

 $\mbox{MoU/MG}$  "ISO-IEC-ITU-UNECE Memorandum of Understanding on e-Business Management Group"

Secretariat: **ISO** 

Secretary: Euchner Martin Mr

#### ISO/TC 184/SC 4

Document type	Related content	Document date	Expected action
Meeting / Other	Meeting: <u>Geneva (Switzerland) 17 Jan</u> 2023	2023-01-11	INFO



#### ISO/TC 184/SC 4/PPC N 225

ISO/TC 184/SC 4/PPC "Policy and planning committee"

Convenorship: ANSI

Convenor: Swope Kenneth Mr



#### StatusReport\_MoUMG\_20230110

Document type	Related content	Document date	Expected action
General / Other		2023-01-11	INFO

#### **Description**

The ISO/TC 184/SC 4 Policy and Planning Committee is invited to note the status report prepared in support of Forty-forth meeting of the IEC-ISO-ITU-UNECE Electronic Business Memorandum of Understanding Management Group (EB-MoU/MG), on 17 January - 18 January 2023.





# TC 184/SC 4 Industrial Data

## Status Report to the MoU Management Group

10 January 2023



Kenneth Swope
Chair
The Boeing Company



Dana Tripp Committee Manager US Army Materiel Command



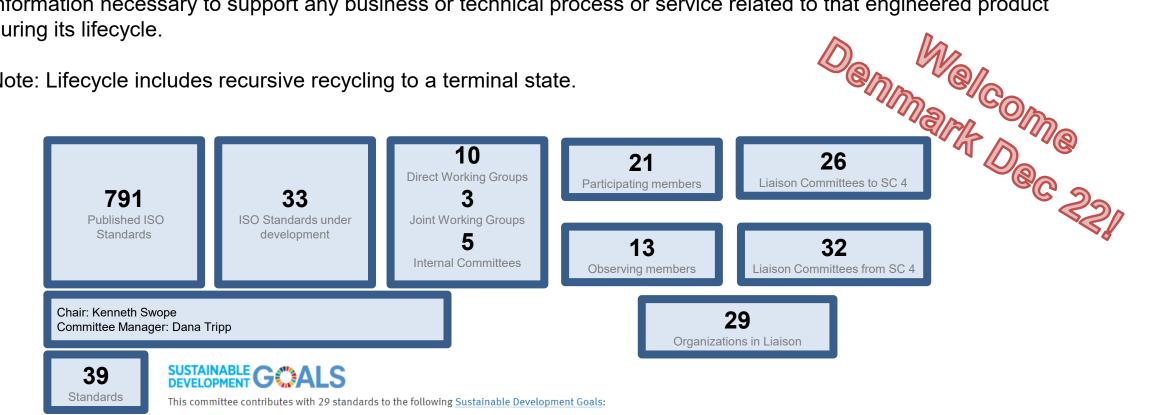


## ISO/TC 184/SC 4: Industrial Data

#### **SCOPE:**

Standardization of the content, meaning, structure, representation and quality management of the information required to define an engineered product and its characteristics at any required level of detail at any part of its lifecycle from conception through disposal, together with the interfaces required to deliver and collect the information necessary to support any business or technical process or service related to that engineered product during its lifecycle.

Note: Lifecycle includes recursive recycling to a terminal state.

