



INTERNATIONAL COMMITTEE FOR  
NON-DESTRUCTIVE TESTING

*The World Organisation for NDT*

**Minutes of a meeting of the**

**ICNDT General Assembly**

**Internet Meeting**

**Monday 19<sup>th</sup> July 2021**

<b>Participants:</b>	S K Babu	ICNDT Chair	Voting
	B Alves	RELACRE (Portugal)	Voting
	G Aufricht	ICNDT Treasurer	Voting
	M Carboni	AIPND (Italy)	Voting
	T Chady	PTBNIDT/SIMP (Poland)	Voting
	J Conte	ABENDI (Brazil)	Voting
	T Erhard	DGZFP (Germany)	Voting
	S Choksi	ISNT (India)	Voting
	L Dick	NZNDT (New Zealand) and APFNDT	Voting
	P Fisch	SGZP (Switzerland)	Voting
	A Garcia	AAENDE (Argentina)	Voting
	D Gilbert	BINDT (UK) and ICNDT General Sec	Voting
	F Gomez	AEND (Spain) and EFNDT	Voting
	G Idinger	ÖGFZP (Austria)	Voting
	H Jansen	SAIW (South Africa), ICEC Chair and AFNDT	Voting
	J Jingyuan	ChSNDT (China)	Voting
	Ik Keun Park	KSNT President (South Korea)	Voting
	A Mullin	ICNDT WG1 Chair and EFNDT	Voting
	B Muthuramlaingam	NDTSS (Singapore)	Voting
	G Nicolescu	ARoEnd (Romania)	Voting
	N Ooka	JSNDI (Japan) and APFNDT	Voting
	T Sakagami	JSNDI (Japan)	Voting
	V Syasko	RSNTTD (Russia)	Voting
	P Trampus	MAROVISZ (Hungary)	Voting
	G Tubrett	CNDE (Canada)	Voting
	P Wadyalkar	AINDT (Australia)	Voting
	C Wassink	KINT (Netherlands)	Voting
	C Belinco	AAENDE (Argentina) and PANNDT	Non-Voting
	C Bird	ICNDT ICEC Secretary	Non-Voting
	Y Cho	KSNT/WCNDT President	Non-Voting
	J M Farley	ICNDT Past Chair	Non-Voting
	O Kwon	KSNT (South Korea)	Non-Voting
	P Milligan	AINDT (Australia)	Non-Voting
	T Ogata	JSNDI (Japan)	Non-Voting
	S Ooka	JSNDI (Japan)	Non-Voting
C Rizzetti	AIPND (Italy)	Non-Voting	
O Sohn	KSNT (South Korea)	Non-Voting	
D I Yoon	KSNT (South Korea)	Non-Voting	
C Bailey	BINDT (Minute Secretary)	Non-Voting	

## 1. Welcome and Opening Remarks

S Babu welcomed all to the online General Assembly. This was the second virtual GA and S Babu was pleased to be in the BINDT office in Northampton with D Gilbert. Dr Babu said that hopefully by next year we will be able to start holding physical meetings again. The agenda for the meeting had been circulated with the meeting invitation.

Dr Babu continued: Although we are miles apart we continue to work together on one ICNDT mission to create a safer world through wider use of NDT and diagnostic technologies. Throughout the pandemic we have learnt that nobody is safe until everyone is safe.

ICNDT activities continued throughout the pandemic and we have embraced new technologies to adapt to this 'new normal' way of working.

Our Annual Meeting was held on the 11<sup>th</sup> February 2021 and the Annual Report was approved. Since then we have had several ICNDT meetings and ad hoc meetings with KSNT. Unfortunately we expect a further postponement of the WCNDT (AFTERNOTE: now 30 May – 3 June 2022).

S Babu was pleased to announce that the new ICNDT website will be launched today and will be introduced to members during this GA. Congratulations were relayed to S Ooka and WG4.

With reference to the resolutions made prior to the last GA in respect of terms of office, it was agreed that the current terms of office will continue until the physical GA.

We will be holding a workshop this year to discuss the ICNDT strategy which will be reported on later in the meeting.

NDT instrument manufacturers have embraced various connectivity technologies and Big Data solutions are also in place with Cloud based service providers. AI based NDT tools are initiated by academic research worldwide but there are challenges ahead in the validation and verification of these new tools in terms of performance and the need to continue to have the human interface. The new version of ISO 9712 is paving the way to include elements of new technologies associated with NDE 4.0 and we also need to consider a certification model to include NDE 4.0.

We look forward to hearing reports from participants during this GA.

On a proposal by P Wadyalkar, seconded by G Aufricht, the Minutes of the GA held on 31 July 2020 were approved.

## 2. Memoriam

D Gilbert reported that Prof Mihovski passed away recently. He was prominent in the development of NDT in Bulgaria, a graduate from LETI and gained a professorship in 1991. Prof Mihovski introduced a laboratory dedicated to the mechanics and diagnostics of NDT. He had a close association with the Bulgarian Academy of Sciences. He was a member of Academia NDT and a member of Insight's European Advisory Panel. He was said to have been involved in the education and training of more than 2,500 NDT technicians and will be sorely missed.

Eduard Stepanovich Gorkunov passed away last October and his long service to the Russian Society of NDT and Technical Diagnostics (RSNTTD) was acknowledged. He was also a member of the Editorial Board of the journal 'NDT Days' published by the Bulgarian Society of NDT and the author of many papers. He was also a member of Academia NDT and the Israeli National Society for NDT and an Associate Member of the Institute of Mechanics at the Bulgarian Academy of Sciences. His contribution to the development of cooperation between the Russian Federation and Bulgaria was recognised when he was awarded Bulgarian citizenship in 2020.

Dr Hae Lee passed away in December 2020. He was a former President of the Korean Institute of Machinery and Materials and a former President of KSNT. Dr Lee was one of the founding members for the inauguration of KSNT in 1980. Besides his tenure as President of KSNT for two terms in the early 1990s, he was instrumental in bringing KSNT activities to the international arena. Dr Lee's contributions to the nation include his role as Commissioner of the Nuclear Safety and Security Commission and other governmental positions, all of which led to him being honoured with the Peony Medal, the second highest order of civil merit in Korea.

### **3. Roll Call and Brief Introductions**

Participants introduced themselves and confirmed if they were a voting or non-voting participant.

### **4. Procedures for voting, confirmation of quorum**

D Gilbert confirmed that the GA was quorate.

### **5. ICNDT business**

#### **5.1 Report on Annual Meeting**

##### Finance 2020

G Aufrecht reported that the Annual Report was presented and approved at the Annual Meeting earlier this year. In 2020 we had an opening balance of €125,503 and a final balance (allocation to reserves) of €133,260. Income from membership fees was €18,552 and we also received some interest from the bank. We had income from the MRA service of €6,600. Total income was €151,167. We had expenditure associated with the MRA of €8,640 and professional services expenditure of €7,640. Total expenditure was €17,907.

##### Draft Budget for 2021

The budget for 2021 was presented showing an opening balance of €133,260.

Following the new membership fee structure, we expect €22,792 income from membership fees, income for the PCBs service of €6,000 and MRA service fees income of €8,000. Income for EQB product application and update fees has been budgeted at €8,100.

On the expenditure side, meeting expenses, printing costs, office costs, PCB service costs, MRA/PCB audit costs, EQB service costs are €2,000 and professional service costs have been budgeted at €8,000. Supplies (badges, flags etc.) miscellaneous (shipping, conference calls) are budgeted at €2,500 and the cost of the website upgrade is €25,000.

Total projected income is €45,422 and total projected expenditure is €53,250 with an allocation to reserves expected by 31/12/21 would be €125,432.

The draft balance at the end of June 2021 shows total expenditure of €2701 against budgeted expenditure of €53,000. The reason being that we have had a very quiet year so far but this may change in the second half of the year. We also had income of €1500 for MRA services which will be added to the balance. We therefore have a very good budget and we had the money to invest in the new website and for the excellent service provided by Colin Bird for the ICEC and the MRA.

#### **5.2 Notification of Operating Procedures issued since last GA**

M Farley reported that OP11 was approved at the Annual Meeting. OP11 is the Operating Procedure for Membership and it has been modified to make it absolutely clear that if you are a member of ICNDT (Full or Associate) you will automatically be a member of a Regional Federation at the same status. The application should come through a Regional Federation. The changes were approved unanimously in February and the application form has also been amended.

### **6. Reports from Regions**

#### **6.1 AFNDT**

The report presented by H Jansen is attached.

#### **6.2 APFNDT**

The report presented by N Ooka is attached.

### 6.3 EFNDT

The report presented by F Gomez is attached. F Gomez confirmed that the ECNDT has been postponed to 3-7 July 2023.

### 6.4 PANNDT

The report presented by J Conte is attached.

## 7. **Reports from National Societies**

Reports will appear on the website in due course.

### 7.1 Argentina

The report was presented by A Garcia. S Babu asked about the Arts Conference in November 2021 and whether this will be physical event or whether it will be mixed with limited places inside the venue and the majority of delegates online. A Garcia replied that it will depend on the Covid situation in November.

### 7.2 China

The report was presented by J Jinguan. With regard to the WCNDT, Y Cho thanked the Chinese Society for their strong support in terms of number of exhibitors and participants; China will have the largest representation at the event. China has contributed about 25% in terms of booths, abstracts etc. and we will continue to collaborate closely to make the WCNDT a success. Y Cho is planning to give a plenary presentation at the Opening Ceremony of the Chinese Society's conference in August.

### 7.3 Hungary

The report was presented by P Trampus.

The pandemic has severely influenced the activities of the Hungarian Society. Normal routine activities are ongoing though slower and in limited scope. P Trampus reported that the conference and exhibition which is normally held every second year was delayed until March this year when it was held very successfully as a virtual conference and exhibition.

With regard to supporting higher education, an English version of the NDT Integrity Engineer course is being discussed and will hopefully be available from February next year.

F Gomez asked about the NDT Integrity Engineer and the NDT Engineer and asked what the difference was. P Trampus replied that the NDT Integrity Engineer is in addition to the NDT Engineer related issues.

M Farley congratulated P Trampus for creating this course. It would be interesting to have a matrix to compare the Integrity Engineer against the NDT Engineer qualification that is being prepared by EFNDT. This would be a good activity for EFNDT and P Trampus will consider this.

### 7.4 Italy

The report was presented by M Carboni. M Carboni was pleased to report that AIPND moved to new premises in June 2021.

### 7.5 India

The report was presented by S Choksi. S Choksi was pleased to report that Dr Babu has been presented with an Honorary Fellow award from ISNT.

ISNT would be very happy and privileged to host the 22<sup>nd</sup> WCNDT in 2028 and the ISNT report included a short presentation of what ISNT would promise to do for the 22<sup>nd</sup> WCNDT.

### 7.6 Japan

The report was presented by T Sakagami. JSNDI will be celebrating its 70<sup>th</sup> anniversary on 26<sup>th</sup> October 2022 and it is hoped that the celebration will take place as part of the JSNDI annual conference.



#### 7.7 Netherlands

The report was presented by C Wassink. The KSNT conference is scheduled to take place in November this year and the intention is to hold this as an in-person event. The language will be Dutch but contributions in English are welcome.

#### 7.8 Russia

The report was presented by V Syasko. RSNTTD will also be bidding to host WCNDT 2028 in St Petersburg.

#### 7.9 Singapore

The report was presented by B Muthuramalingam.

#### 7.10 United Kingdom

The report was presented by D Gilbert.

Having listened to all of the presentations, S Babu summarised that our resilience to move to a new way of working has been the same all over the world in respect of certification, membership, conferences etc. We have all had to move to a digital world very quickly. However, we look forward to the middle of next year when hopefully the borders will be open and we can look forward to physical meetings again.

P Wadyalkar asked D Gilbert about the PCN electronic certificates instead of the traditional paper version and asked if BINDT was planning for this process to be completely digital. D Gilbert explained that the system we have at the moment is an encrypted, watermarked PDF certificate which is protected using a Digital Rights Management (DRM) system and we can control the status of this software. We are also starting to use DRM for electronic publications but this may have different settings. It is a web delivery system and we can control the number of times that a certificate is printed, as well as the number of devices and times that it can be viewed.

P Wadyalkar asked if any other societies were planning to use a system whereby people cannot take a screen shot or print a certificate off in order to stop any falsifying of certificates. S Babu believe industry was not yet ready for such a system.

### **8. 20<sup>th</sup> World Conference Update by KSNT**

Y Cho thanked C Belinco and the Argentinian Society for their understanding of KSNT's situation.

Y Cho did not want to be overly optimistic or pessimistic but wanted to be as realistic as possible in reporting the details to the GA.

The WCNDT has already been postponed twice and is currently scheduled be held in the spring of 2022 but at a different venue outside of Seoul. When ECNDT was postponed to July 2023, KSNT started to prepare for another alternative option given that the pandemic is still ongoing. The next couple of months could be a game changer for KSNT.

The current registration statistics for the WCNDT were presented. Even though we have postponed the event twice, we have only lost about 10% of bookings and we are still holding 90% of conference sessions and exhibitors bookings which is very good news. The problem is that it is not guaranteed that all of these bookings will remain in place. We have a total of 1137 abstracts and 340 exhibitors. We have 25 sponsors, most of which are domestic Korean companies, but Olympus is continuing as the main sponsor. We are keeping a very close dialogue with the other main sponsors and exhibitors.

After the decision was made to move ECNDT to July 2023, KSNT decided to move the WCNDT by three months to early June next year. KSNT will be keeping a close eye on the pandemic situation but will have to make a final decision by the end of 2021 as to whether the WCNDT will be held in June 2022 or, if not, where and when it will take place.

2023 is already full with three different regional events (APFNDT, PANNDT and ECNDT) and there will also be the ASNT conference in the autumn. Therefore, if the pandemic is still going on by the end of this year, we would need to delay WCNDT for a further two years. We would look to place WCNDT sometime

in 2024, preferably June, and we would have to reshuffle every contract because the situation may be very different to the two previous postponements.

This is a very delicate situation but KSNT is still doing its best to try not to disappoint anyone.

V Syasko asked if KSNT will take into account the fact that papers that had been submitted in 2019 may be out of date. Y Cho confirmed that authors will have the opportunity to update their presentations.

Y Cho reiterated that KSNT want to delay making a final decision as long as possible to take into account other issues and other societies conferences.

There is a small chance that KSNT could delay the WCNDT for a further three months instead of another two years but the problem is that it is such a big event and it is a massive challenge to find a venue and block enough hotel rooms for more than 1000 guests. We also have to deal with the main sponsors and exhibitors.

KSNT has found another option for September 2022 in Pusan which has an excellent conference facility and has a slot available for the last week of September 2022. Unfortunately there is no other availability for the rest of 2022 at the original venue.

## **9. Officers and Secretariat for 2021-2022**

S Babu thanked BINDT for the continued support in providing the secretariat and looking after the business of the ICNDT.

S Babu thanked IEC members for their continued support for a further year. We have not received any official resignations so IEC members will continue to be active until the GA at the World Conference.

Working Group chairs were thanked and it was noted that WG1 is still very active with online meetings.

## **10. Membership Update**

J Conte thanked all members of the Membership Committee for their continued support. 55% of ICNDT members are from Europe, 27% from Asia Pacific, 12% from America and 6% from Africa. Challenges due to the pandemic included collection of individual fees and activities. We have standby plans to support Nigeria, Bolivia, Venezuela, Chile and Ecuador through the process of being a member of ICNDT and PANNDT. We are also supporting the Dominican Republic in creating a NDT Society.

## **11. Report on ICNDT actions on Strategic Plan**

### 11.1 Strategic Plan Workshop by IAC

M Farley (IAC Chair) presented plans for the Strategic Plan Workshop. There have been no meetings of the IAC due to the WCNDT not yet being held. We need to rewrite our plan to recognise the impact and opportunities of Covid etc. and we need to introduce new blood onto the ICNDT committees. We are planning to hold an open workshop to explore ideas that can be incorporated into the next Strategic Plan. This will be followed with a sub-group meeting of members of the IAC and their nominees to prepare a new draft plan which then go through the normal review process.

The programme for the workshop will be a two-hour Zoom meeting starting with a reminder of our objectives. Attendees will be invited to report on innovations that have been necessary. We will then note which innovations deserve attention by the ICNDT, for example, how the use of virtual meetings can help to create new societies. We will then discuss other ideas for ICNDT to action and then organise IAC meetings to update the plan accordingly.

This will be an open workshop held either in the middle of August or the middle of September and the secretariat will issue invitations to all members. IAC sub-group meetings will then be held in October/November 2021. The target date for the draft Strategic Plan is 30<sup>th</sup> November 2021 with approval at the Annual Meeting at the end of January/February 2022.

### 11.2 Launch of Website and Communications Update

M Farley was honoured and privileged to launch the new ICNDT website today. He has opened conferences, exhibitions and buildings but this was the first time he has opened a new website.

WG1 have updated the website with the objective of creating a much more visually attractive website that is much easier to use. Thanks were extended to JSNDI who will be hosting the new website. Thanks were also extended to DGZfP for hosting the website for many years and T Erhard was asked to pass on our thanks to M Purschke and S Cullmann.

