

Nuclear Decommissioning Authority

Organisational Learning Good Practice Guide

First Edition, April 2022



Foreword

We are delighted to present to you the first NDA Group Organisational Learning Good Practice Guide.

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Learning is a vital part of our mission. We need to continually strive to be better and improve our work through learning and embedding that learning. It has been recognised internally and externally that we aren't learning as much as we could from our mistakes, performance and successes. In terms of Health and Safety performance, we have seen incidents and Performance Gaps repeated across different NDA companies in our projects, operations and support functions. In many cases, there was plenty of time to make changes to our working practices and keep people safe and on plan.

Ensuring we learn from others is at the core of being able to reliably deliver high quality nuclear decommissioning work. Consistently good practice requires continuous learning and the resultant performance improvement earned from embedding and using learning into our documented ways of working. We need to learn from whole NDA experience as well as from external organisations across a range of industries.

When we learn at work, we are more engaged and more productive. Learning is key to making a difference and feeling that our efforts are valuable and valued. When we learn as individuals, our organisation learns. When we share our learnings, others can test and embed them into work processes across the group. Not only do we keep people safer, but we outperform our mission and get back on track.

We are hugely grateful to the NDA Group staff, the external companies and the consultants who worked with us to understand different perspectives on best practice which enabled us to create this Guide. We found some pockets of excellence in NDA, but we are falling short of transferring that excellence and exploiting it for everybody's benefit.

We need to harness the collective brilliance of the whole NDA, that's why we're putting learning at the top of our agenda.



John Chappell MBE
Director of Asset
Management
and Continuous
Improvement

Steve Giblin
Health, Safety and
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This Guide is the first step. We have created a single view of what good cross-organisational learning should look like for NDA Group. We hope that you will use it as a tool to guide your thinking and benchmark your practice as you develop your own learning processes.

We look forward to hearing how you use this Guide, your successes and also what we can learn from your experiences as you apply this process to improve sharing and embedment of learning into all our work processes across the Group.

How to use this Guide

This Guide is designed to support you to follow good practice in your OpCos and teams. It provides the overarching process for learning cross-NDA.

This Guide is designed to support you to follow good practice in your OpCos and teams. It provides the overarching process for learning cross-NDA. This work was drawn together by Arup on the NDA's behalf. It has been developed in collaboration with NDA Group companies. Learning processes were reviewed from across the NDA Group and wider industry. This Guide was built from combining this information with analysis, cross-industry interviews, focus groups, workshops and surveys as well as best practice from academic and industry publications. The result of all that work is in this Good Practice Guide.

This Guide is designed to help all staff understand what good looks like for their process and how to achieve it. The cross-NDA organisational learning process is divided into four stages covering eight steps.

Each step contains key information:

1. Outcomes: if you are following good practice, you should be achieving the listed outcomes. By checking your own process against the outcomes, you can benchmark your process and gaps against good practice.
2. Process guide: this is to guide the development of your process based on good practice.

A process toolkit is provided in section 2 to help you monitor your achievements and help you target the areas which need more support.

By following this Good Practice Guide, NDA staff are encouraged to:

- Identify and report learnings, (including successes, opportunities and incidents) promptly and efficiently
- Consider the quality of causal analysis, relevance of actions and correctness of learning
- Share learnings cross-NDA, with a focus on ensuring Board of Inquiry learnings are shared across the Group
- Raise awareness of opportunities for improvement in day-to-day operations
- Develop a learning mindset



Learning needs to be an integral part of managing our work, and cross-NDA learning is critical to achieving our mission.

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As you read through this Guide, consider the following questions:

- Is your OpCo achieving the process outcomes set out in this Guide?
- How can your OpCo implement the good practice in this Guide and become a more effective learning organisation?
- What are the barriers to learning in your team or organisation?

If you need help using this Guide or support with cross-NDA learning in general, please contact: crossNDAssharing@nda.gov.uk

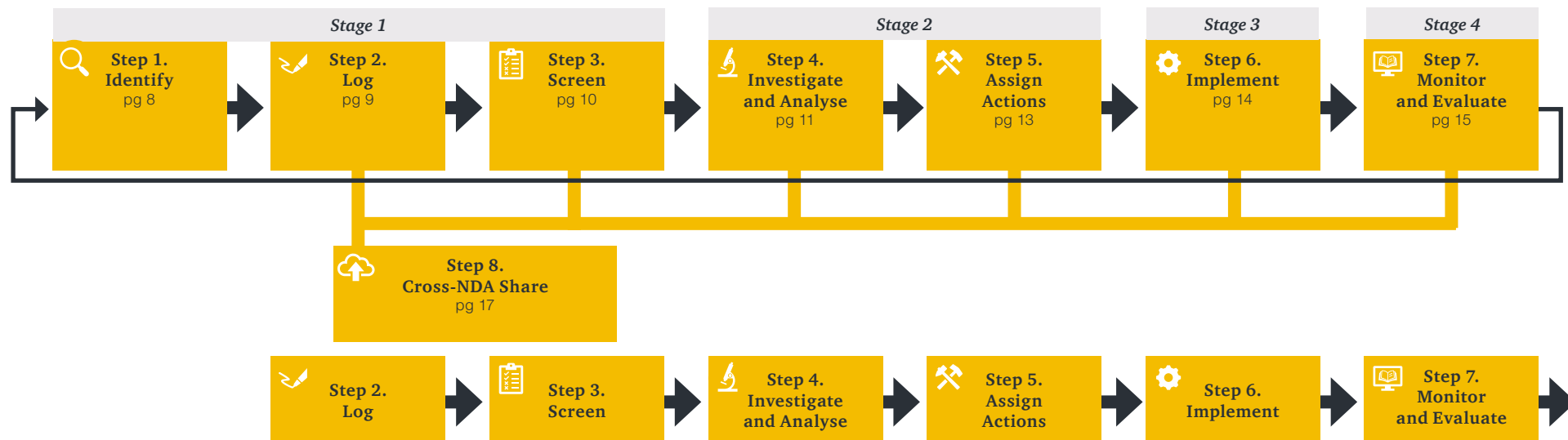
This Guide is divided into three sections:

1. Organisational Learning Process

The cross-NDA learning process has eight steps which go from identifying a Performance Gap to sharing and embedding the solution across the NDA Group.

