation:
 - Successive yearly growth. 47 NBs (31P/16O) despite economic headwinds
 - New regions represented
 - ~150 people at physical. >220 people at virtual
- Growth in the diversity of the work program and ecosystem coverage
 - o Scope of Big Data (WG 2) expanded to included data in the context of AI, Big Data and Analytics
 - o New projects initiated in the following additional areas of the ecosystem
 - **AI MSS** (ISO/IEC 42001)
 - **data quality** for analytics and ML series (ISO/IEC 5259)
 - AI system **lifecycle** (ISO/IEC 5338)
 - **SQuaRE** enhancements for AI systems (ISO/IEC 5059)
 - algorithmic **assessment of classification** performance (ISO/IEC 4213),
 - AI System **Lifecycle** (ISO/IEC 5338),
 - **functional safety** and AI systems (ISO/IEC 5469),
 - **guidelines for AI applications** (ISO/IEC 5339)
 - **knowledge engineering** (ISO/IEC 5392)
 - o Healthy pipeline of new ideas for additional projects and roadmap planning at the SC and WG levels. A number of topic areas and potential new projects are under evaluation that include

- AG on AI Systems Engineering
- Exploration of topics related to data consideration for AI
- Road mapping AHGs started in a number of WGs This includes
- Robust progress on existing work
 - 4 ISs to CD (22989, 23053, 23894, 38507) that include both foundational projects, risk management and governance implications of AI completing successful CD ballots
- Extensive outreach activities, media/comms coverage and collaborations (internal and external)
 - Over a dozen IEC articles and multimedia engagements. Collaboration with the ISO Communications team on key articles re virtual meetings and AI trustworthiness
 - **Thank you to the IEC (Antoinette, Mike, Gabriella and team) and ISO (Liz, Claire, Vivienne, Catherine and team) staff!**
 - Over 30 liaisons including new Cat A liaisons with OECD, EC
 - Working on establishing a liaison with WEF
 - New internal collaboration
 - **IEC TC 65/SC 65A** on project for AI and Functional Safety
 - **JTC 1/SC 7** on SQuaRE enhancements for AI systems
 - Engagement in strategic ISO and IEC activities
 - Examples include ISO SMCC, IEC SEG 10, GSC-22, ISO Workshops, IEC YP, JTC 1 AGs, JTC 1 EC multi-stakeholder feedback
 - Presence at industry keynotes, panels and key events
- Confirmed meeting dates through 2021 and tentative offers identified through April 2023. Initiated planning for subsequent meetings in 2023 and beyond

The membership of the committee has experienced a healthy and steady growth every year since its inception. SC 42 has 31 P-members and 16 O-members. In addition, the attendance at physical plenaries is ~150 attendees and over 220 attendees at virtual plenaries.

The committee's leadership team that consists of the committee chair and committee manager, the subgroup convenors and secretariats, and the editors, has worked proactively to implement the agreed upon work program.

Opportunities and Challenges

The last business plan readout for SC 42 identified a number of challenges. In this section, the challenges identified from 2019 are reviewed, an overview of challenges for the upcoming year is presented along with opportunities and plans. Note that due to unique nature of the past year due to COVID-19, the challenges from the past cycle are divided into ones that were identified in the last report and the unique unidentified challenges.

Key challenges identified in the 2019 business plan successfully resolved

- 2019 challenge: Balancing the expansion of the work program, given the large interest in AI, and executing on existing projects efficiently
 - Resolution: Process for discussing new work, development of officer templates and identification of cross-project issues
- 2019 challenge: Broader engagement with ISO and IEC application focused committees
 - Resolution: Full collaboration toolset used from liaison to JWG. New projects initiated with partner support (e.g. functional safety, SQuaRE). Enhanced outreach to committees with interest in AI. Update to IEC SMB at the 2019 IEC GM
- 2019 challenge: Opportunity to engage additional interest categories such as consumer segments, academic/research and other interest areas
 - Resolution: Strategic outreach emphasizing SC 42's ecosystem approach that resulted in an increase in diversity of experts and liaisons
- 2019 challenge: Emerging SDOs/alliances/consortia with potential to duplicate SC 42's work despite our committee's head start
 - Resolution: Outreach, communication and liaison where possible. Emphasis on SC 42's inclusive ecosystem approach (see picture below)

