



INTERNATIONAL COMMITTEE FOR
NON-DESTRUCTIVE TESTING

The World Organisation for NDT

Version	Record of change	Responsible	Status
Revision 9d	Update to cover period 2014 to 2016 taking account of discussion at PGP and GA in Prague. Action plans for ICEC and WG6 added.	MF	24/07/2015
Rev10 draft	First draft for 2016-2020		
Rev 10 draft 2			20/03/2016
Rev 10d	After mtg with SKB and input from AM		5/5/2016
Rev 10e	After GA 39 in Munich	SKB/MF	
Rev 10f	After IEC Sep 2016	SKB	30/9/2016
Rev 10g	After IEC Nov 2016	SKB	21/12/2016
Rev 10h	After IEC June 2017	SKB	10/08/2017
Rev 10 i	Before GA 40 in Gothenburg	SKB / MF	21/5/2018

ICNDT STRATEGIC PLAN

1. PROCESS

Since 2008, ICNDT has operated in accordance with Strategic Plans updated every two years.

In this document Rev10 the ICNDT's objectives are reviewed and the global situation in which ICNDT operates is considered. There is then a SWOT (Strengths, Weaknesses, Opportunities and Threats) analysis, against the Objectives designed to identify gaps in our activities and develop specific strategies and matching Action Plans for the period 2016-20.

2. OBJECTIVES OF ICNDT

ICNDT is a non profit association devoted to the international development of the science and practice of Non-Destructive Testing, in conjunction with individual already existing NDT societies and recognised Regional Groupings of NDT societies. ICNDT's activities are dependent on the voluntary actions of its members. The purposes, set out in the Constitution, are to:

- i. direct its prime focus on, to promote and support Non-Destructive Testing (NDT) at an international level for the benefit of the involved public in general;
- ii. promote international collaboration in all matters relating to NDT, including collaboration with international organisations with an interest in NDT, e.g. International Organisation for Standardisation (ISO), International Institute of Welding (IIW), International Atomic Energy Agency (IAEA), United Nations Development Organisation (UNIDO), World Federation of NDT Centres etc;
- iii. encourage the foundation, development, strengthening and cooperation of existing and new national and regional NDT Societies;
- iv. assign the place and organisation of the World NDT Conference to an appropriate NDT society or group of societies, at intervals of four years;

- v. establish and implement membership policies of ICNDT in collaboration with Regional Groupings of NDT societies;
- vi. award distinctions honouring outstanding services in the area of Non-Destructive Testing;
- vii. encourage the formulation of international standards on Non-Destructive Testing in collaboration with the International Organisation for Standardisation, and other standards bodies;
- viii. promote best practices in NDT and to encourage international harmonisation in this area.

3. SITUATION ANALYSIS

The situation in which the ICNDT and its member societies operate may be summarised as follows:-

- i. NDT business in all its aspects (including personnel, company equipment, services, and industrial applications) is increasingly “globalised” and subject to standards, directives, regulations and specifications which are determined outside national boundaries. These are sometimes regional (e.g. PED, EASA), sometimes sectoral (e.g. ASME, NADCAP), sometimes international (e.g. ISO, IAEA, IAF...) and sometimes specific to the global operations of large companies.
- ii. In-Service NDT (for condition assessment, life estimation and life extension) is now as important as NDT in manufacture and increasingly important in a safety-conscious world.
- iii. The breadth and depth of technologies encompassed by NDT is increasing and many member societies now cover condition monitoring and diagnostic technologies as well as traditional NDT.
- iv. There are shortages of NDT personnel in some countries; and an increasingly mobile workforce, national certifications spreaded out in foreign economies which need to be recognized in participating MRA countries.
- v. ICNDT needs recognition by and engagement with other international or regional bodies with interests in NDT; comparable with the recognition by ISO
- vi. NDT largely survived the economic downturn, demand continues to grow. Larger NDT Societies are in a healthy state but very small ones struggle to grow and the rate of formation of new societies has declined..
- vii. ICNDT has a long history and very broad membership (over 60 countries) and since legalisation in 2008 provides a stable platform for more effective representation and support of the membership and the wider NDT community.
- viii. ICNDT’s role as an association of NDT societies is complementary to the roles of individual member societies. Even in situations where members cannot find a consensus, ICNDT has a role to play in providing a forum for information, debate and discussion so that individual members are better informed.
- ix. ICNDT includes among its members NDT Societies which range from the very small to the very large with corresponding differences in budgets and resources. Some NDT Societies focus completely within their own countries whilst others have much more international involvement and operate outside their home countries’ borders Several of the larger societies have a track record of working with and supporting smaller societies. There is a desire amongst the Membership, approved at the GA in June 2016 to see closer co-operation between ICNDT and the Regions to eliminate duplication and increase efficiency.

