

**International
Nuclear Utilities**



**OBSOLESCENCE
GROUP**

INUOG UPDATE

GET ON BOARD THE OBSOLESCENCE BOAT

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WHO ARE WE?

INUOG is a nuclear forum of industry experts, in the area of obsolescence management, formed to drive the International Nuclear Industry effort to further collaborate in the area of Obsolescence.

Conference Calls held on the Fourth Thursday of every month

2018-2019 STEERING COMMITTEE

- **Chairman**
 - Johan Linder (Vattenfall)
- **Vice Chairman**
 - Jordi Salto (ANAV)
 - John Latimer (NGL-EDF)
- **Advisor(s)**
 - Noel Evans (NGL-EDF)
 - Rob Santoro (Rolls-Royce)
 - Christina Clancey (Rolls-Royce)
- **INUOG Members**
 - **19 utilities** representing 13 countries across Europe, Asia, Middle East, North America
- **NUOG Members**
 - Steve Ostrowski (Bruce)
 - Dan Philipps (FENOC)



WHY WAS INUOG FORMED?



- Obsolescence Success never comes around to LOOK for you while you wait around.
- You've got to get up and work at it to resolve the Obsolescence problem and make it happen.
- There is not a common platform in Europe/Asia, we need to address differences & align regulators to accept the Obsolescence management procedures
- An Obsolescence issue won't let my Plant down.

WHAT DO WE DO?

PURPOSE

- **Develop synergies across the industry and a platform for nuclear utilities to openly share thoughts, ideas, best practices and successes in relation to Obsolescence.**
- **Develop process, tools and techniques to eliminate risks, at a station level, associated to Equipment Reliability.**
- **Provide a forum for discussions on commonality and shared issues.**
- **Partnering with NUOG, there will be a movement towards wider collaboration and integration for Obsolescence program development.**

GROUP EXPECTATIONS

- **Provide and share obsolescence solutions across utilities through shared learning and methodologies to ensure a reduction in critical component failures driven by Proactive Obsolescence Management.**
- **Move the process from Reactive to Proactive**

- **INUOG Website www.inuog.org**



INUOG Charter
rev.3

WHAT IS OUR 3 YEAR PLAN?



Three Year Plan



- **Get everybody on board the Obsolescence boat**
- **Grow our community**
- **Define, develop, and close-out projects of interest to the international nuclear community**
- **Share best practices**
- **Visibility of shared solutions and documentation**
- **Collaborations on Obsolescence Solutions between Utilities**
- **Obsolescence Benchmarking/site reviews**
- **We propose to review the plan on a bi-annual basis in the monthly meetings to incorporate your feedback and ensure we remain on target**

INUOG THREE (3) YEAR PLAN

	2018	2019	2020	2021
Theme	Get on board	Get on board	Set the course	Set Sail!
Goals	<ul style="list-style-type: none"> - Build bigger community - Establish relationships - Promote utility and vendor Relationships - Share best practices & experiences - Initiate new projects 	<ul style="list-style-type: none"> - Build bigger community - Establish relationships - Achieve aligned utility and vendor relationships - Share best practices & experiences 	<ul style="list-style-type: none"> - Build bigger community - Maintain relationships - Start to collaboratively share solutions 	<ul style="list-style-type: none"> - Established community - Strengthen relationships - Collaboratively sharing solutions
Activities	<ul style="list-style-type: none"> - Invite and encourage participation in the INUOG monthly teleconference - Invite and encourage participation in the INUOG annual meeting - Review previous year achievements 	<ul style="list-style-type: none"> - Promote use of INUOG Liaisons in IERWG, NUOG, and other working groups - Invite and encourage participation in the INUOG monthly teleconference - Invite and encourage participation in the INUOG annual meeting - Review previous year achievements 	<ul style="list-style-type: none"> - Promote full Utility and Supplier engagement - Invite and encourage participation in the INUOG monthly teleconference - Invite and encourage participation in the INUOG annual meeting - Review previous year achievements 	<ul style="list-style-type: none"> - EOC, Oversight committee - Review previous year achievements
New Projects	<ul style="list-style-type: none"> - IEE Project - Obsolescence for Learners - International Management of Obsolescence Guidance Document 	<ul style="list-style-type: none"> - Solution Sharing & Collaboration* - KPI's project, Phase 2 - Suppliers Support to the Nuclear Industry 		
Develop Projects	<ul style="list-style-type: none"> - Top Obsolescence List* - IAEA TecDoc (Inventory Management) - Bring visibility of NUOG projects to INUOG - Share Success Stories 	<ul style="list-style-type: none"> - IEE Project - Obsolescence for Learners - International Management of Obsolescence Guidance Document - Bring visibility of NUOG projects to INUOG - Share Success Stories 	<ul style="list-style-type: none"> - Share Success Stories - Solution Sharing & Collaboration 	<ul style="list-style-type: none"> - Share Success Stories - Solution Sharing & Collaboration
Close Projects	<ul style="list-style-type: none"> - KPI's project, Phase 1 - Three Year Plan - Revision of NX-1037 Rev.3 - INUOG Communication - European Directive on Electric Motors 		<ul style="list-style-type: none"> - IEE Project 	