The presentations that we have seen today from the National Societies have shown that we are vigorous organisations and we have had a tremendous reaction to the pandemic. M Farley requested that these presentations are uploaded to the new website.

S Ooka thanked everyone for their contributions, particularly S Babu who started this idea as one of the Strategic Plan objectives. He also thanked M Farley for his assistance and D Gilbert for his support and also the team at JSNDI who have been putting a lot of effort into the new website. JSNDI will be maintaining the website and they would welcome any comments from around the world as to how to improve the website further.

AFTERNOTE: On behalf of ICNDT D Gilbert wishes to record thanks to Zoe White and Cindy Bailey from BINDT for their work in updating and maintaining the previous version of the website.

The new website will include a membership fee collecting system. APFNDDT will start to use this system in a couple of months' time and then hopefully PANNDT, AFNDT and EFNDT will also pay their fees through the website.

S Ooka is planning some YouTube presentations on how to use the new website which will include the fee collecting system and how to register society information etc.

M Farley pointed out that some of the events in the calendar are out of date and will need to be updated.

P Wadyalkar commented that online webinars have been successful in terms of attendance and asked if there would be a section on the website whereby societies can register their events with a link for people around the world to register and attend. S Ooka confirmed that this can be done.

### Communications

S Ooka presented the report (copy attached) and thanked D Gilbert for his support.

The ICNDT journal has been issued four times a year.

The ICNDT website has been launched with contributions from DGZfP and JSNDI.

Social media activity, Facebook, LinkedIn etc. has been quite slow but once the website has been completed this will be the next project that S Ooka will be working on.

With regard to the photographic competition, because the WCNDT has been postponed, the updated competition has been launched entitled 'NDT Stories in Pictures'. The deadline for entries has been postponed to 30 November 2021 but this really depends on the WCNDT as the winner will receive free registration. We have received about 12 entries so far and S Ooka asked for anyone interested to send in their photos.

The new website will include

- Real time information on ICNDT activities.
- Real time information on events around the world.
- 'My Page' for society members - coming soon.
- Society status – coming soon.
- ICNDT membership fee collection service – coming soon.
- And much more, i.e. reports from all organisations as to what is going on with their conferences, webinars etc.

S Babu thanked all for their contributions to the working group activities.

D Gilbert mentioned that there will be an email going out shortly for invitations to contribute to the next ICNDT journal. The deadline will be 16<sup>th</sup> August 2021.

### 11.3 WG1 Report (NDT Qualification & Certification)

A Mullin reported that WG1 has 23 members representing countries all over the world. Meetings will be held in conjunction with the European or World Conference and an online meeting was held on 21 April. The WG1 Action Plan forms part of the main Strategic Plan.

Current information on the WG1 needs to be uploaded to the new website. D Gilbert also pointed out that the MRAs do not seem to be on the new website. Any comments for areas to be updated should be sent to S Ooka. C Bird will also need to load the MRA Schedule 1 and Schedule 2 status to the website.

S Babu asked all WG chairs to look at their objectives on the new website and asked all to send any comments of anything that is missing to S Ooka.

Action Ref. No. GA/2021-07-19/..	Desc.	WHO	STATUS/COMPLETE BY
1.	Look at WG objectives on the new website and send any comments to S Ooka.	WG Chairs	Ongoing.

#### 11.4 Certification Executive Council Report

H Jansen presented the attached report. There are 47 societies under MRA schedule 1 and 20 PCBs registered under Schedule 2 with 1 further application in progress. A new surveillance system has been introduced. Recent new registrants include Chinese Taiwan and Korea. China renewed in 2020 and there is a new application in process from India.

H Jansen gave an update on the EQB and advised that this is currently available as a stand-alone package. However, during recent meetings of the ICEC, there has been concern that the EQB is not regularly updated and some of the questions might be out of date. We have also identified problems with the maintenance of the EQB and the update of questions to reflect the current standards. We are currently considering an alternative provision option without contravening the non-profit status of the ICEC.

S Babu reported that IAEA has recently sent a questionnaire to all of the participating RCA/ARCAL members to get more feedback on ISO 9712 and he has seen a number of questions related to the ICNDT MRA. We hope that more PCBs will become members of MRA Schedule 2.

#### 11.5 WG3 Report (Research & Education Committee including SIG)

A copy of the report presented by T Erhard is attached.

A virtual NDE 4.0 conference was held on the 14<sup>th</sup> and 15<sup>th</sup> April and a further physical event is planned for 20<sup>th</sup> and 21<sup>st</sup> April 2022. Presentations from the virtual event are available on the website and will be published in a future issue of the Journal on NDE. This was a worldwide virtual event and most of the participants were from Germany and Japan.

The next NDE 4.0 event will be held in Munich on 26<sup>th</sup> – 28<sup>th</sup> April 2022 and the abstract deadline is end of September 2021. The situation in Germany is currently looking encouraging for face to face events.

The next meeting of the SIG NDE 4.0 group will be on the 27<sup>th</sup> August. The SIG Reliability Group has updated its action plan.

#### 11.6 WG5 Report (Radiation Protection)

D Gilbert reported that the main subject for this group is the ISEMIR Project which is supported by the IAEA. The industrial radiation side of the project is a web-based tool for NDT companies who carry out industrial radiography to use for regular data collection and analysis.

There is an impetus to promote ISEMIR more and WG5 consists of ISEMIR members. We have previously invited others to join WG5 and we have had interest from Dr E Malto (Netherlands) and Dr Tuberoso (Italy). We would like to see more people interested in joining the group. The intention has always been to have a meeting at the WCNDT. Face to face meetings are easier when we are trying to establish a group so we will be planning a meeting and possible workshop at WCNDT. Anyone who has contacts or represents any other societies who would like to join WG4, were asked to please let D Gilbert know.

We have developed two questionnaires, one for companies and one for regulatory bodies and over the past few months we have received 284 responses from 42 countries. Some of the questions asked were presented. It was noted that accidents and incidents remain low.

A relatively small number of people were aware of the ISEMIR project, which is quite disappointing. People would be interested in ISEMIR software for dose reporting, analysis and recording.

45 completed questionnaires were received from regulatory bodies, with the majority coming from Europe.

#### 11.7 WG6 Report (Condition Monitoring)

The report presented from C Belinco is attached.

#### ISO/ TC135

S Ooka reported on the activities over the last year and presented the ISO/TC135A structure. Last year, membership of TC135 was made up of 40 participating members and 28 observing members. This year we have 35 participating members and 4 observing members.

Liaison with other organisations was presented and it was noted that ICNDT is a Liaison A member.

The activity report of ISO standards under development or published was presented.

With regard to future plans, the TC135 meeting, planned for the WCNDT in 2020, has been postponed but will be held in October this year. We are planning this as a virtual meeting although there is a problem with time differences. Hopefully in 2022 we will have a meeting during the WCNDT and another meeting during ECNDT in 2023.

With regard to the virtual meeting planned for October this year, Y Cho advised that he has received an email from the German Society regarding an online meeting on 12<sup>th</sup> October and suggested that part of this meeting could be the TC135 meeting. S Ooka replied that this really depends on the secretariat as to what time they want to start their meetings but he intends to hold the plenary meeting at around 11pm in order for everyone to be able to attend. The other TCs can choose where they are in the world as to what time they want to hold their meetings.

Y Cho will keep S Ooka updated on the plan for any postponement of the WCNDT.

The TC135 business plan has been finished and has been updated on the website.

## 12. **Regional Conference Update**

### 12.1 APCNDT, Melbourne 2023

P Wadyalkar reported that the Asia Pacific conference is still scheduled for 20 February – 3 March 2023 in Melbourne. Paul Grosser is the Conference President. There is a lot of accommodation in all price ranges around the conference venue and the temperature in March is around 20°C.

Y Cho wished P Wadyalkar every success with the APNDT event. Nobody can predict when the pandemic will be over and he asked for P Wadyalkar's personal opinion as to how many more months they would need to finalise their schedule for spring 2023 (for example to secure hotel bookings and exhibition facilities). Y Cho suggested that they may want to also consider making a final announcement in case we have to think about delaying WCNDT again, in order to avoid any time conflict between WCNDT and APNDT.

P Wadyalkar said that any changes to WCNDT should be discussed with the AINDT. They intend to go ahead with their schedule regardless of whether there is any postponement but there are a lot of things that can be discussed together to make this easier for everyone. It is important that we all talk to each other so as not to overlap and to have sufficient time between the two events.

### 12.2 ECNDT, Lisbon 2023

B Alves reported that the Portuguese Society have had several meetings regarding a postponement due to the pandemic and have opted for the new dates in July 2023, with the same venue, same city etc. All of the information is on the website.

S Ooka asked if it would be possible to host a TC135 meeting during the ECNDT. B Alves replied that it had been anticipated that all of the meetings scheduled for 2022 would be transferred to 2023 and these have all been accommodated for.

### 12.3 PANNDT

G Tubrett reported that they are waiting to see when all of the other conferences will move to and will look at moving their event so as not to conflict with other events in 2023. This will be discussed further when the other events have been confirmed but will be scheduled so as not to clash with ECNDT or WCNDT.

### **13. Constitution & Proposed Amendments (Approval next meeting)**

We expect to have a physical GA at the WCNDT next year and S Babu confirmed that the existing officers will remain in place until then.

### **14. AOB/Adjournment**

S Babu asked for support and contributions to the Strategic Plan workshop and asked all to contact M Farley. We have learnt a lot of lessons over the last 18 months which may result in some amendments to our constitution.

M Farley commented regarding BINDT Branches. We have about 10 Branches in the UK and they each have about 4-5 meetings a year with normal attendance of around 10 members. However, since holding these meetings virtually, attendance has greatly improved and there is real enthusiasm for Branch meetings on Zoom. This is an example that other societies may want to copy; it is very easy to hold virtual meetings and it makes it easier to have meetings in countries where people have difficulties with travel or to have meetings between NDT societies in areas where there are travel difficulties. The presentations today have given us a lot of enthusiasm; societies are working in different ways because of the pandemic and these things should be captured.

S Babu closed the meeting and thanked all for their participation.



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Draft Balance 30.06.2021	Budget 2021			
	Income 2021	Expenditure 2021	Income 2021	Expenditure 2021
	€	€	€	€
Opening balance	133.260,12		133.260,12	
Donation from Austrian Chamber of Commerce			500,00	
Donation from WCNDT	00,00		00,00	
Members fee (new fee structure)	00,00		22.792,00	
Bank account Nr.: 290-317-99501 interest	6,59		30,00	
PCB CA service: OP 20	00,00		6.000,00	
MRA Service: OP19	1500,00		8.000,00	
EQB Product: Application fees OP23	00,00		7.500,00	
EQB update fees OP23	00,00		600,00	
Meeting expenses/Go to meetings		00,00		1.500,00
Bank account Nr.: 290-317-99501 cost		101,05		200,00
Bank expenditure for incoming fees		00,00		50,00
Printing costs		00,00		2.000,00
Office costs		00,00		2.000,00
PCB CA service costs: system administration, insurance, OP20		320,00		2.000,00
MRA/PCB: Auditorpayment OP19		1600,00		8.000,00
EQB Service costs: Administration and overheads, contingencies. OP23		00,00		2.000,00
Professional Service		680,00		8.000,00
Preparation of ICNDT Monographs		0,00		0,00
Supplies (ICNDT badges, flags, a.o.)		00,00		2.000,00
Miscellaneous (shipping, conference calls)		00,00		500,00
Proposed website upgrade				25.000,00
<b>Total</b>	<b>134.766,71</b>	<b>2.701,05</b>	<b>178.682,12</b>	<b>53.250,00</b>
<b>Allocation to reserves</b>	<b>132 065,66</b>		<b>125.432,12</b>	
2 Pending fees 1.400.-				
Gerhard Aufricht, treasurer, Vienna, 2021.07.11 Rev.1				

Registered office: The Austrian Society of NDT, Jochen Rindt Straße 33, 1230 Wien/Austria

Email: [office@oegfzp.at](mailto:office@oegfzp.at); Email: [treasurer@icndt.org](mailto:treasurer@icndt.org)

Secretariat: The British Institute of NDT, 1 Spencer Parade, Northampton NN1 5AA, UK

Tel: +44 1604 630124 Fax: +44 1604 231489 Email: [icndt@bindt.org](mailto:icndt@bindt.org)



*The World Organisation for NDT*

**Regional Report from the African  
Federation of Non-Destructive Testing**



**Compiled & presented by: Harold Jansen  
AFNDT Executive Secretary**



# Content

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- **Membership**
- **Infrastructure**
- **Activities**
- **Achievements**
- **Challenges**



*The World Organisation for NDT*

## Membership

- **President :** Dr Sahaimi Kamal Morocco  
Centre National de l'Energie des Sciences & des Techniques Nucléaires
- **Secretariat:** Harold Jansen South Africa  
SAIW
- **Country (Active) Representation:**  
Algeria; Angola; Cameroon; Egypt; Ethiopia; Ghana; Kenya; Libya; Mauritius;  
Morocco; Nigeria; South Africa; Sudan; Tunisia; Uganda; Zambia; Zimbabwe
- **Sub-regions:**
  - **North Africa** Algeria, Libya, (Mauritania), Morocco, Egypt and Tunisia
  - **East Africa** Sudan, Burundi, Kenya, Rwanda, Ethiopia, Eretria, Somalia, South Sudan and Uganda
  - **Central Africa** Cameroon, the Central African Republic, Chad, Democratic Republic of the Congo, Equatorial Guinea, Sao Tomi and Gabon
  - **West Africa** Ghana; Benin; Burkina Faso; Cape Verde; Gambia; Guinea; Guinea-Bissau; Ivory Coast; Liberia; Mali; Niger; Nigeria; Senegal; Sierra Leone and Togo
  - **Southern Africa** South Africa; Angola; Botswana; Lesotho; Madagascar; Malawi; Mauritius; Mozambique; Namibia; Seychelles; Swaziland; Tanzania; Zambia and Zimbabwe

# Infrastructure

- Certification Schemes

Main Schemes in Africa remains:

- 1) ASNT SNT-TC-1A Challenges : Written Practice variations inhibit harmonisation
- 2) ISO 9712 Challenges : Required infrastructure & regulatory environment

- Responsible Person

Identify sub regional / national individual or company to initiate NDT interest and communication channels

- National NDT Societies

Establish National NDT Societies that represent the facilitates industry interaction.  
Currently 11 African countries with National NDT societies having various activity levels.

- ICNDT Membership

Participation in ICNDT activities a & annual membership fee.  
Currently 2 compliant African countries.

- ICNDT MRA 1

One MRA Schedule 1 Member per country with additional affiliates if appropriate.  
Currently 3 ICNDT MRA Schedule 1 signatories in Africa.

## Infrastructure

- **Approved Training Bodies**  
(ISO TS 25108 & ISO TS 25107 + ANSI/ASNT CP105 & IAEA Tecdoc 628)  
Various National Training bodies across Africa, mostly ASNT SNT-TC-1A based.  
ISO 9712 options are growing subject to international requirements and thanks to funding from entities such as IAEA (International Atomic Energy Agency) with Regional Development Centres [Francophone : CETIME – Tunisia & Anglophone : SAIW – South Africa) providing valuable support in this regard.  
Most Operational NDT Level 3 / Senior NDT personnel in Africa are thanks to IAEA initiatives / funding within the region.
- **Approved Examination Centres (ExC)**  
ExC's, required by ISO 9712 & recognised by PCB's exist in 7 countries but poses the greatest challenge in establishing National Certification Schemes
- **Authorised Qualification Bodies / Personnel Certification Bodies**  
(ISO 17024 under scope of ISO 9712)  
Only one National PCB registered under ICNDT MRA Schedule 2 in Africa viz. SAIW Certification. Other international ICNDT MRA Schedule 2 operating PCB's within the region is BINDT; TWI & Cofrend.  
Strategic approach has been modified from a single regional PCB approach to various national PCB's to develop national pride; the challenge remains to be sustainability.
- **Service Providers (ISO 17020 / ISO 17025)**  
Major move towards ISO 17020 / ISO 17025 accreditation for service providers performing inspections on pressurised equipment / steam generators.

## Activities

### ■ **Communication**

A regional communication database has been created based on all individuals involved in regional IAEA-AFRA programmes since inception in 2001.

### ■ **Organisational**

While the intent was to hold an AGM during the first half of 2021, members indicated that due to regional inactivity, a preliminary to the AGM should be preferable subject to availability of majority of members, in order to review & discuss proposed constitutional changes. Deadline for a formal AGM has been set for end October 2021.

### ■ **Website**

A formal AFNDT Website is being developed and shall be linked to the ICNDT website once completed and approved by the AFNDT Board

### ■ **Registration – Legal Entity**

Following a successful registration of IIW regional entity by the SAIW; a similar approach has been initiated for a regional AFNDT legal entity situated in South Africa.