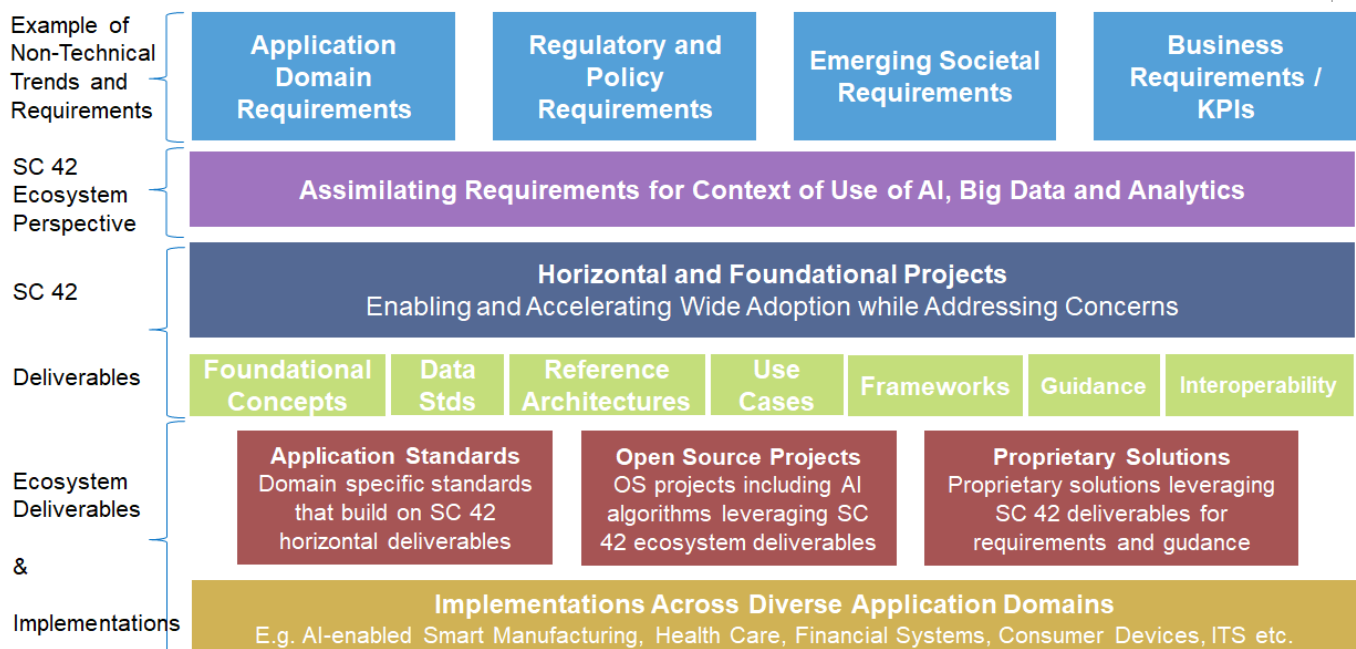


Figure 1: Bridging the Gap – An Ecosystem Approach

Unique unplanned challenges last year

- COVID implications on our work program, meetings and call fatigue / overlap
 - Resolution: Worked closely with the committed hosts, developed two-week virtual plenary (see ISO article) and coordinated call cadence for subgroup call with convenors
- Officer changes in some areas such as editors for some projects and convenor change for JWG
 - Resolution: Worked with impacted project teams, putting a transition plan in place

Challenges looking forward

The challenges identified and addressed over the past cycle may continue to persist as the committee and program of work continues to grow, SC 42 recognizes that some of these challenges like continuing to expand stakeholder diversity, collaboration and balancing high quality efficient output with growth of the program are not one time issues and may evolve as the committee work grows.

In addition, COVID and/or economic headwinds, which may limit participation / growth, may also persist. SC 42 will continue with the approaches highlighted above that have worked and do a regular assessment throughout the year to refine as needed. The uncertainty due to COVID cannot be predicted, however, approaches like the virtual meeting footprint and coordination of SC 42 calls across WGs can help address / lessen the impact.

As adoption of and interest in AI continues to grow, new challenges such as ensuring SC 42 horizontal deliverables are leveraged in application areas such as application standards will remain important. It is important that this challenge is highlighted as it provides an opportunity for SC 42 work to be adopted across verticals and enable the digital transformation. The approach envisioned adds to the tools already identified, specifically, a new project on guidelines for AI applications is being developed. Moreover, as the importance of data continues to be paramount to both IT implementations and OT verticals, the increased focus placed on data issues as they relate to AI, Big Data and analytics within SC 42 better positions SC 42 to serve the emerging market needs. The new series on data quality is a concrete step in that direction.

Future Planning

Looking forward, the scope of the artificial intelligence committee and its focus on the entire ecosystems for AI and related data issued for AI, Big Data and analytics, offers a lot of opportunity for continued expansion of the work program, membership and collaboration. As this is an area of tremendous interest, the time is ideal to continue to act on these areas. The operational challenges were discussed above. From a strategic point of view, it is also important to continue to look at ways to enhance the program and its deliverables. Last year we identified key areas like investigating the need for a MSS and data issues. Similarly, the prior cycle we identified issues like addressing trustworthiness through a technical approach (risk management), governance implications of AI and ethical societal concerns. In each case we have generated new projects to address these issues after a period of study. SC 42 will continue with that approach. We have new projects touching on new areas highlighted above, study items at the SC and WG levels and initial research topics that NBs have submitted.

2.1 Market Requirements, Innovation

Traditionally, AI had been focused on large-scale problems that were either too hard/complex to solve with traditional compute methods or were in specialized emerging areas. This is no longer the case. AI is one of the key enablers of the digital transformation driven by a demand for services and more intelligent analytics. Examples include:

- AI expert systems are helping healthcare professionals make better decisions for patients with proper trustworthiness measures designed into the system,
- AI deployment in the industrial manufacturing sector where it is driving higher efficiencies by allowing robots to work alongside human workers with the proper safety measures designed into the system,
- AI deployment in the financial ecosystem where it is enabling applications that range from asset management that takes into account factors such as the clients risk to fraud detection that reduces false-positives

Emerging applications are numerous and diverse e.g. consumer, retail, digital assistants, expert systems such as smart grid, marketing intelligence tools, enterprise etc.

IDC estimates that by 2021 75% of enterprise applications will use AI. The growing demand for AI systems to provide insights into business problems, is fueling the growth forecasts such as those by IDC that cognitive and AI spending will grow to \$52.2 billion in 2021 achieving a compound annual growth rate (CAGR) of 46.2% over the 2016-2021 forecast period.

Thus, the AI ecosystem is ripe for standardization.

2.2 Accomplishments

Please refer to section 2 for the detailed list of accomplishments over the last cycle.

2.3 Resources

SC 42 has decided on a meeting cadence of two plenaries per year. In addition, all face-to-face meetings of its subgroups are during the plenary week. The JWG performs the bulk of its work by teleconference and may meet with either parent based on the progress of their program of work. The current resources and structure sufficiently address the program of work of SC 42.

During the COVID-19 crisis, SC 42 has developed a two week virtual plenary footprint that balances progression of work with a reasonable call schedule while minimizing any overlapping calls. The minimizing of overlapping calls has also been extended to the regular calls in between plenary meetings.

Moreover, as artificial intelligence and associated data topics relating to AI, analytics and Big Data have a number of application areas and due to the system integration nature of the committee, SC 42 will continue try to leverage as much as possible the resource of other JTC 1, ISO and IEC entities as well as SDO's through cooperative work.

2.4 Competition and Cooperation

SC 42 collaborates with a number of committees and organizations that are both internal as well as external. For a complete current list of liaisons, please refer to the ISO website: <https://www.iso.org/committee/6794475.html>.