4. STRENGTHS AND WEAKNESSES OF ICNDT

	OBJECTIVES	Strengths	Weaknesses	Opportunities	Threats
1	To direct its prime focus on, to promote and support Non-Destructive Testing (NDT) at an international level for the benefit of the involved public in general.	<ul style="list-style-type: none"> - ICNDT is Internationally recognized - Can pool knowledge and share experiences - Liaison with other organizations <ul style="list-style-type: none"> • IAEA • ISO TC 135 • ISO TC 135 SC7 • ISO TC 108 - Members in other organizations 	<ul style="list-style-type: none"> - Modesty of resources <ul style="list-style-type: none"> • Funds • Manpower - Not in good contact with public at large - Insufficient knowledge of member wants - Lack of educational and promotional materials 	<ul style="list-style-type: none"> - Modern communications, networking - Development of press releases - Build on member society capabilities - New brochures and videos on NDT available - Presence in conferences for materials & testing - Market research 	<ul style="list-style-type: none"> - NDT sometimes viewed as less important than other technologies - Competing bodies with more specific objectives - Academia NDT

	OBJECTIVES	Strengths	Weaknesses	Opportunities	Threats
2	To promote international collaboration in all matters relating to NDT, including with international organisations with an interest in NDT, e.g. International Organization for Standardisation (ISO), International Institute of Welding (IIW), International Atomic Energy Agency (IAEA), UNIDO, World Federation of NDE Centres, CEN etc.	<ul style="list-style-type: none"> - Established linkages and increased recognition from organizations such as ISO , IAEA, WINS and WFNDE Centers 	<ul style="list-style-type: none"> - Still not enough influence with IAEA Lack of knowledge about liaison organizations - Lack of strong and continued representation - 	<ul style="list-style-type: none"> - Collaborative programs and publications - Joint workshops - Need to propose our own agenda 	<ul style="list-style-type: none"> - Other organizations may have declining interest in NDT

	OBJECTIVES	Strengths	Weaknesses	Opportunities	Threats
3	To encourage the foundation, development, strengthening and cooperation of existing and new national and regional NDT Societies.	<ul style="list-style-type: none"> - Good track record on all aspects, 10 new members in 4 years - Associate member category allows access for fledgling societies - Some Member societies interested in working with new societies - guidance for new societies published - Membership of ICNDT helps promote national societies 	<ul style="list-style-type: none"> - Resources to support are primarily with member societies – not ICNDT - Small NDT Societies are financially weak and lack the resources to fulfil their roles 	<ul style="list-style-type: none"> - Additional geographic areas/ Regional Groups - Offer to provide links to experts - Provide buddy/mentors to small Societies - Workshops for new and fledgling societies - Encourage external operations of larger societies to provide services in countries which do not have an NDT society - Internet provides low cost facilities to allow interactions - Need more frequent communication and interaction with Members 	<ul style="list-style-type: none"> - Alternatives to NDT societies
4	To assign the place and organisation of the World NDT Conference and exhibition to an appropriate NDT society or group of societies, at intervals of four years.	<ul style="list-style-type: none"> - Well recognised (the only <u>World</u> Conference) - Increasing interest - Brings a broad spectrum together - Well formulated procedures and guidelines - Well established timetable interleaving with Regional Conferences 	<ul style="list-style-type: none"> - Quality is variable - Lack of student participation - Lack of participation by important “users” of NDT 	<ul style="list-style-type: none"> - Bring in or involve other “users”, especially from outside of the NDT Community 	<ul style="list-style-type: none"> - Many other conferences <ul style="list-style-type: none"> • Regions • Member Societies • Materials Societies • Industry Groups - Modern communications, internet fora

	OBJECTIVES	Strengths	Weaknesses	Opportunities	Threats
5	To establish and implement membership policies of ICNDT in collaboration with regional groupings of NDT societies.	<ul style="list-style-type: none"> - new Constitution recognises Member societies and Regional Groups; Full, Associate and Liaison membership - APCNDT and AFNDT have progressed to Federations and PanAm NDT is doing the same 	<ul style="list-style-type: none"> - application process can be slow (but much improved) - African Federation has not progressed as was hoped 	<ul style="list-style-type: none"> - Greater contribution from regions <ul style="list-style-type: none"> - support new federations to form a regional group based on UN charter - support between Regions instead of duplication of work 	<ul style="list-style-type: none"> - Regions need to communicate - lack of global consultation and support to members if regions fail to achieve consensus. - Narrowing vision within the regions - Interregion comms
6	To award distinctions honouring outstanding services in the area of Non-Destructive Testing.	<ul style="list-style-type: none"> - Well defined processes in place for Awards and Honorary Membership, and for recognition of Volunteers 	<ul style="list-style-type: none"> - Lack of publicity by Members, hence lack of awareness in Member Societies 	<ul style="list-style-type: none"> - increase prestige - increase recognition from international community 	<ul style="list-style-type: none"> - Competition from similar national awards
7	To encourage the formulation of international standards on Non-Destructive Testing in collaboration with the International Organisation for Standardization, and other standards bodies.	<ul style="list-style-type: none"> - History of cooperation with ISO TC135, ISO TC135 responsive to ICNDT - ISO meetings frequently held in conjunction with WCNDT and Regional conferences 	<ul style="list-style-type: none"> - Involvement with ISO largely limited to Certification - Insufficient involvement with other standards bodies (eg aerospace, ASME) 	<ul style="list-style-type: none"> - ICNDT now a Liaison member of TC108 (Condition monitoring standards) - More joint ICNDT/ISO Workshops - ICNDT reports as a service to ISO - Input to sub Committees/ groups. 	<ul style="list-style-type: none"> - Regional or local standards may conflict with ISO