They are shown in the process map below:

NDA Common organisational learning process for OpCos



2. Organisational Learning Toolkit

Supplementary to the process guide and outcomes, the process toolkit provides tools to measure to benchmark and track the success of the learning process. This includes:

- Learning organisation assessment
- High level Key Performance Indicators
- Process Key Performance Indicators

3. Background and evolution

This section contains information about how this Guide was developed and how it might evolve and how you can use it to develop your own good practice learning processes, the following information is included:

- Background
- Foundation
- Evolution
- Good Practice Guide contributors
- Next steps

1. Organisational Learning Process

Cross-NDA learning process overview

Key terms

Step 1. Identify

Step 2. Log

Step 3. Screen

Step 4. Investigate and Analyse

Step 5. Assign Actions

Step 6. Implement

Step 7. Monitor and Evaluate

Step 8. Cross-NDA share

Cross-NDA learning process overview

The 8 Step process is based upon good practice from across the OpCos and wider industry which has been adapted to fit the NDA context.

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The 8 Step process is based upon good practice process from across OpCos and wider industry. This has been adapted to fit the NDA context. For this Guide, every step is detailed to ensure that expectations are clear. In practice, organisations can combine steps due to their work systems (i.e. identify, log and screen steps are often combined as one step).

We have shown these potential groupings as stages.

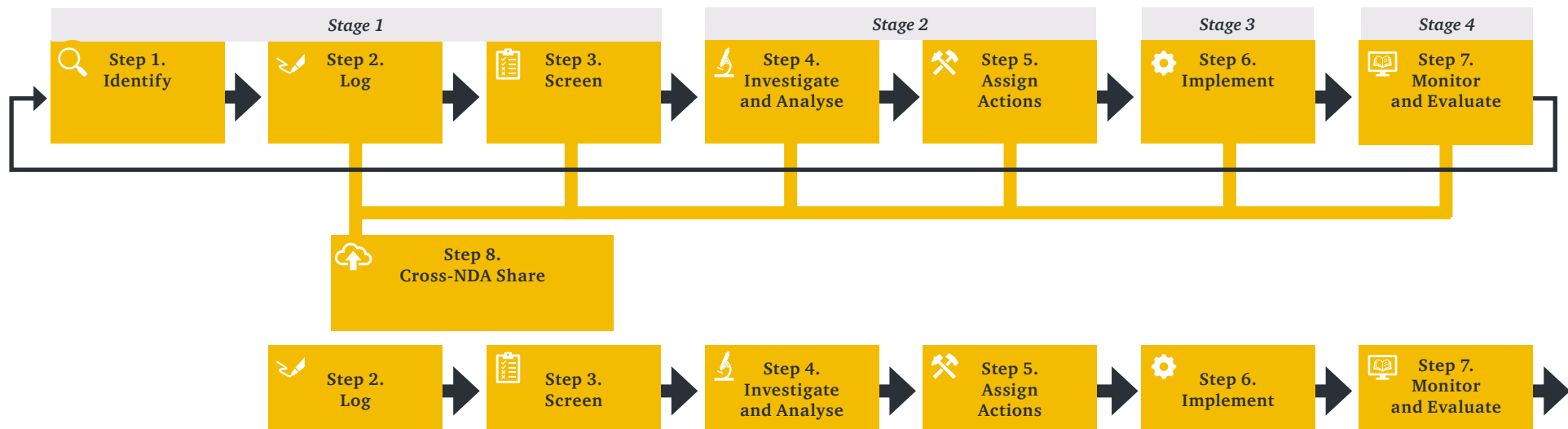
OpCos can choose to keep the steps separate or combine them based on their specific context and systems in use.

Within the 8 step learning process, steps 1 to 7 occur within an OpCo. These seven steps detail how knowledge is identified, screened and analysed, actions established and implemented and outcomes evaluated.

Step 8 occurs when OpCos share knowledge with each other as part of a Cross-NDA Share. Depending on the Performance Gap, this sharing can happen at multiple points in the process.

Each of these steps is further explored in this Good Practice Guide.

NDA Common organisational learning process for OpCos



Key terms

Throughout this process, key terms to understand are as follows:

Performance Gap

Any difference between actual and expected or potential performance. This could be a success, a health and safety incident, a positive or negative difference between actual and planned performance or the opportunity to improve ways of working based on external benchmarking, learning or observation. Current terms for Performance Gap in the OpCos include: event, incident, learning opportunity and condition report. A Performance Gap is often but not always triggered by a specific event and can develop from any observation of the potential for improvement.

Learning Flash

Document which contains key information about Performance Gaps which is shared cross-NDA in a standard format using standard terminology. This is designed to capture key data to allow the recipient to understand if and how to use the learning in their own OpCo. Good practice recommends as a minimum that a Learning Flash is completed and shared cross-NDA for all Board of Inquiry and Causal Analysis investigations.

Board of Inquiry (BOI)

For very serious incidents, a Board of Inquiry (BOI) is held to determine the cause and validate the actions. The first step to improving the cross-NDA learning process is to ensure that learnings from BOIs are shared across NDA and that relevant learnings are embedded into work processes in all NDA Group companies.

