



The World Organisation for NDT

Annual Report 2024

ICNDT is formally registered as a legal association in Vienna in accordance with the Austrian Corporations Act and has a bank account to conduct financial business transactions.

The constitution meets the requirements of the Austrian Corporations Act.

As an incorporated body, ICNDT is required to submit its Annual Report and audited Financial Report to the relevant Austrian authorities.

This is the Annual Report for 2024.

Vision and Mission

Our Vision

To create a safer world through wider use of non-destructive testing (NDT) and diagnostic technologies.

Our Mission

To lead a global network of NDT societies and their regional groups devoted to the promotion of the development of the science and practice of NDT for the benefit of the public worldwide.

Introduction

The operations of the International Committee for Non-Destructive Testing (ICNDT), its regions and its member NDT societies have continued during 2024, taking account of the revised timing of the World Conference on Non-Destructive Testing (WCNDT) and regional conferences.

It was recommended in 2020, and confirmed in 2021, that alternative arrangements should be made for some of the ICNDT business that is normally conducted every four years at the World Conference and these arrangements were continued in 2023 until the elections at the 20th WCNDT in May 2024.

Meetings, Committees and Groups

Annual Meeting 2024

The Annual Meeting went ahead as a hybrid meeting on Thursday 25 January 2024, with 27 voting members and nine observers present. Those taking part included: Dr Sajeesh Babu, Chair; Mr David Gilbert, General Secretary; Mr Gerhard Aufricht, Treasurer; Dr Mike Farley, Past Chair and ICNDT Advisory Committee (IAC) Chair; and Professor Younho Cho, President of the 20th WCNDT.

The Annual Report for 2023 was approved, along with the accounts for 2023 and the fees (no changes) and budget for 2024, which were presented by Mr Aufricht. Members were given an update on the plans for the 20th WCNDT, now scheduled for 27-31 May 2024.

The unconfirmed minutes of the meeting can be found on the ICNDT website.

ICNDT Executive Committee (IEC)

IEC meetings were held on 2 February (online), 3 May (online), 26 May (hybrid – just before the 20th WCNDT), 30 July (online), 21 October (hybrid – at the American Society for Nondestructive Testing Annual Conference (ASNT 2024)) and 13 December (hybrid – at the Indian Society for Non-destructive Testing (ISNT) 34th Annual Conference and Exhibition on Non-Destructive Evaluation and Enabling Technologies (NDE 2024)). These meetings were chaired by Dr Sajeesh Babu. In addition, several sub-group online meetings were held between the IEC and the WCNDT Organising Committee.

ICNDT Advisory Committee (IAC)

A well-attended meeting of the IAC chaired by Dr Mike Farley was held on 26 May 2024 in Incheon, South Korea, just before the start of the 20th WCNDT.

● ICNDT Awards

Following a suggestion at the previous meeting, there was discussion about the ICNDT Awards. Ideas to be considered further are:

- Regions to promote and funnel award nominations to ICNDT;
- Awards to attract younger people, increasing the number of awards for younger people to a minimum of four
- Perhaps have awards for different regions, for example two per region; and
- An award(s) for the best paper(s) at the WCNDT. The Scientific Committee could decide in consultation with Working Group 3 (WG3) and the prize would be free registration for the next WCNDT. ICNDT could cover the cost.

- **Discussion: ICNDT member operations outside their home territories – How to maximise mutual benefit**

As a result of a request by a member society, the committee discussed the benefits and potential problems when members' operations extend into other territories. The Chair reminded members of the ICNDT mission overall, which is to make a safer world, and the key objective of ICNDT to promote cooperation between NDT societies in pursuit of this mission.

The members present quoted many examples of NDT societies (and their certification bodies) providing valuable services in foreign territories, including examples of large societies supporting neighbouring small ones. The key to avoiding problems is cooperation.

- **Discussion: ICNDT membership – Problems and opportunities for small/fledgling societies**

The Chair introduced the discussion by explaining that over the years up to around 2016, ICNDT experienced steady growth in membership as new NDT societies were formed and joined the international committee. Typically, there were two or three new members at each General Assembly (GA). This growth stalled thereafter, despite the efforts of the regions (Asia-Pacific, Africa and Pan-America in particular). Also, the smallest societies struggled to pay the ICNDT membership fee, even though this is a nominal €100 for such societies.

It is still the case that the motivation for creating a society is often the need to organise training and certification.

Dr Farley suggested a new paradigm – ICNDT should create a model for what a new society might look like (based on the use of the internet, Zoom, website, social media – LinkedIn, etc). A new society might not have its own certification scheme but would have links/provide a conduit to other certification bodies and have links to other services available internationally.

Dr Sajeesh Babu suggested a questionnaire is run in the regions.

- **Discussion: Succession planning ICNDT Officers and Committee/WG Chairs**

It was noted that the Specialist International Groups (SIGs) are helping to bring a pool of talent into the orbit of ICNDT and ICNDT committees should encourage their broader involvement in ICNDT, especially to get younger people involved.

With respect to encouraging younger people to get involved, Dr Thomas Wenzel explained the actions that have been taken in the German Society for Non-Destructive Testing (DGZfP) and suggested the creation of a group for younger people in ICNDT.

In the case of ICNDT Officers and Committee/Working Group (WG) Chairs, there was some change happening (new Chairs for WG1, WG3 and WG6 and a new Treasurer) and some continuity (in the roles of ICNDT, Chair, ICNDT Past Chair, General Secretary, ICNDT Certification Executive Committee (ICEC) Chair and WG5 Chair). Looking towards 2028, some succession planning is needed.

- **Next meeting**

The next IAC meeting will be at the 17th Asia-Pacific Conference on Non-Destructive Testing (APCNDT 2026).

World Conference on Non-Destructive Testing (20th WCNDT)

Having been forced to postpone the 20th WCNDT from its originally planned date of June 2020 to 27-31 May 2024, due to the global impact of the COVID-19 pandemic, the Korean Society for Nondestructive Testing (KSNT) did a wonderful job and the conference was a huge success. The venue for the 20th WCNDT was Songdo Convensia, Incheon, South Korea. The success of this event was due entirely to the dedication and commitment of the WCNDT Organising Committee and all related parties who were motivated to provide attendees with unforgettable memories.

The Opening Ceremony was held on Monday 27 May 2024. Dr Dong-Jin Yoon, Organising Committee Chair, officially announced the opening of the 20th WCNDT and then Professor Kyung-Young Jhang, KSNT President, welcomed all attendees on behalf of KSNT. Dr Sajeesh Babu, ICNDT Chair, provided a heartfelt thank you to all for contributing to the success of the World Conference. Dr Babu then congratulated the 2024 ICNDT award winners (see below). Each was presented with a plaque recognising their contributions to NDT in each of their respective areas.

ICNDT award winners:

- **Havercroft Award:** for major contribution to NDT education, training or certification. *Winner: The American Society for Nondestructive Testing (ASNT).*
- **Pawlowski Award:** for major contribution to the promotion of NDT internationally. *Winner: Mr David Gilbert.*
- **Roentgen Award:** for major contribution to the science and technology of NDT. *Winner: Dr Shant Kenderian.*
- **Sokolov Award:** for major contribution to NDT research. *Winner: Dr Roman Maev.*
- **Young Achiever Award:** for the achievements of young people, under 35, in NDT. *Winners: Dr Misty Haith and Dr Hogeon Seo.*

The total number of participants in the 20th WCNDT was 3145 from 64 countries, including 1422 from Korea. Over 900 presenters and more than 250 exhibitors participated. The Scientific Programme Committee, consisting of 18 members, implemented an excellent scientific programme for the five-day duration of the conference. The scientific sessions were organised from 938 submitted abstracts, 764 of which were oral and 174 of which were posters that were displayed throughout the conference. To further enrich the contents of the World Conference, 22 keynote speakers and 27 invited speakers participated in addition to three distinguished plenary speakers.

The first plenary speaker, Professor Tai Sik Lee, provided the audience with his presentation, titled: 'NDT: pioneering the final frontier'. The second plenary talk was given by Professor Dr Bernd Valeske, titled: 'Cognitive sensor and data systems for NDE of materials and for use within circular economy'. Professor Takaaki Kajita, 2015 Nobel laureate in Physics, presented the third plenary talk, titled: 'Neutrinos – Key particles for our understanding of the smallest particles and the largest universe', in line with the programme of the Academia NDT International Research Day 2024.

The impressive exhibition, in a large hall adjacent to the conference hall, featured some 236 exhibiting companies from all over the world and 25 NDT societies from across the ICNDT regions. All refreshment breaks and lunches were held in the exhibition hall. The exhibition was opened by a formal 'cutting-the-tape' ceremony.

The ICNDT activities embraced various committee meetings and workshops during the conference, including two meetings of the ICNDT General Assembly, Working Group meetings, an ICNDT Executive Committee meeting and workshops on NDT Frontiers and certification, plus meetings of some of the SIGs (see page 12 in the section on SIGs).

The conference was followed by ISO/TC 135 meetings on Saturday 1 June and Sunday 2 June 2024.

On the social side of the conference, several events were held throughout the week for delegates. The Gala Dinner on Wednesday evening featured the sounds of Korea and the cultural night on Thursday evening was designed to provide opportunities to experience various features of Korean culture in a casual, relaxing atmosphere in which delegates could meet new friends and be reacquainted with old ones. The Closing Ceremony provided a sketch of the week's activities, leaving a lasting impression of this brilliant event. Presentations by relevant societies for the promotion of upcoming regional conferences followed and everyone bid farewell until the 21st WCNDT in Buenos Aires, Argentina, in 2028.

ICNDT General Assembly Meetings – GA 1 2024 and 44th Meeting of ICNDT

A brief summary and full minutes can be found at: www.icndt.org/ICNDT%2044th%20Meeting%20and%20General%20Assembly1%20Minutes%20Korea%202024.pdf

General Assembly 1 and the 44th Meeting of ICNDT was held in the Board Room at Songdo Convensia, Incheon, South Korea, during the 20th WCNDT. Dr Sajeesh Babu, Chair of ICNDT, presided. There were 29 voting members present plus eight votes from the regions, ie a total of 37 voting persons present (quorum 24). The minutes of the last GA and 2024 Annual Meeting, the Annual Report for 2023 and the accounts balance for 2023 were reviewed and confirmed. OP19 Rev 6 was approved.

Nominations:

Dr Mike Farley (Past Chair) explained that nominations had been sought from members for officers for 2024 to 2028, following the operating procedure OP1.

The nominees were:

Position	Name	Proposed by
ICNDT Chair	Dr Sajeesh Babu (Singapore)	Singapore, Malaysia, Poland, Germany, Romania, UK
ICNDT General Secretary	Mr David Gilbert (UK)	UK, Singapore, Germany, Poland, Romania
ICNDT Treasurer	Vacant	–
World Conference President	Dr César Belinco (Argentina)	Argentina
ICNDT Past Chair	Dr Mike Farley	UK, Singapore
NDT Society to provide secretariat	British Institute of Non-Destructive Testing (BINDT) (UK)	UK, Germany, Poland, Romania, Singapore

As there were no further nominations, an election was not required in accordance with OP1. Dr Farley commented that it is very healthy that the people in the top three positions are not changing. There are some changes in the regional representatives and WG Chairs, so there will be new people at IEC meetings, which is good. However, it was agreed in response to a comment from Mr Glenn Tubrett that some more consideration needs to be given to succession planning.