### ■ **Training**

COVID 19 pandemic has had a significant impact on training with an up to 60% reduction in demand during the 2020/2021 period. Blended training options have been implemented with online theoretical examination options available where infrastructure allows.

### ■ **Qualification / Certification**

Personnel qualification and certification activities have not been affected as severely, with up to a 30% reduction in activity reported where ISO 9712 certification are provided.

## Achievements

- Level 3 Workshop

An NDT Level 3 workshop was held during February & March 2021 at SAIW with 9 participants, including 3 from Cameroon. All individuals successfully achieved their NDT Level 3 qualification in the relevant methods with the Cameroonian candidates being successful in FOUR main Methods.

A second workshop is scheduled for August & September 2021 with a total of 12 participants confirmed.

National sponsorships are actively sought with a total of 12 Level 3 sponsorships confirmed for 2021.

- Scientific Visit – KEBS

Kenya Bureau of Standards have scheduled a scientific visit to South Africa to acquire assistance from SAIW Certification to establish a Kenyan Personnel Certification Body.

- IAEA – Senior NDT personnel

Both abovementioned activities are made possible through triangular projects facilitated by the IAEA, emphasising their commitment to infrastructure development within the African continent and we would like to express our most sincere appreciation towards the IAEA

## Challenges / Opportunities

### ■ National Qualification Framework

The establishment of a National Qualification Framework in various countries and the alignment of trade and occupational qualifications, such as NDT within this framework is proven to be challenging since internationally established good practice and standards require adjustment to comply with the national statutory educational requirements.

### ■ Qualification / Certification

While training and examinations are performed across the African continent, compliance with ISO 17024 under the scope of ISO 9712 is proven to be challenging resulting in the international recognition via the ICNDT MRA schedule 2 registration currently only limited to one African entity.

Significant effort is being planned to assist African countries to help establish a national Qualification and Certification infrastructure across the continent and to gain international recognition via ICNDT MRA Schedule 2 emphasising the importance of the ICNDT EQB within the region.

### ■ Localisation

The localisation of NDT competence in light of the preference towards internationally qualified personnel remains a challenge.

### ■ Regional Co-operation vs National Operations

Most African countries have focussed on national NDT interests as opposed to regional cooperation due to numerous reasons but the shift in strategy to promote sustainable national certification bodies hopes to improve regional cooperation.

Regional Report at ICNDT GA

# APFNDT Report

Asia Pacific Federation for Non-Destructive Testing

[www.apfndt.org](http://www.apfndt.org)

**Dr. Norikazu Ooka**

President of APFNDT

19 July 2021

Web meeting



# Members of APFNDT

- Full Members, 17 societies (2019-2021)
- Secondary Full Members, 3 societies (2019-2021)
- Associate Member, 3 societies (2019-2021)
- Regional Representative Group One - Western Asia,  
Central Asia, South Asia- 2 members
- Regional Representative Group Two - East Asia, South East Asia- 4 members
- Regional Representative Group Three - Pacific, Oceania 2 members

# Members of APFNDT

Full Members, 20 societies (2019-2021)  
Including Secondary Full Members

AINDT - The Australian Institute for Non Destructive Testing

ASNT - The American Society for NDT

AUTRI - Asosiasi Uji Tak Rusak Indonesia

BSNDT - The Bangladesh Society for Non Destructive Testing

ChSNDT - The Chinese Society for Non Destructive Testing

CINDE - The Canadian Institute for Non-Destructive Evaluation

IRNDT - Iranian Society for Nondestructive Testing

ISNT - The Indian Society for Non-Destructive Testing

JSNDI - The Japanese Society for Non-Destructive Inspection

KSNT - The Korean Society for Nondestructive Testing

\*Full Members

\*Secondary Full Members

# Members of APFNDT

MSNDT - Mongolian Society for Non Destructive Testing

MSNT - The Malaysian Society of Non Destructive Testing

NDTSS - Non-Destructive Testing Society (Singapore)

NZNDTA - New Zealand Nondestructive Testing Association Inc.

PASNT - Pakistan Society for NDT

PSNDT - Philippine Society for Nondestructive Testing, Inc.

RSNTTD - The Russian Society for Non Destructive Testing and  
Technical Diagnostics

SNTCT - The Society for Nondestructive Testing and Certification of  
Taiwan

SNDT - Society for Non Destructive Testing, Sri Lanka

TSNT - Thai Society for Non-Destructive Testing

\*Full Members

\*Secondary Full Members

# Members of APFNDT

Associate Member, 3 societies (2019-2021)

VANDT - Vietnam Association for Non Destructive Testing

AZNDT - Azerbaijan NDT Society

KAOFD - Kazakhstan Association of Flaw Detection

# Report of APFNDT

## APFNDT Executive Committee Meeting 24 March, 2021 , Web Meeting

### **General APFNDT Matters**

- Collection of fees
- Approved budgetary items that could not be pursued due to COVID-19
- Proposal for the extension of the current terms of office for the APFNDT Board.

### **16th Asia Pacific Conference for Non-Destructive Testing (APCNDT 2023)**

- Due to COVID-19 the 15th APCNDT in Melbourne, Australia was postponed 27th February to 3rd March, 2023 but is on schedule.

### **APFNDT Newsletter**

- The first issue for this years APFNDT newsletter was released in April with the next released in July.

# Report of APFNDT

## APFNDT Executive committee Meeting 2 June, 2021 , Web Meeting

### **General APFNDT Matters**

Extension of current terms of office approved

### **Dates Decided for next Full Board Meeting and General Assembly**

Full Board Meeting on Friday September 10<sup>th</sup> at 10:00 (JST).

General Assembly on Friday October 1<sup>st</sup> at 10:00 (JST).

### **Future Activities**

More support for NDT programs with other organizations (ISO, IAEA, and IIW).

# Report of APFNDT

Main Activities for 2020-2021 in APFNDT

**TG 1 Membership**

**TG 2 APFNDT Journal**

**TG 3 Communications and website**

**TG 4 Education and Training**

**TG 5 Certification**

**TG 6 Standards**

**TG 7 NDE 4.0 (New TG from 2020)**

# APFNDT Task Group Status

## **TG 1 Membership- Kevin Smith**

23 total members: 17 Primary Full Members, 3 Secondary Full Members, 3 Associate Members.

## **TG 2 APFNDT Journal- Prof. Jung-Ryul Lee**

Under review and is now working to gather content for the APFNDT Newsletter

## **TG3 Communications: Mr. Shohei Ooka**

Renewal of the ICNDT website and distribution of the APFNDT Newsletter.

## **TG 4 Education- Dr. B. Venkatraman**

Working to convert the, “Anniversary of Radiation” into a TG activity.

## **TG 5 Certification – Paul Grosser**

Progress made in the latest edition of ISO 9712:2021

## **TG 6 Standards: Dr. Takamasa Ogata**

Review of existing ISO standards and planned distribution of ISO 9712 and the related standards.

## **TG 7 NDE 4.0- Pranay Wadyalkar**

Recruiting members and had their first meeting on July 5<sup>th</sup>, 2021.



# Report of APFNDT

## NDT Events in APFNDT

Year	Event	Date	Society
2021	7th International Symposium on Laser Ultrasonics and Advanced Sensing	October	ChSNDT
	ASNT Annual Conference 2021	November 15-18	ASNT
2022	The 20th World Conference on Non-Destructive Testing (WCNDT 2022)	Feb 28 - Mar 4	KSNT
	Malaysia International NDT Conference and Exhibition 2022 (MINDTCE' 22)	Aug. 16-17	MSNT
	7th US-Japan NDT Symposium	August 23-26	ASNT JSNDI
	Singapore International Non-Destructive Conference and Exhibition (SINCE)	Nov. 7-8	NDTSS
2023	The 16th Asia Pacific Conference for Non-Destructive Testing (APCNDT 2023)	Feb 28 - Mar 3	AINDT
2025	The 17th Asia Pacific Conference for Non-Destructive Testing (APCNDT 2025)	***	ASNT

# Schedule on APFNDT Meetings (AEC, Board Meeting, General Assembly)

Year	Event	Place	AEC	Board Meeting	General Assembly
2021	APFNDT Meetings	Online via the Secretariat	Yes	Yes	Yes
2022	WCNDT 2022	Korea, Incheon	Yes	Yes	No
2023	16th APCNDT	Melbourne	Yes	Yes	Yes
2025	17th APCNDT	Hawaii	Yes	Yes	Yes



Thank you for your attention

# Presentation for ICNDT GA

IN THAT WORKS AND PROMOTES EFNDT



# SITUATION OF EFNDT MATTERS

**EFNDT has redefined ten Working Groups and three Forums and these have started their work through virtual meetings and conferences. These ten groups 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
- WG7 – Failure Analysis (Risk Analysis)
- WG8 – Human Factors
- WG9 – Ethics
- WG10 – NDT4.0
- Forum for European National Aerospace NDT Boards (NANDTBs)
- Forum for Railway Industries
- Forum for Marine.

Additionally, a Working Group with the European Welding Federation (EWF) has been reactivated to complete The EWF-EFNDT joint committee has had 6 meetings in the 2020-2021 period

# PROJECTS AND ACTIONS

## European NDE Engineer Project

### RIMA

- As ICNDT knows, RIMA is a 4-year H2020 project aiming to establish a network of 13 Digital Innovation Hubs (DIH) on robotics sharing best practices and providing services to facilitate uptake of I&M technologies. RIMA network encompasses leading research organizations supporting one DIH per region aligned with regional policies and industry sectors and sectorial associations which will make a bridge with end users and industries
- EFNDT has sent a letter to our Associations to participate in this project, but the answer has not been, until now, very important

### Other matters

- The EFNDT will hold the general assembly this year divided into two parts.
- On 10th June by internet, the first part to approve the financial results and the second part in October- November this year that we hope will be held semi-face-to-face where the new BoD will be elected
- The WG10 has held 2 meetings and the NDE 4.0 has made an International conference called by the DGZfP and with the support of the ICNDT

# PROJECTS AND ACTIONS

## NDE 4.0

### Brexit

- The EFNDT has had 2 extraordinary meetings to analyze the situation due to Brexit in relation to the European Pressure Equipment Directive 2014/68/EU (PED).

### ECNDT

The Organizing Committee of the next ECNDT has had several meetings with the President and Secretary of the EFNDT and has recommended to the BoD that the dates for the 13<sup>th</sup> ECNDT should be re-scheduled to 3-7 July 2023 in Lisbon, due to the postponement of the 20<sup>th</sup> WCNDT until 2022 and after consultation with the Lisbon Exhibition Centre, the professional conference organizers, sponsors and and exhibitors. These dates have been approved by BoD.

# PROJECTS AND ACTIONS

## OIEA-ARCAL PROJECT

On May 18 has been held a webinar with some Sudamerican countries, Italy and Spain, focused in the Certification schemes

The EFNDT made a presentation of its activities and projects in order to invite these countries to disseminate them and to invite to participate in our different working groups.



The EFNDT will make a presentation of its activities and projects.

This summit will be focussed in NDE 4.0 and IA and supported by the EFNDT





# ICNDT 42<sup>o</sup> MEETING – GENERAL ASSEMBLY 2021, July 19th

10 am London UK time

06 am Brazil time



## PANAMERICAN FEDERATION OF NDT

### MEMBERS / MIEMBROS

PAÍS/COUNTRY/PAÍS	SIGLA/ACRONYM/SIGLA	RAZÃO SOCIAL/BUSINESS NAME/RAZON SOCIAL
Argentina	AAENDE	Asociación Argentina de Ensayos No Destructivos y Estructurales
Bolivia	ASBOSENDIC	Asociación Boliviana de Soldadura, Ensayos No Destructivos, Inspección y Corrosión
Brasil	ABENDI	Associação Brasileira de Ensaio 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	*Costa Rica	Instituto Tecnológico de Costa Rica
Ecuador	ESPOL	Escuela Superior Politecnica del Litoral
Estados Unidos / United States	ASNT	The American Society for Nondestructive Testing Inc
México	IMENDE A.C.	Instituto Mexicano de Ensayos No Destructivos, A.C.
México	AMEXEND A.C.	Asociación Mexicana de Ensayos no Destructivos Asociación Civil
Peru	APEND	Asociación Peruana de END
Uruguay	AENDUR	Asociación Uruguaya de Ensayos No Destructivos



## MANAGEMENT BOARD

- President: João Conte (Abendi - Brazil)
- Vice President: Dave Bajula (ASNT - USA)
- Treasurer: Jorge Amsler (AAENDE - Argentina)
- Secretary: Glenn Tubrett (CINDE – Canada)



# Main activities

- Next PANNDT Conference:  
VIII Pan-American Conference for Nondestructive Testing ( VIII PANNDT), to be held in Canada, 2023 June 19 – 23;
- PANNDT Federation Meeting on May 27th;
- Revision of the Action Plan;
- Estrategic Plan to be reformatted;
- 2021 Membership invoices (ICNDT & PANNDT) sent.



# Status

## **AAENDE (Argentina)**

### Positive issues:

- ✓ Migration into online activities;
- ✓ Agreement with IAEA for training courses;
- ✓ Organization of the “Art’21 International Conference of non-destructive investigations and microanalysis for the diagnostics and conservation of cultural and environmental heritage”, to be held in Buenos Aires, in November, a hybrid event, with English as the official language;
- ❖ Argentina keeps suffering with the restrictions.



# Status

## **CINDE (Canada)**

- ✓ test centers have returned to the same volumes previous to the pandemic;
- ✓ training courses have been reduced the sizes in order to allow distance between the students and so ensuring the security;
- ✓ there are a few qualified online training courses are doing well; staff are not attending events;
- ❖ national conference is planned to May, 2022 as exhibitors; but sponsors and authors of papers are not confident for a good result on an online event.



# Status

## **ACOSEND (Colombia)**

- ✓ national conferences were held as a Metal-Mechanics Congress and another by the Instituto Colombiano de la Construcción con Acero (Colombian Institute of Construction with Steel);
- ❖ last year only 40% of the NDT and Welding training courses could be accomplished. 40 inspectors were certified as Level 2.



# Status

## ASNT (USA)

- ✓ pandemic is almost passed through the USA, many of the business are open up, travels are returning as well as the ASNT staff, although many employees are still working from home;
- ✓ conference events continue to be done virtually until June. From July onwards, events are planned to be in person, expecting to have smaller audience than usual;
- ✓ the annual conference will be in November, in Phoenix (Arizona), in person and as close to the normal as it could be;
- ✓ certifications programs are doing well as the exams centers are open in most areas;
- ✓ exams are back as almost normal and in some cases better;
- ✓ new program on oil and gas industry that is performing well, with more than 400 people attending to it;
- ✓ membership volume is almost back to normal .





# Status

## **IMENDE (Mexico)**

- ✓ collaboration with the Nuclear Mexican Institute to participate of a Conference, to which they were invited by Patricio Quezada. This Conference reunited 5 Societies (Spain, Ecuador, Argentina, Brazil and Mexico) in order to discuss about the different Certification Schemes;
- ✓ Mexico has started to prepare a national certification scheme, which involves four main entities, based on the Mexican Standard B4-82 and in parallel with ISO 9712. The institute is preparing and updating different courses in five methods to become e-learning, which will support the scheme. It will be the first time that exams for Level 3 will be included;
- ✓ Level 2 Certifications have been strengthened in Mexico;
- ✓ Renew of Imende as the Accreditation Body in Mexico for the 5<sup>th</sup> year;
- ✓ Imende is also accredited to certify people for ISO 9712 as well as the Mexican Standard B4-82;
- ✓ Imende kept the recognition by the MRA/ICNDT for Levels 1 and 2;
- ✓ around 400 people are attending the training in 5 methods, and 42 people were certified especially in hydrostatic testing.



# Status

## **AMEXEND (Mexico)**

- ✓ Support to develop a national scheme equivalent to the ISO 9712 standard with the focus of implement a national certification scheme;
- ✓ Participation in the evaluation and review of the standard for non-destructive methods with CANACERO (Cámara Nacional de la Industria de Acero – National Chamber of Steel Industry), working with the Committee ISO TC 135 in reviewing the standards;
- ✓ Micendalc project has been moving.



# Status

## **AMEXEND (Mexico)**

- ✓ Support to develop a national scheme equivalent to the ISO 9712 standard with the focus of implement a national certification scheme.
- ✓ Participation in the evaluation and review of the standard for non-destructive methods with CANACERO (Cámara Nacional de la Industria de Acero – National Chamber of Steel Industry), working with the Committee ISO TC 135 in reviewing the standards
- ✓ Micendalc project has been moving.



# Status

## **AENDUR (Uruguay)**

- ✓ The Society is providing some changes, trying to modernize, as adopting tools for meetings as the face-to-face meetings were not possible;
- ✓ AENDUR was invited to participate of the IAEA webinar session;
- ❖ The size of the country impacts in how they want to certify;
- ❖ The pandemic paralyzed the activities.



# Status

## **ABENDI (Brazil)**

- ✓ Online training programs;
- ✓ The National NDT Conference (CONAENDI) was postponed from 2020 to 2021, which was an online event with around 900 attendees;
- ✓ The number of professionals on Abendi's Qualification and Certification schemes last year remained the same as prior to the pandemic.