Causal Analysis

The investigation into why and how a Performance Gap occurred with the objective of systemically eliminating it in the case of negative Performance Gap or repeating it in the case of positive Performance Gaps. A fishbone diagram or five whys are common ways that causal analysis is undertaken, alternatively, ISO 9001 provides a thorough guidance on causal analysis and challenge.

Embedment

The process of taking learnings and incorporating them into ways of working. This means systemically fixing issues and might include, for example, revising training materials, changing machine parts, adjusting maintenance schedules or updating work processes and procedures or other key documentation.



Key Performance Indicators

Key performance indicators (KPIs) are used to track the effectiveness of the learning process. KPIs are not intended to penalise individuals; instead they expose where the process is not working and where it needs to be improved to allow learning to flow more effectively around NDA.

Step 1: Identify

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Identify Outcomes

- Individuals understand what constitutes a Performance Gap
- Individuals actively seek learnings (positive and negative)
- Individuals are encouraged share their insights and learning
- Individuals actively draw upon multiple learning sources to identify Performance Gaps
- Individuals know how to progress the Performance Gap to the next step

Purpose: Notice that a Performance Gap has occurred and that there is an opportunity for learning. Both negative and positive events and observations are seen as opportunities to learn.

Process Guide: Identify the Performance Gap. Sources for learning include but are not limited to the following:

Internal sources:

- Individual's observation
- Self assessments
- Sickness and absence trends
- Performance trends
- Lessons learned
- Internal reviews
- Project meetings and lessons learned
- Health and Safety meetings
- Investigations
- Harm events
- Near miss events

External sources:

- Benchmarking across the NDA
- External benchmarking
- External learning flashes
- Regulatory audits
- WANO
- INPO
- Regulators
- Research
- Trade Organisations
- Professional bodies (e.g. CIEHF)
- External forums and networks (e.g. OELG)

Cross-NDA Share

For Major Performance Gaps that require immediate action, NDA and/or regulators should be notified as soon as possible after identification.

Classify the Performance Gap

Performance Gap Type	Positive Example	Negative Example
Improvement	Learning from good ideas and experience, such as clear signage or productivity improvements.	Correcting behaviour such as not clearing work stations after use, making it difficult for the next shift to start work.
Minor	Implementing a dedicated safe material cutting workstation for asbestos remediation work that could offer cost and time savings.	Learning from near misses, for example an operative noticing a damaged electrical cord
Moderate	Good practice observations, such as using visible boards to track process improvements across the business.	Uneven slabs on a walkway that cause a trip, slip or fall.
Major	Lessons learned that could benefit the whole company or NDA, such as improvements to project management practices, safety equipment / arrangements or updates to quality management software.	Incidents that cause major harm to people or property including where external reporting is required, e.g. to the regulator.

Step 2. Log

Log Outcomes

- Individuals are aware of and understand the Performance Gap subtypes
- Everyone working in the organisation has access to log Performance Gaps
- Individuals find it easy to log Performance Gaps
- As far as possible, minimum details are auto-populated and criteria are easy to select
- Individuals have captured the minimum information for logging
- Performance Gaps are logged before the end of the shift

Purpose:

Provides visibility of the Performance Gap in the appropriate OpCo system. The minimum details are included to ensure relevant teams and individuals are notified.

Process Guide:

Log the Performance Gap in the appropriate OpCo system as soon as possible and at the latest by the end of the current shift.

Performance Gaps should be logged to ensure that important Performance Gaps and lessons learned are not overlooked and in order that a record is available for future trending and analysis.

Minimum details to log:

- Brief description
- Date and time of identification
- OpCo/Organisation Name
- Site/facility/business function
- Location (exact)
- Originator
- Originator type (employee, contractor)
- Originator Contact details
- Performance Gap Type (Improvement, Minor, Moderate, Major)
- Performance Gap subtype (TEPIDOILESS-I)
- Activity (conducted or observed activity)
- Any immediate/basic causes(s)
- Immediate actions taken
- Supporting information (photographs et cetera)
- Any associated security concerns

Performance Gap subtypes are classified using the TEPIDOILESS-I framework.

This framework is designed to integrate with cross-NDA database searches and analysis, including trending.

- Training – lack of, incorrect
- Equipment – incorrect, faulty or missing
- People – human error, insufficient
- Infrastructure – systems, processes and structures
- Doctrine – strategy and policies
- Organisation – leadership, management and culture
- Information – availability of knowledge
- Logistics – availability of materials
- Environment – geographical site features
- Safety – incident
- Security – breach
- Interoperability – cross-system coordination

Step 3. Screen

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Screen Outcomes

- ▢ A priority has been assigned by assessing the Performance Gaps likelihood and impact
- ▢ Screening has been signed off by appropriate management
- ▢ Where applicable, Major Performance Gaps are shared externally.
- ▢ The appropriate manager has signed off the activity

Purpose:

The Performance Gap is screened to enable the appropriate investigation to be assigned.

Process Guide:

Screen the Performance Gap using the table below right. The screen should be reviewed and signed off by designated management as per the OpCo specific process to record the screening outcome for future reference and evaluation in later steps. Share major Performance Gaps across NDA as soon as possible (see step 8).

Example #1

If a negative major Performance Gap has occurred, a P1 or P2 could be assigned based on the severity.

	Minor	Moderate	Major
Imminent/ Occurred	P3/P4	P2/P3	P1/P2
Certain	P3/P4	P2/P3	P1/P2
Likely	P3/P4	P2/P3	P1/P2
Unlikely	P3/P4	P3/P4	P1/P2
Highly Unlikely	P3/P4	P3/P4	P1/P2



Example #2

If an individual logs a positive Performance Gap for potential moderate cost-savings that involve lessons learned from another, a P2 or P3 could be assigned.