	OBJECTIVES	Strengths	Weaknesses	Opportunities	Threats
8	To promote best practices in NDT and to encourage international harmonization in this area.	<ul style="list-style-type: none"> - Conference presentations/ interactions both WCNDT, Regional and national on special topics - ICNDT Guide on Qualification and Certification –published - ICNDT Guide on NDT Education published - ICNDT Guide on NDT research published - MRA & PCB and Examination Question Bank launched - Improve Certification Body accreditation/ approval process 	<ul style="list-style-type: none"> - Lack of literature by ICNDT on best practices - Insufficient knowledge and acceptance of MRA & PCB and Examination Question Bank 	<ul style="list-style-type: none"> - Additional Guides, including PCB/AQB/EC, Q+C for Condition Monitoring , NDT for Managers - Coordination of Regional efforts - Input to Wikipedia - Extend/improve EQB - Syllabus for NDT Engineer - Promotion via Wikipedia 	Extended support from regions is essential – Regional MRA

5. AREAS FOR ICNDT ACTION

There are seven key areas for ICNDT action:

- i. Support for NDT Societies
- ii. Promotion of importance of NDT, better links to external bodies
- iii. NDT Qualification and Certification
- iv. NDT Education and NDT Research
- v. Radiation Safety and Security
- vi. Condition Monitoring & Technical Diagnostics
- vii. ICNDT Management & Administration

For each area an Action Plan is required.

6. ACTION PLANS

Action Plans for the above six key areas are tabulated below. There is one additional Action Plan for ICNDT Management and Administration. The tables show the Action proposed; the anticipated cost to ICNDT, supporting Societies; Working Groups/Committees/members/ individuals responsible and proposed completion dates.

Note Rev 9d as been retained on the website as a record of previous actions. Rev 10 deals only with on-going /new actions.

ICNDT members able to contribute to these actions are asked to advise the Secretariat.

ACTION PLAN 1: SUPPORT NDT SOCIETIES

- **Task Leader: J. Conte**

Group: Membership Committee: Joao Conte, Sajeesh Babu, Emilio Romero, Nori Ooka, David Gilbert, Sharon Bond, Alexander Mullin

	Action (What)	Cost (€)	Who?	When?	Progress Remarks	Exec Decision
1	Set up series of ICNDT International Forums in conjunction with Conferences, General Assemblies, on sharing best practice. Collaborate with IAEA where appropriate.					
	a) Look for opportunity to engage with Central Asia societies		Mullin and S K Babu	Ongoing	To keep in contact with central Asian societies and coordinate with APFNDT. One new member (Azerbaijan) and more members to follow	Ongoing
	b) Africa- support ACNDT conference in 2016		IEC	Nov 2016	Completed	
	c) International Forum at ASNT Fall conference		IEC	Oct 2016	Completed	
	d) International Forum at APCNDT		IEC	2017	Completed	
	e) International Forum at Middle East NDT conference		IEC	2019	Action not executed as the days were overlapping with APCNDT seek new opportunity	
2	Enable ICNDT National Societies and committees to better demonstrate their recognition of the value of the support given by volunteers. Certificate created to recognise the work of Volunteers		IEC to promote more strongly.		Complete. Modified OP22 approved	
3	Articles on Societies activities and development for ICNDT Journal		Gilbert/ Bond	ongoing		

	Action (What)	Cost (€)	Who?	When?	Progress Remarks	Exec Decision
4	Input to NDT.net to ensure references to ICNDT		IEC – David Gilbert	ongoing	NDT.net input to be hand over to communications working group	
5	Organise a Survey Monkey Questionnaire to seek views of Membership on how support can be best provided		IEC – David Gilbert	Nov 2017	Discuss draft survey at IAC Meeting, ECNDT 2018	
	Organise more frequent communication with members. Facebook? Email news?		IEC- Sharon/Shoei/Pranay	Nov 2017	A Facebook account has been established for ICNDT. It is necessary to promote NDT societies to join	
6	Nominate contacts as buddy/mentor to new societies for specific geographies/languages/cultures and publicise in the ICNDT Journal and on the website		Conte	Continues	Needs more attention outside South and Central America. ABENDI is mentoring a fledgling society in Angola. Establish communication with regional working group/task group.	Clarify responsibilities with Regions
7	Update the directory of National Societies, including the website of each association and promote a link with the ICNDT		Conte/Bond/David	Ongoing	NDT member organization websites are reviewed annually. Any societies that do not currently have a link to the ICNDT website are encouraged to do so.	
8	Register entities that carry on some type of coordination of NDT activities in countries that do not have National Societies and encourage Associate Membership of ICNDT		Membership Committee	Ongoing	New associate member applications are being reviewed from Africa region	