Approved External Liaisons

Category A

- European Commission (Joint Research Center)
- ETUC – European Trade Union Confederation
- Open Geospatial Consortium (OGC)
 - SC 42 liaison officers:
 - OGC liaison officers: George Percivall and Ingo Simonis
- Consumers International
- Big Data Value Association (BDVA)
 - SC 42 liaison officers: Abdellatif Benjelloun Touimi (U.K.) and Ray Walshe (Ireland)
- ITU
 - SC 42 liaison officer: Yoav Evenstein (Israel)
 - ITU liaison officers: Reinhard Scholl and Bilel Jamamoussi
- Organisation for Economic Cooperation and Development (OECD)
 - SC 42 liaison officer:
 - OECD liaison officers
- Partnership on AI (PAI)
 - SC 42 liaison officer: Tarek Besold (Germany)

- PAI liaison officers: Terah Lyons, Peter Eckersley and Steven Adler

Category C

- None

Approved Internal Liaisons from SC 42

- IEC SyC Smart Cities
 - SC 42 Officer: Tangli Liu (China)
- IEC SyC AAL – Active Assisted Living
 - SC 42 Officer: David Martin (United States)
- IEC/TC 65 – Industrial – Process measurement, control and automation
 - SC 42 Officers: Wei Wei (Germany), Rudy Belliard (TC 65 Secretary) and Wael William Diab (SC 42 Chair)
- IEC/TC 65/SC 65A – System Aspects
 - SC 42 Officers: Takashi Egawa (Japan)
- JTC 1/SC 7 – Software and systems engineering
 - SC 42 Officers: Yuchang Cheng (Japan) and Adam Leon Smith (UK)
- JTC 1/SC 27 – IT security techniques
 - SC 42 Officers: Peter Deussen (Germany), Sun Yan (China)
- JTC 1/SC 29 – Coding of audio, picture, multimedia and hypermedia information
 - SC 42 Officers: Wo Chang (United States) and Abdellatif Benjelloun Touimi (UK)
- JTC 1/SC 32 – Data management and interchange
 - SC 42 Officers: Wo Chang (US) and Guang Liang (China)
- JTC 1/SC 34 – Document description and processing languages
- JTC 1/SC 36 – Information technology for learning, education and training
 - SC 42 Officer: Bruce Peoples (United States)
- JTC 1/SC 37 – Biometrics
 - SC 42 Officers: Brianna Brownell (Canada), Frank Rudzicz (Canada)
- JTC 1/SC 38 – Cloud computing and distributed platforms
 - SC 42 Officers: Peter Deussen (Germany), David Filip (Ireland)
- JTC 1/SC 39 – Sustainability for and by Information Technology
- JTC 1/SC 40 – IT Service Management and IT Governance
 - SC 42 Officer: Geoff Clarke (Australia)
- JTC 1/SC 41 – Internet of things and related technologies
 - SC 42 Officer: Wei Wei (Germany)
- JTC 1 (WG 11) – Smart cities
 - SC 42 Officer: Tangli Liu (China)
- ISO/TC 37 – Language and terminology
 - SC 42 Officer: David Filip (Ireland)
- ISO/TC 37/SC 3 – Management of terminology resources
 - SC 42 Officer: David Filip (Ireland)
- ISO/TC 69 – Applications of statistical methods
 - SC 42 Officer: Radouane Oudrhiri (UK)
- ISO/TC 204 – Intelligent Transport Systems
 - SC 42 Officer: Wael William Diab (Chair)
- ISO/TC 215 – Health informatics
 - SC 42 Officer: Paolo Alcini (Italy)
- ISO/TC 262 – Risk management
 - SC 42 Officer: Pat Baird (United States)
- ISO/TC 299 – Robotics
 - SC 42 Officer: David Dubois (Canada)
- ISO/TC 307 – Blockchain and distributed ledger technologies
 - SC 42 Officers: Li Bin (China) and Dapeng Zhang (China)
- ISO/TC 309 – Governance of organizations
 - SC 42 Officer: Victoria Hailey (Canada)
- ISO CASCO

Approved Internal Liaisons to SC 42

- JTC 1 (WG 11) – Smart Cities
 - Officer: Howard Choe
- JTC 1/SC 7 – Software and systems engineering
 - Officers: Stuart Reid and Shuji Kinoshita
- JTC 1/SC 29 – Coding of audio, picture, multimedia and hypermedia information

- JTC 1/SC 32 – Data management and interchange
- JTC 1/SC 36 – Information technology for learning, education and training
 - Officer: Jon Mason
- JTC 1/SC 37 – Biometrics
 - Officer: Markku Metsämäki (Finland)
- JTC 1/SC 38 – Cloud computing and distributed platforms
 - Officer: Toshiro Suzuki (Japan)
- JTC 1/SC 40 – IT Service Management and IT Governance
 - Officer: Terry Landers (Ireland)
- JTC 1/SC 41 – Internet of things and related technologies
 - Officers: Osten Franberg (Sweden) Luke Fay (United States)
- ISO/PC 317 – Consumer protection: privacy by design for consumer goods and services
- ISO/TC 20 – Aircraft and space vehicles
- ISO/TC 20/SC 16 – Unmanned aircraft
- ISO/TC 37 – Language and terminology
- ISO/TC 37/SC 3 – Management of terminology resources
- ISO/TC 42 – Photography
 - Officer: Scott Foshee (United States)
- ISO/TC 69 – Applications of statistical methods
 - Officer: Radouane Oudrhiri (United Kingdom)
- ISO/TC 211 – Geographic information/Geomatics
- ISO/TC 215 – Health infomatics
- ISO/TC 262 – Risk management
- ISO/TC 269 – Railway applications
- ISO/TC 307 – Blockchain and distributed ledger technologies
 - Officer: Janna Lingenfelder (Germany)
- ISO/TC 309 – Governance of organizations
 - Officer: Michael Kayser
- ISO CASCO
- IEC SyC AAL
 - Officer: Ulrike Haltrich
- IEC SyC SM
 - Officer: Alexander McMillan
- IEC TC 65 – Industrial – Process measurement, control and automation
 - Officers: Rudy Belliardi (TC 65 Secretary) and Wael William Diab (SC 42 Chair)

It is anticipated that the liaison partnerships will continue to grow over the next year.

3 Work Program

Structure

SC 42 set its initial structure at the inaugural plenary meeting and updated at subsequent plenaries. SC 42 has and will continue to utilize AGs and ad-hoc groups as needed.

A summary of the current structure appears in the table below

SC 42 Subgroup	Title	Notes
SC 42/WG 1	Foundational standards	Formed at the 1 st plenary
SC 42/WG 2	Data	Formed at 2 nd plenary Updated at 5 th
SC 42/WG 3	Trustworthiness	Formed at the 2 nd plenary
SC 42/WG 4	Use cases and applications	Formed at the 2 nd plenary
SC 42/WG 5	Computational approaches and computational characteristics of AI systems	Formed at the 3 rd plenary
SC 42/SC 40 JWG 1	Governance implications of AI	Confirmed by JTC 1 Resolution – November 2018
SC 42/AG 2 AI Systems Engineering	Artificial Intelligence Systems Engineering	Formed at the 4 th plenary
SC 42/AHG 1	Dissemination and outreach	Formed at the 2 nd plenary, re-established at the 3 rd and 4 th plenaries

SC 42 will continue to evaluate its structure in response to the work program.