	Minor	Moderate	Major
Imminent/ Occurred	P3/P4	P2/P3	P1/P2
Certain	P3/P4	P2/P3	P1/P2
Likely	P3/P4	P2/P3	P1/P2
Unlikely	P3/P4	P3/P4	P1/P2
Highly Unlikely	P3/P4	P3/P4	P1/P2

Cross-NDA Share

For major Performance Gaps that require immediate action, NDA and/or regulators should be notified as soon as possible after identification in line with OpCo processes.

		Potential Impact Type 		
		Minor	Moderate	Major
Likelihood of Occurrence 	Imminent/ Occurred	P3/P4	P2/P3	P1/P2
	Certain	P3/P4	P2/P3	P1/P2
	Likely	P3/P4	P2/P3	P1/P2
	Unlikely	P3/P4	P3/P4	P1/P2
	Highly Unlikely	P3/P4	P3/P4	P1/P2

- Minor Incident Event
 - No significant consequences
 - Minor learnings
 - Near misses
 - Slips
 - Trips
 - No injuries
 - Event potential consequences
 - Injuries
 - Moderate positive benefit to OpCo (savings, avoidance of large loss)
 - Lessons Learned that may potentially benefit 1+ OpCo
 - Major Event Serious Event
 - High/significant potential consequences
 - Regulatory concern
 - Significant benefit to NDA
 - Major benefit to OpCo (e.g. to OpCo Business plan, avoidance of major financial loss)
 - Lessons Learned that may benefit entire NDA
- Good Practice
- Positive
 - Minor benefits
 - Lessons Learned of potential benefit to entire OpCo
 - Ideas for potential business improvement with minor benefit

Step 4. Investigate and Analyse

Cross-NDA Share

BOI and Causal investigations should be shared cross-NDA as soon as the learnings are signed off by OpCo senior management.

Investigate and Analyse Outcomes

- Initiate and close investigation to timescales
- Independent chairs / convening authorities lead investigations
- Terms of Reference are created for investigations
- A dedicated investigations team investigates major Performance Gaps
- Multiple disciplines are represented on the investigations team
- Investigators have appropriate training, mentorship and resourcing to complete a quality investigation
- The original individual who logged the Performance Gap is included in the investigation
- Cause codes are assigned to Performance Gaps
- Terms of reference and investigation reports are signed off by senior management
- BOI and Causal investigations are shared across NDA.

Purpose:

Understand why a Performance Gap occurred and how to systematically correct it.

Process Guide:

Use the Performance Gap priority assigned during the screen step to indicate the appropriate investigation level using the table below:

Performance Gap Priority	Applicable Investigation Level
P1	1/2
P2	2/3
P3	3/4
P4	4

Assign the investigation to the appropriate team based on the Investigation Requirements table. Once the investigation is complete, log cause code/s against the Performance Gap using the table right. This framework is designed to integrate with cross-NDA database searches and analysis, including trending.

Cause code	Type
Process Controls	<ul style="list-style-type: none"> • Training/Qualification • Written Procedures and Documents • Work Organisation • Maintenance, Testing, Surveillance
Engineered Controls	<ul style="list-style-type: none"> • Internal Environmental Conditions • External Environmental Conditions • Human-Machine Interface • Design Configuration Analysis • Equipment Specification, Manufacture and Construction
Supervisory Controls	<ul style="list-style-type: none"> • Verbal Communications • Work Schedule • Supervisory Methods
Cultural Controls	<ul style="list-style-type: none"> • Management Direction • Communication or Co-Ordination • Management Monitoring and Assessment • Decision Process • Allocation of Resource • Change Management • Organisational/Safety Culture • Management Of Contingencies • Interoperability
Individual Act	<ul style="list-style-type: none"> • Personnel Work Practice • Personal Factors



Step 4. Investigate and Analyse

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Investigation Level and Type	Description	Investigation team core requirement	Outputs	Timing to initiate	Time to close	Training and experience required
Level 1 Board of Inquiry (BOI)	A BOI uses formal, structured investigation techniques to understand the root causes and contributing factors in greater detail and the circumstances leading up to and surrounding the Performance Gap and similar Performance Gaps that may have occurred in the vicinity/related process including human factors considerations alongside data.	<ul style="list-style-type: none"> • An independent chair assigned by the OpCo executive • To act as the convening authority for the Investigation. • A lead Investigator • Dedicated investigation team representing multiple disciplines and including people from outside the immediate work area to reduce blind spots. • As far as possible, include the individuals who identified the original Performance Gap 	<ul style="list-style-type: none"> • Terms of Reference • Initial preliminary report (Initial findings) • Detailed documentation with formal presentations to management. • Compiled data, analysis, risk register and tools used • Review and analysis of previous Performance Gaps with similar causes • Independent peer review of draft investigation by a competent panel (external / different OpCo) • Follow-up effectiveness review • Sign off by OpCo leadership 	< 8 hours	50 days	<ul style="list-style-type: none"> • Chair / Convening Authority formal training • Certified training in causal analysis • Regular experience in causal analysis at the BOI scale developed under an experienced mentor
Level 2 Causal Investigation	Formal, structured investigation incorporating people, process and technology with a deeper focus on understanding the root causes, contributing factors and the extent of the Performance Gap.	<ul style="list-style-type: none"> • A lead investigator • Dedicated investigation team representing multiple disciplines and including people from outside the immediate work area to reduce blind spots. • As far as possible, include the individuals who identified the original Performance Gap 	<ul style="list-style-type: none"> • Detailed information on the Performance Gap and root causes • Data analysis, supplementary analysis files • Roles interviewed with quotes • Detailed list of documents and files reviewed • Independent peer review of draft investigation by a competent panel (external / different OpCo) • Executive Summary • Approval / sign off in line with OpCo specific process 	< 24 Hours	50 days	<ul style="list-style-type: none"> • Certified training in causal analysis • Regular experience in causal analysis at the causal analysis scale developed under an experienced mentor
Level 3 First Line Investigation	Formal approach to root cause analysis with data and process analysis to identify the basic and most likely causes and involves: Capturing facts through person/people directly involved with the Performance Gap through interviews Using Basic Investigation Tools and techniques (e.g. document analysis, 5 whys, task analysis)	<ul style="list-style-type: none"> • Lead investigator • As far as possible, include the individuals who identified the original Performance Gap 	<ul style="list-style-type: none"> • Thorough documentation detailing: • Tools and methodologies used • Performance Gap described in detail • Analysis leading 	< 5 Days	50 days	<ul style="list-style-type: none"> • Formal causal analysis training and regular experience developed under an experienced mentor
Level 4 Basic Investigation / Trending	Performance Gaps are recommended for Trending if it is judged during screening that there are no immediate learnings. However, the Performance Gap could provide insights if monitored over a more extended period.	<ul style="list-style-type: none"> • As far as possible, include the individuals who identified the original Performance Gap 	<ul style="list-style-type: none"> • Brief description of the Performance Gap including: • Tool(s) used • High level finding(s) • Root cause backed by evidence of analysis 	< 10 Days	50 days	<ul style="list-style-type: none"> • Awareness of good practice causal analysis from a mentor or guidance document.