	Action (What)	Cost (€)	Who?	When?	Progress Remarks	Exec Decision
9	Participate in NDT events promoted in each country to advertise the ICNDT activities and foster the participation of each national society		All Executive Committee	Ongoing	Secretariat to contact members to provide the list of their national events to be published in ICNDT calendar. Societies should provide information about the conference	
10	Provide recommendations to encourage external operations of larger societies whilst fully recognising/and encouraging new/fledgling societies		Farley	Draft presented at PGP.	Recommendation to be published	Next ICNDT Journal
11	Prepare a NDT Society Operations Manual		Conte	June 2018	In progress	
12	Support the small NDT societies to create Websites		WG	Ongoing	Complete, System set-up	
13	Encouragement of NDT Societies to develop e-learning & contribute to the national programs initiated by UNIDO, IAEA, ISO etc.				Proposed by Mr. Ferid Herelli	

ACTION PLAN 2: PROMOTION OF THE IMPORTANCE OF NDT

- **Task Group Leader: D Gilbert**

Group: Communications (Journal/ Internet): David Gilbert, Sharon Bond, Stefan Culman, Shohei Ooka

	Action (What)	Cost (€)	Who?	When?	Progress remarks	Exec Decision
1	Wider promotion of existing videos (JSNDI, ASNT, BINDT.....) via website		Gilbert	Complete	See 9 below	
2	Promote sessions at World and Regional Conferences on Case Studies which demonstrate the value of NDT <ol style="list-style-type: none"> 1. APCNDT 2. ECNDT 3. PANAM C NDT 4. 20th WCNDT 		IEC SK Babu David Gilbert Joao Conte Younho Cho	Completed In Progress	APCNDT update to IEC WCNDT update to IEC	Confirm plan for 20 th WCNDT
3.	Map multinational external bodies and websites that have interests in NDT and make them aware of ICNDT	3000 euro	IEC / professional support		Action to include additional bodies (IIW...).	To be updated by Tony Wooldridge
	Plan more proactive involvement in key external organisations (ISO, IIW, IAEA, CEOC International, ISCM, WCI, WNO)		Nominate representatives		IAEA, ISO, WINs, WCI, ISCM under way – see below; IIW to be progressed; CEOC left to EFNDT	IIW now urgent, inc plan for 20 th WCNDT
	Plan more proactive involvement with Regional groupings of NDT societies (AFNDT, APFNDT, EFNDT, PanAmFNDT.....).		IEC		Underway. See Action plan 7.	
	ISO –liason membership of TC135: NDT liason membership of TC108: Condition Monitoring		Farley	Complete Complete	Accepted ,April 2013 Rep nominated by CM Group (WG6) - Cesar Belinco?	ISO to be contacted - MF
	IIW		Alexander Mullin	Nov 2017	MOU was signed with IIW Action to be followed	

	Action (What)	Cost (€)	Who?	When?	Progress remarks	Exec Decision
	IAEA: Review IAEA's activities and plans		IEC		Continue to work with E-Learning (R Holstein)	
	CEOC International					Liaison via EFNDT
4	Build on progress to date and establish an <i>upgraded</i> website, linked to members websites, to provide an intelligent NDT information portal.		SB/Working Group	On-going development	Some improvements made completed.	
5.	Wikipedia - ensure quality input (English and other languages) and links to "approved" sites. Create ICNDT page.		WG2			
	- Seek volunteer "champions" via ICNDT Journal and website, offer rewards/ payment?		Gilbert	On going	Group started work Paper by Pranay Wadyalkar shows importance of this task.	Request some priority given to this
6.	Add NDT and Diagnostic Technologies as a strapline to our letter head - Trial this without commitment - Survey involvement of ICNDT members in condition monitoring		IEC Farley Gilbert/ Bond		Done at Prague GA. Publicise in NDT Journal.	
9	Prepare report on NDT for Managers – possible collaborator IAEA		IEC/ professional assistance (MF)		MF to discuss with IAEA again in Gothenburg	
10	Collaborate with BINDT action to assess total market and employment in NDT,CM and SHM		IEC	Delayed by BINDT to 2019		

ACTION PLAN 3: QUALIFICATION AND CERTIFICATION

Task Group Leader: Alexander Mullin

Task Group: WG1

Document title	Revision Date	Revised by	Scope of revision	Circulated to WG1
WG1-03_Action Plan	19/10/2017	A Mullin	Reviewed and revised at Singapore meeting	

X	Action item / project	Cost €	Who?	When?	Progress / remarks	IEC decision
	COMMITTEE ADMINISTRATION					
1	Regularly review and update the Group's objectives (this Action Plan).	Nil	WG1 Chairman	at each physical meeting	Updated after ICNDT GA 16.06.2016 in Munich	
2	Regularly review and update (if required) the Terms of reference	Nil	WG1 Chairman	Ongoing task (without deadline)	ToR revision 2013-11-20 is valid.	
3	Periodically review and refresh membership to ensure global representation	Nil	WG1 Chairman	Ongoing task (without deadline)	After Singapore meeting new members were approved: Diwakar D. Joshi (Indian Society for NDT) and Shohei Ooka (JSNDI, replaced Norikazu Ooka) Jingyuan Ji (ChSNDT) was reappointed	
4	Define timetable for actions that should feed into the revision of ISO 9712		WG1 chair/ D Corcoran			
A	COMMUNICATION AND KNOWLEDGE SHARING					