Summary of ICNDT Awards Presented at the Opening Ceremony

Awards were presented during the 20th WCNDT Opening Ceremony. Awards are issued every four years in conjunction with the WCNDT. The awards are:

- Havercroft Award: for major contribution to NDT education, training or certification.
- ICNDT Young Achiever Award and the ICNDT Recognition of Outstanding Voluntary Effort Award.
- Pawlowski Award: for major contribution the to promotion of NDT internationally.
- RoentgenAward: for major contribution to the science and technology of NDT.
- Sokolov Award: for major contribution to NDT research.

See the report on the 20th WCNDT on page 4 for the names of the winners.

Dr Mike Farley reported that there was a really good set of nominations for all of the awards this year. A secret ballot was carried out among the IEC members and there was a clear winner in every category except for the Young Achiever Award which was a draw, so two awards were made.

The GA was advised of the recommendation from the IAC that in future the number of awards for young people should be increased from one to four. Part of the award will be free registration at the next WCNDT, funded by ICNDT, and this will require a change to the Operating Procedure.

Many of those who did not receive awards deserved recognition for their efforts, so the process in OP22 was followed and there were also ten awards for outstanding voluntary effort presented at the Opening Ceremony. Dr Farley reminded all members that OP22 can be used by any national society members of ICNDT at any time between meetings.

Approval of Nominations for Honorary Membership

Dr Sajeesh Babu and Dr Mike Farley put forward nominations that had been approved by the IAC and IEC and were unanimously supported by the meeting:

- Mr Harold Jansen, for his services to ICNDT in chairing and leading the work of the ICEC for a very long period and for his input into the ICNDT Multilateral Recognition Agreement (MRA);
- Professor Younho Cho, for his services to the Asia-Pacific Federation for Non-Destructive Testing (APFNDT) and ICNDT and for his services as WCNDT President; and
- Mr Fermín Gómez Fraile, for his dedicated services to the European Federation for Non-Destructive Testing (EFNDT) and ICNDT for many years.

Report on Liaison Members

The WG1 Chair (Mr Bento Ottone Alves) will be nominated to ISO/TC 135/SC 7. Similarly, a new nominee is sought for ISO/TC 108/SC 5, as the current nominee (Dr César Belinco) now has an active role with the next World Conference on Non-Destructive Testing.

There is an informal liaison with the International Atomic Energy Agency (IAEA) and currently Dr Sajeesh Babu and Mr David Gilbert take the lead on various groups within the IAEA. There is also a formal liaison with the International Institute of Welding (IIW) and the latest Memorandum of Understanding (MoU) between ICNDT and IIW was signed in Shanghai, China, during the IIW GA. It is now time for renewal and this was planned for the GA 2, which took place on Thursday 30 May 2024. Dr Thomas Wenzel is the new representative to IIW.

22nd World Conference in 2032 – Presentation of bids

Bids for the 22nd World Conference in 2032 were presented. There were six presentations and each society was given 15 minutes to present its bid.

Presentations were given in the following order, which had been agreed earlier in the meeting:

- Singapore
- South Africa
- India
- USA
- UK
- Hungary.

Acknowledgments

Dr Mike Farley thanked the six societies that had presented bids. A lot of hard work and commitment goes into making these plans and presentations and ICNDT was very grateful for this.

Dr Sajeesh Babu expressed heartfelt thanks to the following people, who have given him great support during his leadership over the past eight years:

- Mr Gerhard Aufricht (Treasurer) for all of his hard work on the accounts, along with the auditors, Dr Werner Schmid and Mr Douglas Marshall;
- Mr João Conte for chairing WG2;
- Dr Mike Farley (Past Chair) for his valuable input that ensures that our constitution and procedures work well;
- Mr David Gilbert for all his support as General Secretary and BINDT for providing the secretariat;
- All WG Chairs and the SIG Chairs for their great work and support to ICNDT; and
- Mrs Cindy Bailey and Miss Zoe White from BINDT for their secretariat support.

GA 1 was then adjourned.

ICNDT General Assembly Meetings – GA 2 2024 and 45th Meeting of ICNDT

A brief report and full minutes can be found at: www.icndt.org/ICNDT%2045th%20Meeting%20and%20General%20Assembly%20Minutes%20Korea%202024.pdf

General Assembly 2 and the 45th Meeting of ICNDT was held in the Board Room at Songdo Convensia, Incheon, South Korea, during the 20th WCNDT. Dr Sajeesh Babu, Chair of ICNDT, presided. The meeting was declared quorate with 31 voting members present plus eight votes from the regions, ie a total of 39 voting persons present, plus one proxy vote from Poland, which had been given to the Chair.

Reports were presented from national societies, the four regions and liaison members (ISO/TC 135, ISO/TC 135/SC 7, IAEA, IIW and Academia NDT International). A report was presented from the American Society of Mechanical Engineers (ASME) and it was agreed to seek to re-establish liaison.

Election of Officers and Committees 2024-2028

Dr Mike Farley advised that the list of nominations for the IEC had been presented at the GA 1 meeting, where it was noted that there would not need to be an election. After some canvassing following GA 1, Dr Casper Wassink of the Dutch Society for Quality Control, Inspection and Non-Destructive Techniques (KINT) kindly agreed to be nominated as Treasurer. By a show of hands, the Chair (Dr Sajeesh Babu), General Secretary (Mr David Gilbert), Treasurer (Dr Casper Wassink), WCNDT President (Dr César Belinco), Past Chair (Dr Mike Farley) and secretariat (BINDT) were approved for office for the next four years.

Nominations to the IEC for the regions are:

- African Federation of Non-Destructive Testing (AFNDT) – Dr Sahaimi Kamal (Morocco)
- Asia-Pacific Federation for Non-Destructive Testing (APFNDT) – Dr Tokamasa Ogata (Japan)
- European Federation for Non-Destructive Testing (EFNDT) – Mr Fermín Gómez Fraile (Spain)
- Pan-American Federation for Nondestructive Testing (PANNDT) – Mr Glenn Tubrett (Canada).

Mr Douglas Marshall (Canada) and Dr Werner Schmid (Switzerland) were both willing to stand again as auditors and were unanimously approved.

WG Chairs nominated by the ICNDT IEC and approved at GA 2 are:

- Mr Harold Jansen – ICEC
- Mr Bento Ottone Alves – WG1 (Qualification and Certification)
- Mr David Bajula – WG2 (Membership)
- Dr Thomas Wenzel/Professor Younho Cho – WG3 Co-Chairs (Education and Research)
- Mr Shohei Ooka – WG4 (Communications)
- Mr David Gilbert – WG5 (Radiation Protection and Safety)
- Dr César Belinco/Professor Len Gelman – WG6 Co-Chairs (CM and Technical Diagnostics)*
- Dr Mike Farley – WG7 (Administration).

*As Dr César Belinco will have other duties relating to the 21st WCNDT, it was agreed that a new Chair for WG6 would be sought and later (December 2024) it was announced that Mr Simon Mills of BINDT, Past Chair of the ISO CM Working Group, would take on the role of Chair of WG6.

The list of nominations for SIG chairs was presented and unanimously approved.

It was noted by the Chair that ICNDT is very fortunate to have so many people willing to serve and everyone was thanked for their past service and for their service going forward.

Strategic Plan 2024-2028

Dr Sajeesh Babu presented a snapshot of the changes to the Strategic Plan. A draft of Issue 12 of the Strategic Plan will be circulated to the WG and SIG Chairs for their further input based on discussions during the conference. In due course, the plan will be published on the website and used by the IEC and Chairs to guide ICNDT's work over the next four years.

Action areas for ICNDT:

- Support NDT societies – this will come from the membership WG;
- Promotion of the importance of NDT – better links to external bodies – responsibility of the communications WG;
- WG1 focuses on qualification and certification;
- WG3 focuses on NDT education and research;
- WG5 focuses on radiation protection and safety, including cooperation with the IAEA;
- WG6 focuses on CM and technical diagnostics; and
- WG7 focuses on management and administration and reviews some of the OPs as well as the constitution.

Election of Host for the 22nd WCNDT in 2032

Three tellers, independent of the six bidders (see page 6), were appointed to count the votes. The procedure was clear, *ie* the winner would be the first country to receive more than 50% of the number of eligible votes (40). Five rounds of voting were necessary but after five bidders were eliminated the winner was declared to be Singapore.

Next General Assemblies

GA 1 and the 46th Meeting of ICNDT will be held in 2026 at the time of the 14th European Conference on Non-Destructive Testing (14th ECNDT) in Verona, Italy.

GA 1, GA 2 and the 47th and 48th Meetings of ICNDT will be held in 2028 at the time of the 21st WCNDT in Buenos Aires, Argentina.

Working Group 1 (Qualification and Certification)

A hybrid meeting of Working Group 1 (WG1) was held on 26 May 2024 at the 20th WCNDT in Incheon, South Korea. The meeting was chaired by Dr Sajeesh Babu. A new WG1 Chair, Mr Bento Ottone Alves from the Portuguese Society of NDT, was selected and approved by the IEC at the meeting held on 26 May 2024 and elected in the 45th GA on 30 May 2024. Several other changes to the membership of the group were agreed and ratified by the IEC. An updated list will be published soon on the website. The terms of reference were reviewed, adopted with comments and sent to publishing.

The *ICNDT Guide to Best Practice Management by Certification Bodies to Achieve Integrity, Impartiality & Independence* was reviewed and will be sent to publishing when the appendix is complete.

The *Report of ICNDT WG1 on interpretation of ISO 9712:2021* is almost finished, incorporating comments coming from several national societies. New text will be developed for the document.

The *ICNDT Guide to Qualification and Certification of Personnel for NDT*, updated to reflect ISO 9712:2021/2022, was published on the ICNDT website and printed copies were issued at the 20th WCNDT.

ISO/IEC 17024:2012 is in the process of revision by the ISO committee for conformity assessment (CASCO). A new link to CASCO was chosen, Mr Robert Skwirut from Canada. Monitoring the revision is very important as any significant changes to this standard would have an impact on all the world's NDT accredited certification schemes.

Dr Babu has provided the liaison between ICNDT WG1 and the International Accreditation Forum (IAF) and, currently, Mr Colin Bird is playing this role.

The Strategic Plan was updated, taking account of progress to date and the outcomes of the meeting in Incheon, South Korea.

An ICNDT Certification Workshop was held on 31 May 2024 during the 20th WCNDT in Incheon, South Korea. The presentations are available on the ICNDT website.

The ICNDT Certification Executive Committee (ICEC)

The activities of the ICNDT ICEC centre around the MRA, ICNDT Personnel Certification Body (PCB) conformity assessment and the ICNDT Examination Question Bank (EQB). The ICEC carries out most of its work via email and the internet. It had online meetings on 13 February, 18 April, 28 May, 15 August, 17 October and 12 December 2024.

Present ICEC members are as follows: Mr Harold Jansen (Chair and Africa representative); Dr Norikazu Ooka (Asia-Pacific region); Mr Gerhard Aufricht (ICNDT Treasurer); Mr João Rufino Teles Filho (Vice Chair); Dr Thomas Wenzel (Europe region); Dr Kamal Sahaimi (African region); Mr Glenn Tubrett (Pan-America region); and Mr Bento Ottone Alves (WG1 representative). The Secretary is Mr Colin Bird, who can be contacted at: icec-secretary@icndt.org

It can now be reported that the ICNDT OP19-registered PCBs are fully audited and registered. It can be further reported that all the OP19- and OP20-registered members are operating to ISO 9712:2021.

There are now 45 signatories to the MRA Schedule 1. These signatories are committed to recognising the certification awarded by the 18 PCBs registered by ICNDT under the MRA Schedule 2.

The ICEC has developed an online delivery system for the ICNDT EQB. This online EQB has been successfully trialled by several PCBs.