Step 5. Assign Actions

Assign Actions Outcomes

- Actions are prioritised based on the type of Performance Gap they address
- Actions are defined using SMART criteria
- Actions are discussed and agreed with action owners
- Pre-mortem / risk assessment has taken place to mitigate the risk of unintended consequences
- Actions provide systemic solutions
- Actions have clear closure criteria
- Deadlines are met

Purpose:

Identify clear actions, owners and completion timelines to close Performance Gaps.

Process Guide:

- Actions should address issues systemically, for example the design of a process, equipment or training
- Actions should add value
- Actions required to close the Performance Gap should be kept to a minimum
- Actions should be SMART (Specific, Measurable, Achievable, Relevant, Timebound)
- Actions and deadlines should be agreed with the action owners
- Actions should be feasible
- Actions should be prioritised based on the type of Performance Gap being addressed
- Actions should be reviewed critically to ensure the original intent from the investigation findings has been met
- Actions should be risk assessed to understand any unintended consequences.
- Actions, action owners, actionees and tracking mechanisms should be confirmed within 28 working days following the completion of the investigation.

Cross-NDA Share



Where issues or opportunities relate to machines or processes in use across NDA, actions should pass straight to the implement step without need for re-investigation in the receiving OpCo.



Step 6. Implement

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Implement Outcomes

- Performance Gap has been systemically closed
- Action closure criteria have been met
- Actions have been signed off by the appropriate authority
- Any learning from implementing actions has been logged
- Feedback is provided to the Performance Gap originator



Purpose:

Implement the actions, confirming that they are completed accurately, to a high quality and on time.

Process Guide:

- Actions should be tracked centrally by the appropriate investigations team
- Actions owners should follow actions through to completion
- Actions should be completed by the deadline, if deadlines need to be extended, this should be raised and investigated as a new Performance Gap
- Actions are deemed complete when the following criteria are met:
 - Agreed actions are completed and agreed action closure criteria have been met
 - Supporting evidence confirms that the Performance Gap has been addressed.
 - The action is signed off by the action owner and the appropriate manager according to the OpCo procedure.

Feedback should be provided to the individual who initially identified the Performance Gap. Feedback should include:

- Thanking the individual
- Sharing how the Performance Gap was analysed and acted upon
- The positive changes that have resulted from the Performance Gap closure

Step 7. Monitor and Evaluate

Monitor and Evaluate Outcomes

- Effectiveness Reviews are Initiated to timescales
- Performance Gaps are raised if any adverse outcomes are identified
- Performance Gaps are raised from any adverse trend patterns
- Evaluation is conducted by a team or individual who is independent of the investigations team
- Trending analysis is conducted across NDA
- Effectiveness review learnings are shared cross NDA

Purpose:

Regularly monitoring actions, processes and procedures will ensure good practice is embedded and contributes to a proactive learning culture.

Process Guide:

A dedicated and independent performance evaluation capability owns the monitor and evaluate process step, ensuring that evaluations are independent from the original investigations team and that they occur in line with requirements.

- Effectiveness reviews should be conducted for 100% of BOI investigations
- Effectiveness reviews should be conducted regularly in line with OpCo stated frequency for other types of investigations

Effectiveness reviews consist of three components:

- Process Governance: a review of the approach to identify learnings from a Performance Gap
- Action Impact: a review of the actions and subsequent learnings
- Trending: analysis across all identified Performance Gaps and learnings

Effectiveness reviews classify outcomes using the table right. Where the effectiveness review finds a red or amber, this constitutes identification of a Performance Gap in the learning process and should be entered into the learning process.

During the effectiveness review individuals should notify OpCo management if there is a need to; stop activity, quarantine site or notify emergency services or other external bodies. At the end of the effectiveness review, the panel should reflect on what they have learnt from the process of learning overall and integrate these learnings back into the learning process.

Evaluation and Monitoring Effectiveness Review Outcome Classifications	
Classification and (New Performance gap type)	Description
GREEN Standard (N/A)	<ul style="list-style-type: none"> • Good Practice • Stable trends • Actions resolved causes • No reoccurrences • Correct Priority and Investigation type assigned • Correct Investigation approach and tools used • Learnings were shared • Learnings were incorporated into work process
AMBER Below Standard (Moderate)	<ul style="list-style-type: none"> • Some Actions not embedded • Moderate causes not addressed by Actions • Actions were not completed to time • Non-conformance to a process or procedure • Likely to have a Moderate impact on OpCo • Potential likelihood of negative Performance Gap reoccurrence • Some Learnings were shared • Inadequate Investigation Approach and/or use of tools
RED Unacceptable (Major)	<ul style="list-style-type: none"> • Actions not embedded, Non-conformance to multiple processes or procedures • Major causes not addressed by Actions • Regulatory, Legal, environmental, Major Safety implications. • High likelihood of negative Performance Gap reoccurrence • Performance Gap given the wrong priority and investigation type • Wrong Investigation approach and/or tools used • No Learnings were shared

Cross-NDA Share

Learnings at any part of the effectiveness review should be shared cross-NDA.