Membership

As of this report, SC 42 has 31 P-members and 16 O-members. For a complete current list of membership, please refer to the ISO website: <https://www.iso.org/committee/6794475.html>.

P-Members: 31

Australia (SA), Austria (ASI), Belgium (NBN), Canada (SCC), China (SAC), Congo, Democratic Republic (OCC), Denmark (DS), Finland (SFS), France (AFNOR), Germany (DIN), India (BIS), Ireland (NSAI), Israel (SII), Italy (UNI), Japan (JISC), Kenya (KEBS), Korea, Republic of (KATS), Luxembourg (ILNAS), Malta (MCCAA), Netherlands (NEN), Norway (SN), Russian Federation (GOST R), Saudi Arabia (SASO) Singapore (ESG), Spain (UNE), Sweden (SIS), Switzerland (SNV), Uganda (UNBS), United Arab Emirates (ESMA), United Kingdom (BSI), United States (ANSI)

O-Members: 16

Argentina (IRAM), Benin (ANM), Cyprus (CYS), Hong Kong Special Administrative Region of China (ITCHKSAR), Hungary (MSZT), Indonesia (BSN), Lithuania (LST), Mexico (DGN), New Zealand (NZSO), North Macedonia (ISRS), Philippines (BPS), Poland (PKN), Portugal (IPQ), Romania (ASRO), South Africa (SABS), Ukraine (DSTU)

Summary of Current SC 42 Officers and Editors

Officers

Position	Officer Name	Originating National Body
SC 42 Chair	Wael William Diab	USA (ANSI)
SC 42 Committee Manager	Heather Benko	USA (ANSI)
SC 42/WG 1 Convenor	Paul Cotton	Canada (SCC)
SC 42/WG 2 Convenor	Wo Chang	USA (ANSI)
SC 42/WG 3 Convenor	David Filip	Ireland (NSAI)
SC 42/WG 4 Convenor	Fumihiro Maruyama	Japan (JISC)
SC 42/WG 5 Convenor	Tangli Liu	China (SAC)
SC 42/JWG 1 Convenor	Yonosuke Harada	Japan (JISC)
SC 42/JWG 1 Co-Convenor	Gyeong-Min Kim	Republic of Korea (KATS)

Editors

- ISO/IEC 22989: Wei Wei (Germany)
- ISO/IEC 23053: Milan Patel (United Kingdom)
- ISO/IEC 24668: Gautam Banerjee (India)
- ISO/IEC 24027: Adam Leon Smith (UK)²
- ISO/IEC 24028: Orit Levin (United States)
- ISO/IEC 24029-1: Arnault Ioualalen (France)
- ISO/IEC 24029-2: Arnault Ioualalen (France)
- ISO/IEC 23894: Peter Deussen (Germany)
- ISO/IEC 24368: Viveka Bonde (Sweden)
- ISO/IEC 24030: Yuchang Cheng (Japan)
- ISO/IEC 24372: Wanzhong Ma (China)
- ISO/IEC 38507: Peter Brown (United Kingdom)
- ISO/IEC TS 4213: Lingzhong Meng (China), Michael Thieme (United States)
- ISO/IEC 5059: Adam Leon Smith (United Kingdom)
- ISO/IEC 5259-1: Suwook Ha (Korea) ISO/IEC 5259-3: Matthis Eicher (Germany)
- ISO/IEC 5259-4: Wanzhong Ma (China)
- ISO/IEC 5338: Yuchang Cheng (Japan)
- ISO/IEC 5339: Shrinkat Bhat (India)
- ISO/IEC 5392: Ruiqi Li (China)
- ISO/IEC TR 5469: Takashi Egawa (Japan)

3.1 Working Group 1 – Foundational standards (Current)

SC 42 established Working Group 1 on foundational standards at its inaugural plenary meeting. The working group (SC 42/WG 1) has three currently approved and open projects:

- ISO/IEC 22989: Artificial Intelligence Concepts and Terminology
- ISO/IEC 23053: Framework for Artificial Intelligence Systems Using Machine Learning

² Project editor changed at the 3rd plenary due to original editor stepping down for other responsibilities

- ISO/IEC 42001: AI Management Systems Standard

At the second plenary meeting, SC 42 assigned the following TOR to WG 1:

- Development of foundational standards for Artificial Intelligence

In addition to the assigned projects, this WG was tasked with considering material presented on standards lifecycle.

Officers

- Convenor: Paul Cotton (Canada) was appointed as Convenor of SC 42/WG 1. 2018-04-20 to present
- Project editors:
 - o ISO/IEC 22989: Wei Wei (Germany). 2018-04-20 to present
 - o ISO/IEC 23053: Milan Patel (United Kingdom). 2018-04-20 to present

3.2 Working Group 2 –Data (Current)

SC 42 established Working Group 2 on big data at its second plenary meeting. The working group (SC 42/WG 2) has four currently approved and open data projects:

- ISO/IEC 24668: Information technology -- Artificial Intelligence -- Process management framework for Big data analytics
- ISO/IEC 5259-1: Data quality for analytics and ML — Part 1: Overview, terminology, and examples
- ISO/IEC 5259-3: Data quality for analytics and ML — Part 3: Data Quality Management Requirements and Guidelines
- ISO/IEC 5259-4: Data quality for analytics and ML — Part 4: Data quality process framework

At the fifth plenary meeting, SC 42 assigned the following revised TOR to WG 2:

Standardization in relation to data in the context of artificial intelligence, big data, and data analytics

Officers

- Convenor: Wo Chang (United States) was appointed as Convenor of SC 42/WG 2. 2018-10-12 to present
- Project editors:
 - o ISO/IEC 24668: Gautam Banerjee (India). 2019-07 to present
 - o ISO/IEC 5259-1: Suwook Ha (Korea) 2020-08 to present
 - o ISO/IEC 5259-3: Matthis Eicher (Germany) 2020-08 to present
 - o ISO/IEC 5259-4: Wanzhong Ma (China) 2020-08 to present

3.3 Working Group 3 – Trustworthiness (Current)

SC 42 established Working Group 3 on trustworthiness at its second plenary meeting. The working group (SC 42/WG 3) has seven currently approved and open projects:

- ISO/IEC 24027: Information technology -- Artificial Intelligence (AI) -- Bias in AI systems and AI aided decision making
- ISO/IEC 24029-1: Artificial Intelligence (AI) -- Assessment of the robustness of neural networks - Part 1: Overview
- ISO/IEC 23894 -- Information technology -- Artificial intelligence -- Risk management
- ISO/IEC 24368: Information technology -- Artificial Intelligence (AI) -- Overview of Ethical and Societal Concerns
- ISO/IEC 24029-2: Artificial Intelligence (AI) -- Assessment of the robustness of neural networks – Part 2: Methodology for the use of formal methods
- ISO/IEC 5059: Software engineering — Systems and software Quality Requirements and Evaluation (SQuaRE) — Quality Model for AI-based systems
- ISO/IEC TR: 5469: Artificial intelligence — Functional safety and AI systems

At the second plenary meeting, SC 42 assigned the following TOR to WG 3:

- Standardization in the area of AI Trustworthiness

Officers

- Convenor: David Filip (Ireland) was appointed as Convenor of SC 42/WG 3. 2018-10-12 to present
- Project editors:
 - o ISO/IEC 24027: Adam Leon Smith (UK). 2019-04-12 to present
 - o ISO/IEC 24029-1: Arnault Ioualalen (France). 2018-10-12 to present
 - o ISO/IEC 24029-2: Arnault Ioualalen (France). 2020-06 to present
 - o ISO/IEC 23894: Peter Deussen (Germany). 2019-01 to present
 - o ISO/IEC 24368: Viveka Bonde (Sweden). 2020-6 to present
 - o ISO/IEC 5059: Adam Leon Smith (UK)
 - o ISO/IEC TR 5469: Takashi Egawa (Japan) 2020-4-20 to present

In addition to the assigned projects, this WG was tasked with remainder of the TORs from SG 2 for study.

3.4 Working Group 4 – Use cases and applications (Current)

SC 42 established Working Group 4 on use cases and applications at its second plenary meeting. The working group (SC 42/WG 4) has three currently approved and open projects:

- ISO/IEC 24030: Information technology -- Artificial Intelligence (AI) -- Use cases
- ISO/IEC 5338: Information technology — Artificial intelligence — AI system life cycle processes
- ISO/IEC 5339: Information Technology — Artificial Intelligence — Guidelines for AI applications

At the second plenary meeting, SC 42 assigned the following TOR to WG 4:

- Use cases and applications for AI standardization

Officers

- Convenor: Fumihiro Maruyama (Japan) was appointed as Convenor of SC 42/WG 4. 2018-10-12 to present
- Project editors:
 - o ISO/IEC 24030: Yuchang Cheng (Japan). 2018-10-12 to present
 - o ISO/IEC 5338: Yuchang Cheng (Japan). 2020-8 to present
 - o ISO/IEC 5339: Shrikant Bhat (India). 2020-8- to present

In addition to the assigned projects, this WG was tasked with remainder of the TORs from SG 3 for study.

3.5 Working Group 5 – Computational approaches and computational characteristics of AI systems (Current)

SC 42 established Working Group 5 on computational approaches and computational characteristics of AI systems at its third plenary meeting. The working group (SC 42/WG 5) has three currently approved and open projects:

- ISO/IEC 24372: Information technology -- Artificial Intelligence (AI) -- Overview of computational approaches for AI systems
- ISO/IEC TS 4213: Information technology — Artificial Intelligence — Assessment of machine learning classification performance
- ISO/IEC 5392: Information technology — Artificial intelligence — Reference architecture of knowledge engineering

At the third plenary meeting, SC 42 assigned the following TOR to WG 5:

- Standardization in the area of computational approaches and computational characteristics of AI systems.

Officers

- Convenor: Tangli Liu (China) was appointed as Convenor of SC 42/WG 5. 2019-04-12 to present
- Secretariat: Qun Zhang (China) was appointed as Secretariat of SC 42/WG 5. 2019-04-12 to present
- Project editors:
 - o ISO/IEC 24372: Wanzhong Ma (China). 2019-04-12 to present
 - o ISO/IEC TS 4213: Lingzhong Meng (China) and Michael Thieme (United States) 2020-7-30 to present
 - o ISO/IEC 5392: Ruiqi Li (China) 2020-8 to present

3.6 Joint Working Group 1 – Governance Implications of AI

JTC 1 endorsed the recommendation from SC 42 at its November 2018 plenary establishing a joint working group between SC 42 and SC 40. SC 42 was given the administrative lead. The following project was assigned by JTC 1 to the JWG:

- ISO/IEC 38507 -- Information technology -- Governance of IT -- Governance implications of the use of artificial intelligence by organizations

The following TOR was assigned to JWG 1:

- Governance Implications of AI

Officers

- Convenor: Yonosuke Harada (Japan) from SC 42 was appointed as Convenor of SC 42/JWG 1. 2020-5-13 to present
- Co-Convenor: Gyeong-min Kim (Korea, Republic of) from SC 40 was appointed as Co-Convenor of SC 42/JWG 1. 2018-11-09 to present
- Project editors:
 - o ISO/IEC 38507: Peter Brown (UK). 2018-11-09 to present

3.7 Study Group 1 – Computational approaches and characteristics of artificial intelligence systems (Completed)

SC 42 established Study Group 1 on Computational approaches and characteristics of artificial intelligence systems, at its inaugural plenary meeting, with the following terms of reference:

- Study different technologies (e.g., ML algorithms, reasoning etc.) used by the AI systems including their properties and characteristics.
- Study existing specialized AI systems (e.g., NLP or computer vision) to understand and identify their underlying computational approaches, architectures, and characteristics.
- Study industry practices, processes and methods for the application of AI systems.
- Develop new work item proposals as appropriate and recommend placement.
- Report to the next SC 42 Plenary.
- Membership in the Study Group is open to SC 42 P- and O-members and Liaison organizations.

Officers:

- Convenor: Tangli Liu (China) was appointed as Convenor of SC 42/SG 1. 2018-04-20 to 2019-04-12
- Secretariat: Qun Zhang (China) was appointed as Secretariat of SC 42/SG 1. 2018-04-20 to 2019-04-12

SG 1 was re-established at the second SC 42 plenary. In addition to the TORs, this SG was tasked with studying the Canadian proposal related to computational.

3.8 Study Group 2 – Trustworthiness (Completed)

SC 42 established Study Group 2 on Trustworthiness, at its inaugural plenary meeting, with the following terms of reference:

- Investigate approaches to establish trust in AI systems through transparency, verifiability, explainability, controllability, etc.
- Investigate engineering pitfalls and assess typical associated threats and risks to AI systems with their mitigation techniques and methods.
- Investigate approaches to achieve AI systems' robustness, resiliency, reliability, accuracy, safety, security, privacy, etc.
- Investigate types of sources of bias in AI systems with a goal of minimization, including but not limited to statistical bias in AI systems and AI aided decision making.
- Develop new work item proposals as appropriate and recommend placement.
- Report to the second SC 42 Plenary, including but not limited to a dedicated report on robustness of AI Systems.
- Membership in the Study Group is open to SC 42 P- and O-members and liaison organizations.