The ICEC has been approached by additional PCBs showing continued demand for the EQB. In particular, two countries have approached the ICEC to become MRA registered and use the online EQB. The online version of the EQB will be compatible with ISO 9712:2021 and ISO 17024, include psychometric testing of the examination questions, enable translation of the EQB into more languages and include country- and region-specific questions.

Membership Committee (WG2)

Chair: Mr David Bajula

Members: Mr Shohei Ooka, Mr David Gilbert, Professor Ferid Herelli, Mr Les Dick and Mr João Conte.

Mr João Conte stood down as Chair at the 20th WCNDT after many years of service in the role and Mr David Bajula was confirmed as the new Chair at the General Assembly.

Actions: WG2 efforts are primarily associated with working on Action Plan 1: Support NDT Societies. This Action Plan has 12 specific tasks or items and the group is initially focusing on items 1a-1d and 12 (a large task) as follows:

- 1a – Look for opportunity/opportunities to engage with the Middle East region;
- 1b – Work with AFNDT to help structure the membership fees and collection;
- 1c – Assure support for the next AFNDT conference, determine needs and report out by the 14th ECNDT;
- 1d – Prepare a standard request to have ‘International Forum’ events/meetings at regional conferences and at the very least at all federation conferences; and
- 12 – Prepare a Societies Operational Manual (work in progress).

WG2 plans to meet more regularly outside of regional and federation meetings and events. It also plans to work with WG4 to update the membership area of the website.

Working Group 3 (Research and Education)

A meeting of Working Group 3 (WG3) was held on Thursday 30 May at the 20th WCNDT with members present, including representatives of IIW, a liaison member. The meeting was co-chaired by Professor Younho Cho and Dr Thomas Wenzel.

The meeting reviewed the objectives of the Working Group, reviewed the current membership and heard reports from the SIG Chairs present. Topics for inclusion in the next Action Plan for the Working Group were discussed. The membership structure was confirmed as that previously agreed at a meeting held during the 13th ECNDT in Lisbon, Portugal, with names of representatives updated as follows:

Designation	Current representative
Co-Chairs	Professor Younho Cho
	Dr Thomas Wenzel
Ex-officio	
ICNDT Chair	Dr Sajeesh Babu
ICNDT IAC Chair	Dr Mike Farley
ICNDT General Secretary	Mr David Gilbert
ICNDT Treasurer	Mr Gerhard Aufricht (to be replaced by Dr Casper Wassink)
ICNDT Membership Chair	Mr David Bajula
Chair WG1	Mr Bento Ottone Alves
Chair WG4	Mr Shohei Ooka
Chair WG5	Mr David Gilbert
Co-Chair WG6	Dr César Belinco (until year end, see below)
ICEC Secretary	Mr Colin Bird

Regional Representatives	
African Federation of Non-Destructive Testing (AFNDT)	Mr Harold Jansen
Asia-Pacific Federation for Non-Destructive Testing (APFNDT)	Dr Takamasa Ogata
	Professor Krishnan Balasubramaniam
European Federation for Non-Destructive Testing (EFNDT)	Mr Fermín Gómez Fraile
	Mr Bento Ottone Alves
Pan-American Federation for Nondestructive Testing (PANNDT)	Mr Glenn Tubrett
	Mr David Bajula
Specialist International Group (SIG) Chairs	
Full Matrix Capture	Professor Paul Wilcox
Long-Range Guided Wave Ultrasonic Testing	Professor Younho Cho
Magnetic Memory Method	Dr Peter Ladányi
NDE 4.0	Dr Johannes Vrana
NDT Frontiers	Dr Roman Maev
NDT of Art and Cultural Heritage	Dr Roman Maev
NDT of Civil Engineering	Dr César Belinco
NDT Reliability	Dr Daniel Kanzler
Non-linear UT	Dr Serge Dos Santos
Terahertz	Dr Mira Naftaly
Representatives of Liaison Members	
Academia NDT International	Professor Peter Trampus
	Dr Serge Dos Santos
	Dr Shant Kenderian
IAEA	Ms Hannah Affum
IIW	Dr Luca Costa or nominee
International Organization for Standardization (ISO)	Mr Shohei Ooka
Other Interested Specialists	
Academia NDT	Dr Uwe Ewert
BINDT	Professor Ian Cooper
Department of Skills Development Malaysia Certification Body	Dr Salbiah Hussein
DGZfP	Dr Sascha Feistkorn
French Confederation for Non-Destructive Testing (COFREND)	Mr Etienne Martin
Italian Association of NDT (AIPnD)	Dr Roberto Felicetti
KSNT	Dr Hogeon Seo
Malaysian Society for Non-Destructive Testing (MSNT)	Dr Ilham Mukriz Zainal Abidin
SIG Reliability	Dr Fabian Delhof
Society for Nondestructive Testing and Certification of Taiwan (SNTCT)	Dr Juin-Fu Chai

ICNDT WG3 Membership Structure:

Specialist International Groups

Reports were presented from most of the Specialist International Groups during the WG3 meeting. These reports indicated the depth and breadth of activity in this relatively new area of ICNDT.

Dr Daniel Kanzler (SIG Reliability) commented that there were some issues with the Reliability Workshop at the 20th WCNDT. He had hoped to run the workshop in a different way and that it would be shown in the programme in a different way. Dr Kanzler said that he would offer a workshop again but hoped to be able to help structure the topic better as, in his opinion, reliability is a very important topic.

As one of the WCNDT organisers, Professor Younho Cho said that he took responsibility and took the criticism on board and apologised profusely. The reason it happened this way was because this workshop was run totally in parallel and it was not part of the regular technical programme. This needs to be improved in future.

Dr César Belinco (NDT Civil Engineering) presented the SIG report. Dr César Belinco reported that the Civil Engineering group had been set up in Portugal in 2023. He stated that three meetings have been held concerning emerging technologies lead by Mr Les Dick, Dr Sebastián Laprida, Dr Roberto Felicetti and Dr Ernst Niederleithinger. Three sub-groups have been created. During a meeting in March it was mentioned that the liaison and scope of the working groups aligned with the IAEA activities.

Mr David Gilbert commented that for some time we have been talking to the IAEA about a Practical Agreement (PA) at a higher level between ICNDT and the IAEA and we reached a point where we have a draft PA. We need to complete some of the gaps corresponding to the activities. We need to provide a timeline associated with the actions and determine who will help to complete those actions, with suggested completion dates in each case. We will go through this and then submit the PA for approval by the IAEA. It is hoped that this will help to coordinate all of the activities. This is not an easy task as there are various 'touch points' between the IAEA and ICNDT at different levels, different deadlines and different activities, but it would be good to have some form of coordination of those activities to help with communication as to who is doing what and when.

Professor Younho Cho (Long-Range Guided Wave Ultrasound) presented a summary of his considerations with respect to long-range guided waves (LRGWs). In particular, he noted the significant number of papers presented during the conference. Of special interest he noted that LRGW research shows that small defects can be detected. He noted that LRGW was now being applied in deep water applications, in particular delamination of corrosion-resistant coatings on pipelines, this being an online monitoring process. He also noted that LRGW is being applied to heat exchangers in Korea and that during the Japanese Society for Non-Destructive Inspection (JSNDI) Conference a special session was held on LRGW.

NDE 4.0 Dr Thomas Wenzel presented the work with Non-Destructive Evaluation 4.0 (NDE 4.0) with respect to education. A list of NDE 4.0 competencies has been produced but it was questioned whether the list was complete. The SIG discussed how to address these competencies at the university level. It was noted that the number of students applying for NDE is getting smaller and we must do more to encourage young people into NDT.

Interaction of ICNDT SIGs with the similar regional groups

There was discussion about the overlap of activity and how to avoid duplication of effort. Some principles emerged:

1. Some topics are fully international and should be led from the ICNDT SIG. However, regional groups may wish to discuss these topics and feed their ideas to the ICNDT group.
2. Some topics are specific to regions and should be led from the region. Nevertheless, it is interesting and useful to keep the ICNDT group informed of what is being conducted.

Reports from regions

Reports were given from EFNDT, APFNDT, PANNDT and AFNDT.

Cooperation with the IAEA

Mr David Gilbert reported on the liaison with the IAEA. It was noted that there was progress within the civil engineering community with the IAEA in particular with respect to civil engineering activities within disaster areas. The IAEA was invited to the WG3 meeting but the meeting received apologies from Ms Hannah Affum of the IAEA.

The Information System on Occupational Exposure in Medicine, Industry and Research (ISEMIR) project was discussed at the WG5 meeting (see page 18).

IIW

Dr Thomas Wenzel welcomed the representatives from IIW (Dr Stephan Egerland and Dr Luca Costa). A meeting was held with Dr Sajeesh Babu, Dr Wenzel and IIW and both sides agreed to fostering the collaboration between IIW and ICNDT. Dr Wenzel has taken over and will lead the interface with IIW and fulfilled the action to attend the IIW Annual Assembly in Rhodes, Greece.

Open discussion on purpose and objectives of WG3

The discussion was led by Dr Thomas Wenzel and Professor Younho Cho with the purpose of listening to the members prior to completion of a revised Action Plan to be incorporated in the new ICNDT Strategic Plan (see image on the right).

Extract from Action Plan

The action from the meeting was for the Co-Chairs to take away the results of the discussions and to formulate a revised Action Plan. This has been included in v12, which was later issued by the ICNDT Chair.

Next meeting of WG3

This is planned as an in-person meeting during the VIII Pan-American Conference for Nondestructive Testing (PANNDT 2025) in Niagara Falls, Canada, from 9-12 June 2025.

Specialist International Groups

The **Specialist International Group on NDE 4.0** is led by Dr Johannes Vrana and Dr Ripi Singh.

The 3rd International Conference and Exhibition on NDE 4.0 is being organised by ISNT (co-chaired by ICNDT) and will be held in Bengaluru, India, from 3-6 March 2025. The Kurzweil Award for High Impact in NDE 4.0 will be awarded again during the conference. The 4th International Conference is scheduled for 2027 and five counties are currently preparing a pitch.

The SIG held two virtual meetings and one in-person meeting in 2024 to gain insight into the ongoing activities of the sub-groups.

The work of the sub-groups is summarised as follows:

- Sub-group T1 – Training, Education and Research for NDE 4.0 is led by Dr Johannes Vrana and Professor Dr Norbert Meyendorf. It has focused on NDE 4.0 training and is working on international harmonisation of NDE 4.0 training for technicians and integrating NDE 4.0 aspects into university NDE classes.

Action (What)	
1	Set up a plan of meetings to be held – at least one physical meeting/year and one internet meeting 2025: – NDTSS Local event in Singapore (Feb) – Online Meeting – PANNDT in Niagara Falls Canada (June), in person 2026: – Online Meeting in Feb – ECNDT in Verona, Italy, in person 2027: – Online Meeting in Feb – Alongside Annual Meeting of IIW or Alongside Annual Meeting of NDT Academia, in person 2028 – Online Meeting in Feb – WCNDT, Buenos Aires, Argentina, in person
2	Research Agenda for NDT: Follow-up of the results created during the ICNDT NDT Frontiers Workshop in Korea and the SIG Meetings.
3	Continue to promote register of NDT Research Bodies on ICNDT website.
4	Update of ICNDT Guide on Education in NDT - including a list of universities organising courses in NDT and CM categorising them as in the Guide. Draw up list of NDT text-books with commentary on their level (to be reviewed).
5	Promote International Specialist Groups (new and existing) , each hosted by a member or other organisation.