Step 7: Types of Evaluation

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Evaluation Type	Purpose	Time to initiate	Review Guide
Process Governance	Ensure correct investigation procedures were followed and quality standards adhered to	0-3 months following completion of the investigation	<ul style="list-style-type: none"> • Assignment of the correct priority • Assignment of the correct Investigation Type • Investigation approach and tools used • Quality of causal analysis • Sharing of learnings • Quality of investigation training and material
Action Impact	Ensure successful embedment of actions and learnings and quality standards adhered to	2-12 months following action closure	<ul style="list-style-type: none"> • Impacted areas, plant, people and work processes addressed appropriately • Root causes were successfully eliminated or mitigated • Actions were effectively monitored and tracked to completion • Extensions to deadlines were investigated as Performance Gaps • Learnings were embedded effectively • Performance Gaps did not recur • Unintended consequences were identified and logged as Performance Gaps.
Trending	To identify trends across Performance Gaps both within OpCos and across NDA	Monthly, ongoing	<ul style="list-style-type: none"> • Repeat Performance Gaps (occurred at any time, anywhere within the past 3 years) • Statistical analysis using appropriate tools and expertise • New linked Performance Gaps logged • Outliers analysis • Performance Gap type, subtype and causes analysis



8. Cross-NDA Share

Cross-NDA Share Outcomes

- Learning flashes are issued for all major Performance Gaps and BOIs
- Performance Gaps are available cross-NDA
- Lessons learned are available cross-NDA
- Learning Flashes are easy to share, understand and use
- Performance Gaps are successfully integrated into OpCo ways of working and do not recur in a different OpCo
- Learnings are viewed positively as opportunities to improve working practices
- Learning Flashes are rated for usefulness to the recipient, feedback collected and monitored to continuously improve

Purpose:

Sharing Performance Gaps and learnings across the NDA Group helps OpCos learn from others, enabling potential Performance Gaps to be predicted and managed and changes to be implemented in advance. Sharing learning means NDA succeeds faster and works more safely.

Process Guide:

A 'Learning Flash' should be shared cross-NDA for:

- All major Performance Gaps identified, at either steps 1, 2 or 3
- BOIs and causal analysis at the beginning and end of the investigate and analyse step 4
- Learnings from effectiveness reviews in step 7

Learning Flashes should be pre-populated as far as possible to make it easy for the originator to log the Performance Gap.

Staff should be able to opt into receiving Learning Flashes based on their interest – using either the Performance Gap type or subtype.

OpCo specific acronyms or terms should be avoided to ensure the learning is accessible across the Group.

When deciding whether the Performance Gap applies in your OpCo, the following questions should be considered:

- Are similar equipment, tools or work processes in use?
- Has the OpCo experienced similar negative Performance Gap?
- Is the plant or stores of similar design?
- Could similar conditions be present or occur?
- Are the same or similar behaviours or attitudes present?
- Are there similar governance mechanisms or management expectations?

Trending analysis should be undertaken centrally on cross-NDA Performance Gaps and learnings

Recipients of Learning Flashes should rate Learning Flashes for their usefulness, with feedback going back to the sharer to know where improvements are needed

Peer to peer learning is two-directional and requires the following learning mindsets:

- Learning is shared in a meaningful way
- Learning is received with an open mind
- Learning is not exploited beyond the original intentions
- Learning is treated positively and fairly, without seeking to blame individuals

Learning Flash	
Description:	
Date:	Time:
OpCo:	Exact location:
Site / Facility / Business function:	Originator type: (employee / contractor)
Originator Name:	Originator email address:
Originator email address:	Originator phone number:
Performance Gap Type: select (improvement / minor / moderate / major)	
Performance Gap Subtype: select (TEPIDOLESS-I)	
Activity observed:	
Immediate actions:	
Basic cause/s:	
Supporting information (e.g. photographs)	
Any security concerns:	
Type of investigation: select (BO / causal investigation / first line investigation / basic investigation / trending)	
Investigation lead:	
Responsible Senior Manager:	
Cause/s:	
Impact:	
Actions:	
Lessons learned:	

Steps 1, 2 or 3

Additional information at steps 4 or 7

2. Learning Organisation Toolkit

1. Learning Organisation Assessment

2. Process KPIs

3. Monthly Learning Process Dashboard

Learning Organisation Assessment

This is a quick self-assessment you can complete to test whether you, your leaders, your team and your organisation are set up to learn effectively.

Select the number that most closely represents your experience

1	2	3	4	5
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Supportive Learning Environment

People are uncomfortable talking about problems and disagreements within the organisation						It is easy to raise concerns, even if I think others will disagree with me
Most of the time when something goes wrong, the ultimate cause is blamed on an individual						Most of the time when something goes wrong, the ultimate cause is apportioned to an error in the wider system
People are really struggling with workloads, there's just no time to improve our ways of working						Despite the workload, we find time to review what works well and look for improvements
Only ideas generated in my OpCo are taken seriously						My OpCo is open to new ideas from outside of the organisation

Mostly 1-2:
Lack of evidence that learning is a priority for your organisation, review Guide for best practice.

Mostly 3:
Some evidence of a learning organisation but with areas for improvement.