# Status

## **ACHISEND (Chile)**

- ❖ Due to the pandemic, the actions to legalize the Society were halted.



# Status

## ASOVEND (Venezuela)

- ❖ Difficulties with certification of people considering Venezuela left ISO, in this way no standards to work on;
- ✓ In 2019, it was created a Technical Committee named as "22". Such Committee discussed and aproved some standards based on the ISO 9712 and 2967. The Venezuelan Government is the only authorized body to certify people, although the standards allow Universidad Central Venezolana (Venezuelan Central University) to act as a didactic expert, which means the Univerisy is allowed to teach and enable professionals, to apply exams, and to provide recommendation to the SENCAMER - Servicio Nacional Autónomo de Normalización, Calidad, Metrología y Normativa Técnica (National Autonomous Service of Standardization, Quality, Metrology and Technical Standards) - which is the Government's body of accreditation;
- ✓ The Venezuelan standard is almost done, equivalent to the ISO 9712;
- ❖ The Univerisy will not be a body of accreditation;
- ❖ ASOVEND has been abandoned , however there is a will to reactive it legally , but this movement has been stopped due to the pandemic.



# Status

## **ASENDEC (Ecuador)**

- ✓ Participation to the ARCAL/IAEA webinar sessions on Certification Schemes
- ❖ There has been no meetings as a Society, due to the pandemic, it is why it was not possible to move on with the procedures for the legalization of the Ecuadorian Society.





# Challenges

- As in other sectors, Covid 19 pandemic impacted the business;
- Collection of the membership fees for ICNDT & PANNNDT;
- Support to the countries to create their national certification schemes.



# Opportunities

- Future new members:
  1. Reactivation of ASBOSENDIC, ASOVEND
  2. Legalization of ACHISEND, ASENDEC
  3. CONENCA



# 20<sup>th</sup> WCNDT

20<sup>th</sup> WCNDT 20<sup>th</sup> World Conference on Non-Destructive Testing

Songdo Convensia, Incheon, Korea  
**Feb 28 (Mon) ~ Mar 4 (Fri), 2022**

## 20<sup>th</sup> WCNDT Update





## Reporting of Situation Update

1 Conference Overview

2 Homepage Renewal

3 Registration

4 Abstract

5 Exhibition

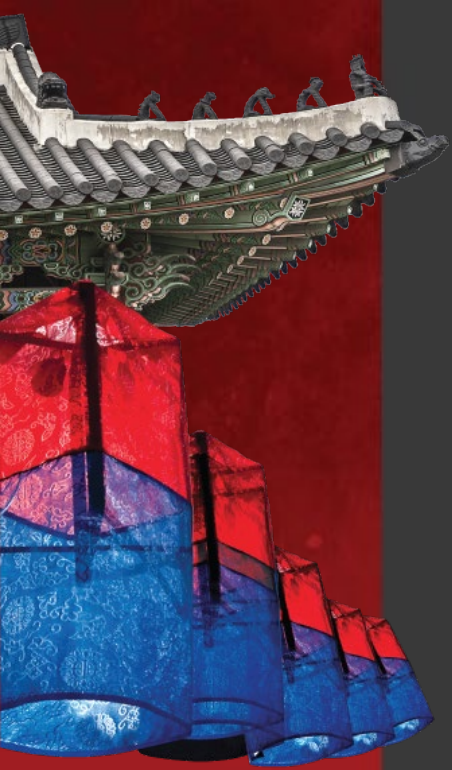
6 Fluctuation in Attendance

7 Sponsorship

## Reporting of Future Plan

Plan to Counter COVID-19





## Reporting of Situation Update



# 1. Conference Overview

First Postponed

Second Postponed

Date

May 31 to June 4, 2021

**February 28 to March 4, 2022**

In response to the global widespread of COVID-19, 20<sup>th</sup> WCNDT Organizing Committee has decided the 2<sup>nd</sup> postponement of the Conference at the end of last year to the new date for **Feb. 28 to Mar. 4, 2022**.

Venue

**Songdo Convensia, Incheon**

Title

As it has been postponed to be held in 2022, the Conference name is changed from WCNDT 2020 to **"20<sup>th</sup> WCNDT"** including the official website at [www.20thwcndt.com](http://www.20thwcndt.com).

Official Website

<https://www.20thwcndt.com>

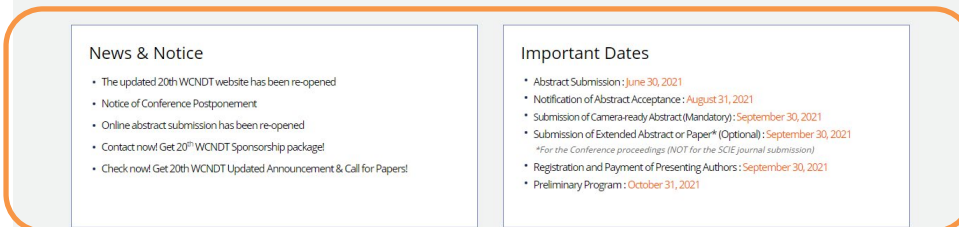


# 2. Homepage Renewal



Amendment of Conference Logo

Revision of Conference Title and Date



Revision of Important Dates and News & Notice



Abstract Submission and Registration  
- Online abstract and registration system is in operation

# 3. Registration

## Registration Status (As of July 14)

Category of Conference Fees	Number of Registrants
Participants (Full)	390
Students	117
Retired/Meeting	22
Accompanying Person	24
Exhibitors (Free)	172
NDT Society (Free)	18
<b>Total</b>	<b>743</b>



# 4. Abstract Submission

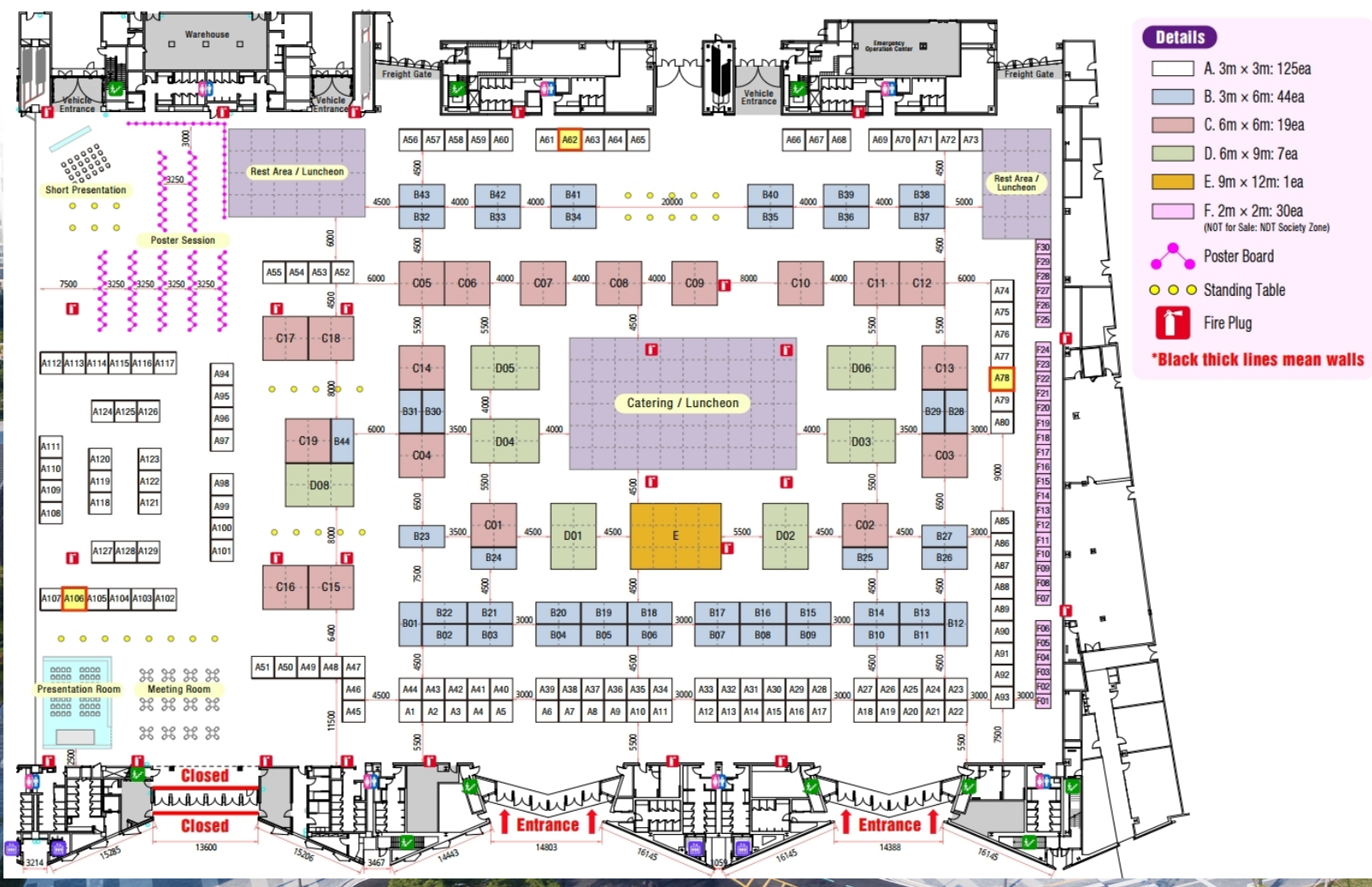
## Abstract Submission Status

### Abstract Submission Status by Main Topic (As of July 14)

Division		Oral	Poster	Total
Topic 1.	Ultrasonics (UT)	186	37	223
Topic 2.	Infrared Thermography (IR)	39	9	48
Topic 3.	Eddy Current & Electromagnetics (ET)	74	39	113
Topic 4.	Digital Radiography & Computed Tomography (RT)	79	35	114
Topic 5.	Power Plants (PP)	42	15	57
Topic 6.	Structural Health Monitoring & Prognostics and Health Management (HM)	29	6	35
Topic 7.	Optics & Vision Systems (OT)	15	4	19
Topic 8.	Civil Infrastructures (Smart NDT for Bridges and Buildings) (HM)	27	5	32
Topic 9.	Terahertz (TZ)	34	15	49
Topic 10.	Transportation (TR)	23	20	43
Topic 11.	Aerospace & Defense (AD)	27	2	29
Topic 12.	Acoustic Emission & Acoustic Method (AE)	43	15	58
Topic 13.	Additive Manufacturing (AM)	19	2	21
Topic 14.	NDT Industry 4.0(IoT, AI etc.) (AI)	29	7	36
Etc.	Biomedical Technology (BT)	7	2	9
	Material Characterization (MC)	21	12	33
	Vibration & Condition Monitoring (CM)	3	2	5
	Certification & Qualification (CQ)	12	3	15
	Oil & Gas (OG)	25	5	30
	NDT Reliability (RE)	22	7	29
	Sensor & Materials (SM)	8	4	12
	Etc.	8	10	18
Special Sessions		92	5	97
Academia		12	0	12
<b>Total</b>		<b>876</b>	<b>261</b>	<b>1137</b>

# 5. Exhibition

- ▶ Total **185 exhibitors** completed booth contract and **340 booths** (based on 9 sqm2) are sold out.
- ▶ Additional **3 booths** space are available for supplementary sale based on the updated booth layout.
- ▶ Aiming to completing booth contract by **October 31, 2021**.



# 6. Fluctuation in Attendance

## Overall Changes in Attendance by 2<sup>nd</sup> Postponement

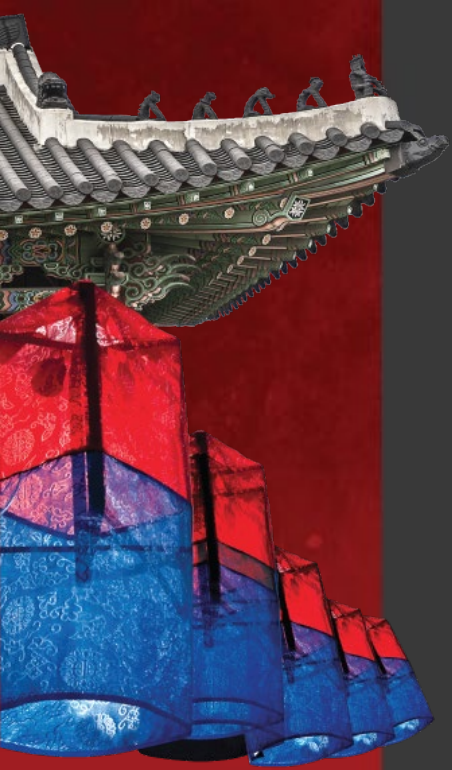
- ▶ The notice date of the second postponement : Dec. 31, 2020
- ▶ The due date of the cancelled registration refund: Mar. 31, 2021

Category	Before Postponed	After Postponed	Changes
Abstracts	1128	1137	9 increase
	<ul style="list-style-type: none"> <li>▪ Abstract cancellation after postponed: 44</li> <li>▪ Additional abstract submission after postponed : 53</li> </ul>		
Registrants	764	743	21 decrease
	<ul style="list-style-type: none"> <li>▪ Registration cancellation after postponed: 29</li> <li>▪ Additional registration after postponed: 8</li> </ul>		
Exhibition Booths (A-sized Booth)	339	340	1 increase

# 7. Sponsorship

- ▶ As of July 9, total **25 sponsors** including exclusive sponsor confirmed their participation.
- ▶ 20th WCNDT 2020 Organizing Committee is undertaking multi-faceted efforts to attract more sponsors to contribute overall income

<p>Exclusive Sponsor</p>	
<p>Other Sponsors (19)</p>	
<p>Supporting Organizations (5)</p>	



## Reporting of Future Plan





## Rescheduling Dates for 20<sup>th</sup> WCNDT

**Consideration:** 20<sup>th</sup> WCNDT Organizing Committee reviewed multi-faceted points for the successful conference including pace of vaccinations, seasonal factor, availability of Songdo Convensia, satisfaction from major sponsors and exhibitors.

**Decision on Dates:** Through intensive internal meetings and close consultation with ICNDT key stakeholders on Jul. 9, 20<sup>th</sup> WCNDT Organizing Committee has come to an agreement to hold the conference on **May 30 to June 4, 2022.**

✘ In case that Jun., 2022 would not be available inevitably, autumn 2022 or 2024 could be considered later as alternative options

**Official Announcement:** Expected to make official announcement on rescheduling dates for 20<sup>th</sup> WCNDT by the end of July.



**ICNDT**  
**42º MEETING – GENERAL ASSEMBLY**  
**2021, July 19th**  
**MEMBERSHIP**

10 am London UK time

06 am Brazil time

João Conte



## **Membership Committee**

Chair: João Conte

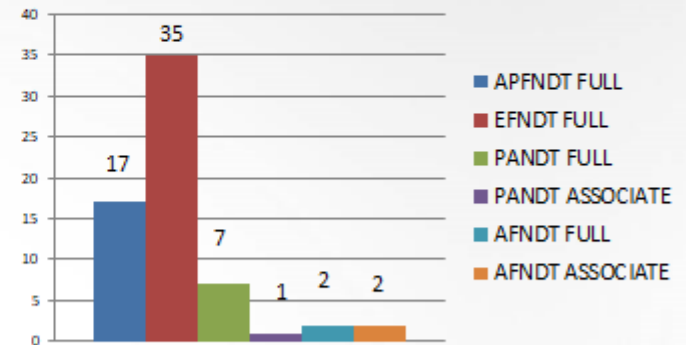
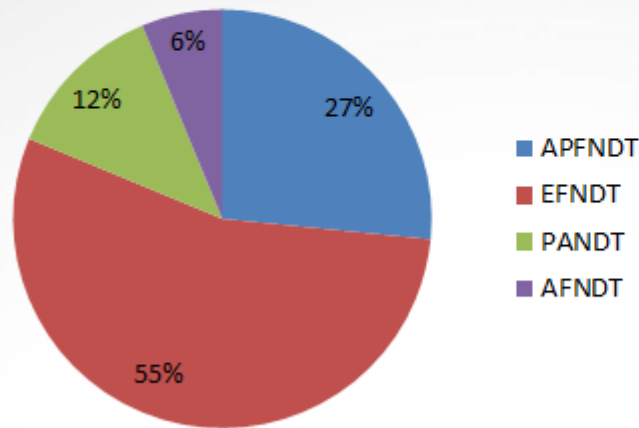
Members: Alexander Mullin; David Gilbert; Ferid Herelli; Les Dick; Purschke Matthias;  
Shohei Ooka





## ICNDT Membership

Current status: 64 organizations





### Challenges:

- Covid 19 pandemic;
- Collection of annual fees.

### Main activities:

- Distribution of the annual fees invoices for the region;
- Translation of OP 11 and the flier about the **Determination and collection of membership fees for 2021** to Spanish language in order to facilitate the understanding and attract new Spanish speaker members.