Officers:

- Convenor: David Filip (Ireland) was appointed as Convenor of SC 42/SG 2. 2018-04-20 to 2018-10-12
- Secretariat: Barry Smith (Ireland) was appointed as Secretariat of SC 42/SG 2. 2018-04-20 to 2018-10-12

3.9 Study Group 3 – Use cases and applications (Completed)

SC 42 established Study Group 3 on Use Cases and applications, at its inaugural plenary meeting, with the following terms of reference:

- Identify different AI application domains (e.g., social networks and embedded systems) and the different context of their use (e.g., fintech, health care, smart home, and autonomous cars).
- Collect representative use cases.
- Describe applications and use cases using the terminology and concepts defined in ISO/IEC AWI 22989 and ISO/IEC AWI 23053 and extend the terms as necessary.
- Develop new work item proposals as appropriate and recommend placement.
- Report to the second SC 42 Plenary.
- Membership in the Study Group is open to SC 42 P- and O-members and liaison organizations.

Officers:

- Convenor: Fumihiro Maruyama (Japan) was appointed as Convenor of SC 42/SG 3. 2018-04-20 to 2018-10-12
- Secretariat: Nobuhiro Hosokawa (Japan) was appointed as Secretariat of SC 42/SG 3. 2018-04-20 to 2018-10-12

3.10 Advisory Group – AI Management Systems Standards (Completed)

SC 42 established an advisory group on AI Management Systems Standard, at its 4th plenary, with the following terms of reference:

- prepare a Justification Study as required by Annex L of the Consolidated JTC 1 Supplement that identifies the elements and substantiates the viability of an AI Management Systems Standard
- provide a Convenor Report and any supporting documentation as required by Annex L to SC 42

SC 42 assigns Jim MacFie (Canada) as Convenor of the AG. The advisory group will complete its work and report to the SC 42 5th Plenary in April 2020.

The AG is in national body mode and a number of NBs participated.

3.11 Advisory Group – AI Systems Engineering (Current)

SC 42 approved the establishment of an AI System Engineering Advisory Group (AG), at its 4th plenary meeting, with the following terms of reference:

- Study item: Gap analysis between existing engineering practices and AI best practices to identify standardization opportunities
- Study Item: Identify ISO, IEC or JTC1 existing standards that may be impacted
- Study Item: Feedback between the AI subsystem/component and the parent System*
- Study Item: Redeployment, reuse, or transfer of AI systems to different contexts requires unique considerations*
- Study Item: Maintenance of AI systems within the same context require unique considerations. Many AI system require retraining/recalibration that may impact on outer system validation. This has direct impact to the operation of AI system and associated OpEx*
- Study Item: ML life cycle vs AI life cycle may have different needs. Similarly AI systems vs AI services may have different needs. Proposed study item analyze whether this is captured by the current SC42 program of work*

* SC 42 requests both the new AG and WG 4 to look at these study items and provide a division of the work such as the lifecycle software perspective is done in WG 4 and remainder in the AG.

SC 42 assigns Luigi Troiano (Italy) as Convenor of the AG. The AG is created through the SC 42 6th Plenary Meeting and it will provide an interim report at the SC 42 5th Plenary Meeting.

The AG is in national body mode and a number of NBs participated.

3.12 Ad-Hoc Group 1 – Dissemination and outreach (Current)

SC 42 established an ad-hoc group on dissemination and outreach, at its second plenary meeting, with the following terms of reference:

- Develop information about JTC 1/SC 42 activities to relevant communities; and
- Identify new opportunities to increase awareness and engagement with industry and stakeholders

The SC 42 Chair convenes this ad hoc and the SC 42 Committee Manager is the Secretariat for this AHG. The AHG is in national body mode and a number of NBs participate.

The AHG was re-established at the 3rd and 4th plenary meetings of SC 42.

3.13 Ad-Hoc Group 2 – Liaison with SC 38 (Completed)

SC 42 approves the establishment of an ad hoc, at its 3rd plenary meeting, to provide feedback on the AI related parts of the JTC 1/SC 38 CD ballot of ISO/IEC 19944:AMD1. The AHG completed its task going into the SC 42 4th plenary meeting.

SC 42 approved the reestablishment of AHG 2 to develop a Liaison Statement back to JTC 1/SC 38, to include the following elements:

- an offer to JTC 1/SC 38 for SC 42 to provide comments on ballots ISO/IEC 19944-1 and ISO/IEC 19944-2
- a request to JTC 1/SC 38 to review and provide input to SC 42 on CD ballots of ISO/IEC 22989 and ISO/IEC 23053

SC 42 assigned Peter Deussen (Germany) as Convenor of the ad hoc.

The AHG is in national body mode and a number of NBs participate.

3.14 Ad-Hoc Group 3 – Intelligent systems engineering (Completed)

SC 42 established an ad-hoc group on dissemination and outreach, at its third plenary meeting, with the following terms of reference:

- refine the Italian NB proposal (SC 42 N 244)
- make recommendation on the next steps e.g. formation of SG, proposal for TR or other.

SC 42 appoints Luigi Troiano (Italy) as Convenor of this ad hoc.

The AHG is in national body mode and a number of NBs participate.

The AHG successfully completed its work at the 4th SC 42 plenary resulting in a recommendation that study items being assigned to the existing WGs (WG 2, WG 3 and WG 4) as well as another recommendation to create an AG on AI Systems Engineering with an associated ToR.

3.15 Ad-Hoc Group 4 – Liaison with SC 27 (Completed)

SC 42 approves the establishment of an ad hoc to provide feedback to JTC 1/SC 27 on the JTC 1/SC 27/WG 5 documents identified in SC 42 N 392 and in SC 42 N 393, and any related revised drafts provided by JTC 1/SC 27 to SC 42 within one month from the conclusion of the JTC 1/SC 27 Plenary (18 November 2019).

SC 42 assigns Peter Deussen (Germany) as Convenor of the ad hoc.

The AHG is in national body mode and a number of NBs participate. The feedback provided to JTC 1/SC 27 will be forwarded to SC 42 for information.