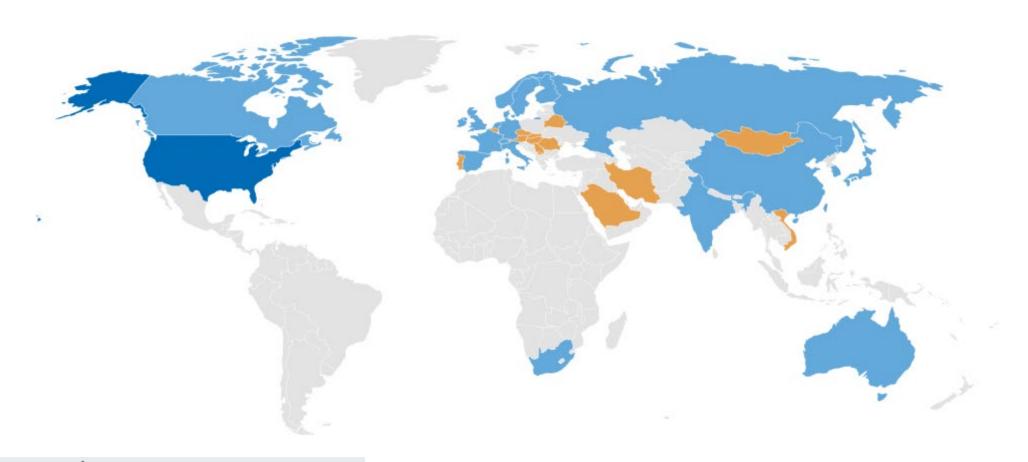


8 9 10 11 12 13 14 15 16



## Winner 2007 & 2021 Lawrence D. Eicher Leadership Award

#### Membership



Secretariat

United States - American National Standards Institute (ANSI)

Participating Members [21]

Observing Members [13]



## ISO/TC 184/SC 4 – Industrial Data



#### Online resources



ISO - ISO/TC 184/SC 4 - Industrial data



ISO/TC 184/SC 4 Newsletter



https://committee.iso.org/home/tc184sc4



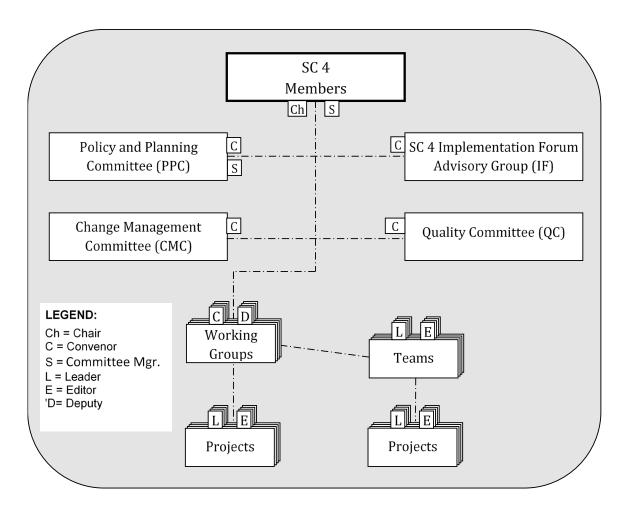
https://www.linkedin.com/company/iso-tc-184-sc-4-standards-for-industrial-data/



## ISO/TC 184/SC 4 – Industrial Data



#### **Organization Structure**



Group	Title
TF 01	ISO 10303 SMRL architecture innovation
TF 02	SC 4 reference model for industrial data
WG 3	Oil, gas, process, and power
WG 8 (Standby)	Manufacturing process and management information TC 184/SC4 – TC 184/SC5
WG 11	Implementation methods and conformance
WG 12	STEP product modeling and resources
WG 13	Industrial data quality
WG 15	Digital manufacturing
JWG 16	Formats for visualization and other derived forms of product data TC 184/SC 4 – TC 171/SC 2 – JTC 1/SC 24
WG 21	SMRL validation team
WG 22	Reference data validation team
WG 23	Vocabulary validation team
JWG 24	Product Properties and classes and their identification
WG 25	ISO CDD validation team
AG 3	Core Industrial data set of terms