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Standby:

- INDT Nigeria
- Reactivation of ASBOSENDIC (Bolivia), ASOVEND (Venezuela)
- Legalization of ACHISEND (Chile), ASENDEC (Ecuador)
- CONENCA (Dominican Republic)



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# ICNDT WG 4 Communications

## Report

2021 ICNDT General Assembly (Web Meeting)

2021-07-19

ICNDT WG 4, Chair, Shohei [Ooka](#)







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## *Member of ICNDT WG 4, Communications*

Chair	Mr. Shohei Ooka	JSNDI
Past Chair	Mr. David Gilbert	BINDT
Member	Ms. Sharon Bond	CINDE
Member	Mr. Stefan Cullmann	DGZfP
Member	Ms. Garra Liming	ASNT
Member	Mr. Don Courchesne	CINDE
Member	Mr. Antonio Aulicino	ABENDI
Observer	Dr. Mike Farley	BINDT
Observer	Dr. SK Babu	NDTSS





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## *Main Activities of ICNDT WG 4*

- ◆ *ICNDT Journal (Contributions from BINDT)*
  - ✓ *Issued 4 times a year*
  
- ◆ *ICNDT Website (Contributions from DGZfP and JSNDI)*
  - ✓ *Update*
  - ✓ *Maintenance*
  
- ◆ *SNS*  
*(Facebook, Linked-In, Instagram, Twitter, etc.)*
  - ✓ *Facebook is open*
  - ✓ *Others are in progress*
  
- ◆ *Other*
  - ✓ *ICNDT Photo Competition for WCNDT 2022*





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## ICNDT Photograph Competition 2022 "NDT Stories in Pictures" Photo Competition

The deadline for entries was 31 March 2020. It is now postponed to 30 November 2021, and the winner will be announced at the end of January 2022, with a certificate of commendation being presented to the winner at the World Conference in Korea.

Further details will be announced  
on the new ICNDT website.

**ICNDT**  
The World Organisation for NDT

ICNDT Photograph  
Competition 2022  
"NDT Stories in Pictures"  
Songdo Convensia, Incheon, Korea

**Prize**  
Win the prize of "One Free Full Registration" to  
the 20th World Conference on Non-Destructive Testing (WCNDT)  
from 28 February to 4 March 2022 in Korea.

**Deadline** | 30 November 2021

**Commendation**  
The winner will be announced on  
the ICNDT Website by the end of  
January 2022, and awarded during the  
20th WCNDT with a certificate of  
commendation.

**How to apply**  
To enter the "ICNDT Photograph  
Competition 2022", please visit the ICNDT  
website at [www.icndt.org](http://www.icndt.org) to download all forms  
and once completed, send it back with one photograph  
to the ICNDT WG 4 at [icndt@icndt.or.jp](mailto:icndt@icndt.or.jp).

If you have any inquiries you wish to know, please contact to ICNDT WG 4 ([icndt@icndt.or.jp](mailto:icndt@icndt.or.jp)).

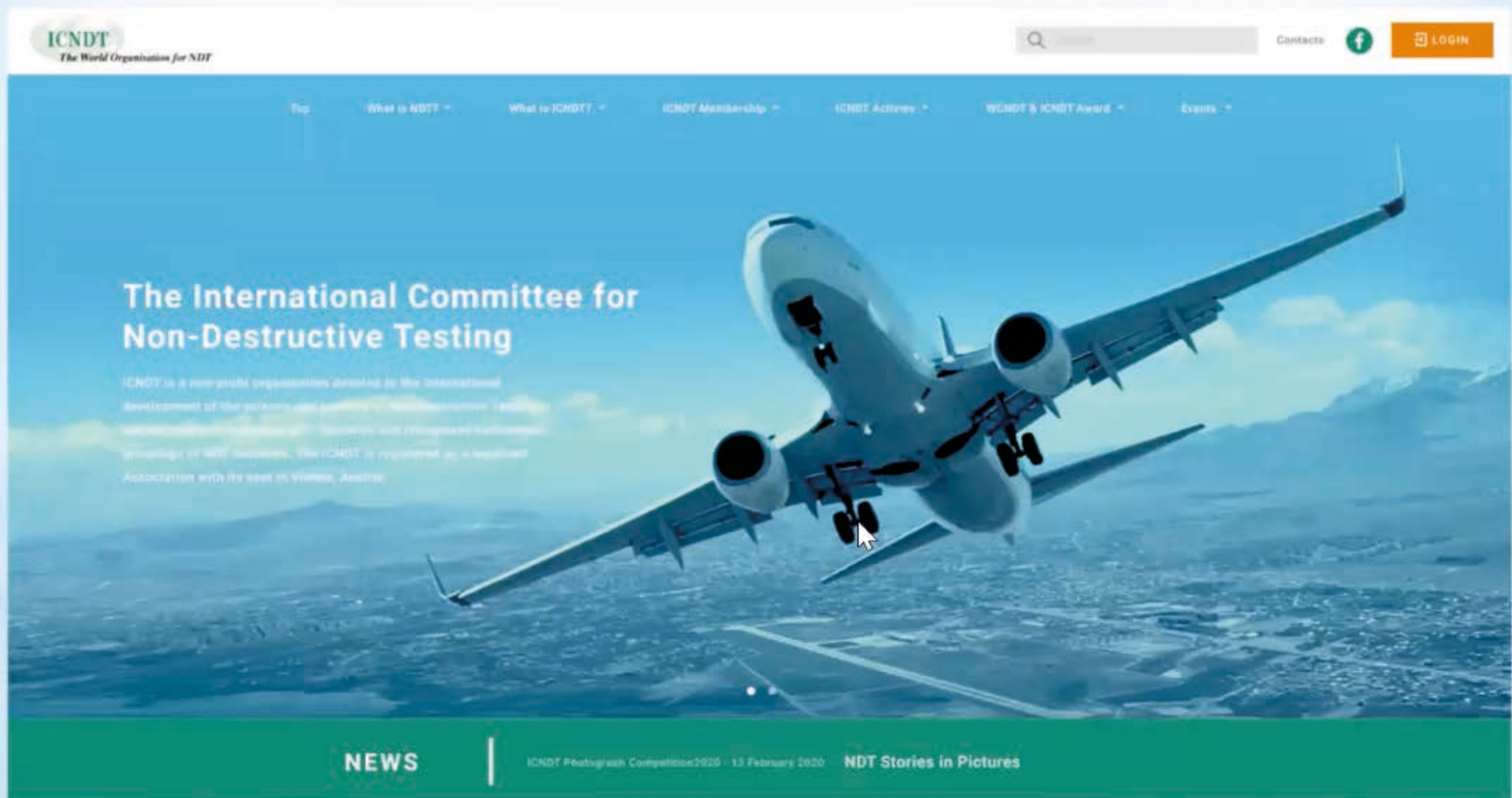




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## New ICNDT Website is launched







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## *What you can do with the new website.*

- ◆ *Real time ICNDT Activities*
- ◆ *Real time NDT Events around the world*
- ◆ *My page for Society Members (Coming soon)*
- ◆ *Society Status (Coming soon)*
- ◆ *ICNDT Membership Fees collecting system (Coming soon)*
- ◆ *Much more*



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***Thank you  
for your continued support  
of ICNDT WG 4***





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# **ICNDT Working Group 1 on Qualification and Certification**

**Report to GA**

**19<sup>th</sup> July 2021**

**Alexander MULLIN**

**WG 1 Chair**



## WG 1 Membership

**Currently – 23 members representing the following countries:**

**Austria, Australia, Brazil, Bulgaria, Canada, China, Denmark, Germany, France, Japan, Iran, India, Republic of Korea, Russia, Singapore, Spain, South Africa, Turkey, Ukraine, UK, USA**



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WG1 members (rev. April 2021)

Name	Affiliation	Comments
Alexander Mullin (Chair)	Russian Society for NDT	mmullin@ndt-rus.ru
Gerhard Aufricht (1) or Gerald Idinger (2)	Austrian Society for NDT	aufricht@mittli.at or g.idinger@oegfzp.at
Harold Jansen	South African IW	harold.jansen@saiw.co.za
João Rufino Teles Filho	Brazilian Society for NDT	rufino@rufinoteles.com.br
P.K. Yuen	Canadian Institute of NDE	puikei.yuen@canada.ca
Matthias Purschke (1) or Ralf Holstein (2)	German Society for NDT	pm@dgzfp.de or ho@dgzfp.de
Shohei Ooka	Japanese Society for NDI	shohei@jsndi.or.jp
Patrick Fallouey	Honoured member	Patrick.Fallouey@orange.fr
Rodolfo Rodriguez	Spanish Society for NDT	r.rodriguez@aend.org
Dave Bajula	American Society for NDT	dbajula@acuren.com
Sajeesh Kumar Babu or Dickson Tan	NDT Society (Singapore)	skbabu@ndtss.org.sg
Vitaly Radko	Ukrainian Society for NDT	Garwardv@i.ua
Keith Arcus	Australian Institute for NDT	kcarcus1@bigpond.net.au
Jennifer Cook	British Institute for NDT	jennifer.cook@bindt.org
Kyung-Cho Kim	Korean SNT	robertkc.kim@gmail.com
Jingyuan Ji	Chinese Society for NDT	mib8888@163.com
Cemil Hakan Gur	Turkish NDT Society	chgur@metu.edu.tr
Mirmajid Ghaemi	Iranian Society for NDT	mirmajidghaemi@gmail.com
Diwakar D. Joshi	Indian Society for NDT	diwakarj@gmail.com
Yordan Mirchev	Bulgarian Society for NDT	mirchev@imbm.bas.bg
Amela Elezovic	COFREND	a.elezovic@cofrend.com

### Observer status

Mike Farley	Past Chairman, ICNDT	mfarleyconsulting@btinternet.com
Colin Bird	ICEC Secretary	colinbird@outlook.com
David Gilbert	General Secretary ICNDT	David.Gilbert@bindt.org
Patrick Brisset	IAEA	p.brisset@iaea.org
Peter Milligan	Australian Institute for NDT	csm@aindt.com.au
Norikazu Ooka	Japanese Society for NDI	norio-ooka@rio.odn.ne.jp
Darcy Corcoran	ISO TC135 SC7	darcy@qcccanada.com

## WG 1 Meetings

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**2016 – Munich, Germany - 11 June 2016**

**2017 – Vienna, Austria - 5 June 2017**

**2017 – Singapore - 15 November 2017**

**2018 – Gothenburg, Sweden - 13 June 2018**

**2019 – Mexico-city – 22 October 2019**

**2020 – Seoul – 07 June 2020 – cancelled**

**2021 – on-line – 21 April 2021**

# WG 1 Meeting, 21 April 2021



## WG1 on NDT Qualification and Certification

Online meeting of 21<sup>st</sup> of April 2021 (Wednesday)  
13:00 – 15:00 CET

### AGENDA

- |  |                      |
|--|----------------------|
| 1. Welcome and Apologies   | A Mullin             |
| 2. Adoption of the Agenda  | A Mullin             |
| 3. Approval of the Minutes of the Meeting held on 22 <sup>nd</sup> October 2019<br>In Mexico-city                                    | A Mullin             |
| 4. WG1 Membership  | A Mullin             |
| 5. Best practices in implementation of ISO/IEC 17024:2012 for<br>NDT personnel certification   | SK Babu              |
| 6. Action plan   | A Mullin<br>members  |
| 7. Report on the work of the ICEC  | Colin Bird           |
| 8. Current situation with revision of ISO 9712:2012 and other<br>ISO standards related to NDT personnel qualification/certification. | A Mullin             |
| 9. Updating of ICNDT Guide on Certification of NDT Personnel<br>to reflect the changes in ISO 9712                                   | M Farley             |
| 10. PED Approval for non-European countries  | A Mullin<br>H Jansen |
| 11. WCNDT2020. Workshop on certification   | KSNT repr.           |
| 12. Any other business   | members              |
| 13. Date and place of next meeting   | A Mullin             |



## Action plan.

### Part of ICNDT Strategic plan Last update – 21 April 2021

INTERNATIONAL COMMITTEE FOR  
NON DESTRUCTIVE TESTING



Working Group 1  
on Qualification  
and Certification

ICNDT ACTION PLAN 3: QUALIFICATION AND CERTIFICATION Task Group: WG1 Task Group Leader: Alexander Mullin

Document title	Revision Date	Revised by	Scope of revision	Circulated to WG1
WG1-03_Action Plan	2009-08-17	JR Thompson	Synchronised with ICNDT Strategic Plan (revision 3A). NOTE: the ICNDT strategic plan is now at Rev 5	2009-08-24
WG1-03_Action Plan	2010-01-04	JR Thompson	Superficial review following the first WG1 meeting in Yokohama, and prior to an IEC virtual meeting in January 2010	2010-01-04
WG1-03_Action Plan	2010-01-18	JR Thompson	Reformatted and rationalised following IEC Teleconference	2010-09-12
WG1-03_Action Plan	2010-09-12	WG1	Reviewed and revised at Vienna meeting as required by WG1 ToR	2010-09-28
WG1-03_Action Plan	2011-06-10	WG1	Reviewed and revised at Valencia meeting as required by WG1 ToR an IEC	2011-07-01
WG1-03_Action Plan	2012-11-19	A Mullin	Reviewed and revised at Luton meeting	2012-11-19
WG1-03_Action Plan	2013-11-20	A Mullin	Reviewed and revised at Mumbai meeting	2013-11-20
WG1-03_Action Plan	2014-10-06	A Mullin	Reviewed and revised at Prague meeting	2014-09-23
WG1-03_Action Plan	2015-10-30	A Mullin	Reviewed and revised at Salt Lake City meeting	2015-10-08
WG1-03_Action Plan	2016-06-16	A Mullin	Reviewed and revised at Munich meeting	2016-06-06
WG1-03_Action Plan	2017-06-05	A Mullin	Reviewed and revised at Vienna meeting	2017-06-05
WG1-03_Action Plan	2017-11-15	A Mullin	Prepared and revised at Singapore meeting	2017-10-19
WG1-03_Action Plan	2018-06-13	A Mullin	Prepared and revised at Gothenburg meeting	2018-05-30
WG1-03_Action Plan	2019-10-22	A Mullin	Prepared and revised at Mexico meeting	2019-10-18
WG1-03_Action Plan	2021-04-21	A Mullin	Considered at online meeting	2021-04-19

Assignments are proposed by the chairman for acceptance by the nominated WG1 member. Where primary and secondary (or backup) responsibilities are stated, this is to (a) spread the workload, (b) ensure continuity in the event that an individual ceases to be a WG1 member, and (c) improve the likelihood that at least one

## WG1 Action plan

### New items.

A8	Identify possibility to create unified body of knowledge based on gap analysis between ISO/TS 25107, CP106 and Tec.Doc 628	Nil	R Holstein	Ongoing task	To establish Ad-hoc group	
B19	ICNDT Recommendations for the operations of Certification Bodies during the COVID-19 pandemic in compliance with ISO/IEC 17024:2012 and ISO 9712:2012	Nil	A Mullin Editorial Committee	2021	Update Recommendations after publishing of new ISO 9712 if the pandemic situation does not improve in 2022	
B20	Develop an ICNDT Best practices for Certification bodies on implementation of ISO/IEC 17024:2012	Nil	SK Babu	2021	Discuss at the online meeting on April 21st	
B21	Discuss how to get PED 2014/68/EU Approvals for non-EU countries	Nil	Rodolfo Rodriguez Harold Janssen	2021	Discuss at the online meeting on April 21st	



# Workshops on qualification and certification

2014 – Prague

2016 – Munich

2017 – Singapore

2020 – Seoul – **cancelled**

202? – Incheon - planned

Workshop on Qualification and Certification of NDT personnel  
Prague, Friday Oct 10th, 9.00 to 12.00  
Joint Chairs: Alexander Mullin (WGL) and Patrick Fallovey (ICEG)

Time	Speaker	Topic
9.00 - 9.15	Mike Farley, Chairman	Scene-setting
9.15 - 9.30	Nicole Scott	Comparison of implementation of ISO 9712 by different PCBs
9.30 - 9.45	Roger Engelbart	New CP106
9.45 - 10.00	Alexander Mullin	Issues raised in current ICNDT review of standard ISO 9712:2012
10.00 - 10.15	Rodolfo Rodriguez	Value/importance of experience before certification
10.15 - 10.30	S K Babu	Comparison & review best practice for renewal/ recertification

ICNDT Workshop  
"NDT + CM training and certification – current issues"  
WCNDT, Munich  
17th June, 09:00-12:00

Time	Speaker	Subject
9:00 - 9:05	M Farley	Scene-setting
9:05 - 9:15	M Farley	Degrees of harmonisation
9:15 - 9:50	T Clazing	Update on ASNT views on ACCP/ISO9712, and specialist certification in USA (AWS, ANDE, etc)
9:50 - 10:10	M Turnbow	ANDE-Performance Based Training and Experience
10:10 - 10:25	S K Babu	Recommendation for Administering Practical Examination
10:25 - 10:40	N Scott	Authorized qualification body: Functions and responsibilities. Best practice.
10:40 - 11:00	T Clazing	Structured practical experience in corporate environment