* The 2018 Top Obsolescence List project has been redefined into the new 2019 Solution Sharing & Collaboration project. **Bold blue** items indicate alignment with NUOG.

INDUSTRY INTERFACES

	POC	Interface Expectations
NUOG	Steve Ostrowski Dan Philipps	<p>INUOG to participate in selected NUOG projects, via an INUOG Lead. INUOG representative invited to join the NUOG monthly calls. NUOG representative(s) invited to join INUOG monthly calls. Exchange of best practices.</p>
IERWG	Alexander Lindqvist	<p>The INUOG Chair, or delegate, will participate and share INUOG activities at IERWG meetings. INUOG will lead the IERWG Obsolescence Sub-committee. INUOG/IERWG will propose potential topics for joint projects.</p>
IAEA	Robert Krivanek	<p>INUOG and IAEA to support each other where it strategically makes sense for both groups, for example:</p> <ul style="list-style-type: none"> - INUOG Product Publication - SALTO Missions - IAEA TecDoc's
WANO	Dajun Song	<p>INUOG and WANO to support each other where it strategically makes sense for both groups, for example:</p> <ul style="list-style-type: none"> - INUOG Product Publication

PROJECT LIST

		Project Title	Project Lead	NUOG / INUOG Rep	Received				
					Problem Statement	Clear Objective	Defined Deliverables	Defined Due Dates	Status
INUOG Projects	2017-2018	International Management of Obsolescence Guidance Document	Noel Evans, EDF Energy	TBD	✓	✓	✓		→
	2018-2019	International Obsolescence Metrics / KPI's, Phase 2	Jordi Salto, ANAV	TBD	✓	✓	✓	✓	→
	2018-2019	Obsolescence for Learners	John Latimer, EDF Energy	TBD	✓	✓	✓	✓	→
	2018-2019	Item Equivalency Evaluations (IEE) and Change Control for plant spares	Alexander Landstedt, Ringhals, Vattenfall	TBD	✓	✓	✓	✓	→
	2018-2019	Solution Sharing & Collaboration	TBD	TBD	✓	✓	✓		
	2019-2020	Task Group - Suppliers Support to Nuclear Industry	TBD	TBD					
	2018-2019	Revision of NX-1037 (Rev. 3)	Noel Evans, EDF Energy	Dan Philipps, FENOC	✓	✓	✓		→
NUOG Projects	2018-2019	Component Based Solutions	Steve Ostrowski Bruce Power	TBD (John Latimer)					
	2019-2020	Industry Collaboration		TBD					
	2019-2020	Revision of NX-1037 (Rev. 4)	Dan Philipps, FENOC	TBD					
	2019-2020	High Risk Industry Vulnerability Project							

The NUOG/INUOG Rep is the link between INUOG and NUOG for each respective project of interest. This ensures a wider collaboration and avoids duplication of efforts across groups.



INUOG ACHIEVEMENTS TO DATE



WHAT HAVE WE SHARED?

- **Site Success Stories:**
 - 2017
 - December: Arteche Relay (ANAV)
 - 2018
 - January: Yokogawa MCR Recorder (ANAV)
 - February: Obsolescence Solutions Exhibition (EDF Energy)
 - April: Commercial Grade Item Dedication (KHNP)
 - May: Project Graded Approach (Electrabel)
 - August: Honeywell PTCL, PTCM & PTP (Ringhals)
 - September: Benefits of the Obsolescence Plant Committee (ANAV)
 - November: ABB RTD's (Electrabel)
 - December: Notification of Obsolescence from Rotork (EDF Energy)
- **Obsolescence Procedures**
- **IEE Procedures**
- **Site Top Obsolescence List**
- **Obsolescence Solutions**