## ISO/TC 184/SC 4 – Industrial Data 👟



Lawrence D. Eicher Leadership Award

#### Team

#### **Quality Committee**



Véronique Dubillot

WG 11
Implementation methods
and conformance



Dr. David Loffredo

WG 12/21
STEP product modeling and resources
SMRL validation resources

WG 3 Oil, gas, process, and power



Paul van Exel



Keith Hunten

WG 13/23
Industrial data quality
Vocabulary validation team



Dr. Tim King

WG 15
Digital Manufacturing



6



## ISO/TC 184/SC 4 – Industrial Data 🐥



Lawrence D. Eicher Leadership Award

#### **Team**

**JWG 16** Formats for visualization and other derived forms of product data TC 184/SC 4 – TC 171/SC 2 – JTC 1/SC 24



**Christophe Mouton** 

TF 1 **ISO 10303 SMRL** architecture innovation



**Stewart Galt** 

ISO/IEC JWG 24 Product properties and classes and their identification



Hiroshi Murayama ISO



Gernot Rossi TF<sub>2</sub> **IEC** SC 4 reference model for



Jean Brangé

validation team

WG 23

Reference data

Nils Sandsmark



## ISO/TC 184/SC 4 Industrial Data



#### Scope of industrial data

Lawrence D. Eicher Leadership Award

Concept Stage

Development Stage

Production Stage

**Utilization Stage** 

**Support Phase** 

Retirement Phase

#### Product Definition

- ISO 4758
- ISO 8329
- ISO 10303
- ISO 15926
- ISO 18136
- ISO 24463

#### Product Visualization

- ISO 3151
- ISO 14306
- ISO 17506
- ISO 23301
- ISO 24464

#### Factory Integration

- ISO 15531
- ISO 18629
- ISO 18828
- ISO 18876
- ISO 20534

#### Digital Manufacturing

- ISO 23247
- ISO 23952

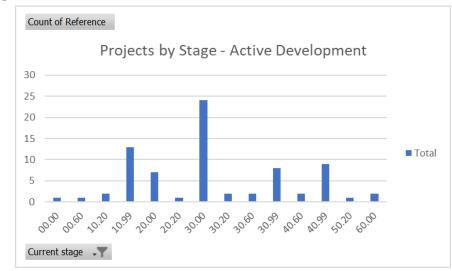
Industrial Data Quality: ISO 8000, ISO 29002

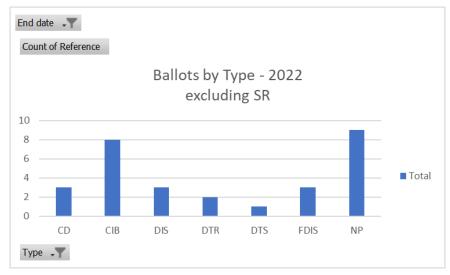
Product Properties and classes, Common Data Dictionary: ISO 13584, ISO 22745, IEC 61360



#### **Work Program Update**

- SC 4 converted from Bugzilla/CVS to Jira/GIT 1 January; transition completed 6 September with a validated baseline, documentation, and repeatable procedure for publication
- SMRL V9 is complete and with ISO for publication
  - ISO 10303 242 ed 3 (Minor Revision) in publication
  - ISO 10303 238 ed 3 (Minor Revision) in publication
- 7 Projects Completed in 2022
  - 1SO 8000 2, -64, -82, -150
  - ISO 10303 17, 238
  - ISO 17506
- 10 Projects Launched in 2022
  - ISO TR 3151 1 & ISO 3151 2
  - ISO TS 23301 ed 2
  - ISO 8000 1, 114, 200, 210
  - ISO 10303 242 ed 4
  - ISO 15926-6
  - ISO 18136
- 23 Ballots processed since 2022-01-01, 6 open
  - Handbook updated to incorporate Jira / GIT
  - Cancelled development of ISO 10303 209
  - Restarted ISO 29002
  - Cat A Liaison: The International Association of Classification Societies. Ltd.
  - Support to restart in-person meetings with 84th Plenary in October 2022
- TMB Approved SC 4 procedure to manage standards as a database utilizing the IEC CDD









84<sup>th</sup> Plenary Meeting – Hamamatsu Japan

Lawrence D. Eicher Leadership Award

- The 84<sup>th</sup> Plenary held 2022-10-30
- Return to in-person plenary since November 2019
- Restarting traditional forums that had been suspended during pandemic
- Industry Day: New Perspectives of Digital Data Interoperability
- Hybrid light format Open / Closing sessions, business meeting, and daily briefing
- Open Technical Forum Jira/Git change procedures