3.16 Published Projects

The following three big data related projects, which have published, have also been assigned to SC 42:

- ISO/IEC 20546:2019 Information technology -- Big Data -- Overview and Vocabulary
 - Publication date: 2019-02
 - Description: This document provides a set of terms and definitions needed to promote improved communication and understanding of this area. It provides a terminological foundation for big data-related standards. This document provides a conceptual overview of the field of big data, its relationship to other technical areas and standards efforts, and the concepts ascribed to big data that are not new to big data.
- ISO/IEC TR 20547-1:2020 Information technology -- Big data reference architecture -- Part 1: Framework and application process
 - Publication date: 2020-08
 - Description: This document describes the framework of the big data reference architecture and the process for how a user of the document can apply it to their particular problem domain.
- ISO/IEC TR 20547-2:2018 Information technology -- Big data reference architecture -- Part 2: Use cases and derived requirements
 - Publication date: 2018-01
 - Description: ISO/IEC TR 20547-2:2018 provides examples of big data use cases with application domains and technical considerations derived from the contributed use cases.
- ISO/IEC 20547-3:2020 - Information technology -- Big data reference architecture -- Part 3: Reference architecture
 - Publication date: 2020-03
 - Description: This document specifies the big data reference architecture (BDRA). The reference architecture includes concepts and architectural views.
- ISO/IEC TR 20547-5:2018 Information technology -- Big data reference architecture -- Part 5: Standards roadmap
 - Publication date: 2018-02
 - Description: ISO/IEC TR 20547-5:2018 describes big data relevant standards, both in existence and under development, along with priorities for future big data standards development based on gap analysis. ISO/IEC TR 20547-2:2018 : Information technology -- Big data reference architecture -- Part 2: Use cases and derived requirements
 - Status: 60.60
- ISO/IEC TR 24028:2020 - Information technology — Artificial intelligence — Overview of trustworthiness in artificial intelligence
 - Publication date: 2020-05
 - Description: This document surveys topics related to trustworthiness in AI systems, including the following:
 - approaches to establish trust in AI systems through transparency, explainability, controllability, etc.;
 - engineering pitfalls and typical associated threats and risks to AI systems, along with possible mitigation techniques and methods; and
 - approaches to assess and achieve availability, resiliency, reliability, accuracy, safety, security and privacy of AI systems.

SC 42 Strategic Business Plan Artificial Intelligence

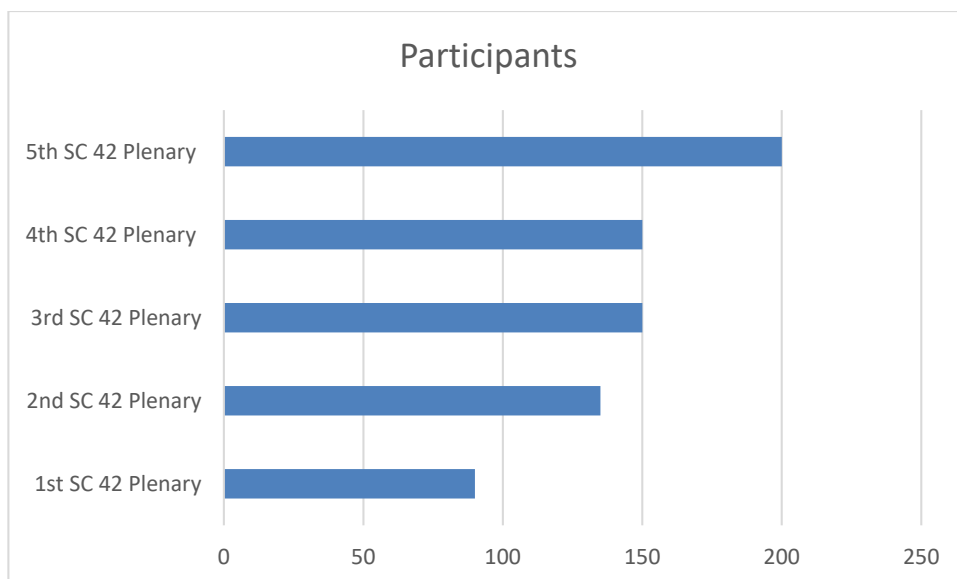
Annex A: Dashboard

Systematic Reviews

Standards

Year	Total Closed	Closed On :me	% on :me	Number Published	Avg :me to Publish	# within :me frame	% within :me frame
2018							
2019				3	-	-	-
2020				3			

Meeting Attendance:



Potential NWIs or activities identified by SC 42 Member Bodies and WGs

- Artificial Intelligence – Software testing of AI medical devices – Part 1: Clinical evaluation” (to be discussed at the 6th Plenary)
- Advisory Group on AI Service Ecosystem Design and Assessment methodologies for Controllability of Autonomous Systems

Artificial Intelligence Computing Devices [Click here to enter text.](#)

SC 42 Strategic Business Plan Artificial Intelligence

Annex B: Additional Links and Information

Committee Information Online

The following committee information is updated regularly and is available on ISO's website, ISO Online.

Click on the links below to find the following information:

- [About \(Secretariat, Secretary, Chair, Date of creation, Scope, etc.\)](#)
- [Contact details](#)
- [Structure \(Subcommittees and working groups\)](#)
- [Liaisons](#)
- [Meetings](#)
- [Work program \(published standards and standards under development\)](#)