A1	Establish lines of communication with Qualification and Certification group(s) in ICNDT regions (Africa, Europe, America, Asia) with a view to co-ordination of activities. Responsible WG1 member(s) to provide written report of regional meetings for circulation to WG1 members.	Nill	See remarks column	Ongoing task (without deadline)	Asia Pacific – S K Babu, P Milligan EFNDT – M Purschke, R Rodriguez Africa – H Jansen Pan-America - João Rufino Teles Filho, P.K. Yuen	
A2	Seek , maintain or re-establish liaison and/or Observer status with relevant					
	a). ISO TC135 SC7 and relevant WG	Nill	M Farley A Mullin	Ongoing task (without deadline)	ICNDT WG1 has official SC7 liaison status. ISO/TC 135/SC 7/WG 9 Revisions of training guidelines	
	b). International Accreditation Forum (IAF).	Nill	SK Babu	Ongoing task (without deadline)	SK Babu provides the liaison between ICNDT WG1 and IAF.	
	c). ISO/CASCO WG30 (revising ISO/IEC 17024)	Nill	SK Babu, Nicole Banks assists.	To be decided	To be discussed in Gothenburg	
	d). ASME and similar bodies on NDT personnel qualification matters	Nill	ASNT representative	Ongoing task (without deadline)	ASNT representative provides liaison	
	e). International Atomic Energy Agency (IAEA)	Nill	G Aufricht R Holstein	Ongoing task (without deadline)	Formal liaison with IAEA re-established with a view to co-operation on several matters. See A3 below	
A3	IAEA					
A3.1	Plan programme of joint workshops		M Farley	Ongoing task	Draft plan programme of joint workshops in cooperation with P Brisset	
A3.2	Identify project ideas for global benefit		M Farley	Ongoing task	Cooperate with P Brisset on this matter	
A4	To keep up-to date directory of NDT personnel certification bodies, with scopes of compliance, numbers of persons certificated and certificates issued, etc.	Nill	Tony Wooldridge	Ongoing task (without deadline)	Directory published on the ICNDT web site should be kept up-to-date.	
A5	Provide assistance for developing countries seeking to establish national certification schemes.	Nill	P Milligan	Upon request	Procedure published in ICNDT Guide. Update if needed	

A6	Plan and organise a regular (annual or biennial) workshop on qualification and certification topics, inviting guest speakers with specialist knowledge/experience	Nill	WG1 Chairman	completed	Date and place of Q&C workshop to be discussed in Gothenburg	
A7	Provide new and interesting material on qualification and certification in order to keep the ICNDT website updated.	Nill	D Gilbert / WG1 Chairman	Ongoing task (without deadline)	WG1 members are responsible to forwarding matters of interest through WG1 chairman to D Gilbert	
A8	Identify possibility to create unified body of knowledge based on gap analysis between TR 25107, CP106 and Tec.Doc 628	Nill	S K Babu	Awaiting developments in ISO TC 135 SC7 WG9	ISO is proceeding with revision of TR 25107, under WG9 of SC7. ICNDT should participate in particular sub-groups.	
A9	Organise periodical meetings with ASNT to discuss personnel certification matters	Nill	WG1 Chairman M Farley	Ongoing task	Next meeting is to be decided	
A10	Seek opportunities for engagement in the Middle East, including organising a WG1 meeting and workshop at a conference there.	Nill	WG1 Chairman M Farley	Ongoing task	Suspended	
A11	Establish liaison with ICNDT WG6 in terms of CM personnel certification	Nill	P Milligan	Ongoing task		
B	GLOBAL HARMONISATION AND RECOGNITION					
B1	Review and update the ICNDT Guide and Recommendations on NDT personnel Qualification and Certification.	Nill	D Gilbert, WG1 members	Ongoing task	ICNDT Guide to Qualification and Certification has been updated and published in June 2016 to WCNDT 2016	
B2	Participation in maintaining of ICNDT Examination question bank (EQB)	Nill	WG1 members	Ongoing task	Functions of WG1 are defined in OP-23.	
B3	Develop the table of ISO standards used for NDT of different products.	Nill	WG1 Chairman WG1 members	Ongoing task	Table should be kept up-to-date.	
B4	Consider substitution renewal by recertification	Nill	R Holstein	Ongoing task	ICNDT now inputting to relevant ISO TC135 SC7 Task Group. Survey of WG1 to be carried out.	