DRAFT SC 4 Plenary Meeting Schedule

	10/30/2022	10/31/2022	11/1/2022	11/2/2022	11/3/2022	11/4/2022
TIME (LOCAL)	Sunday	Monday	Tuesday	Wednesday	Thursday	Friday
8:30 - 9:00			Hybrid Summary Briefing	Hybrid Summary Briefing	Convenor Tag Up	
9:00 - 9:30		Opening Technical Session		INDUSTRY DAY		Closing Technical Plen
9:30 - 10:00		Opening Technical Session		INDUSTRY DAY		Closing Technical Plen
10:00 - 10:30		Opening Technical Session		INDUSTRY DAY		Closing Technical Plen
10:30 - 11:00		Opening Technical Session		INDUSTRY DAY		Closing Technical Plen
11:00 - 11:15		Break	Break	Break	Break	Break
11:15 - 12:00				INDUSTRY DAY	Draft resolutions due from Convenors!	TC 184/SC 4 Busine Meeting
12:00 - 12:30				INDUSTRY DAY		TC 184/SC 4 Busine Meeting
12:30 - 13:00				INDUSTRY DAY		TC 184/SC 4 Busine Meeting
13:00 - 14:00	PPC/Convenors Meeting	Lunch	Lunch	Lunch	Lunch	Close TC 184/SC 4 Meeting
14:00 - 14:30	PPC/Convenors Meeting		SC 4 Change Board	INDUSTRY DAY		
14:30 - 15:00	PPC/Convenors Meeting		SC 4 Change Board	INDUSTRY DAY		
15:00 - 15:30	PPC/Convenors Meeting		SC 4 Change Board	INDUSTRY DAY		
15:30 - 16:00	QC		SC 4 Change Board	INDUSTRY DAY		
16:00 - 16:15	QC	Break	Break	Break	Break	
16:15 - 16:30	QC			INDUSTRY DAY	Resolutions Available	
16:30 - 17:00	QC			INDUSTRY DAY		
17:00 - 17:30	Orientation			INDUSTRY DAY		
17:30 - 18:00	Orientation			INDUSTRY DAY		
18:00 - 18:30		Hybrid Summary Briefing	Hybrid Summary Briefing		Hybrid Summary Briefing	
18:30 - 19:00		Open Technical Forum		INDUSTRY DAY	NSB Caucuses	
19:00 - 19:30		Open Technical Forum			Coordinate with	



## Winner 2007 & 2021 Lawrence D. Eicher Leadership Award

#### 84<sup>th</sup> Plenary Meeting – Key outcomes

- Launched NP Ballots for ISO 10303-238 ed4, ISO 10303-62 ed2, ISO 8000-220 and a multi-part split ISO 14306-1, and ISO 14306-4
- Created a new Working Group "ISO CDD Validation Team" to manage standards in database format utilizing the IEC Common Data Dictionary
- Approved splitting ISO 14306 (JT) into a multi-part standard recognizing JT 9.5 and JT 10.5
- Launched an inquiry ballot on creating a Management System Standard with ISO 8000
- Multiple schedule adjustments across the project portfolio
- Updates to Liaisons



## ISO/TC 184/SC 4: Industrial Data 😽



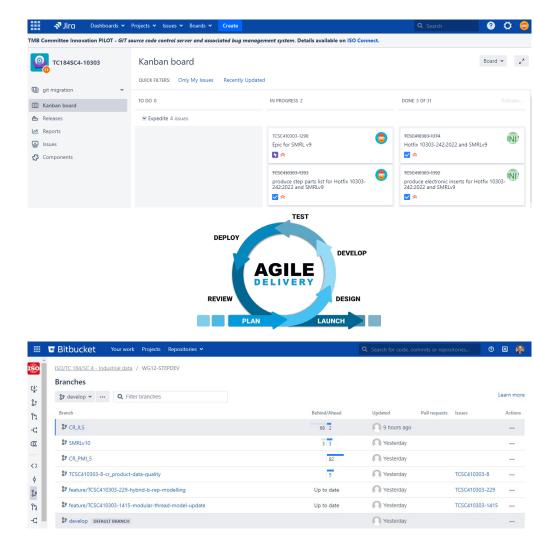
Lawrence D. Eicher Leadership Award

Jira/Git Procedure

SC 4 has conducted a Living Lab project demonstrating the use of Jira/Git as a technology foundation for Agile project management.

The project was completed successfully and a procedure was drafted to manage change and content. Projects are using it including ISOAWI TS 15926-4, ISO/AWI TS 23301, TF 02 and SMRL stabilization team.

Both AP 242 ed 3 and SMRL V9 were processed multiple times over two weeks to support publication. Normally, this takes months -> step function improvement in quality and speed.