- Sub-group T2 – Guidelines on Data Formats, Interfaces, Exchange and Ontology is led by Dr Johannes Vrana and Mr Pranay Wadyalkar. It has focused on gathering information about ongoing activities such as the European Union (EU) data act, OPC Unified Architecture, Digital Imaging and Communication in Non-Destructive Evaluation (DICONDE) and Hierarchical Data Format version 5 (HDF5). As the basic information has been collected, this group will choose next year what to do going forward.
- Sub-group P1 – Common Terminology was led by Professor Dr Nathan Ida. The group is currently on hold after publishing a Wikipedia article on NDE 4.0.
- Sub-group P2 – Knowledge Exchange Channel (Publications, Platform and Forum) is led by Mr Ramón Fernández Orozco and Dr Serge Dos Santos.
- Sub-group P3 – Guideline for Roadmap/Application on NDE 4.0 is led by Dr Ripi Singh and Mr Ramón Fernández Orozco and has produced a guideline on how to create a roadmap for NDE 4.0. This document was forwarded to the leaders of WG3 on 12 April 2022 with the intention of presenting it to the ICNDT Board of Directors (BoD). Unfortunately, no feedback has been provided to the SIG to date.
- Sub-group H1 is a collaboration with SIG Reliability and is led by Professor Dr Norbert Meyendorf.
- Sub-group H2 – Ethics, Diversity, Equality and Inclusion is put on hold for the moment.
- Sub-group H3 – Certification was proposed by the Australian Institute for Non-Destructive Testing (AINDT), discussed by the SIG and put on hold for the moment.

The **Specialist International Group on NDT Reliability** (with three sub-groups: Standardisation, Human Factors and NDE 4.0), currently led by Dr Daniel Kanzler, serves as a platform for addressing questions related to reliability. The NDT Reliability SIG has two sub-groups:

- The NDE 4.0 sub-group, led by Professor Dr Norbert Meyendorf, which seeks to build bridges between the reliability field and the NDE 4.0 field. In regular meetings, common topics are discussed with the experts in both fields.
- The Human Factors sub-group, led by Dr Marija Bertovic and Dr Abdeldjalil Bennecer, which meets monthly to work on and discuss the progress of the Human Factors Guidance Document. Furthermore, the sub-group is reviewing existing guidance documents and sharing experiences and information on existing and future projects related to human factors, occasionally inviting someone to present their work.

An important objective of the SIG in 2024 has been ‘promoting the topic of reliability and its importance throughout industry and creating awareness on the topic to users of NDT/structural health monitoring (SHM) through international events’, with mixed results:

- 27-31 May 2024: 20th World Conference on Non-Destructive Testing in Incheon, South Korea – regrettably NDT Reliability was almost invisible, indicating the lack of papers submitted.
- 6-8 May 2024: DGZfP Annual Meeting 2024 with the Application Award going to a reliability topic: ‘An industry-suited NDE 4.0 approach – Validation of automated ultrasonic testing application using POD on the production floor’.
- 24-28 June 2024: ASNT Research Symposium 2024 in Pittsburgh, Pennsylvania, USA – strong representation in the field of reliability.

Looking forward, the SIG will work through ICNDT Working Group 3 and offer support to conference organisers, including PANNDT 2025, the 14th ECNDT, APCNDT 2026 and the 21st WCNDT, in an endeavour to promote the visibility of NDT Reliability through specialist sessions, keynotes and workshops.

Several standards are currently in progress in collaboration with the ICNDT SIG:

- German standard DIN 19293 ‘Non-destructive testing – Evaluation of testing data – Guideline to estimate the reliability of applications’

- A general standard for reliability
- Includes new topics such as synthetic data and with a connection to the AI-law
- Developed from a wide field of experts (aviation, railway, industries, etc)
- Presented and discussed at different events in ICNDT meetings and regular NDT meetings;
- Automotive standard VDA 239-170:2025 ‘Process capability for NDE application in automotive’; and
- Improvement of the European standard EN 16991 ‘Risk-based inspection framework’.

CEN/TC 138 ‘Non-destructive testing’ is considering an update and change from technical report (TR) to technical specification (TS) of CEN/TR 14748 ‘Methodology for the qualification of NDT’. If the work item is accepted, a WG will be established. The SIG will seek to participate through its links with EFNDT.

The **Specialist International Group on Terahertz (THz)** is led by Dr Mira Naftaly and supported by the British Institute of Non-Destructive Testing (BINDT). This group was established in 2021 to promote and advance techniques utilising THz technologies to inspect components, materials and structures and to recommend standardisation and best practice as appropriate. Currently, the group has *circa* 60 members from academia and industry, including major equipment manufacturers and end-users. In 2022, the group published a promotional leaflet, titled: ‘Terahertz technologies for non-destructive testing and condition monitoring’, listing the capabilities and applications of terahertz measurements, followed in 2023 with the publication of a second leaflet, titled: ‘Terahertz technologies for specific applications’, listing the capabilities of various THz technologies and their applicability to particular applications. These leaflets can be downloaded from the ICNDT website through the links given at: <https://www.icndt.org/ICNDT-Activities/TerahertzUsers>. An item about the group’s activities was published in the September 2023 issue of *NDT News*, which is produced by BINDT and circulated to its membership. A plenary talk introducing THz to an audience of NDT professionals was presented at the 60th Annual British Conference on NDT (NDT 2023), organised by BINDT. In 2024, the group focused on producing three application notes for specific use-cases, due to be published in 2025, and on promoting THz via presentations and professional social media (for example LinkedIn).

The **Specialist International Group on Full Matrix Capture (FMC)** is led by Professor Paul Wilcox and supported by BINDT. The group currently has 68 members, with over half from outside the UK. Typical meeting attendance is 20-25.

The group aims to hold two to three online meetings per year. The last meeting was 1 August 2024, the minutes of which are available on the BINDT website. This meeting included a talk by Larissa Fradkin on ‘FMC and explainable AI for damage characterisation’. The next meeting will be held early 2025.

Ongoing work on the EPRI ‘UT Data Common File Format initiative’ involves various members of the FMC Group, which now has four sub-groups that meet to discuss various aspects of the file format (data structures, transducer information, trajectory information and other information).

The **Specialist International Group on Non-linear Ultrasound for NDT** (Non-linear UT) is led by Dr Serge Dos Santos (Institut National des Sciences Appliquées (INSA) de Centre Val de Loire, Blois, France) and supported by COFREND.

The group, specifically focused on non-linear ultrasonic testing (UT) for NDT, was reactivated in July 2023 during the 13th ECNDT in Lisbon, Portugal, and brings together 14 current active experts and researchers working in this specific field, thus promoting knowledge exchange and collaborations. This SIG focuses on the promotion of new non-linear ultrasonic techniques and methods suitable for NDT, taking advantage of recent advances in the field. Through the combination of skills and resources, the group will improve the sensitivity and accuracy of flaw detection and characterisation techniques. Moreover, it contributes to the standardisation of NDT procedures based on non-linear UT, to facilitate their adoption in the industry. Finally, the group will also serve as a platform for training and education, sharing knowledge and best practices with the new generation of worldwide NDT professionals interested in the subject.

The objective of this SIG is to assess the relevance of developing new NDT methods using non-linear ultrasonics. NDT is constantly evolving and the utilisation of non-linear UT opens new perspectives for the detection and evaluation of defects in various materials. The project consists in forming a task group that will delve deep into the potential benefits of these innovative approaches. In this context, three key areas could play a crucial role. Firstly, the role of big data (non-linear data) and the Internet of Things (IoT) is paramount, as it would enable the collection and analysis of vast amounts of data (annotation in connection with DICONDE and HDF5 formats). This sub-group is actively looking for a Chair and is temporarily chaired by Dr Dos Santos. Secondly, the integration of artificial intelligence (AI) could

aid in extracting meaningful patterns and trends from the gathered non-linear data. This sub-group is active, with Dr Lukasz Pieczonka and Dr Marc Rebillat being the first two members to accept the opportunity to share some ideas and actions within the subject. Thirdly, a strategic sub-group related to fine metrology associated with measuring non-linearities in noise is essential in ensuring precise and reproducible measurements. This active sub-group is chaired by Professor Yoshikazu Ohara and Professor Kyung Young Jhang. A preliminary introduction was presented during the 20th WCNDT in Incheon, South Korea, and the slides can be found here: www.icndt.org/Limited/upload/Minutes%20SIG%20Nonlinear-UT%20Kick-off%20meeting%2011%20April%202024%20-V4.pdf

During 2024, the formation of sub-groups constituted the main goal of the initial Action Plan. A preliminary meeting was held with COFREND members on 13 November 2023. A kick-off meeting was held (online) on 12 April 2024 with Dr Dos Santos, Professor Yoshikazu Ohara, Professor Kyung Young Jhang, Dr Lukasz Pieczonka, Dr Marc Rebillat, Professor Weibin Li and Dr Lynda Chehami, where 14 active members were approved. During the 20th WCNDT, special sessions on non-linear ultrasonic (We.O.B.1, We.O.B.2, Tu.SS.L.1) were co-chaired by Professor Igor Solodov and Dr Serge Dos Santos. An exhaustive list of the 34 papers accepted and presented during the 20th WCNDT, including the 'non-linear' keyword have been identified (https://www.20thwcndt.com/programs/20thWCNDT_PreliminaryProgram_042624.pdf). It was suggested that members of the Non-linear UT SIG attending these presentations at WCNDT could propose short feedback during future meetings. Furthermore, during the 20th WCNDT, in Incheon, South Korea, the first (in-person) meeting was held on 30 May 2024, where seven members were present and approved as members of the Non-Linear UT SIG. The 20th WCNDT demonstrated the great interest in using non-linear UT, as evidenced by three dedicated non-linear UT sessions as well as multiple additional talks (approximately 20) with a non-linear focus. Common themes included material characterisation, second harmonic generation, non-linear vibration and measurement techniques. This conference provided an excellent opportunity for specialists to discuss state-of-the-art applications and trends. In conclusion, future plans for the SIG, including discussing developments related to non-linear tools for NDT companies and organisations, training for advisors, supervisors, sharing updates, highlighting good and bad practices, sharing learning from events discussing current papers and guidance and identifying improvements were proposed. All members of the SIG are invited to share minutes of the meetings to their respective national NDT societies and communicate about future actions.

The next pragmatic actions for the ICNDT Non-linear UT SIG are to prepare special sessions for PANNDT 2025, the 14th ECNDT and the 21st WCNDT.

The **Specialist International Group on Guided Wave Ultrasound Applications** is led by Professor Younho Cho. It held a meeting on 29 May during the 20th WCNDT designed to showcase the evolution of guided wave technology in addressing complex inspection challenges, providing new insights and potential applications across industries.

The focus was on three topics:

- 'Ultrasonic guided wave-based damage detection system for heat exchanger tubes in offshore structures'

Jeongnam Kim, Korea Institute of Machinery & Materials (KIMM)

The system was designed to address the challenges of inspecting narrow spaces and complex geometries in underwater environments. The experimental results demonstrated the system's capability to accurately detect corrosion and other defects, even in tightly spaced tube bundles.

- 'Enhancing ultrasonic guided wave inspection of marine coatings through artificial intelligence'

Jiannan Zhang, School of Mechanical Engineering, Pusan National University

The presentation focused on improving the inspection of bonding quality in underwater environments. The AI system developed demonstrated a high accuracy rate in identifying bonding defects, offering a promising solution for large-scale inspections in harsh marine environments.

- 'Quasi-static component generation of guided waves and its applications on damage detection'

Jinshan Wen, School of Aerospace Engineering, Xiamen University, Xiamen 361102, China

The study highlighted the effectiveness of quasi-static component (QSC) generation in detecting localised damage, particularly in tubular structures subjected to harsh operating conditions and indicated that it could significantly enhance the sensitivity and accuracy of damage localisation in aerospace applications, making it a valuable tool for ensuring the safety of critical structures.