B5	Clarification of functions and responsibilities of Certification body – Authorised Qualification body – Examination center	Nill	WG1 Chairman WG1 members	as required	ICNDT now inputting to relevant ISO TC135 SC7 Task Group	
B6	Prepare ICNDT guidelines on the impact of Human Factors on reliability of NDT executed by certificated personnel.	Nill	TBD	Ongoing task	Action suspended as ICNDT International Specialist Group on the same matter is going to be created To be considered further in the light of the ICNDT workshop in Singapore.	
B7	Survey of job-specific training and certification being carried out to supplement ASNT and ISO 9712 certification	Nill	H Jansen	Ongoing task	To be discussed in Gothenburg	
B8	Discussion on how to deal with “experience requirements” in ISO 9712 leading to recommendations to ISO TC 135 SC7	Nill	K Arcus	Ongoing task	To be discussed in Gothenburg	
B9	Develop recommendation for grading of practical examination.	Nill	WG1 Chairman WG1 members	Ongoing task	To be discussed in Gothenburg	
B10	Review and update the ICNDT Guide and Recommendations on NDT personnel Qualification and Certification.	Nill	D Gilbert, WG1 members	Completed	Complete. ICNDT Guide to Qualification and Certification has been updated and published in June 2016 to WCNDT 2016,	To be Deleted
B11	Interpretation of ISO 9712:2012 Table D.1 “Guidance on the percentile weighting for practical examination of Levels 1 and 2” for different NDT methods.	Nill	Nicole Banks	Ongoing task	Discussed in Singapore, November 2017. Continues	
B12	Harmonisation and recognition - risk and opportunity analysis	Nill	PK Yuen	Ongoing task	To be discussed in Gothenburg	
B13	Review options for training and certification in civil engineering and opportunities for ICNDT to add value	Nill	WG1 Chairman WG1 members	Ongoing task	Organize review of certification in civil engineering among PCBs	
B14	Discuss if NDT Societies/PCBs could assess and approve employers’ certification to ICNDT requirements	Nill	Vitaly Radko	Completed	To be discussed in Gothenburg	
B15	Discuss if NDT Societies/PCBs could establish an expert group to oversee the inspection qualification activities	Nill	Rodolfo Rodriguez	Ongoing	Revised questionnaire being issued (May 2018)	

B16	Discuss possibility to set up a register of approved independent L3's (or CM Category 3s or 4s) with available to control NDT/CM activities on-site	Nill	WG1 Chairman	November 2017	Discussed in Singapore, November 2017	
B17	Develop Recommendations for improvement of ISO 9712	Nill	WG1 Chairman WG1 members	Completed	Recommendations submitted to SC7 and considered in Singapore	
B18	Participation in ISO 9712 revision process	Nill	A Mullin M Farley WG1 members	2020	ICNDT is represented on each of the ISO TC135 SC7 Task Groups set up to consider the comments submitted. Further actions to be discussed in Gothenburg	
B19	Clarification of surveillance for ISO 9712 particular case	Nill	Vitaly Radko	Ongoing task	To be discussed in Gothenburg	

ACTION PLAN 3B: Certification Executive Committee

- **Chair:** Harold Jansen (from June 2016) **Vice-Chair:** **Secretariat:** Tony Wooldridge
- **Members:** Gerhard Aufricht (alternate Idinger), Matthias Purschke, Alexander Mullin, Harold Jansen, Nori Ooka, Joao RufinoTeles

Action item / project		Cost €	Who?	When?	Progress / remarks	IEC decision
001 2012-04-15	Contact all ICNDT members with the following aims: <ul style="list-style-type: none"> • Request signature on Schedule 1 of MRA • Survey expected signing of MRA and requests for assessment of PCB where accreditation unavailable. • Survey extended to include PCB CA and EQB systems Promote registration of PCBs with the MRA, esp Europe Need focus on countries	Nil	Wooldridge	Completed.	At 24/05/2018 44 signatures of Sch 1 and 15 Sch 2 registrations complete	
002 2012-04-15	Maintain Business Plan for MRA PCBA and EQB	Nil	Wooldridge	Completed		
003 2012-04-15	Establish Assessor Register and arrange assessor training at next regional conference	Nil	Wooldridge Jansen	Initiated 2012-07-18 Ongoing.	Six assessors (three lead, three support) were agreed at Zagreb. Additional Lead Assessor appointed for ABENDI ausit	
004	OP 24 – Complaints and appeals (extracted from appendix in Issue 1 of OP19 but ow covering all ICEC activities)		Wooldridge	Published	Approved	

Action item / project		Cost €	Who?	When?	Progress / remarks	IEC decision
005	OP23 (EQB): Plan for future development – adding and modifying questions, database software, etc)		Wooldridge	Pending	Questionnaire circulated and analysed.	
006	Development of EQB, taking account of results of Questionnaire. Add Questions on Phased Arrays?	Refer Budget	S K Babu / G Aufricht		Working Group led by Tony Wooldridge set up to review recommendations Further discussion at meeting in Gothenburg.	

ACTION PLAN 4: EDUCATION AND RESEARCH

Task Group Chairs: Prof. Younho Cho Korean Society for NDT

Group: WG 3:

Dr. Manfred Johannes SAINT South Africa (Retiring, year-end)

Prof. Steve Holland Iowa State University USA

Ekaterina Cheprasova Russian Society for NDT Russia

Prof. Vjera Krstelj Croatian NDT Society Croatia

Mr. Harold Jansen SAIW South Africa

Prof. Marc Kreutzbruck University of Stuttgart Germany

Kevin Smith ASNT USA

Prof Uwe Ewert BAM Germany

Tony Erhard Germany Vice-Chair??