INUOG DISCUSSION TOPICS

- **In-Storage Maintenance of Obsolete Items**
- **Equipment Qualification**
- **Commercial Grade Dedication**
- **Shelf Life**
- **3D printing**
- **Obsolescence Notifications from suppliers**
- **Obsolescence Cost and Risk Management**
- **Etc.**

SUCCESSSES SO FAR

- **Four 2018 INUOG Projects successfully completed**
 - KPI's project, Phase 1
 - Revision of NX-1037 Rev.3
 - Pending WANO publication
 - INUOG Communication
 - INUOG Three Year Plan
 - European Directive on Electric Motors
 - Expected to provide significant savings to European sites!
- **Good participation and discussion from all INUOG members**
- **Communication of process improvements**



MEETING INVITATION

International Nuclear Utilities Obsolescence Group (INUOG)
Cordially invites you to the

2019 INUOG Annual Meeting
March 18-19, 2019
Madrid, Spain

Join us for an opportunity to support industry collaboration in Obsolescence Management.

Event Venue:

NH PASEO DE LA HABANA
Paseo de la Habana, 73 | 28036 Madrid | SPAIN

Registration:

Click the following link to register for the event: <https://www.regonline.com/2019INUOG>

Accommodations:

Hotel NH Madrid PASEO DE LA HABANA

INUOG has reserved a room block at this hotel. Please fill out the Reservation Form and email it to nhabana@nh-hotels.com to complete your hotel room booking. Room reservations need to be completed by **February 15th 2019**.

Any Questions?

International
Nuclear Utilities



OBSOLESCENCE
GROUP

APPENDIX

DETAILS ON INUOG PROJECTS



INTERNATIONAL MANAGEMENT OF OBSOLESCENCE GUIDANCE DOCUMENT

LEAD: NOEL EVANS

Problem: Need for an International Obsolescence Guidance Document

Objective: This International Obsolescence Guidance Document will be a merge of NX-1037 and TOP401 with additional details on how to implement an obsolescence management program.

Deliverables / Actions for 2018-2019

Action	Action Owner	Due Date
Develop draft document	Noel Evans	Complete
INUOG Steering Committee to review the document	Noel Evans	March 2019
INUOG Steering Committee to approve and distribute final document	Noel Evans and INUOG Exec	TBD

INTERNATIONAL OBSOLESCENCE METRICS / KPI'S

LEAD: JORDI SALTO

Problem: At the 2016 ENUOG summer meeting in Edinburg, the need for obsolescence KPI's was identified. These KPI's would be used within the industry to benchmark, monitor and control a sites obsolescence program.

Objective:

- Phase 1 will focus on the development of document INUOG-2018/002: Guideline for establishing obsolescence indicators.
- Phase 2 will focus on a process to share and compare indicators amongst the industry. The process has three steps:
 - Every two (2) months participating plants must send the values to the process coordinator.
 - Process coordinator will fill-out the spreadsheet with received data.
 - The coordinator will send back to the participating plants with the graphs for comparison of each site to the industry.

Deliverables / Actions for 2018-2019 (Phase 2):

Action	Action Owner	Due Date
Development of document INUOG-2018/002	Jordi Salto	Complete. Phase 1 of the project was closed-out July 2018
Issue Rev 02 of INUOG-2018/002. This revision will add more clarification on the definition of each KPI to ensure reporting is consistent from site to site.	Jordi Salto	January 24 th : Phase 2 Kickoff on monthly call January 31 st 2019: Issue Rev 02
Request participants to issue their metrics updates every two (2) months. Present results at Annual Meeting. Note: Distribution method will be via email to the Process Coordinator. Conscious of potential confidential information, any reports distributed will be anonymized.	Jordi Salto - Lead Esko Luukkonen – Participant Johan Linder – Participant Noel Evans – Participant Arne Claes – Participant Jordi Salto – Participant	March 2019
Long term: metrics to be included in a standard INUOG report and generated automatically.	EDF Energy & Rolls-Royce are working on a draft POMS report.	December 2019

OBSOLESCENCE FOR LEARNERS

LEAD: JOHN LATIMER

Problem: Need for a single location to store or reference all documents and tools available in the industry to help new engineers implement a successful obsolescence program. This will help reduce the time required to perform this task.

Objective: Creation of a beginners guide to starting an obsolescence program.