The findings not only demonstrate the current capabilities of guided wave technology but also pave the way for future innovations that can further improve safety and efficiency in various sectors.

The **Specialist International Group on NDT of Art and Cultural Heritage** is led by Dr Roman Maev, with two Secretaries: Mr Ed Cabral, who is responsible for Great Britain and North, South, Central and Latin America and the Caribbean; and Dr York Oberdorfer, who is responsible for Europe, Asia, Africa and Australia.

Following on from involvement in three events in 2022 and 2023, namely the Third International Workshop: 'Analysing Art: New Technologies – New Applications', which took place in Florence, Italy, in April 2022, the 'NDT of Art and Culture Heritage' Special Session at the 13th ECNDT, which took place in Lisbon, Portugal, in July 2023 and 'NDT in Art'23', which took place in Brescia, Italy, in November 2023, planning has begun in 2024 for a special session at PANNDT 2025, which is taking place in Canada in June 2025. The programme for this session is currently under development and will be finalised sometime in March 2025.

Another important event being planned for 2025 will be the Fourth International Workshop: 'Analysing Art: New Technologies – New Applications', which is scheduled to take place in Antwerp, Belgium, from 18-21 May 2025. The ICNDT Specialist International Group on NDT of Art and Cultural Heritage is responsible for this regular and successful event, together with BINDT. The ICNDT logo will be displayed on the banners and flyers of this event. The programme for this three-day workshop is currently under development and will be finalised in February 2025.

The **Specialist International Group NDT of Civil Engineering** (NDT-CE) led by Dr César Belinco, has held five virtual meetings since its creation in July 2023 and a hybrid meeting during the 20th WCNDT in Incheon, South Korea, in 2024. During these meetings, three sub-groups with different scopes were created (see: <https://icndt.org/ICNDT-Activities/NDT-of-Civil-Engineering>).

The Chairs of the sub-groups have worked to design preliminary work plans:

SG 1: NDT-CE Standardisation

SG 1 intends to promote knowledge exchange between specialists on emerging NDT-CE standardisation, to build an international basic model for training and certification standards on the main NDT methods used in civil engineering.

SG 1 will produce and edit leaflets on emerging NDT-CE standardisation, written by appointed experts, approved by at least two-thirds of the SG members and the SIG and approved and published by ICNDT.

SG 1 wants to involve experts from NDT companies from all countries in the world that apply NDT techniques and train NDT staff in their own nationalities and abroad. An open call is to be issued.

SG 2: NDT-CE Applications

The aim is to know, gather and analyse all possible applications of NDT methods in civil structures. The group will be of service to the sector for the correct application of testing methods, emphasising what is right and wrong in the application of each method. Actions will be proposed in different construction phases: project, quality control, research, maintenance, analysis of defective structures and others.

Plans: the group is discussing how to organise itself and its actions. The scope is divided in four areas of application: maintenance and safety assessment (including interventions pre- and post disaster); quality control for new construction or refurbishment projects; analysis of pathological behaviour; and cultural heritage.

SG 3: Emerging Techniques

SG 3 intends to promote knowledge exchange between specialists on emerging NDT-CE technologies, to foster international collaboration for improvement towards practical application and to provide objective information about potential and limitations to the NDT community and potential users.

SG 3 will produce and edit leaflets on emerging NDT-CE techniques, written by appointed experts, approved by at least two-thirds of the SG members and the SIG and approved and published by ICNDT.

The **ICNDT Specialist International Group 'NDT Frontiers'** was established in September 2023. The original initiative to create this new SIG came from the three founders: Dr Roman Maev (Canadian Institute for Non-Destructive Evaluation (CINDE)), Dr Shant Kenderian (ASNT, USA) and Mr David Gilbert (BINDT, UK). After careful review and some additional suggestions, this initiative was fully supported by Dr Sajeesh Babu and Dr Mike Farley. They also suggested that Dr Maev (Canada) should be the Chair of the new group and the new SIG should comprise about 20

members representing various active national societies, with the goal of arranging the first in-person ‘kick-off’ SIG meeting (session) at the 20th WCNDT in Incheon, South Korea, in May 2024. It was also agreed that, after the first physical meeting of the SIG at the 20th WCNDT, further ICNDT SIG meetings will be held within the programmes of PANNDT 2025, the 14th ECNDT and APCNDT 2026.

The NDT Frontiers SIG (led by SIG Chair Professor Dr Roman Maev, with the strong support of SIG Secretaries: Mr Ed Cabral and Dr York Oberdorfer) prepared a special session for Monday 27 May 2024 at the 20th WCNDT, with a very impressive programme and the involvement of globally recognised leading NDT experts. The opening included an introduction by Dr Maev, along with welcome notes from Dr Babu, Dr Farley, Mr Gilbert and Professor Younho Cho, WCNDT 2024 President. Invited lectures: Dr Shant Kenderian, USA, ‘At the threshold of new frontiers in NDT’; Dr Marc Kreutzbruck, Germany, ‘Robotics and AI – Key technologies for fully automated NDT’; Dr Jianmin Qu, USA, ‘Quantitative non-destructive evaluation in the age of artificial intelligence’; Mr David Gilbert, UK, ‘Development of engineering talent for the next generation of inspection technology’; and Mr Etienne Martin and Mr Pierre Calmon, France, ‘Present and future challenges for NDT in the nuclear industry’.

The programme for this session included two panel discussions:

The first panel discussion was titled: ‘Rethinking requirements for NDT education and training’. The Moderator was Mr David Gilbert with Mr Ed Cabral as Secretary. The panellists were: Dr Sajeesh Babu (Singapore); Dr Shant Kenderian (USA), Mr Glenn Tubrett (Canada); Dr Krishnan Balasubramanian (India); Dr Manfred Johannes (South Africa), Dr Roman Maev; and Mr Etienne Martin (France). The second panel discussion was titled: ‘The impact of standardisation: standards and metrology on innovation’. This discussion was co-moderated by Dr Tomoki Shiotani (Japan) and Mr Etienne Martin (France), with Dr York Oberdorfer as Secretary. The panellists were: Dr Thomas Heckel (Germany), Mr Danny Keck (USA); Dr Gongtian Shen (China); and Dr Benoit Dupont (France).

Closing remarks were presented by Dr Roman Maev.

Notably, at the 20th WCNDT Opening Ceremony, Dr Maev, ICNDT SIG Chair, received the Sokolov Award for his major contributions to NDT research. The next action for the NDT Frontiers SIG is preparing a special session for PANNDT 2025, taking place in Canada in June 2025. The programme of this session is currently under development and will be finalised in March 2025.

The **Specialist International Group on Magnetic Memory Method (MMM)** has been operating since 2018. It is led by Dr Peter Ladányi as Chair and supported by the Hungarian Association for Non-Destructive Testing (MAROVISZ).

The fourth meeting of the ICNDT SIG MMM was held on 30 May 2024 during the 20th WCNDT in Incheon, South Korea. The meeting was attended by 21 specialists from nine countries: Argentina, Brazil, Canada, China, Czech Republic, Hungary, Korea, Malaysia and Russia.

At the meeting, reports were delivered on the following topics:

- The work of the ICNDT SIG MMM for 2018-2023;
- Work plan of the ICNDT SIG MMM for 2024-2025;
- How MMM can be integrated with other pipeline integrity technologies; and
- Advances in MMM using drones and augmented reality.

As of January 2024, the MMM method had spread to 47 countries across the world. The ICNDT SIG MMM continued to work actively in accordance with the work plan for 2024-2025, including the following activities:

1. Participation in the exhibition and the 20th WCNDT, Incheon, South Korea, 27-31 May 2024.
2. Participation in national and international conferences on non-destructive testing with reports on the experience of the MMM method application in technical diagnostics of equipment and structures, in particular:
 - 11th international industrial forum ‘NDT Territory’, Moscow, Russia, 15-17 April 2024.
 - 3rd World Congress on Condition Monitoring (3rd WCCM), Beijing, China, 15-18 October 2024.
 - 24th international exhibition ‘NDT Russia’, Moscow, Russia, 22-24 October 2024.
 - 34th Annual Conference & Exhibition on Non-Destructive Evaluation & Enabling Technologies (NDE 2024), Chennai, India, 12-14 December 2024.

- 12th international industrial forum 'NDT Territory', Moscow, Russia, 14-16 April 2025.
 - At the ICNDT SIG MMM meeting, it was proposed to discuss with MSNT the possibility of holding the fourth international conference on the MMM method in Malaysia.
3. Promotion and coordination of experimental studies of the physical and mechanical properties of metals using the MMM method.
 4. NDT personnel training and certification in the MMM method in Russia, Kazakhstan, China, Malaysia, India, Moldova, Croatia, Azerbaijan and other countries.
 5. Publication of articles in national and international scientific and technical journals, including *Welding in the World* and *Insight*.
 6. Further development of the non-contact method and development of procedures for inspection of various equipment. At the ICNDT SIG MMM meeting, a resolution was adopted to develop ICNDT recommendations for the application of non-contact magnetometric inspection of buried pipelines based on the metal magnetic memory method.

Working Group 4 (Communications)

ICNDT Working Group 4 (WG4) (Chair: Mr Shohei Ooka from JSNDI has been working on the ICNDT Strategic Plan and the Action Plan, titled: 'Promotion of the importance of non-destructive testing (NDT)'. WG4 was established to promote ICNDT activities and disseminate information to national NDT societies around the world, other NDT-related organisations, regional federations and corporations involved with NDT. WG4 activities include, but are not limited to, ICNDT website updates, journals, etc. WG4 held three hybrid meetings in 2024 on 28 May (Incheon, South Korea), 4 September (Telford, UK) and 23 October (Las Vegas, Nevada, USA).



Along with new WG4 members, a very fruitful discussion was had, with great progress made regarding ongoing items in the ICNDT Strategic Plan, including the *ICNDT Journal*, ICNDT website and ICNDT membership system. The *ICNDT Journal*, with a new editorial team supported by JSNDI, was published twice, Issue 12 of Volume 9 in March 2024 and Issue 13 in August 2024. The activities and the aims are to publish the journal in the original cycle of three times a year.

The ICNDT website was progressed, with more information added on ICNDT Specialist International Groups and other pages.

The ICNDT membership system was maintained and developed further this year to provide more systematic and effective communications, with a streamlined approach for members and users regarding the ICNDT online system.

As a new endeavour, WG4 is currently considering developing the ICNDT library on the ICNDT website.

WG4 will keep working on the promotion of the importance of NDT.

Working Group 5 (Radiation Protection and Safety)

A hybrid meeting of the IAEA Working Group on the Information System on Occupational Exposure in Medicine, Industry and Research: Industrial Radiography (ISEMIR-IR) was held 2-4 April 2024, the main objectives of which were to:

- Review the activities of ISEMIR-IR in 2023;
- Discuss the 2023 ISEMIR-IR annual report;
- Review the summary of the results of the global survey on ISEMIR-IR in 2023;
- Discuss the upgrade of the ISEMIR-IR system;
- Propose and discuss methodology and a work plan for ISEMIR-IR in 2024; and
- Discuss the experience from operation of the ISEMIR-IR system in the testing environment.

The methodology and results of the third ISEMIR-IR global survey were discussed.

In summary:

- A majority of regulatory bodies (RBs) recognise the advantage of the free information system for NDT companies.
- Almost two-thirds of the responding NDT companies are interested in the free software provided by the IAEA.
- Most of the responding RBs and NDT companies are willing to share information with the IAEA through ISEMIR-IR.
- About 50% of the companies would like the IAEA to create an ISEMIR-IR account for them.
- Most of the responding NDT companies still use hard copy for their registrations.
- For most companies, registrations include individual dose, source details, accidents/incidents, number of radiographers and training records.
- RBs and NDT companies are willing to work with IAEA to provide input data to the ISEMIR-IR system.