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ICNDT Workshop on NDT Laboratory Accreditation & Personnel Certification  
16th of November 2017 (Thursday)  
09:00 – 12:30  
Singapore  
Marina Bay Sands Hotel

Time	Speaker	Subject
10:55 - 11:00		
11:10 - 11:15		
11:25 - 11:30		
11:35 - 11:40		
11:50 - 12:00		
12:00		

ICNDT Workshop  
"NDT + CM training and certification – current issues"  
WCNDT, Seoul  
12th June 2020, 08:00-12:00

Time	Speaker	Subject
08.00 - 08.05	M Farley	Scene-setting
08.05 – 08.25	M Farley	Degrees of harmonisation
08.25 – 08.50	D Corcoran	Revision of ISO 9712. Current situation
08.50 - 09.15	R Holstein	ISO/TS 25107:2019
09.15 - 09.35	A Mullin	ISO/TS 25108:2018.
09.35 - 09.55	D Bajula	Update on ASNT views on ACCP/ISO9712, and specialist certification in USA
09.55 - 10.20	M Turnbow	Update on ANDE-Performance Based Training and Experience
10.20 - 10.45	S K Babu	Harmonisation and recognition- risk and opportunity analysis
10.45 - 11.10	J Moody	Practical Marking Considerations
11.10 - 11.35	P K Yuen	On-line examination. Advantages and disadvantages
11.35 - 11.50	P Brisset	IAEA developments on qualification and certification of NDT personnel
11.50-12.00	M Farley	Closing



## **ICNDT Recommendations for the operations of Certification Bodies during the COVID-19 pandemic in compliance with ISO/IEC 17024:2012 and ISO 9712:2012**

### **Editorial Committee**

<b>No</b>	<b>Name</b>	<b>Representation</b>	<b>e-mail</b>
1.	Alexander Mullin - Chair	ICNDT WG1 Chair	mullin@ndt-rus.ru
2.	Sajeesh K Babu	ICNDT Chairman	skbabu@ndtss.org.sg
3.	Harold Jansen	AFNDT	harold.jansen@saiw.co.za
4.	Nori Ooka	APFNDT	noriooka@rio.odn.ne.jp
5.	John Moody	EFNDT	john.moody@bindt.org
6.	Cesar Belinco	PANAMNDT	belinco@cnea.gov.ar
7.	Ralf Holstein	Nominated member	ho@dgzfp.de
8.	Les Dick	Nominated member	lj dick@ndt.co.nz
9.	David Gilbert	Nominated member	David.Gilbert@bindt.org
10.	Fermin Gomez Fraile	Nominated member	fermin.gomez@adsquality.com
11.	James E. Bennett	Nominated member	jbennett@asnt.org
12.	João Rufino Teles Filho	Nominated member	rufino@rufinoteles.com.br

## **Background.**

**The main challenge for Certification bodies under the conditions of government restrictions is to provide qualification and certification following three main principles of ISO/IEC 17024:2012 which are independence, integrity and impartiality.**

**ICNDT recommends using the best practice to address both ISO/IEC 17024:2012 and ISO 9712:2012.**

## **ICNDT Recommendations deals with:**

### **1. Eligibility: Training**

**Recognition of a Blended Training option by the Certification Body**

### **2. Eligibility: Industrial NDT Experience**

### **3. Examination**

### **4. Renewal / Recertification**

# **PD CEN/TR 15589:2014 should be used**

## **Non destructive testing - Code of practice for the approval of NDT personnel by recognised third party organisations under the provisions of Directive 97/23/EC**

### **4.2 Route A**

An individual holds an EN ISO 9712 certificate in a relevant sector issued by a Certification Body which is also an RTPO. In this case, the individual is considered to be approved without further action.

### **4.3 Route B**

An individual holds an EN ISO 9712 certificate in a relevant sector issued by a certification body *which is not a RTPO*, but which has a formal contractual arrangement with a RTPO to carry out assessments as a sub-contractor. In this case the individual may be approved by the above mentioned RTPO upon receipt of satisfactory documented evidence of qualification and certification provided by the certification body concerned.

### **4.4 Route C**

**4.4.1** An individual qualified in a relevant sector against criteria of an accepted standard that is equivalent to EN ISO 9712 may be approved by an RTPO, provided it is satisfied that qualification criteria equivalent to those of the standard have been met.

**4.4.2** When applying approval by route C, a qualification on-site audit is required. The RTPO shall appoint one or more assessors who, between them hold NDT Level 3 certification issued by a third party certification body, covering the relevant sector(s) and those NDT method(s) equivalent to those applied by the NDT personnel to be approved.

# ICNDT Recommendations for Personnel Certification Bodies

## Task Group Members

S No	Name	Society	Email
1	Sajeesh Kumar BABU	NDTSS	skbabu@ndtss.org.sg
2	Jennifer COOK	BINDT	jennifer.cook@bindt.org
3	Amela ELEZOVIC	COFREND	a.elezovic@cofrend.com
4	David J GILBERT	BINDT	David.gilbert@bindt.org
5	Diwakar D JOSHI	ISNT	diwakarj@gmail.com
6	John MOODY	BINDT	John.moody@bindt.org
7	Alexander MULLIN	RSNDTT	mullin@ndt-rus.ru
8	Rodolfo RODRIGUEZ	AEND	r.rodriguez@aend.org
9	Pui Kei YUEN	CINDE/NRCAN	puikei.yuen@canada.ca

## **Background**

**ICNDT WG1 has developed these recommendations to prevent unfair delivering ISO 9712 Personnel Certification and reduce the risk for Certification bodies.**

**Members who are part of Schedule 2 of ICNDT MRA shall extend their best efforts to eliminate any deviations from both ISO/IEC 17024:2012 and ISO 9712:2012 during the operation of Certification scheme.**

**Recommendations provides the best practice in regards to:**

- 1. Structure of Certification Body**
- 2. Outsourcing**
- 3. Application process**
- 4. Using of Examination Question bank**
- 5. Practical Examination**
- 6. Instruction writing / Procedure writing**
- 7. Decision on certification**



## WG1 participation in ISO 9712 revision process

***Representatives of WG1  
in TC 135 SC7 Task  
Groups were nominated.***

### Task Groups – ISO/TC 135/SC 7

#### Task Group #1

- **Sajeesh Kumar Babu, ICNDT**

#### Task Group #2

- **Dave Bajula, ICNDT**

#### Task Group #4

- **PK Yuen, ICNDT**

#### Task Group #5

- **Harold Jansen, ICNDT**

#### Task Group #6

- **Peter Milligan, ICNDT**

#### Task Group #7 – Convenor, **Alexander Mullin**

- **Ji Jingyuan, ICNDT**



**Thank you!**



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## **Report from the ICNDT Certification Executive Committee (ICEC) for July 2021**

**Compiled by Colin Bird. Secretary ICEC and Harold Jansen Chairman ICEC**

**Presented by Colin Bird and Harold Jansen, Chairman ICEC**

# Contents

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- ICNDT Certification Executive Committee OP18
- ICNDT MRA Schedule 1 Members OP19
- ICNDT MRA Schedule 2 Registrants OP19
- Certification Bodies which are under renewal process
- New Certification Body Applications
- PCBA status
- Member challenges
- Current activities for Conformity Assessment OP20
- ICNDT – EQB OP23



# ICNDT Certification Executive Committee (OP18)

The ICNDT Executive Committee (IEC) delegates specific responsibilities of the ICNDT Certification Executive Committee (ICEC) for the management of activities relating to NDT personnel qualification and certification, including but not limited to:

- An ICNDT Multilateral Recognition Agreement (MRA)
- Conformity assessment of PCBs against specific standards/ criteria
- Management & administration of an ICNDT Bank of Examination Questions (EQB)

THE ICEC is established to implement and manage processes developed by the ICNDT Working Group 1

*WG 1 – Qualification and Certification*



# ICNDT Multilateral Recognition Agreement (MRA) - Current Status of Schedule 1

47 National Societies/Institutes, which are Members/Associate Members of ICNDT have signed the ICNDT MRA Schedule 1:

Argentina, Australia, Austria, Belgium, Brazil, Bulgaria, Canada, China, China Taiwan, Colombia, Croatia, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, India, Iran, Israel, Italy, Japan, Kazakhstan, Lebanon, Malaysia, Mexico, Morocco Netherlands, New Zealand, Poland, Portugal, Romania, Russia, Serbia, Singapore, Slovakia, South Africa (SAINT & SAIW), South Korea, Spain, Sri Lanka, Switzerland, Turkey, Ukraine, UK and Uzbekistan.

*They have thereby agreed to promote the recognition of the certification awarded by the Personnel Certification Bodies (PCBs) which are registered with ICNDT under Schedule 2.*



# ICNDT Multilateral Recognition Agreement (MRA) - Current Status of Schedule 2

*20 Personnel Certification Bodies (PCBs) are registered with the ICNDT MRA Schedule 2, There is a further 1 application in progress. This represents an increase of two PCB bodies since July 2020.*

IRAM Argentina,  
AINDT Australia,  
ABENDI Brazil,  
ChSNDT China,  
Chinese Taiwan  
TUV Nord Czech, s.r.o.  
Inspecta Sertifiointi Finland,  
SECTOR Cert Germany,  
South Korea,  
Malaysia,

IMENDE Mexico,  
UDT-CERT Poland,  
RELACRE Portugal  
RTC Russia,  
SAIW Certification South Africa,  
NDTSS Singapore,  
NCNDT Sri Lanka.  
PCN UK,  
CSWIP UK,  
Ukr-SRINDT Ukraine



# ICNDT Multilateral Recognition Agreement (MRA)- Recent Changes to Registrations

Recent new registrations to MRA Schedule 2 (Personnel Certification Bodies)

- Chinese Taiwan February 2021
- KSNDT Korea February 2021

Recent renewals of registration to MRA Schedule 2 (PCBs)

- ChNDT China July 2021

*2021 has been a relatively quiet year for ICEC MRA review teams.*

*However thank you for the effort in the OP20 audit review and re-registration of ChNDT which is now a large and growing member organisation.*





# ICNDT Multilateral Recognition Agreement (MRA)- Other activities

## Schedule 2 Applications in Progress

- India

## Schedule 2 Continuity Check (Form C)

- During 2020 a 'surveillance' process have been implemented to ensure maintenance of accreditation and to allow for the identification of any changes in recognition scope.
- In August I will be reminding all MRA Schedule 2 members to completed form C to continue their registration except for China which has renewed their registration in 2021.



# ICNDT Conformity Assessment of Personnel Certification Bodies (OP20)

- In situations where independent accreditation of PCBs is not available or considered sufficient, ICNDT may offer a conformity assessment to support an application for registration under the MRA Schedule 2.
- ChNDT (China) was successfully audited via the OP20 route this year which was lead by Alexander Mullin Russia supported by Singapore leading to a successful OP19 re-registration.



# ICNDT Examination Question Bank (OP23)

- The EQB is a set of more than 6000 method, sector and level specific questions covering the 6 basic NDT methods i.e ET, MT, PT, UT, RT and VT available to MRA Schedule 2 Registered PCB's.
- Currently it is available as a standalone package capable of generating random papers relating to abovementioned parameters.
- The ICEC have identified issues relating to continuous support, maintenance and update of questions to reflect latest standards and is considering different service provision options without contravening its 'non-profit' status, since modification shall inadvertently have commercial implications.



DEUTSCHE  
GESELLSCHAFT FÜR  
ZERSTÖRUNGSFREIE  
PRÜFUNG e.V.

# International NDE 4.0 virtual Conference

ICNDT GA  
[9th July 2021](#)  
[Prof. Dr. A. Erhard](#)  
[er@dgzfp.de](mailto:er@dgzfp.de)

## Some brief information

The virtual conference took place at 14<sup>th</sup> and 15<sup>th</sup> April 2021 as well as at 20<sup>th</sup> and 21<sup>st</sup> April 2021.

Four keynote presentations, 26 invited lectures, twelve commercial lectures and four panel discussions made up the program for this four days.

The presentations of many contributions can be found on the conference website <https://2021.nde40.com> and will appear as a paper in a special edition of the Journal of NDE.

## Participants

Participation - virtual, all days	66
Free participation virtual	23
Speaker - virtual, all days	8
Students - virtual, all days	9
Participation - 2 days_20/21 April	5
Participants in total	111

# Participants

Germany	37
Japan	15
USA	10
Spain	7
United Kingdom	7
Canada	6
South Korea	6
India	4
France	3
Argentina	1
Australia	1
Austria	1
Belgium	1
China	1
Czech Republik	1
Finland	1
Hungary	1
Italy	1
Latvia	1
Mexico	1
Netherlands	1
Norway	1
Singapore	1
Sweden	1
Switzerland	1

# Next NDE 4.0 Conference

The banner features a dark blue header with the text 'NDE 4.0' on the left and 'Start', 'Call for Abstracts', and 'Attend' on the right. The main background is a blurred image of a person's hands typing on a keyboard, overlaid with a network of glowing blue lines and binary digits (0s and 1s). A teal and blue text box in the center contains the conference details.

NDE 4.0

Start Call for Abstracts Attend

International Conference on NDE 4.0  
26 – 28 April 2022 in Munich, Germany

Abstract submission until September 30<sup>th</sup> 2021  
(<https://conference.nde40.com>).

# SIG NDE 4.0

## SCOPE of SIG on NDE 4.0

		Responsibility	Priority	
	<u>Technical</u>			
T-1	<i>Sharing of International R&amp;D &amp; NDE 4.0 Activities (Content)</i>	<i>Janannes, Bernd</i>	1	Including sharing with outside of NDE sector
T-2	<i>Guidelines on Data Formats, Interfaces, exchange, und ontology</i>	<i>Janannes, Pranay</i>	2	Including best practise
T-3	<i>Standardization, Validation (Inclusive of learning systems)</i>	<i>Mr. Wait</i>	3	
	<u>Process</u>			
P-1	<i>Common terminology</i>	<i>Don Andrews</i>	1	What is specially NDE 4.0
P-2	<i>Knowledge exchange Chanel (Publications, Platform and Forum)</i>		1	Other professional bodies
P-3	<i>Guideline for roadmap/application on NDE 4.0</i>	<i>Ripi</i>	2	Recommens ptractice , include critival issues
P-4	<i>Risk and Resiliency (War, COVID, ...)</i>		3	
	<u>Human Perspectives</u>			
H-1	<i>Changing Role (Liaison SIG on reliability)</i>		1	
H-2	<i>Ethics, Diversity Equity &amp; Inclusion,</i>		2	
H-3	<i>Certification (H, M, HMI)</i>	<i>Mr. Wait</i>	3	



# SIG Reliability

## Brief Information

**ACTION PLAN: SIG NDT Reliability** (Updated June 8, 2021)

**Task Group Co-Chairs:** Daniel Kanzler and Marija Bertovic

**Committee:** Bernard McGrath, Greg Selby, Robert Smith, Johanna Farnhammer, Younho Cho, Abdeldjalil Bennecer.

### Notes:

1. “Cost” estimate and “IEC Decision” needed when the SIG wants to spend ICNDT money or
2. ICNDT IEC Decision needed if you wish to publish an ICNDT Guide – fairly easy process.
3. We suggest someone from the committee be named to take the lead on each Action Area.
4. The normal reporting route for the SIG is to the Co-Chairs of ICNDT WG3 (Prof Erhard and Prof Cho). Mike Farley will remain available to provide support.

## *extraction of the action plan*

	<b>Action (What)</b>	<b>Cost (€)</b>	<b>Who?</b>	<b>When?</b>	<b>Progress/ Remarks</b>	<b>IEC Decision</b>
<b>1</b>	<b>Organisation</b>					
<b>1.1</b>	Confirm membership of Committee		?Marija Bertovic	April 2021		
<b>1.2</b>	See up email register of all members of group		?Daniel Kanzler	April 2021		
<b>1.3</b>	Update website		Ditto/ David Gilbert			
<b>1.4</b>	Announce meeting programme in ICNDT Journal and on website		Ditto/ David Gilbert			
<b>2</b>	<b>Communication and knowledge sharing</b>					
<b>2.1</b>	Quarterly/ Bimonthly meetings. Each meeting will have a standard agenda, eg: Introductions Speakers (normally 2/meeting, 20 min talks and 5 min Q+A) – to be arranged six months at a time Reports on Action areas Decisions on new action areas Update on next International workshop		?	First tranche by mid April		



*The World Organisation for NDT*

**ICNDT WG5:  
Radiation Protection &  
Safety**

## ISEMIR-IR

- ISEMIR is the acronym for the Information System on Occupational Exposure in Medicine, Industry and Research.
- ISEMIR-IR is a web-based tool for non-destructive testing companies carrying out industrial radiography (IR). ISEMIR-IR is developed as a tool for regular data collection and analysis of occupational doses for individuals in IR, and for the use of this information to improve occupational radiation protection.
- It assists IR facilities in benchmarking their arrangements in radiation protection and safety, and hence in promoting of, implementation of optimisation of occupational radiation protection.