Prof Robert Smith/ Keith Newton BINDT ? UK

Dr Serge Dos Santos INSA, COFREND France

Prof Norbert Meyendorf Iowa State University, WFNDEC

Prof Krishnan Balasubraman ISNT India

ANO India

Prof C.Xu China

	Action (What)	Cost (€)	Who?	When?	Progress/ Remarks	IEC Decision
1	<p>Set up a plan of meetings to be held – at least one physical meeting/year and one internet meeting</p> <p>2017 – APCNDT 2018 – ECNDT 2019 – QNDE? 2020 - WCNDT</p>		IEC		Meeting in Gothenburg	
2	Set up biennial meeting of bodies interested in the “research agenda” in NDT along lines of Durban workshop, including IIW, IAEA and NDT Academia..ASME PVP, PRCI, EPRI NDE Centre, IIW		Manfred Johannes	1 st held at ECNDT Prague	Seek to arrange joint workshop with IIW at WCNDT. Contact Eric Sjerne, Chair Commission V. -MF	
3	Continue to promote register of NDT Research Bodies on ICNDT website, with target of 20 bodies by year-end		Younho Cho/ professional support? IEC	Dec 2016 ?? await progress on above action	3 bodies are registered at this moment	
4	<p>Update of ICNDT Guide on Education in NDT</p> <p>Draw up a list of Universities organising courses in NDT and CM categorising them as in the guide</p> <p>Draw up list of NDT text-books with commentary on their level</p>		? David Gilbert	2018	<p>Update of ICNDT Guide on Education in NDT - tie up with WFNDEC Balasubraman</p> <p>Promote via ICNDT GA Y Cho/A Erhard</p> <p>Share DGZfP list.</p> <p>Ask other ICNDT members Y Cho/A Erhard</p>	
5	Promote ICNDT Guide on NDT Research		Farley		Complete	

	Action (What)	Cost (€)	Who?	When?	Progress/ Remarks	IEC Decision
6	Sponsor International Specialist Groups, each hosted by a Member or other organisation				<p>Websites pages to be set up.</p> <p>Organise Session for each group at 20th WCNDT Y Cho</p> <p>Action list for secretariat to be agreed at WG3 meeting in Gothenburg</p>	
	Full matrix capture		BINDT			
	Teraherz imaging		BINDT			
	Microwave		ASNT			
	Magnetic memory		Hungarian Association for NDT Nondestructive Testing BINDT			
	NDT of Art		BINDT			
	NDT reliability		DGZFP			
	Non linear UT		DGZFP			
	Guided Wave Ultrasound		KSNT			
	Automotive composites		BINDT			

	Action (What)	Cost (€)	Who?	When?	Progress/ Remarks	IEC Decision
7	ICNDT Guide on importance of NDT and NDT research Promote more widely				Based on Prague workshop. Published 2015. Consider update in two years.	
8	NDT Academia Set up web-place on ICNDT site for advertising of Professorships, Fellowships and Studentships		Secretariat		Action abandoned	
9	WFNDEC Maintain link		Norbert Meyendorf			
10						

ACTION PLAN 5: Radiation safety and protection

Chair: Matthias Purschke **Group:** Ms Barbara Solter/ Etienne Martin/

5.1	Liaison and support to IAEA- providing advice on behalf of the wider NDT industries					
5.2	Liaison with WINS related to security of Radioactive sources					
5.3	Liaison with WCI <ul style="list-style-type: none">Decision needed on opportunity to present a paper at International Conference on Isotope (ICI) with the emphasis on the use of isotopes in NDT."				Opportunity to be determined by SK Babu	

ACTION PLAN 6: Condition Monitoring

Co –chairs: Cesar Belinco and Prof Len Gelman (ISCM)

Sec: David Gilbert/Cindy Bailey

Group: Paul Rand(AINDT, alternate Peter Milligan); Dr. Gábor Pór (Marovitz Hungary), Florian Raddatz / Jens Prager (DGZfP); Dr Peter Tscheliesnig (OGZfP); Prof WonTae Kim (KSNT, alternate Prof Younho Cho); Prof Mehdi Behzad (Sharif University of Technology, IRNDT TBC), Nadine Martin (ISCM), Leon Swedrovski(ISCM); Aleramo Lucifredi (University of Genoa, ISCM); Renata Klein (RK Diagnostics, ISCM) . Corresponding members: Cameron Sinclair, Lars Schubert.