A meeting of WG5 was held alongside the 20th WCNDT in South Korea. ISEMIR is an important part of the activities, but it is not the only subject covered in the EFNDT WG, which also includes personnel who are not involved in the ISEMIR WG. More members are invited and if anyone is interested in joining the WG they should contact Mr David Gilbert.

Working Group 6 (Condition Monitoring and Technical Diagnostics)

There were no meetings of Working Group 6 in 2024. Mr Simon Mills from BINDT has now taken on the role of Chair of this WG. Member societies are encouraged to nominate experts in the area to join the group.

Chair's Activities

Dr Sajeesh Babu, Chair of ICNDT, has played a pivotal role in advancing the organisation's mission and strengthening its global presence through a range of significant activities and engagements throughout 2024. His steadfast commitment to the non-destructive testing community is reflected in his dynamic leadership and strategic contributions:

ICNDT Annual Meeting and IEC Leadership

- Chaired the ICNDT Annual Meeting on 25 January 2024 in Glasgow, UK, held in conjunction with the BINDT Scottish Branch meetings.
- Led six IEC meetings, driving key discussions on ICNDT's strategic priorities and operational plans.

Working Group 1 (WG1) contributions

- Co-chaired the WG1 meeting during the 20th WCNDT with Dr Mike Farley, formulating a comprehensive four-year strategic plan for the working group.
- Oversaw the election of Mr Bento Ottone Alves as the new WG1 Chair and conducted an induction programme to ensure seamless leadership transition.

Preparations for the 20th WCNDT

- Dedicated substantial effort to *ad hoc* meetings with KSNT, the host society for the 20th WCNDT, ensuring meticulous preparation for this landmark event.
- Provided critical guidance on the implications of European sanctions on Russia's participation, enabling informed, strategic decisions.
- Actively observed and contributed to ICEC and WG4 meetings, offering expert advice and reinforcing ICNDT's influence in global NDT advancements. Provided an induction for Mr David Bajula, incoming Chair of WG2.

Representation at International Forums

Dr Babu's presence at key international events has elevated ICNDT's global profile and fostered meaningful collaborations:

- BINDT Scottish Branch Seminar (January 2024): presented a paper during the ICNDT Annual Meeting.
- 20th WCNDT (May 2024): delivered opening remarks, actively participated in ICNDT and APFNDT meetings and was re-elected as ICNDT Chair for another four-year term.
- 7th Malaysia International NDT Conference and Exhibition (7th MINDTCE): presented a keynote on NDE 4.0 applications in the storage and energy sectors.

- IAEA SSG-11 Revision Working Group (Vienna, Austria): contributed to the revision of international safety standards.
- 1st Formosa Conference on Non-Destructive Testing (FCNDT 2024) (Taiwan): delivered a keynote speech and inspired students through university engagements, promoting the importance of NDT.
- Saudi Aramco Quality Forum: presented on global trends in NDE 4.0, digital technology and AI.
- ASNT Annual Conference: participated in strategic discussions to advance ICNDT’s goals.
- NDE 2024 (Chennai, India): delivered the opening address, presented a keynote speech and contributed to two panel discussions, promoting innovation and collaboration in NDT.

Note from Dr Mike Farley, Past Chairman

ICNDT members and the NDT community as a whole owe a huge debt of gratitude to Dr Sajeesh Babu, ICNDT Chair, for his immense contribution to promoting the mission of ICNDT during an exceptionally busy year. His efforts have been instrumental in strengthening ICNDT’s global influence and fostering meaningful partnerships within the NDT community.

ICNDT Officers and Chairs 2024

The 2023 Officers and Chairs were in post until the elections at the 20th WCNDT on 25 May 2024 when the new office holders took over.

	January to 25 May 2024	25 May 2024 onwards
ICNDT Chair	Dr Sajeesh K Babu (Singapore)	Dr Sajeesh K Babu (Singapore)
ICNDT Past Chair	Dr Mike Farley (UK)	Dr Mike Farley (UK)
ICNDT General Secretary	Mr David Gilbert (UK)	Mr David Gilbert (UK)
World Conference President	Professor Younho Cho (Korea)	Dr César Belinco (Argentina)
NDT Society to provide Secretariat	The British Institute of NDT (UK)	The British Institute of NDT (UK)
Treasurer	Mr Gerhard Aufricht (Austria)	Dr Casper Wassink (Netherlands) (phased handover)
Auditors	Mr Douglas J Marshall (Canada) and Dr Werner Schmid (Switzerland)	Mr Douglas J Marshall (Canada) and Dr Werner Schmid (Switzerland)
Chair – ICNDT Certification Executive Committee	Mr Harold Jansen (South Africa)	Mr Harold Jansen (South Africa)
Chair WG1 – Qualification and Certification	Mr Alexander Mullin (Russia) until July 2023, then Dr Sajeesh K Babu and Dr Mike Farley acted as Co-Chairs	Mr Bento Ottone Alves (Portugal)
Chair WG2 – Membership	Mr João Conte (Brazil)	Mr David Bajula (USA)
Co-Chairs WG3 – Research and Education	Professor Younho Cho (Korea) and Dr Thomas Wenzel (Germany)	Professor Younho Cho (Korea) and Dr Thomas Wenzel (Germany)
Chair WG4 – Communications	Mr Shohei Ooka (Japan)	Mr Shohei Ooka (Japan)
Co-Chairs WG5 – Radiation Protection and Safety	Mr David Gilbert (UK)	Mr David Gilbert (UK)
Co-Chairs WG6 – CM and Technical Diagnostics	Professor Len Gelman (UK) and Dr César Belinco (Argentina)	Mr Simon Mills (UK)
Chair WG7 – Administration	Dr Mike Farley (UK)	Dr Mike Farley (UK)

Regional Group Representatives

Africa	Dr Kamal Sahaimi
	Mr Harold Jansen
Asia-Pacific	Dr Takamasa Ogata
	Professor Krishnan Balasubramaniam
Europe	Mr Fermín Gómez Fraile
	Mr Ezio Tuberosa
Pan-America	Mr Glenn Tubrett
	Mr David Bajula

Strategic Planning and Organisation

At GA 1, Dr Sajeesh Babu reviewed the activities of ICNDT *versus* the previous Strategic Plan and explained that the new plan for the next four years would be finalised after the General Assembly meetings, taking into account the discussions at these and those in the various ICNDT Working Groups and Committees that were happening in parallel with the conference. Subsequently, at the meeting of the IEC on 21 October 2024, Dr Babu confirmed the finalised plan as v12 and asked for this to be posted on the website. There will be a workshop on the plan during 2025.

Changes to the Constitution and Operating Procedures

There have been no changes to the constitution during 2024.

Operating Procedure OP19 Rev 6 (ICNDT MRA) was approved at GA1. Mr Colin Bird highlighted the following changes:

- Procedure to allow for remote audits when there is an internationally recognised situation (and not just because an organisation prefers it).
- Clarification of the use of the ICNDT Certification Executive Committee and ICNDT logos to specifically state that the ICEC logo can only be used by Schedule 2 members.
- Qualification of auditors – auditors should be certified as an NDT Level 3, have previous NDT Level 3 qualifications or be equally technically competent.

There was discussion at GA 2 about other operating procedures that need improvement/revision and WG7 Administration has included this work in the Strategic Plan v12.

APFNDT (Asia-Pacific)

APFNDT Membership

Regarding the Asia-Pacific Federation for Non-Destructive Testing’s membership and organisation status, the current members and regional representatives are as follows. To see other regularly updated information for the Asia-Pacific region, visit: www.apfndt.org

Full Member Societies (17 members)	The American Society for Nondestructive Testing (ASNT)
	The Australian Institute for Non-Destructive Testing (AINDT)
	The Bangladesh Society for Non-Destructive Testing (BSNDT)
	The Canadian Institute for Non-Destructive Evaluation (CINDE)
	The Chinese Society for Nondestructive Testing (ChSNDT)
	The Indian Society for Non-Destructive Testing (ISNT)
	The Iranian Society for Nondestructive Testing (IRNDT)
	The Japanese Society for Non-Destructive Inspection (JSNDI)
	The Korean Society for Nondestructive Testing (KSNT)
	The Malaysian Society for Non-Destructive Testing (MSNT)
	The Mongolian Society for Non-Destructive Testing (MSNDT)
	The New Zealand Non-Destructive Testing Association (NZNDTA)
	The Non-Destructive Testing Society (Singapore) (NDTSS)
	The Philippine Society for Nondestructive Testing Inc (PSNT)
	The Russian Society for Non-Destructive Testing and Technical Diagnostics (RSNTTD)
	The Society for Nondestructive Testing and Certification of Taiwan (SNTCT)
	Vietnam Association for Non-Destructive Testing (VANDT)
Potential Member Societies (7 members)	Azerbaijan Society for Non-Destructive Testing (AZNDT)
	Indonesian Society for Non-Destructive Testing (AUTRI)
	Kazakhstan Association of Flaw Detection (KAOFD)
	Myanmar (Society under formation)
	Pakistan Society for Non-Destructive Testing (PASNT)
	Society for Non-Destructive Testing, Sri Lanka (SNDT)
	Thai Society for Non-Destructive Testing (TSNT)
Regional Group One	Western Asia, Central Asia, South Asia
Regional Group Two	East Asia, Southeast Asia
Regional Group Three	Pacific, Oceania

APFNDT Executive Committee (AEC)

President	Dr Takamasa Ogata (JSNDI)
Vice President	Professor Krishnan Balasubramaniam (ISNT)
Past President	Dr Norikazu Ooka (JSNDI)
General Secretary	Mr Paulchamy Pugalendhi (NDTSS)
Treasurer	Mr Kevin Smith (ASNT)
President of the 17th Asia-Pacific Conference on Non-Destructive Testing (APCNDT 2026)	Mr Danny Keck (ASNT)

Auditor	Dr Sajeesh K Babu (NDTSS)
Secretariat Representative	Mr Shohei Ooka (JSNDI)

APFNDT Board Members

Regional Representative: Group One (Western Asia, Central Asia, South Asia)	Mr Diwakar D Joshi (ISNT)
	Mr Alexander Mullin (RSNTTD)
Regional Representative: Group Two (East Asia, Southeast Asia)	Dr Ji Jingyuan (ChSNDT)
	Professor Ik-Keun Park (KSNT)
	Dr Ilham Mukriz Zainal Abidin (MSNT)
	Professor Chih-Hung Chiang (SNTCT)
Regional Representative: Group Three (Pacific, Oceania)	Mr Neal Couture (ASNT)
	Mr Pranay Wadyalkar (AINDT)

APFNDT Task Groups

The following seven task groups (TGs) were established in order to carry out specific activities. As per APFNDT official documentation, TGs may be organised by the Board on a short-term or permanent basis. The current TGs are as follows:

TG1 Membership	Mr Kevin Smith (ASNT)
TG2 APFNDT Journal	Professor Jung-Ryul Lee (KSNT)
TG3 Communications	Mr Shohei Ooka (JSNDI)
TG4 Education and Training	Dr B Venkatraman (ISNT)
TG5 Certification	Mr Paul Grosser (AINDT)
TG6 Standards	Dr Makoto Ochiai (JSNDI)
TG7 NDE 4.0	Mr Pranay Wadyalkar (AINDT)