## ISO/TC 184/SC 4: Industrial Data

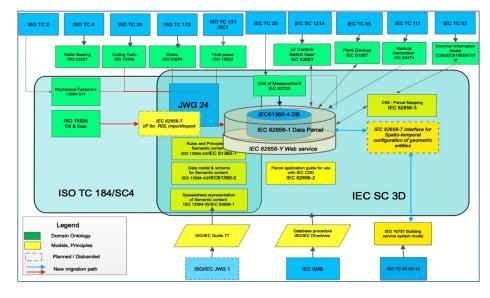


#### **ISO Database Procedure for IEC CDD**

JWG 24 is executing a TMB approved procedure for managing ISO standards in database format using the IEC CDD.

The procedure allows JWG 24 to perform against its terms of reference and to effectively collaborate with other ISO committees in using the IEC CDD.

The JWG now has a Validation Team for managing the evaluation and validation of Change Requests for content.





ISO/TC 184/SC 4 N 3708

ISO/TC 184/SC 4 "Industrial data" Secretariat: ANSI Committee manager: Tripp Dana Ms



Procedure specific to ISO/TC 184 SC/4 for the maintenance of ISO standards in database form using IEC CDD

Document type	Related content	Document date	Expected action
General / Other		2022-08-21	INFO

2022-12-20 ISO/TC 184/SC 4 Industrial Data 13

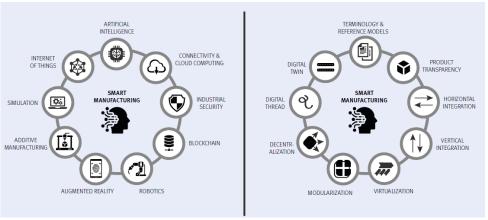


## Smart Manufacturing Coordination Committee



- ISO/TC 184/SC 4 is a member of the Smart Manufacturing Coordination Committee which has the mandate to coordinate activities across ISO on Smart Manufacturing (Industry 4.0)
- White Paper published late 2021
- General concepts, introductory
- Enablers, enhancers, and effects





https://www.iso.org/publication/PUB100459.html

2022-12-20 ISO/TC 184/SC 4 Industrial Data



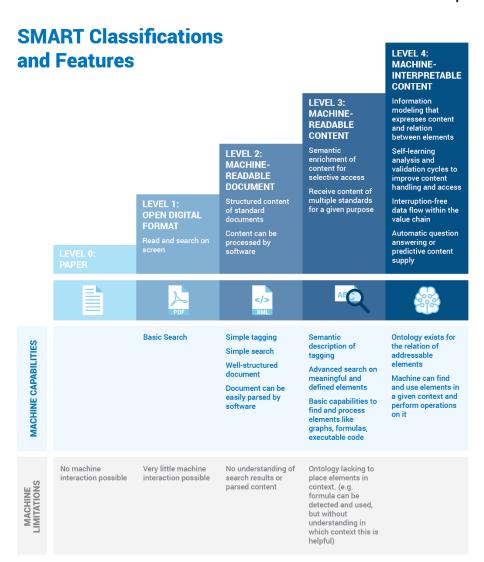
## **ISO SMART Standards**

ISO has launched the ISO SMART programme. The programme seeks to introduce a set of standards are directly consumable by technology solutions and provide enhanced solutions to address user needs.

ISO/TC 184 and its subcommittees have been identified by the ISO SMART programme as being among those most interested in pursuing machine-readable standards content and have been included in the first batch of use cases to be collected.

ISO/TC 184/SC 4 has identified the following use cases for submittal:

- Reference Data Libraries (i.e. ISO 15926-4) & Open Technical Dictionaries with a means of extension (ISO based, company extended, (IEC CDD/PLIB, etc.)
- Computer interpretable models / architectures (i.e. ISO 10303 Express / SysML, PLCS Dexs, ISO 15926-2) with conformity by test (STEP File Analyzer) and analysis
- Chained requirements from standards extracted through normative references for conformance







**Contact Information** 

Chair: Kenneth Swope Kenneth.a.swope@boeing.com

Secretariat: Dana Tripp <a href="mailto:trippdsc4@gmail.com">trippdsc4@gmail.com</a>

TPM: Laura Mathew Mathew@iso.org

EPM: Claudia Lueje <u>lueje@iso.org</u>

International Organization for Standardization ISO Central Secretariat Chemin de Blandonnet 8 Case Postale 401  $\mathsf{CH-1214}\ \mathsf{Vernier}, \mathsf{Geneva}$  Switzerland

iso.org

© ISO, 2022

All rights reserved ISBN 978-92-67-10648-9