Status of Action Plan: to be updated by new co-chair

	Action (What)	Cost (€)	Who?	When?	Progress/ Remarks	IEC Decision
1	Conferences and Workshops					
	a. 19 th WCNDT Munich 2016 – encourage CM participation		LG/TC and members		Complete	N/A
	b. Workshop on CM education and certification				Munich Workshop combined with NDT and focussed on elearning	
	c. ICNDT Workshop at ISCM in Paris 10- 12 Oct 2016		TC		Topic?	
	d. ISCM World Conference in London, UK in13-16 June 2017 (+CM/NDT cross-forum) –group to support event		All	Action mid 2016		
	e. ICNDT Workshop?					
	f. 20 th WCNDT Korea 2020 – seek strong CM participation		TC/Wontae Kim	Meeting in Seoul in August 2016	Meeting completed	
2	Create register of research organisations in CM and Diagnostic technologies – circulate proforma to collect info and publish on ICNDT and ISCM websites		David Gilbert	ASAP		
	Create related Glossary of Terms (CM, PM, SH, DT) referencing ASTM's		Florian Raddatz /TC/ Cameron Sinclair	Target completion for ASNT conference 2015		

	Action (What)	Cost (€)	Who?	When?	Progress/ Remarks	IEC Decision
3	ICNDT/ ISCM Guide to Certification in NDT (and Condition Monitoring) -		Peter Milligan/ Peter Tscheliesnig/ Terry Clausing/	Target completion for ASNT conference 2015	Published June 2016.	
	Survey members about training and certification in CM different countries		Peter Milligan/ Wendy Poole (BINDT)	ASAP		
4	ICNDT Guide to Education in CM and DT – the workshop in 1b will be designed to collect information and produce Guide. Volunteer author needed or need approval to incur cost	??	TC/LG/ Gabor Por	Action fto follow 3b.		
	Prepare a paper for the two Certification committees in ISO recommending that at Level 3 awareness of the other should be included as a topic.		LG	Action for 2016		
5	Representation on ISO TC 108 SC Condition Monitoring -		TC/WTK	Mtg in Sydney March 2016 Next mtg: ??	Terry Clausing nominated. alternate is Prof Wontae Kim	
6	CM/NDT Publications – review existing publications and needs				???	
	International Journal of CM –internet publication, free to members of ISCM and BINDT		LG	2016	WG to organise a special issue on NDT for the CM community	
			DG/LG	2015	Consider model of availability	
	Insight –annual August issue		DG	By Dec 2015	WG to initiate papers on CM for an NDT audience	
	Condition Monitor –digital publication		DG		Consider using for “NDT for Condition Moitoring community” articles	
	On-line journal Case Studies in NDT (ed Bernd Kohler)		Florian Raddatz		Seek opportunities for papers to demonstrate value of CM bothin this Journal and above Journals.	

	Action (What)	Cost (€)	Who?	When?	Progress/ Remarks	IEC Decision
7	CM/NDT CPD (Continuous Professional Development)		LG/TC	2016	Action to be considered in the light of 1b Need for CPD for CM trainers to be considered.	
8	CM/NDT joint grant application with ICNDT/ISCM involvement as a dissemination partner (eg EU Project Horizon)		All		Agreed to be open for ideas	No commitment without IEC approval
9	Joint CM/NDT cross-forums: plan first for ISCM World Conference in 2017.		LG/TC	2016		
10	Review of need for Standards for on-line monitoring				Actions to be considered at next meeting	
11	Administration- circulate updated joint TOR incorporating refs to ISCM and SHM.	Aug 2015	MF/LG/TC		Sent to TC/LG 22/04/2016,	

ACTION PLAN 7: ICNDT Management and Administration

Chair: Sajeesh Kumar Babu

Group: Mike Farley , Gerhard Aufricht, , David Gilbert

	Action (What)	Cost (€)	Who?	When?	Progress/ Remarks	IEC Decision
1	Clarify responsibilities of the officers	Nil	Farley, Group	Oct 2016	Completed by new Operating Procedures	
2	Clarify and publish structure (and membership) on the website Further update to reflect new organisation	Nil	Farley, Gilbert Farley, Gilbert	June 2018	MF MF/DG	
3						
4	Prepare a four-year timeline to assist management of actions	Nil	S K Babu, Gilbert Farley	July 2016 Completed	Complete and circulated to IEC. Needs update to reflect new OP on fees	
5	Review and update Operating Procedures	Nil	Group	Completed	Action complete.	
6	Revise organisation and fee structure to improve coordination with Regional Groups 1. update of constitution 2. updates of OPs	Nil	Farley +IEC	Completed	Approved by membership and to be implemented at GA in Gothenburg 2018	
7	Review responsibilities of Secretariat and other supporting Member Societies		Group	2018	Necessary in view of change role of David Gilbert at BINDT	
8	Review the share of activities and responsibilities between ICNDT and Regions		ICNDT Advisory Committee	Commence June 14 th 2018	Necessary to implement the intent of the new Constitution and fee structure	

7. SUMMARY

A thorough review of ICNDT's activities and the opportunities has been completed. Key strategies have been identified and Action Plans drawn up with the immediate priorities being those "quick-wins" which can be achieved at modest cost.

The Strategic Plan is a "live-document". It will be subject to further elaboration and remains open for comment and revision by the Membership through the General Assembly and Policy and General Purposes Committee..

8. ACKNOWLEDGMENT

The Chairman and Executive Committee thank the individuals who have given time and effort to the preparation of this plan by their participation in meetings and drafting work.

9. FURTHER INFORMATION

Please contact the ICNDT Secretariat (david.gilbert@bindt.org).