## WG5: Radiation Protection & Safety

- New impetus in promoting ISEMIR-IR and encouraging completion of the surveys.
- WG5 basically consists of the ISEMIR WG members:  
David Gilbert (UK); Charlotte Kaps (Germany); Richard van Sonsbeek (Netherlands); Francisco Da Silva (Brazil).  
Others are invited:  
Dr. Erik Malta (Netherlands); Ezio Tuberosa (Italy)  
*More please! Hope to hold meeting at WCNDT.*
- In order to increase the number of active users in the system, as well as enhance users' experience, two new surveys were conducted: one for regulatory bodies and one for NDT companies.



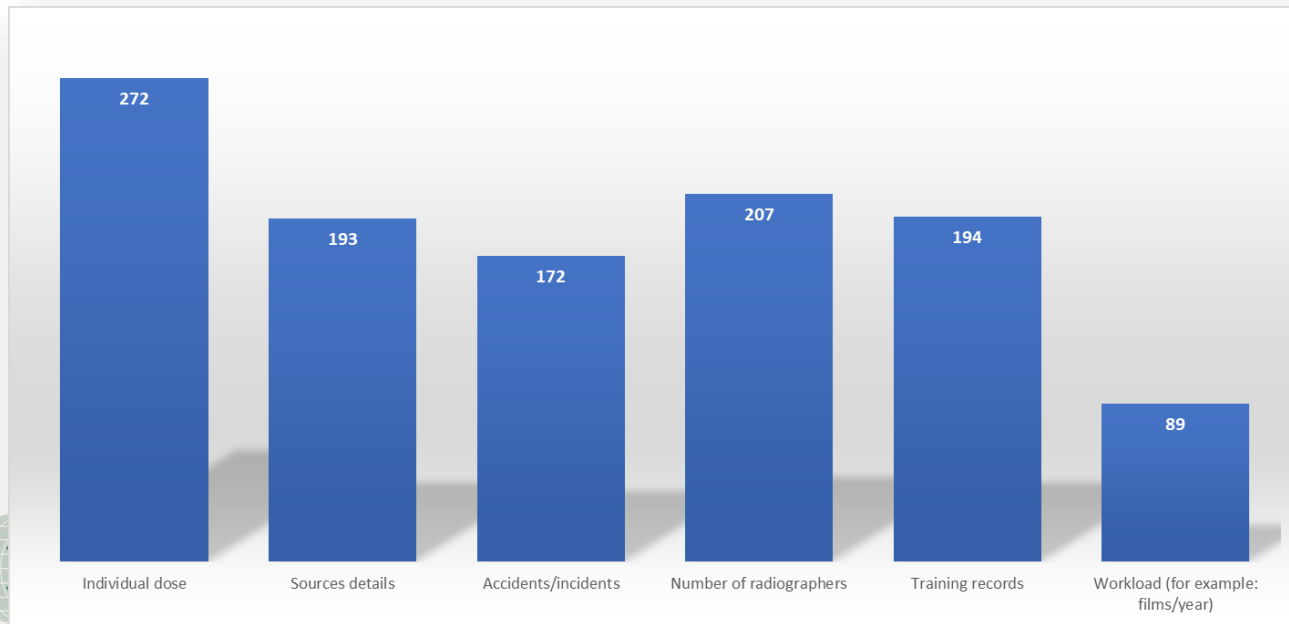
# ISEMIR-IR Global Survey - Analysis of the results

- Number of questionnaires received from **NDT companies**

Region	Questionnaires received	Countries
Africa	30	9
Asia-Pacific	100	11
Europe	130	15
Latin America	15	6
North America	9	1
<b>Total</b>	<b>284</b>	<b>42</b>

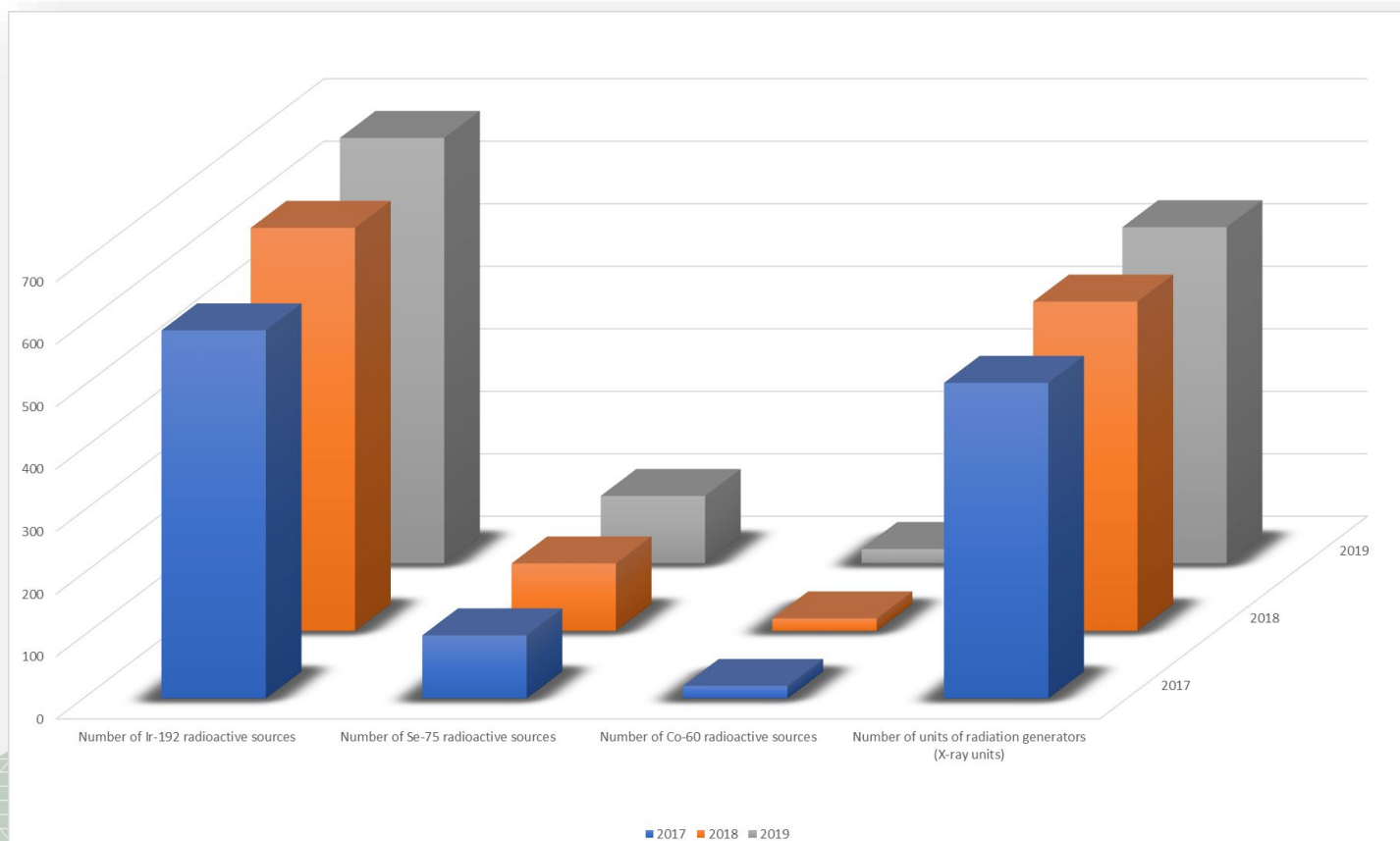
# What sort of data do you record?

	Individual dose	Sources details	Accidents/incidents	Number of radiographers	Training records	Workload (for example: films/year)	Total
Africa	28	23	20	12	14	10	107
Asia-Pacific	96	63	51	77	73	36	396
Europe	125	90	85	100	91	37	528
Latin America	15	11	9	11	9	5	60
North America	8	6	7	7	7	1	36
<b>SUM</b>	<b>272</b>	<b>193</b>	<b>172</b>	<b>207</b>	<b>194</b>	<b>89</b>	<b>1127</b>



# Radiography sources

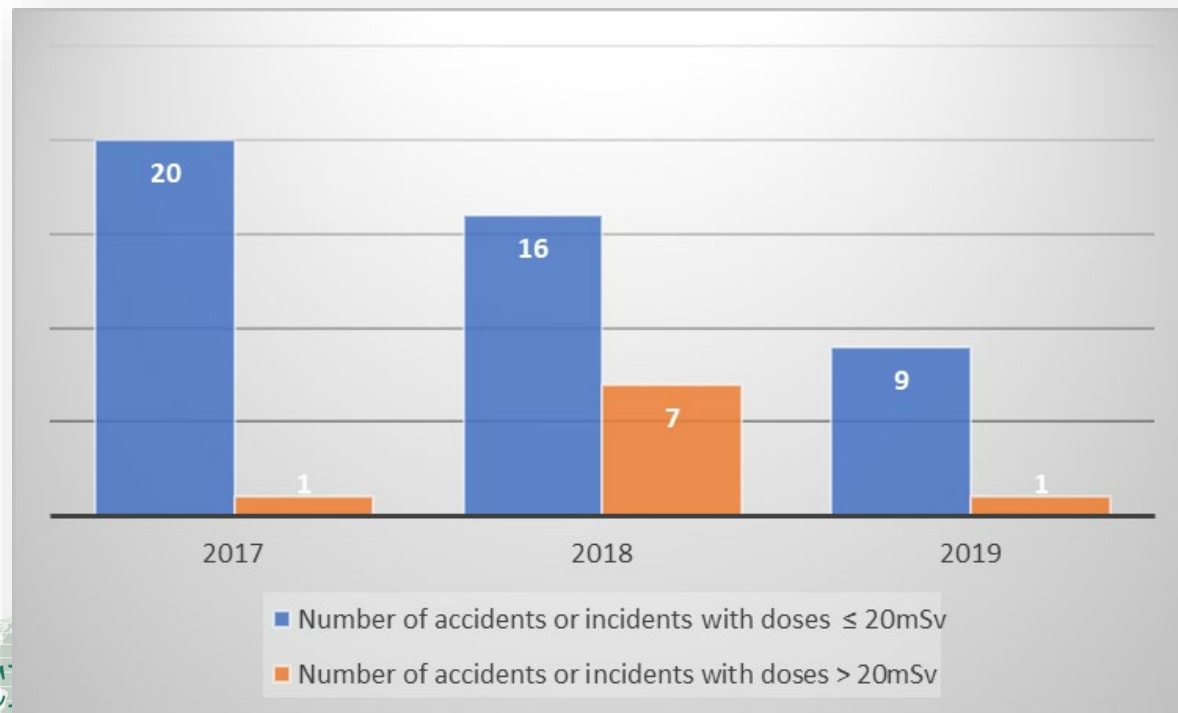
	Number of Ir-192 radioactive sources	Number of Se-75 radioactive sources	Number of Co-60 radioactive sources	Number of units of radiation generators (X-ray units)	Total
2017	589	101	20	505	1215
2018	645	108	20	527	1300
2019	681	108	23	538	1350





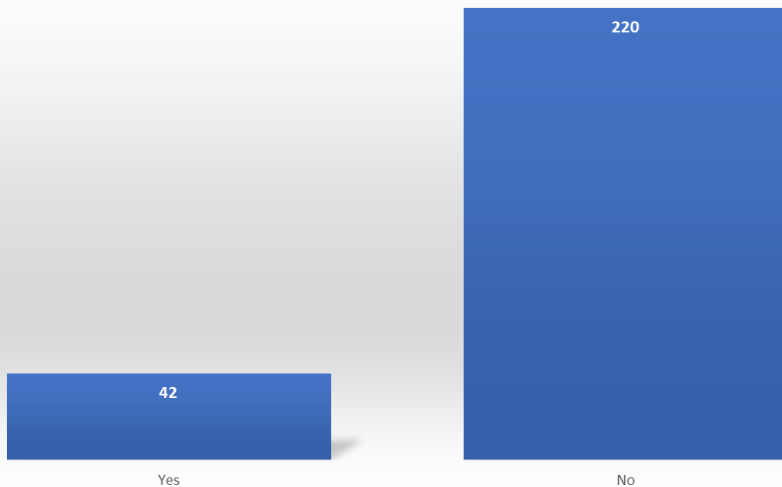
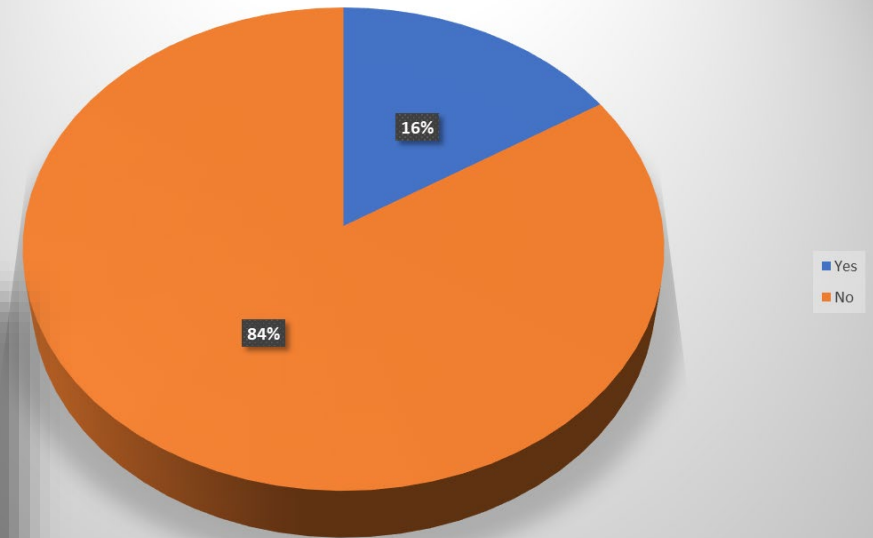
## 16. Accidents and incidents

	Number of accidents or incidents with doses $\leq$ 20mSv	Number of accidents or incidents with doses $>$ 20mSv
2017	20	1
2018	16	7
2019	9	1



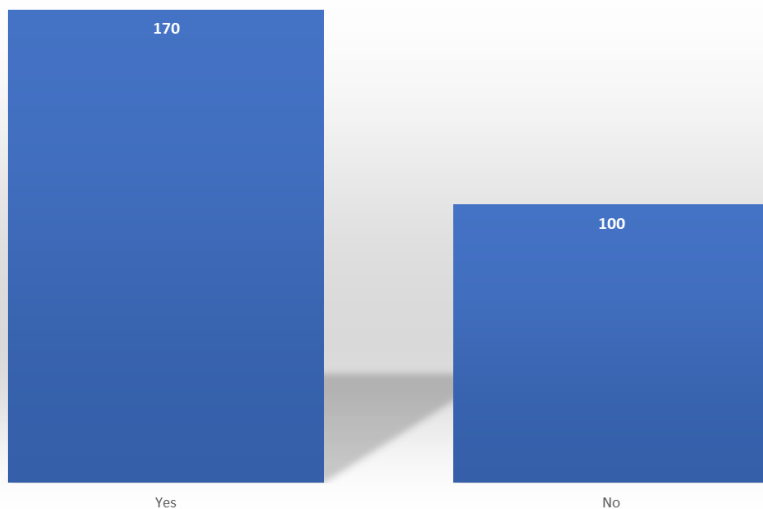
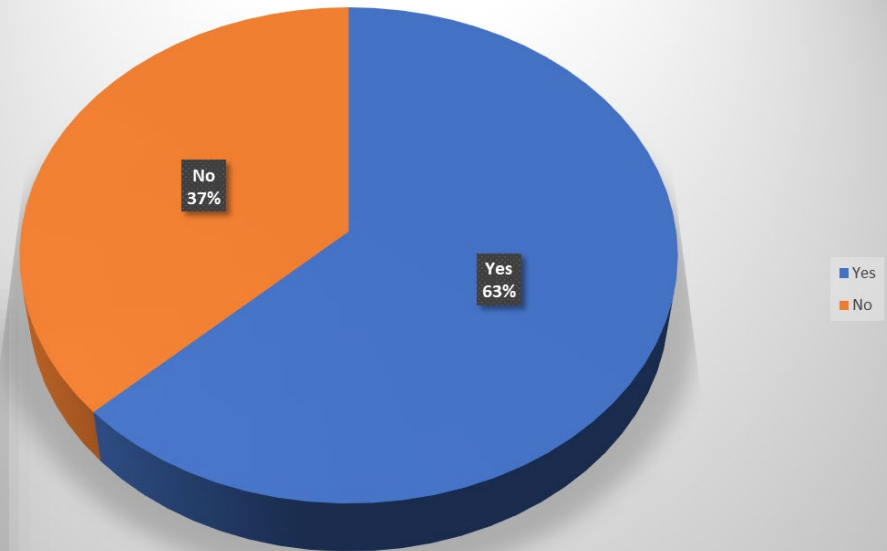
# Are you aware of the IAEA ISEMIR-IR project for NDT companies?