ISO, IEC and JTC 1 Related Information and Websites

- SC 42
 - [Committee](#) website
 - [History](#) website
- Press Coverage Related to SC 42 Overview and Program of Work
 - [IEC e-tech](#) article on IEC and ISO publish TR which provides overview of big data framework and reference architecture (Aug 24th 2020)
 - [IEC e-tech](#) article on Achieving trustworthy AI with standards (June 8th 2020)
 - [ISO news](#) SC 42 virtual plenary as an example of standards innovation during COVID-19 (May 15th, 2020)
 - [IEC news](#) announcing the key outcomes of the 5th plenary and added focus on data ecosystem (May 7th, 2020)
 - [IEC e-tech](#) article on SC 42's holistic ecosystem approach to AI standardization (Feb 2020)
 - [IEC e-tech](#) article on IEC and ISO AI committee (SC 42) expands programme of work (Jan 2020)
 - [IEC news](#) AI standards help accelerate digitalization of smart manufacturing (December 2019)
 - [ISO focus](#) Nov/Dec 2019 magazine on AI and the SC 42 program of work (November 2019)
 - [ISO focus](#) landing page for edition including links to download PDF (above in English) in various languages and individual articles
 - [IEC news](#) announcing the key outcomes of the 4th plenary (Nov 11th, 2019)
 - [IEC news](#) announcing the key outcomes of the 3rd plenary (April 23rd, 2019)
 - [IEC news](#) announcing the start of the 3rd plenary (April 9th 2019)
 - [ISO news](#) article (18th October 2018)
 - [JTC 1 press committee](#) article (30th May 2018)
- Press Coverage Related to SC 42 Formation
 - [IEC e-tech](#) article (17th May 2018). Additional circulations
 - ISO [retweeted](#) the article (September 2018)
 - [Published](#) on ANSI (US National Body) website
 - [Published](#) on UNE (Spain National Body) website (September 2018)
 - [Published](#) on ILNAS (Luxemburg National Body) website (27th April 2018)
 - Note: not a direct reprint but used the photo
 - [Published](#) on Robotics Automation and News [Magazine](#)
 - [ANSI news](#) article on the formation of SC 42 (16th January 2018)
 - Introduction of SC 42 in the IEC MSB [White Paper](#) on Artificial Intelligence
- Other media coverage
 - Twitter
 - ISO (@[isostandards](#))
 - [Tweet Chat](#) on standards on Artificial Intelligence with Chair of SC 42 (25th October). Hashtags: #ISOchat #Standards4AI
 - IEC (@[IECStandards](#))
 - [Article](#) on New international standard will help organization boards and executive managers ask and answer key questions about AI technologies (12th February 2019)
 - Article on International standards play a key role in addressing the ethical, technical, safety and security aspects (6th February 2019)

- [Article and video](#) on Standardization can help eliminate data bias in AI (4th February 2019)
 - [Article and video](#) on Chair of SC 42 explains the growing influence of AI in Smart Manufacturing (4th February 2019)
 - [Article](#) on Chair of SC 42 will lead a session at the CEN/CENELEC workshop on Trustworthy Artificial Intelligence (10th Aug 2018)
- IEC Medium Publications
 - [IEC blog](#) on New IEC and ISO Standard will enable big data adoption across industry sectors (Mar 30th, 2020)
 - [IEC blog](#) on Trustworthiness is key to services and products using AI and IoT technologies (Mar 3rd, 2020)
 - [IEC blog](#) on Important questions around AI technologies in smart manufacturing (Jan 8th, 2020)
 - [IEC blog](#) on AI standards on the agenda at IOT Solutions World Congress (Nov 21st 2019)
 - IEC e-tech article on Standards development organizations play key role in enabling remote daily life (Jun 1st 2020)
 - [IEC blog](#) on Establishing trustworthiness is vital in our human-machine world (Sep 9th 2019)
 - [IEC blog](#) on AI and IoT industry leaders to consider a digital trust framework at Berlin forum (May 15th 2019)
 - [IEC blog](#) on The need for Big Data Standards (April 24th 2019)
 - [IEC blog](#) on New international standard will offer risk management framework for AI (March 18th 2019)
 - [IEC blog](#) on Helping organization boards and executives ask and answer key questions about AI technologies (Feb 12th 2019)
 - [IEC e-tech](#) article on AI in healthcare: keeping data safe and building trust (January 25th 2019)
 - [IEC blog](#) on Making AI safe (January 23rd 2019)
 - [IEC e-tech](#) article on Healthcare needs doctors and machines (December 10th, 2018)
 - [IEC e-tech](#) article on Eliminating data bias from machine learning systems (November 13th 2018)
 - [IEC e-tech](#) article on Smart homes are getting smarter (November 6th 2018)
 - [IEC e-tech](#) article on Machine learning is not a synonym for AI (October 17th 2018)
 - [IEC e-tech](#) article on Rethinking the healthcare ecosystem (reference to SC 42)
- ISO Multimedia
 - ISO [video interview](#) with Chair of SC 42 on Standards and Artificial Intelligence (November 14th 2018)
 - Artificial Intelligence and the role of International Standards in the implementation of this technology
 - ISO [video interview](#) with Chair of SC 42 on Standards and Artificial Intelligence Continued (November 14th 2018)
 - Artificial Intelligence and easing the mind of end-users including AI trustworthiness, ethics and societal concerns
- IEC Multimedia
 - IEC [video interview](#) with Chair of SC 42 on How can we ensure AI is safe for Healthcare? (April 6th 2019)
 - IEC [video interview](#) with Chair of SC 42 on Is it too early to use machine learning for cybersecurity? (April 5th 2019)
 - IEC [video interview](#) with Chair of SC 42 on To what extent is AI ready for standardization? (April 5th 2019)
 - IEC [video interview](#) with Chair of SC 42 on What are some of the challenges you see with AI? (March 26th 2019)
 - IEC [video interview](#) with Chair of SC 42 on How to Define Artificial Intelligence (March 26th 2019)
 - IEC [video interview](#) with Chair of SC 42 on Why do we need standards for AI? (March 26th 2019)
 - IEC [video interview](#) with Chair of SC 42 on Artificial Intelligence (February 4th 2019)
 - The growing influence of AI in Smart Manufacturing and the important role of standards
 - IEC [video interview](#) with Chair of SC 42 on Artificial Intelligence (February 4th 2019)
 - Standardization can help eliminate data bias in AI
- Other media coverage
 - Global Standards Collaboration (GSC-22) 2019 Session on Artificial Intelligence
 - [ISO news](#) on Standards cooperation is key to making AI and smart cities a reality (April 4th 2019)
 - [IEC blog](#) on 22nd Global Standards Collaboration meeting discusses need for standards to accelerate AI technology innovation and adoption (April 3rd 2019)
 - Industrial Internet Consortium (IIC) published [blog](#) on from IEC on Standards for AI on the Agenda

- at IoT Solutions World Congress
- IoT Solutions World Congress (IoT SWC) [promotion](#) of the IEC blog on AI standards on the agenda at IoT Solutions World Congress

SC 42 Strategic Business Plan Artificial Intelligence

Revision History

The following is the history of this document

- Initial version created by Wael William Diab (SC 42 Chair)
- Initial version reviewed and amended by Heather Benko (SC 42 Committee Manager)
- Submitted to SC 42 for review at the third plenary
- Concurrently submitted to JTC 1 for the November 2020 plenary based on the earlier deadlines and to SC 42 for review at its October plenary

The following actions are planned prior to the report at the JTC 1 November 2019 plenary

- 3 slide summary for presentation at the JTC 1 plenary created and submitted to JTC 1 (Completed)