Learning Processes

Lessons are logged but no real learning occurs as a result						Positive and negative lessons are effectively embedded in work processes
Causal analyses do not address systemic failures						Our causal analysis always gets to the root/s of the issue
Our learning process is ad-hoc and we often don't get time to do it thoroughly						We follow a consistent learning process that means we systemically integrate lessons learnt back into ways of working
We don't really get the opportunity to develop our skills and learn from others within the OpCo						My OpCo encourages regular attendance at training and expects formal learning outcomes from different forums
The learning process within the OpCo is closed to learning from other OpCos and industries.						The learning process within my OpCo facilitates learning from other OpCos and industries.

Mostly 4-5:
Clear evidence of good practice in your organisation. You're on the right track
Keep checking back in to see where you can improve / course correct as you progress on your organisational learning journey.

Senior Leadership Sponsorship







OpCo leaders criticise people who disagree with them						OpCo leaders listen to and incorporate diverse perspectives into ways of working
Sharing information about past failures make my OpCo look incompetent						OpCo leaders are pleased when learning, good or bad, is shared across and outside the OpCo
Only incompetent people need to learn from others						There are clear examples of learning being implemented within the OpCo and improving ways of working
Sharing information about past failures often has negative consequences						Both success and failure are promoted as opportunities to learn and improve

This tool was developed based on the NDA cross-organisational learning survey which drew from: Garvin, Edmondson and Gino, 2008; Reason, 2000; Easterby-Smith, Lyles and Tsang, 2008. If you are unsure how to use this tool, please contact dani.harris@arup.com

Process KPIs

The KPIs below are designed to help OpCos and teams understand if their learning processes are working effectively

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	Title	Details
1	 Identify	Number of Safety moments (per month)
2	 Log	Number of Performance Gaps logged
3		Type of Performance Gaps logged
4		Number of Performance Gaps by Type raised across departments/functions
5	 Screen	Learning Flash shares that are shared externally
6		Investigations initiated to timescales (per month)
7		Investigations completed to timescales (per month)
8		Investigations ongoing (per month)
9	 Assign Actions	Number P1, P2 Actions assigned
10		% of Live P1, P2 actions out of total raised
11		% of P1, P2 actions completed to timescales (per month)
12		% of P1, P2 actions not completed to initial timescales (per month)
13		% of P1, P2 actions extended (per quarter)
14	 Monitor and Evaluate	Number of Trend Performance Gaps Raised (per quarter)
15		Number of P1, P2 Performance Gaps by type (per quarter)
16		% of Process governance reviews (per quarter)
17		% of Action Impact reviews (per quarter)
18		% of Process governance reviews below standard (per quarter)
19		% of Action Impact reviews below standard (per quarter)
20	 Cross-NDA Share	Total number of Learning briefs shared (per quarter)
21		Total number of External Learning Briefs actioned (per quarter)
22		Benchmarking Reports completed (per quarter)

Number of safety conversations taking place with individuals in the field, Performance Boards

Performance Gaps logged by an OpCo

Performance Gaps by Type

To ensure Learnings are being identified from all areas of the OpCo

Performance Gaps by type that are shared, to ensure OpCos are sharing at the earliest opportunity in the process

The number of investigations by type and cause code started within the timescales

The number of investigations by type and cause code completed within the timescales

Number of live investigations by type per month

To ensure priority actions are being assigned to owners

To demonstrate the amount of incoming Performance Gaps and the amount of subsequent auditable change (actions)

The percentage of actions completed to their local OpCo timescales per month

The percentage of actions not completed to their original timescales per month

The amount of important actions that have been extended

To demonstrate the amount of potential learnings that are occurring from those Performance Gaps identified for trending