	Yes	No	Total
Africa	6	23	29
Asia-Pacific	13	80	93
Europe	20	100	120
Latin America	3	10	13
North America	0	7	7
<b>SUM</b>	<b>42</b>	<b>220</b>	<b>262</b>



## 5. Would you be interested in IAEA free software for dose recording, analysis and reporting?

	Yes	No	Total
Africa	25	4	29
Asia-Pacific	62	31	93
Europe	62	64	126
Latin America	14	0	14
North America	7	1	8
<b>SUM</b>	<b>170</b>	<b>100</b>	<b>270</b>



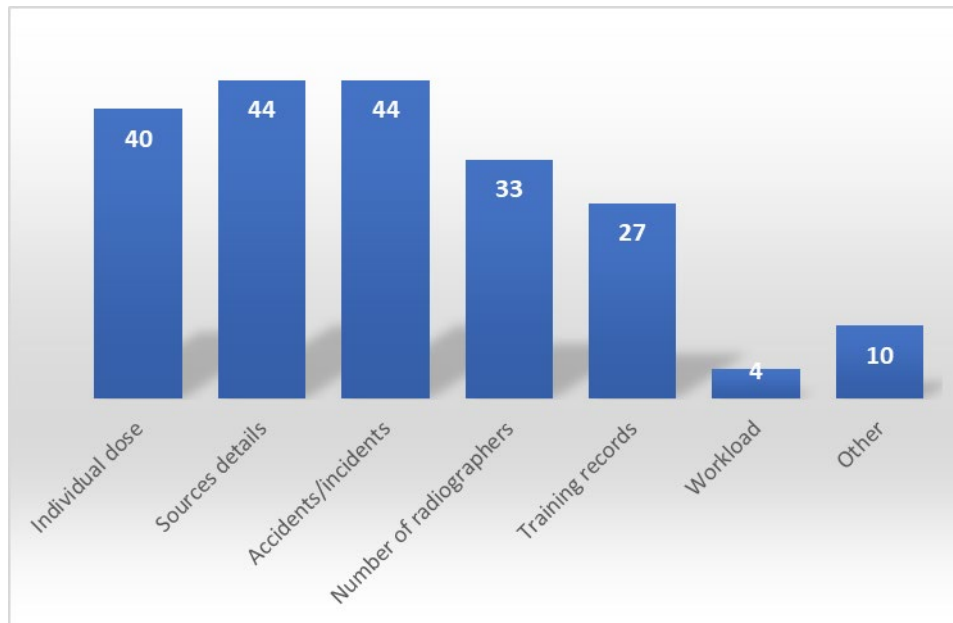
# ISEMIR-IR Global Survey - Analysis of the results

Number of questionnaires received from **Regulatory Bodies**

Region	Questionnaires received	Countries
Africa	7	7
Asia-Pacific	9	9
Europe	23	22
Latin America	5	5
North America	1	1
<b>Total</b>	<b>45</b>	<b>44</b>

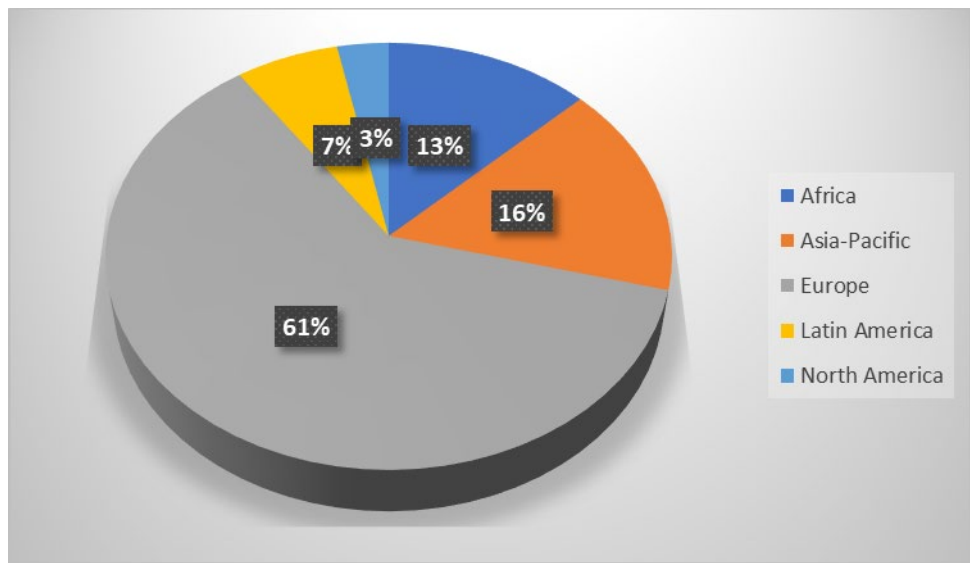
# What data do you currently collect from NDT companies?

	Individual dose	Sources details	Accidents/incidents	Number of radiographers	Training records	Workload	Other	Total
Africa	6	7	6	6	6	1	0	32
Asia-Pacific	9	11	11	7	5	0	4	47
Europe	20	21	22	15	13	1	6	98
Latin America	3	3	3	3	2	1	0	15
North America	2	2	2	2	1	1	0	10
<b>SUM</b>	<b>40</b>	<b>44</b>	<b>44</b>	<b>33</b>	<b>27</b>	<b>4</b>	<b>10</b>	<b>202</b>



# Are you aware of the ISEMIR-IR?

	Are you aware of the ISEMIR-IR?
Africa	4
Asia-Pacific	5
Europe	19
Latin America	2
North America	1
<b>SUM</b>	<b>31</b>





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**ICNDT WG5:  
Radiation Protection &  
Safety**

**Thank you**





INTERNATIONAL COMMITTEE FOR  
NON-DESTRUCTIVE TESTING

*The World Organisation for NDT*

## **Brief report to the ICNDT from the ICNDT's Working Group 6, July 2021**

### **Condition Monitoring**

- **Conferences**

#### **The WCNDT 2022**

WG6 is actively supporting WCNDT 2022 by organizing multiple structured sessions. WG6 is preparing to publish the best CM papers from the WCNDT in the International Journal Insight and the best-case studies in the International Newsletter Condition Monitor.

Some members of WG6 are planning to make CM/NDT presentations at the WCNDT 2022.

#### **The Third World Congress on CM, 2022**

WG6 is actively supporting WCCM 2022 by organizing multiple structured sessions and by making NDT/CM plenary keynote talks. WG6 is preparing to publish the best CM papers from the WCCM in the International Journal Insight

and the best case studies in the International Newsletter Condition Monitor.

**Some members of WG6 are planning to make CM/NDT presentations at the WCCM 2022.**

- **CM/NDT publications**

Preparation of a special issue of the International Journal Insight to cover CM/NDT topic is an ongoing task.

- **CM/NDT Continuing Professional Development**

WG6 is planning CPDs, related to CM/NDT, at WCCM 2022

- **Joint CM/NDT cross-forums**

WG6 planning cross-forum at WCCM 2022

The next WG 6 meeting in person will be at WCNDT 2022.

- **ISO TC 108 SC5**

Argentina offers to discuss in WG6 all standards of the TC 108 SC5 “Condition Monitoring & Diagnostics”.

ISO 18436-6 “Condition monitoring and diagnostics of machines — Requirements for qualification and assessment of personnel — Part 6: Acoustic emission” was sent on June 23 and is under discussion up to the end of July. No comments were received up to now!

Co-Chairs of the WG 6  
Cesar Belinco and Len Gelman



International Organization for Standardization

# *Report of ISO/TC 135*

## *- Non-destructive testing -*

ICNDT General Assembly

July 2021

Web meeting



# Structure of ISO/TC 135



## **ISO/TC 135 *Non-destructive testing***

### **SC 2 *Surface methods***

### **SC 3 *Ultrasonic testing***

*SC 3/WG 5 Ultrasonic test equipment*

*SC 3/WG 6 Inspection using guided waves*

### **SC 4 *Eddy current testing***

### **SC 5 *Radiographic testing***

*SC 5/WG 8 Gamma scanning*

### **SC 6 *Leak testing***

### **SC 7 *Personnel qualification***

### **SC 8 *Infrared thermography for non-destructive testing***

*SC 8/WG 2 NDT-IRT-General principles*

*SC 8/WG 3 NDT-IR-System and equipment*

*SC 8/WG 4 NDT-IR-Guidelines for examination of electrical installations*

### **SC 9 *Acoustic emission testing***

*SC 9/WG 8 Acoustic emission testing of metallic structures*

*SC 9/WG 9 AE sensor sensitivity verification*

*SC 9/WG 10 Acoustic emission testing of atmospheric pressure storage tank*

**Japan (JISC)**

**South Africa (SABS)**

**Germany (DIN)**

Germany (DIN)

Germany (DIN)

**France (AFNOR)**

**Germany (DIN)**

Austria (ASI)

**Japan (JISC)**

**Canada (SCC)**

**Korea (KATS)**

Japan (JISC)

China (SAC)

India (BIS)

**China (SAC)**

China (SAC)

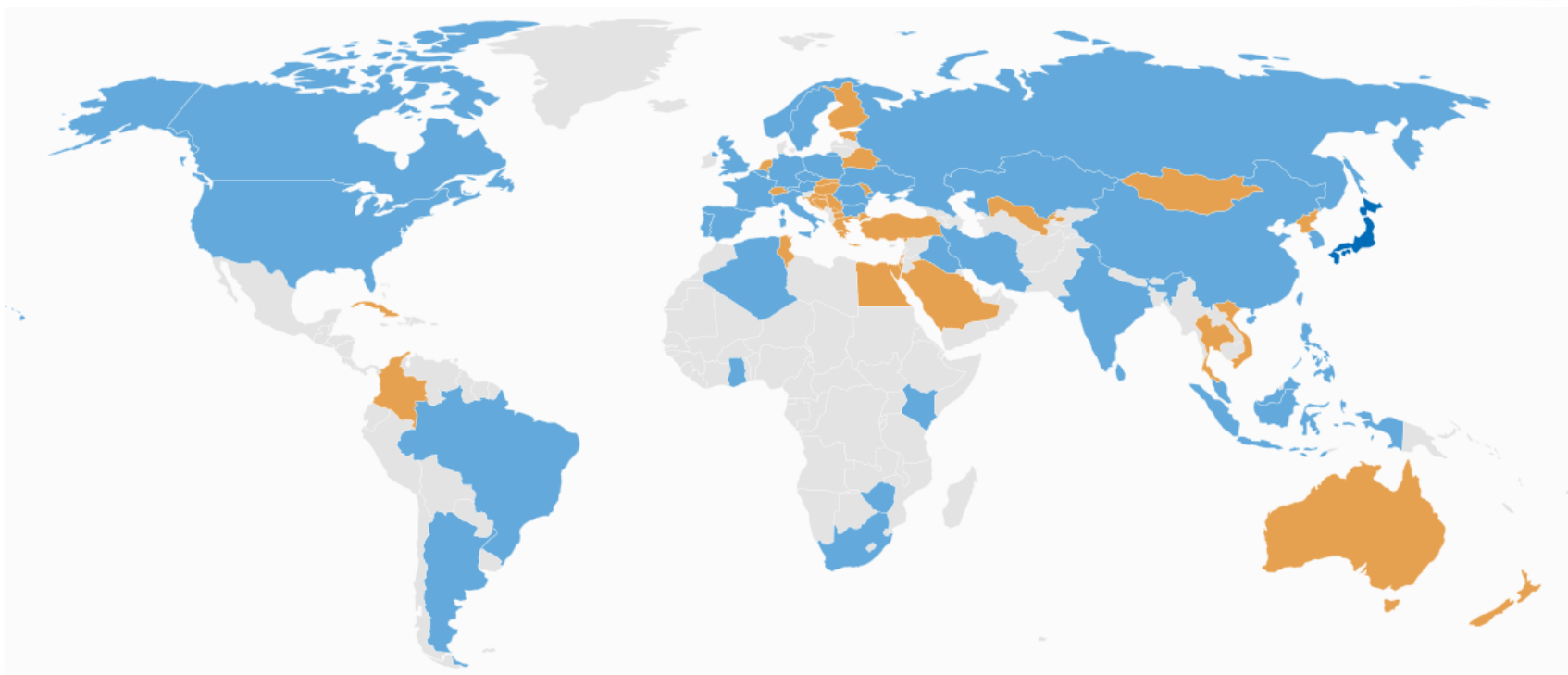
China (SAC)

China (SAC)

# Members of ISO/TC 135



Secretariat (JISC, Japan) ■



2020 Participating Members (40) ■

Observing Members (28) ■

2021 Participating Members (35) ■

Observing Members (32) ■

# Liaisons with other organizations



(1) Special liaison to comply with the Vienna agreement (1)  
CEN/TC 138

(2) Liaisons (within ISO and with IEC) (16)

ISO/CASCO

ISO/TCs (12): TC 11, TC 17, TC 20, TC 26, TC 44, TC 58,  
TC 67, TC 79, TC 107, TC 112, TC 119, TC 261

SCs (2): TC 85/SC 6, TC 108/SC 5

IEC/TC (1): IEC/TC 87

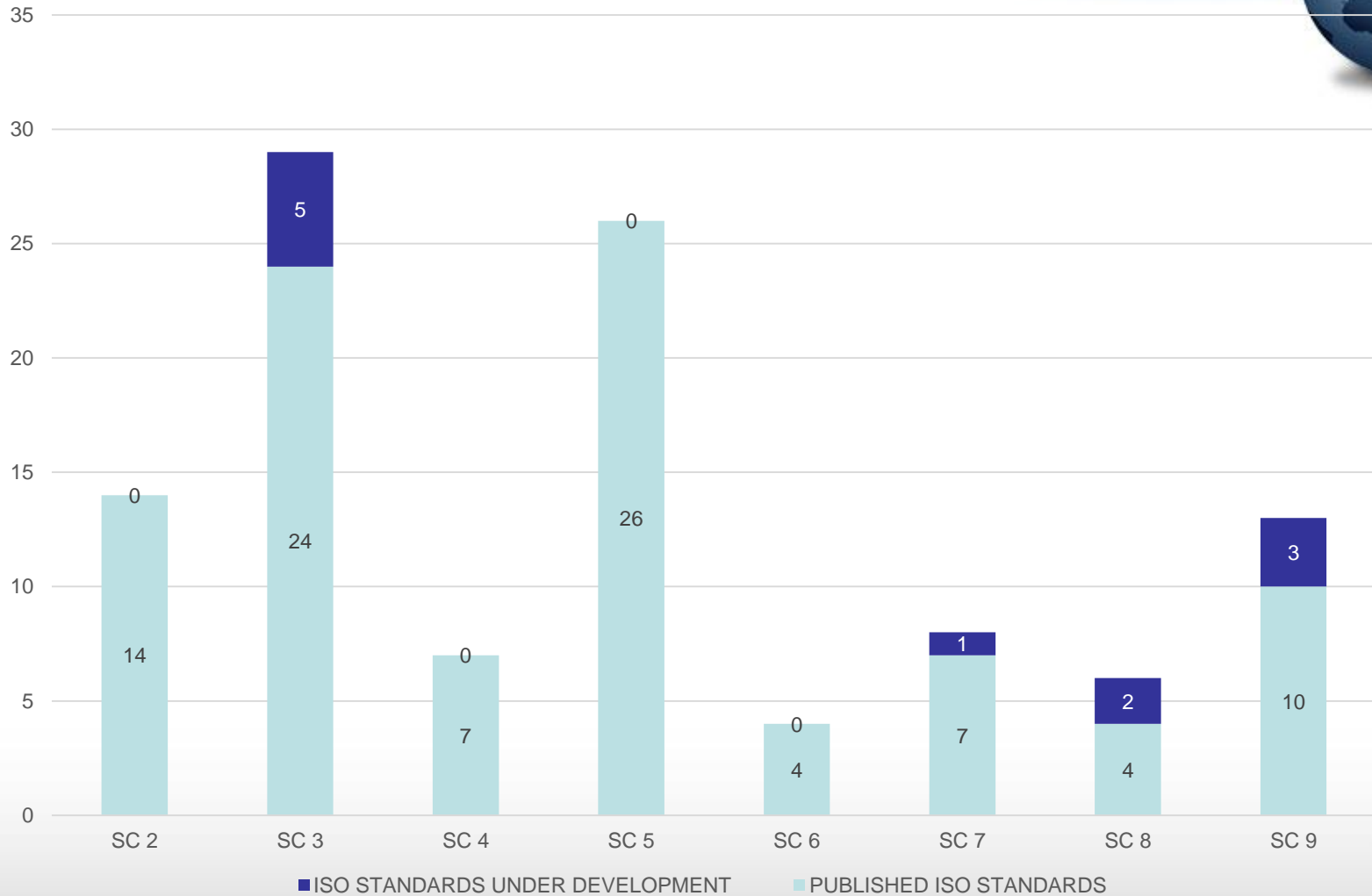
(3) Liaisons with other organizations (7)

Liaisons A (4) : CEOC International, **ICNDT**, IIW, INLAC

Liaisons B (3) : EC, IAEA, WCO



# Activity Report



# *Future Plan / New Items*



## **Next ISO/TC 135 Plenary**

2020 WCNDT (Korea) Postponed

**2021 Virtual Meeting in October**

2022 WCNDT (Korea)

2023 ECNDT (Portugal)



**Thank you for  
your attention.**