Current and Future Activities

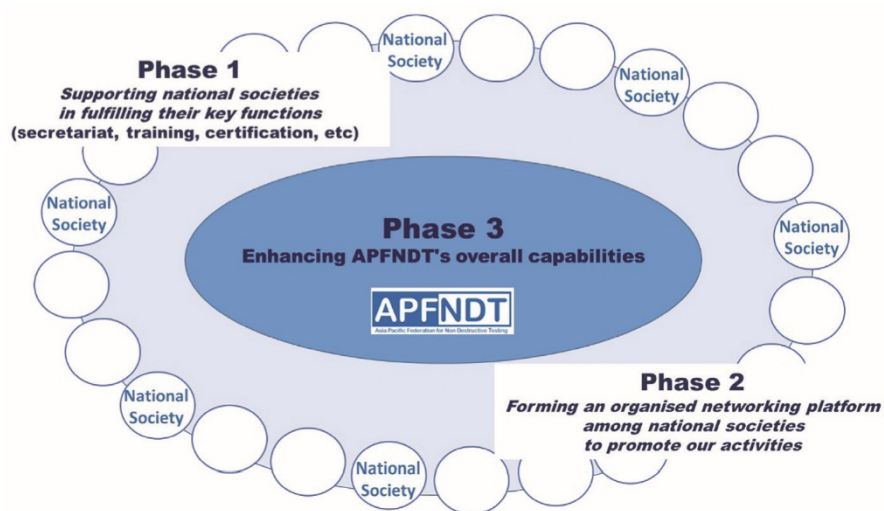
APFNDT meetings

- In 2024, APFNDT AEC meetings were held a total of three times with the following schedule:
 - Online on 16 April 2024
 - Face-to-face during the 20th WCNDT in Incheon South Korea, on 29 May 2024
 - Face-to-face during FCNDT 2024 in Tainan, Taiwan, on 4 October 2024.
- The APFNDT Board Meeting (ABM) was held during NDE 2024 in Chennai, India, on 12 December 2024.
- During the 7th MINDTCE in Malaysia, 20-21 August 2024, Dr Takamasa Ogata, President of APFNDT, delivered a speech on the activities of APFNDT. After the speech, certificates of appreciation from APFNDT were presented to individuals who have contributed to the advancement of non-destructive testing technology in Malaysia.
- Certificates of appreciation from APFNDT were also presented during FCNDT 2024 in Tainan, Taiwan, and NDE 2024 in Chennai, India.
- The next APCNDT is scheduled to be held in Hawaii, USA, from 11 to 14 May 2026 and will be hosted by ASNT. The following APCNDT is scheduled to be held in Kuala Lumpur, Malaysia, from 12 to 16 November 2029.
- In February 2024, the APFNDT website was relaunched with a more user-friendly design than the previous version, making it easier for visitors to find the content they need.

Future plans for APFNDT

Since the APFNDT's establishment in 2013, the primary focus has been on building the overall structure of the Federation. This includes activities such as drafting official documentation, for example the Constitution and Operating Procedures, forming TGs and maintaining communication in the region. While all of these activities have laid the foundation for APFNDT, from September 2023 the focus shifted from organisation building to a new phase of goals outlined in the diagram below:

- Phase 1: supporting APFNDT national societies in fulfilling their key functions;
- Phase 2: forming an organised networking platform among APFNDT national societies to promote activities; and
- Phase 3: enhancing APFNDT's overall capabilities.



To achieve the above, the secretariat function of all APFNDT member societies must first be strengthened, because this is one of the most important functions in the development of a society. In order for each NDT society to operate more smoothly, communication and exchange of information between the respective secretariats is important. Therefore, the APFNDT Board will undertake activities to improve the secretarial functions of APFNDT member societies.

For the next step:

- Online consultation with the secretariats of APFNDT member societies, led by the APFNDT Secretariat and the Secretariat of the Volunteer Association.

In the future:

- Secretariat exchange workshop; lectures and seminars by experts on topics such as non-profit organisation (NPO) studies or NPO management; and organisation of a conference-style event for secretariats to exchange information.
- Based on the plans outlined last year, an information exchange meeting was held with the participation of the management teams of MSNT, SNTCT and ISNT, respectively. The meeting mainly focused on exchanging information on each other's academic, educational and accreditation activities. It is planned to continue the exchange of information with APFNDT member societies in the future.

AFNDT (Africa)

Membership

President	Dr Kamal Sahaimi (Centre National de l'Energie, des Sciences et des Techniques Nucléaires, Morocco)
Secretariat	Mr Harold Jansen (Southern African Institute of Welding (SAIW), South Africa)
Founding Members	Algeria, Cameroon, Democratic Republic of the Congo, Egypt, Ghana, Libya, Mauritius, South Africa, Tanzania, Tunisia, Zambia
ICNDT Membership (Active)	Egypt, South Africa
Signatories to Current Constitution (2014)	Algeria, Angola, Cameroon, Egypt, Ethiopia, Ghana, Kenya, Libya, Mauritius, Morocco, Nigeria, South Africa, Sudan, Tunisia, Uganda, Zambia, Zimbabwe
Country (Active) Representation	Cameroon, Kenya, Morocco, Nigeria, South Africa, Sudan, Tunisia <i>There are 54 countries that are potential members</i>
Sub-regions	North Africa: Algeria, Egypt, Libya, Morocco, Mauritania, Tunisia
	East Africa: Burundi, Djibouti, Eritrea, Ethiopia, Kenya, Rwanda, Somalia, South Sudan, Sudan, Uganda
	Central Africa: Cameroon, the Central African Republic, Chad, Democratic Republic of the Congo, Equatorial Guinea, Gabon, São Tomé and Príncipe
	West Africa: Benin, Burkina Faso, Cape Verde, Gambia, Ghana, Guinea, Guinea-Bissau, Ivory Coast, Liberia, Mali, Niger, Nigeria, Senegal, Sierra Leone, Togo
	Southern Africa: Angola, Botswana, Eswatini, Lesotho, Madagascar, Malawi, Mali, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Tanzania, Union of Comoros, Zambia, Zimbabwe

Meetings

The African Federation of Non-Destructive Testing last met in 2022, with nine participants from Cameroon, Morocco, Nigeria, South Africa and Sudan.

Outcomes

- Final draft constitution is pending adoption
- AFNDT 'renewal'/rejuvenation agreement
- Participation agreement
- Membership and communication: 54 countries; establish communication channels.

Outstanding

- Operating procedures: June 2022
- AGM and election of dignitaries/representatives: July 2022
- Action Plan, activities and website: July 2022 – ongoing activities.

African Regional Cooperative Agreement for Research, Development and Training Related to Nuclear Science and Technology (IAEA-AFRA)

- Triangular project: IAEA, Cameroon, SA – Level 3 Workshop (completed 2021)
- National project: Cameroon – Authorised Qualification Body (AQB) and PCB establishment (2023-2026).

Visits in 2023

- SAIW provided training to Malawian Fellows during 2023 as part of an IAEA-AFRA triangular project, with the intent to establish an Approved Training Body (ATB) in Malawi.
- An anticipated visit to Sudan during 2023 was cancelled due to the internal conflict that broke out in April 2023.
- Initiating discussions were held with IAEA-AFRA concerning a nine-year project to establish ATBs, AQBs and PCBs in various African countries. Five initial countries have been identified as the sub-regional leaders and the intent would be to initiate this project via triangular projects in the 2024/2025 period. Expansion into neighbouring countries shall be facilitated via these countries and through proposed triangular projects.

Website and Digital Platforms

- A formal AFNDT website is being developed and will be linked to the ICNDT website once completed and approved by the AFNDT Board.
- An AFNDT LinkedIn group has been initiated.
- A Meta (Facebook) group will be initiated.
- A database has been initiated with 63 email addresses.

Strategic Plan Objectives

- National NDT liaison/NDT societies in 54 countries.
- ICNDT MRA Schedule 1 signature.
- At least one ATB per country.
- A sustainable PCB (and AQB) per country.
- ICNDT MRA Schedule 2 registration – via National Accreditation Body or ICEC OP20 process.

EFNDT (Europe)

European Federation for Non-Destructive Testing elections were held during the 13th ECNDT, which took place from 3-7 July 2023 in Lisbon, Portugal.

Board of Directors	
President	Mr Fermín Gómez Fraile (Spain)
Vice President	Mr Ezio Tuberosa (Italy)
Treasurer	Mr René Klieber (Switzerland)
Directors	Dr Thomas Wenzel (Germany)
	Mr Frédéric Schaditzki (France)
	Mr Peter Fish (Switzerland)
	Professor Libor Topolar (Czech Republic)
	Mr Gerald Idinger (Austria)
	Mr Bento Ottone Alves (Portugal)
	Mr David Gilbert (UK)
	Professor Dr Eng Tomasz Chady (Poland)
Co-opted Members (non-voting)	
	N/A
	Mr René Klieber (Switzerland)
Ex-Officio Members (non-voting)	
General Secretary	Dr Emilio Romero (Spain)
Past President	N/A
14th ECNDT (Verona, Italy)	Professor Dr Daniele Bisi
EFNDT Certification Executive Committee (ECEC) President	Dr Thomas Wenzel (Germany)
Auditor	Dr Casper Wassink (Netherlands)

EFNDT Matters

EFNDT has redefined the ten Working Groups and three Forums and these have started their work through virtual meetings and conferences. They are as follows:

- WG1 – Education.
- WG2 – Radiation Protection and ADR.
- WG3 – Condition Monitoring.
- WG4 – Laboratory Accreditation.
- WG5 – NDT for Public Safety and Security.
- WG6 – NDT on Additive Manufacturing (two meetings).
- WG7 – Failure Analysis (Risk Analysis) (three meetings together with ICNDT SIG).
- WG8 – Human Factors.
- WG9 – Ethics (internal work with some associations).
- WG10 – NDT 4.0 (eight meetings, one conference hosted by DGZfP and an international conference planned in Spain for aerospace NDT (AEROEND 4.1)). Joint with ICNDT SIG.
- Forum for European National Aerospace NDT Boards (NANDTBs) (four meetings and development of EN 4179).

- Forum for Railway Industries.
- Forum for Marine (preparing underwater inspection specifications; contact with the International Association of Classification Societies (IACS)).
- Two new forums have been created: Forum of Civil Works and Forum of AI.
- A new WG has been created: WG EFNDT Marketing and Communication.
- WGs and Forums have been asked to work more intensively in their areas of work and to meet their objectives within EFNDT, focusing on the criteria and particularities of European sectorial markets in cooperation with ICNDT.
- EFNDT needs to know the present NDT market in Europe in order to work more efficiently in the geographical areas or sectors to improve the European NDT world and to establish the MRAs (European and ICNDT) in a better way.
- The EFNDT BoD is promoting a European Conference on Certification that will be defined and prepared during an extraordinary BoD meeting in February 2025. This conference will be held in 2026 with special invitation to ICNDT.
- Additionally, a Working Group with the European Welding Federation (EWF) has been reactivated to complete the European NDT Engineer proposal (two meetings were held in 2021).
- An agreement has also been reached with the TIC Council Confederation of Inspection and Certification Organisations to work together on WG6 and WG10 matters.

Projects and Actions

Robotics for Inspection and Maintenance (RIMA) is a four-year EU Horizon 2020 project that aims to establish a network of 13 digital innovation hubs (DIHs) on robotics, sharing best practices and providing services to facilitate the uptake of inspection and maintenance technologies. The very successful EU project RIMA Network closes after four and a half years of work towards closing the market gap. In its place, the project partners have built something greater that will work beyond the scope of the project itself, the RIMA Alliance, with the collaboration of institutions such as the European Commission, euRobotics, Adra, Sprint Robotics and the Big Data Value Association (BDVA).

EFNDT will seek a meeting with the EU Commission in order to participate in new NDT projects.