Deliverables / Actions for 2018-2019

Action	Action Owner	Due Date
Create a share point website for hosting core documents, common terminology, and sharing information sets (NUOG docs, guides, INUOG presentations)	Christina Clancey	Complete – October 2018
Create a one page Roadmap model of Obsolescence programme – as “brainstormed” at Vienna	John Latimer	Jan 31 st 2019
Ask for feedback (e.g. what information do others need? want to see or understand? need help with?)	John Latimer	March 2019
Coordinated approach between NUOG & INUOG. Tie in the historical projects from both groups.	John Latimer / Dan Philipps	July 2019
Develop an “Obsolescence for Learners” booklet	John Latimer (with input from INUOG group)	August 2019
Populate share point website with appropriate content	John Latimer / Christina Clancey	September 2019

ITEM EQUIVALENCY EVALUATIONS (IEE) & CHANGE CONTROL OF PLANT SPARES

LEAD: ALEXANDER LANDSTEDT

Problem: Need for a more efficient process, than a fully elaborated engineering design modification, for the control of supplier modifications to plant spare components and materials destined to be fitted to plant or held as stocked items.

Objective: Develop a WANO Best Practices document on Item Equivalency Evaluation and Change Management Process for Control of Modifications to Plant Spares. This is a joint project between INUOG and IERWG.

Deliverables / Actions for 2018-2019

Action	Action Owner	Due Date
Project to be discussed with the IERWG Ageing and Obsolescence sub-committee during a breakout session at the October meeting in Abu Dhabi (UA)	INUOG/IERWG	Complete
Gather volunteers and set up a review team. Volunteers from the Annual Meeting:	Alexander Landstedt	Complete
<ul style="list-style-type: none"> • Nick Huggleston • Bristol Hartlage • Alexander Lindqvist 		
<ul style="list-style-type: none"> • John Cestra • Johan Linder • Stephanie Novain 		
<ul style="list-style-type: none"> • Dave Emsden 	<ul style="list-style-type: none"> • Hyo-Jong Park • Robert Leone • Keith Porter • Fernando Mirallas • Dan Udrea 	
Develop draft document	Review Team	20/3-2019
Circulate in the IERWG Ageing and Obsolescence sub-committee for review/comments	IERWG	5/4-2019
IERWG vote for approval and work with WANO to publish the document.	IERWG	1-3/10-2019

SOLUTION SHARING & COLLABORATION

LEAD: TBD

Problem: Duplication of efforts and reduced impact on maintaining suppliers in the industry if everyone works individually.

Objective: Identify Top Common Industry Obsolescence Challenges

Deliverables / Actions for 2018-2019

Action	Action Owner	Due Date
Identify a lead from each utility. Each site lead to provide their Top 10 list and obsolescence prioritization setup (e.g. OVR).	All participating utilities to send to the project lead	TBD
Consolidate the data	Project Lead	TBD
Analyze the data by a defined criteria (component based, reactor type..)	Project Lead	TBD
Define target population (overlap)	Project Lead	TBD
Create a Project folder on the INUOG SharePoint website with project documents	Project Lead	TBD
Identify potential industry solutions		
Work with interested sites and suppliers with solutions to implement a solution.		

REVISION OF NX-1037

LEAD: NOEL EVANS

Problem: NX-1037 needs to be revised/updated to include latest changes in the industry.

Objective: Revision 3 incorporates the inclusion of the International Nuclear Utilities Obsolescence Group as a partnership between North America Utilities, Europe and Asia on a common approach to a Proactive Obsolescence Strategy.

Deliverables / Actions for 2018-2019

Action	Action Owner	Due Date
Prepare a draft of NX-1037 Rev 3	Noel Evans	Complete
Send the NX-1037 revision to Steve Ostrowski / Dan Philipps for INUOG's review and acceptance	Noel Evans	Complete
Send the document to the NUOG Steering Committee for any final input before submittal to INPO.	Dan Philipps	Complete
Submit NX-1037 Rev 3 to INPO for final approval and distribution. The request to INPO needs to list all the countries we want the NX-1037 document shared with since the 10CFR810 document is country specific.	Dan Philipps	Complete
INPO to publish and ask for permission to share with WANO members	Carl Lane (INPO)	TBD
After INPO approval and distribution of Rev 3., begin a revision 4 to the NX-1037 document. Goal: Approve at the Summer Meetings. Publish, distribute and implement Rev. 4 by Oct 2019	INUOG & NUOG	Oct 2019