Brexit

During the EFNDT BoD meeting, the situation due to Brexit was analysed in relation to the European Pressure Equipment Directive (PED) 2014/68/EU and the new requirements of the United Kingdom Accreditation Service (UKAS) affecting how NDT personnel with certificates issued by an EU Recognised Third-Party Organisation (RTPO) can work under the UK Pressure Equipment (Safety) Regulations (PE(S)R). There have been a number of interim arrangements (which BINDT can advise on) but, following a UK government announcement in August 2023 (see: <https://www.gov.uk/government/news/uk-government-announces-extension-of-ce-mark-recognition-for-businesses>) and the completion of the parliamentary process, certificates issued by an EU RTPO are valid against the UK PE(S)R and this will remain the case in future (so long as the certificates are valid). Please refer to BINDT for information on this subject, as changes are still being made to the requirements. This essentially resolves the EU-UK problems.

Russia-Ukraine War

On 27 December 2022, Mr Alexander Mullin, formerly EFNDT Vice President and Chair of the ECEC, withdrew from these positions until the end of the Russia-Ukraine war.

EFNDT has suspended the Russia Federation of NDT until the war against Ukraine ends. As a result, the Russian Federation cannot participate in any WGs, meetings, seminars, works and conferences organised by EFNDT.

TIC Council agreement

EFNDT is seeking an agreement with the TIC Council to obtain administrative support in Brussels.

Mr Fermín Gómez Fraile
EFNDT President

PANNDT (Pan-America)

Current members of the Pan-American Federation for Nondestructive Testing are as follows:

Argentina	AAENDE	Asociación Argentina de Ensayos No Destructivos y Estructurales
Bolivia	ASBOSENDIC	Asociación Boliviana de Soldadura, Ensayos No Destructivos, Inspección y Corrosión
Brazil	ABENDI	Associação Brasileira de Ensaios Não Destrutivos e Inspeção
Canada	CINDE	Canadian Institute for Non-Destructive Evaluation
Chile	ACHISEND	Asociación Chilena de Soldadura Inspección y Ensayos no Destructivos
Colombia	ACOSEND	Asociación Colombiana de Soldadura y Ensayos No Destructivos
Costa Rica	–	Instituto Tecnológico de Costa Rica
Ecuador	ESPOL	Escuela Superior Politécnica del Litoral
Mexico	AMEXEND A.C.	Asociación Mexicana de Ensayos No Destructivos, A.C.
Mexico	IMENDE A.C.	Instituto Mexicano de Ensayos No Destructivos, A.C.
Peru	APEND	Asociación Peruana de END
Uruguay	AENDUR	Asociación Uruguaya de Ensayos No Destructivos
USA	ASNT	American Society for Nondestructive Testing

The current Board is as listed below:

President	Mr Glenn Tubrett (CINDE, Canada)
Vice Chair	Mr David Bajula (ASNT, USA)
Treasurer	Mr Antonio Aulicino (ABENDI, Brazil)
Secretary	Mr Jorge Amsler (AAENDE, Argentina)

The Terms of Reference of the Federation and the PANNDT Strategic Plan are being reviewed by the Board.

The region is excitedly preparing for the PANNDT Regional Conference to be held in June 2025 in Niagara Falls, Canada (see: www.panndt.org for more information and how to participate). At the conference, the Pan-American region will introduce a new awards programme recognising the leaders who forward NDT initiatives in the Americas.

In addition to the PANNDT 2025, member countries are also hosting important conferences in the near future: ASNT is hosting the next APCNDT in Hawaii in 2026 and Argentina will host the next WCNDT in Buenos Aires in 2028.

Certification of NDT Personnel – MRA, PCB and EQB

Multilateral Recognition Agreement (OP19)

- There are currently 45 signatories to Schedule 1 of the MRA. See: <https://www.icndt.org/What-is-ICNDT/Certification-Executive-Committee>
- There are currently 20 PCBs registered under the MRA Schedule 2. See: <https://www.icndt.org/What-is-ICNDT/Certification-Executive-Committee>

Personnel Certification Body Compliance Assessment (OP20)

- Brazil is in the process of supplementing its OP19 Schedule 2 MRA registration using the OP20 route to provide additional international assurance of its high standard of compliance with ISO 9712 and ISO 17024.

Examination Question Bank (EQB)

The ICEC has developed an online delivery system for the ICNDT EQB. This online EQB has been demonstrated to the current EQB users and the new delivery method has been trialled by volunteer PCBs. The ICEC has been approached by additional PCBs showing continued demand for the EQB, both in its current form and the future online version. ICEC is now in the process of generation operating procedures for the purchase and use of the online EQB.

ICNDT Guide to Qualification and Certification of Personnel for NDT

The latest version of the guide is available on the ICNDT website at: www.icndt.org/ICNDT%20Guidelines%202024.pdf

ISO/TC 135

ISO/TC 135 plenary and SC meetings were held for three days following on directly from the 20th WCNDT.

Acting as the ICNDT representative and liaison member, respectively, for ISO/TC 135, Dr Mike Farley and Dr Sajeesh Babu participated.

Website/Journal/Publications

The ICNDT Secretariat has continued to provide updates to members through the website and the *ICNDT Journal*, issued in March 2024 (see: <https://www.icndt.org/common/pdf/journal/The%20ICNDT%20Journal%20-%20Volume%209%20Issue%20No.12.pdf>) and August 2024 (see: <https://www.icndt.org/common/pdf/The%20ICNDT%20Journal%20-%20Volume%209%20Issue%20No.%2013.pdf>).

ICNDT is grateful to JSNDI for providing the platform for the ICNDT website and publishing the *ICNDT Journal*. It acknowledges the continuing support of BINDT, especially Miss Zoe White and Mrs Cindy Bailey, for their support to the committees and for the preparation of this Annual Report and other published documents.

Finance

The audited financial report for 2024 and the budget for 2025 are shown in the following pages.

Acknowledgements

ICNDT wishes to thank its Executive Committee, Committees and Working Groups for their efforts during 2024 and acknowledges the support of the Secretariat provided by BINDT. Thanks are also reiterated to the 20th WCNDT Organising Committee, particularly Dr Dong-Jin Yoon, Chair of the Conference Organising Committee, and Professor Younho Cho, WCNDT President, for their efforts in dealing with the complexities of organising and rearranging the 20th WCNDT with great success. ICNDT is also grateful to the organisers of the 20th WCNDT, as well as ASNT and BINDT for their provision of facilities for ICNDT meetings during their conferences.

ICNDT also thanks JSNDI for maintaining the ICNDT website. The Chair personally thanks Dr Mike Farley, who has coordinated and compiled the contents of the Annual Report.

All volunteers working for their NDT societies have had a busy year and their work is much appreciated. It is vital to continue to create a safer world through the wider use of NDT and diagnostic technologies.

We were delighted to see many of our members in person for the first time in seven years at the 20th WCNDT.

Dr Sajeesh K Babu
Chair, ICNDT

Financial Report – Draft Balance at 31.12.2024		
	€	€
	Income 2024	Expenditure 2024
Opening balance	158,314.95	
Donation from Austrian Chamber of Commerce	500.00	
Donation from WCNDT	40,000.00	
Members fees (<i>new fee structure</i>)	21,786.00	
Bank account Nr: 290-317-99501 interest	17.29	
PCB CA service (OP20)	1,200.00	
MRA service (OP19)	4,300.00	
EQB product: application fees (OP23)	0.00	
EQB update fees (OP23)	0.00	
Meeting expenses/Go to meetings (OP18)		1,224.01
Bank account Nr: 290-317-99501 cost		250.91
Bank expenditure for incoming fees (CB)		230.28
Printing costs		2,797.11
Office costs (<i>insurance, home page, Zoom, various</i>)		27,948.96
PCB CA service costs: system administration (OP20)		0.00
MRA/PCB: auditor payment, administration (OP19)		4,840.00
EQB service costs: (OP23) administration, (OP24/CB) overheads, third-party services		2,244.00
Professional services		6,072.00
Preparation of ICNDT monographs		0.00
Supplies (<i>ICNDT badges, flags, etc</i>)		0.00
Miscellaneous (<i>shipping, conference calls</i>)		0.00
Travel expenses, support WGs		3,849.44
Totals	226,118.24	49,456.71
Allocation to reserves		176,661.53

*Ing Gerhard Aufricht (Treasurer
until end 2024)*

Draft Budget 2025						
	2022	Budget 2023	2023	Budget 2024	2024	Budget 2025
Donation Austrian COC	500.00	500.00	500.00	500.00	500.00	500.00
Donation from WCNDT	0.00	0.00	0.00	50,000.00	40,000.00	0.00
Membership fees	30,750.00	22,800.00	14,981.60	22,800.00	21,386.00	22,000.00
Interest	15.28	30.00	15.90	20.00	12.85	30.00
PCB CA (OP20)	9,575.00	5,200.00	0.00	0.00	0.00	2,400.00
MRA (OP19)	0.00	750.00	4,900.00	6,900.00	3,550.00	8,150.00
EQB product (OP23)	7,500.00	7,500.00	0.00	7,500.00	0.00	3,000.00
EQB update (OP23)	0.00	500.00	0.00	500.00	0.00	0.00
Total	48,340.28	37,280.00	20,397.50	88,220.00	65,448.85	36,080.00
Meeting expenses	3,415.64	7,760.00	4,060.50	8,000.00	1,224.01	8,000.00
Bank cost	188.21	300.00	348.97	300.00	338.06	500.00
Bank expenditure	880.27	1,000.00	11.53	500.00	55.36	500.00
Printing	0.00	2,000.00	0.00	4,000.00	0.00	4,000.00
Office cost	3,324.91	2,000.00	1,749.34	2,000.00	2,710.35	3,000.00
PCB cost (OP20)	1,168.00	2,000.00	418.00	1,000.00	0.00	1,700.00
MRA cost (OP19)	9,348.86	9,400.00	5,544.00	9,400.00	4,796.00	6,512.00
EQB auditor payment (OP23)	1,688.00	0.00	0.00	0.00	0.00	0.00
EQB service cost	6,760.00	6,400.00	3,476.00	6,000.00	1,584.00	4,928.00
Professional services	0.00	3,500.00	6,402.00	4,500.00	5,500.00	5,668.00
ICNDT monographs	0.00	0.00	0.00	0.00	0.00	0.00
Supplies	0.00	1,000.00	212.00	1,000.00	2,797.11	3,000.00
Miscellaneous	0.00	2,000.00	0.00	3,000.00	4,038.05	4,000.00
Website	0.00	0.00	0.00	25,000.00	25,050.00	0.00
Total	26,773.89	37,360.00	22,222.34	64,700.00	48,092.94	41,808.00
Net income	21,566.39	-80.00	-1,824.80	23,520.00	17,355.91	-5,728.00

Dr Casper Wassink (Treasurer
from January 2025)

Published on behalf of ICNDT by the Publishing Department, The British Institute of Non-Destructive Testing,
Midsummer House, Riverside Way, Bedford Road, Northampton NN1 5NX, UK.
Tel: +44 (0)1604 438300 | Email: info@bindt.org | Web: www.bindt.org

The ICNDT is registered as a legalised association with its seat in Vienna, Austria.
Registered office: Jochen-Rindt-Straße 33, 1230 Vienna.
Chair: S K Babu | Email: chairman@icndt.org

www.icndt.org

Published on behalf of ICNDT by the Publishing Department, The British Institute of Non-Destructive Testing,
Midsummer House, Riverside Way, Bedford Road, Northampton NN1 5NX, UK.
Tel: +44 (0)1604 438300 | Email: info@bindt.org | Web: www.bindt.org

www.icndt.org