To demonstrate any learnings following Evaluation and Monitoring

To demonstrate effectiveness reviews are being done regularly

To demonstrate effectiveness reviews are being done regularly

To demonstrate how effective the process governance is

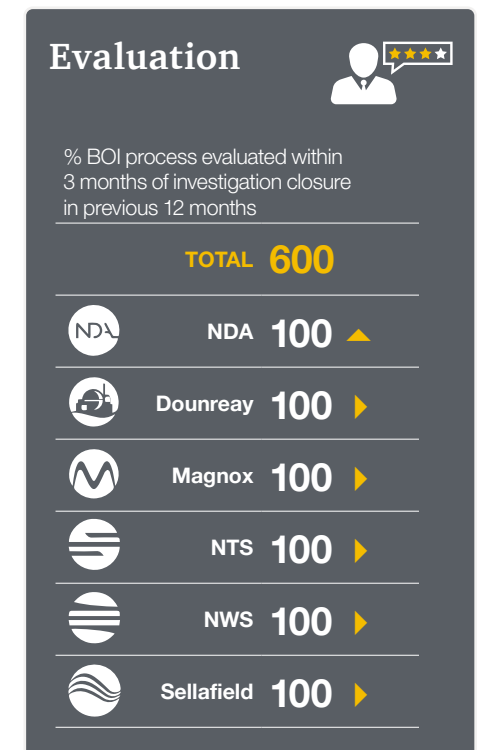
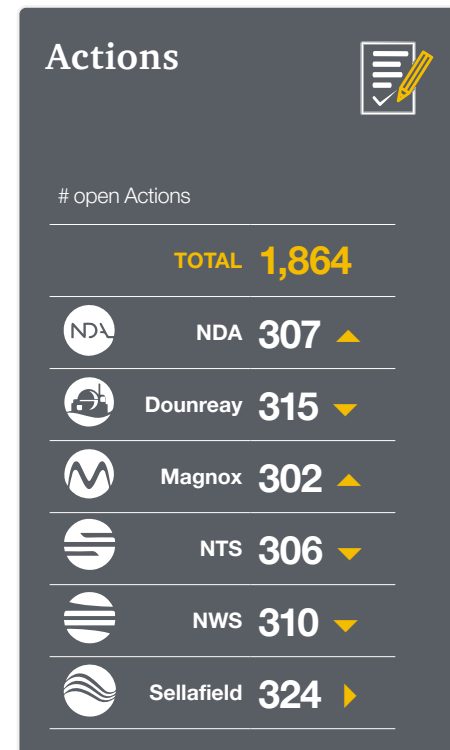
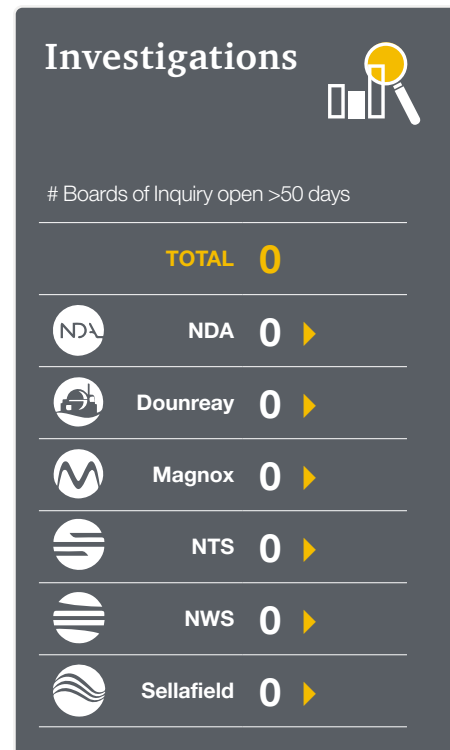
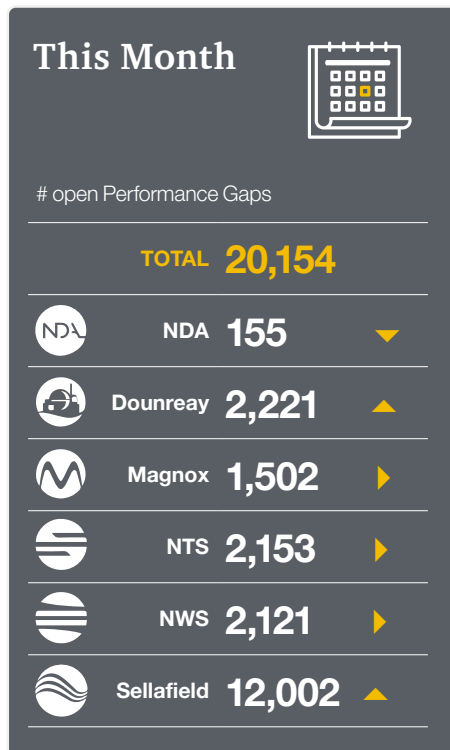
To demonstrate how effective the actions are at embedding learnings

Learning Briefs shared cross NDA

External Learning Briefs actioned by an OpCo







Number of benchmarking exercises done from Learning Briefs by an OpCo

Monthly Learning Process Dashboard









Monthly Learning Process Dashboard

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	Total	 NDA	 Dounreay	 Magnox	 w	 NWS	 Sellafield
Open Performance Gaps	20,154	155	2,221	1,502	2,153	2,121	12,002
Major	9	0	1	2	3	1	2
Moderate	2,295	5	20	200	50	20	2,000
Minor	5,750	50	200	300	100	100	5,000
Improvements	12,100	100	2,000	1,000	2,000	2,000	5,000
Open investigations	31	2	6	6	3	2	12
Boards of Inquiry ongoing	5	0	1	0	0	1	3
Boards of Inquiry open >50 days	0	0	0	0	0	0	0
Causal investigations ongoing	26	2	5	6	3	1	9
Causal investigations open >50 days	0	0	0	0	0	0	0
Average time to approve a BOI report (days)	120	20	21	19	20	21	19
Open actions	1,264	207	215	202	206	210	224
Actions overdue	1,864	307	315	302	306	310	324
OpCo internal actions overdue	0	0	0	0	0	0	0
Cross-NDA actions overdue	0	0	0	0	0	0	0
Evaluation	1,264	207	215	202	206	210	224
% BOI process evaluated within 3 months of investigation closure (24 month average)	600	100	100	100	100	100	100
% BOI action impact evaluated within 12 months of investigation closure (24 month average)	600	100	100	100	100	100	100
# Performance Gaps raised following evaluations (24 month average)	64	7	15	2	6	10	24

Monthly Learning Process Dashboard

This month	Total	 NDA	 Dounreay	 Magnox	 NTS	 NWS	 Sellafield	
New Performance Gaps	1,636	130	171	372	241	190	532	
Major	6	0	1	2	1	0	2	23
Moderate	240	10	20	50	20	50	90	
Minor	1,100	100	100	250	200	100	350	
Improvements	290	20	50	70	20	40	90	
Performance Gaps closed without investigation	330	50	40	90	20	50	80	
Boards of Inquiry initiated	6	0	1	2	1	0	2	
Board of Inquiry reports submitted	3	0	1	0	1	0	1	
Board of Inquiry reports approved	4	0	1	0	1	0	2	
Performance Gaps identified through trending analysis	58	5	6	15	8	7	17	

3. Background and Evolution

1. Background and Objective

2. Foundation

3. Evolution

4. Good Practice Guide contributors

5. Key References

5. Next Steps

Background and Objective

Background: NDA has been described as “not a learning organisation” in several internal and external reports. Whilst many actions have been put in place, evidence still suggests that issues with organisational learning are yet to be fully addressed.

Purpose:

The Good Practice Guide for cross-NDA learning establishes how learnings should be captured and flow through the NDA Group. This Good Practice Guide provides a common high-level language and improvement process to be used for all Performance Gaps across the NDA Group as well as toolkits for monitoring the effectiveness of the learning process.

This Guide establishes a shared model of how to engage with cross-NDA learning and in doing so improve performance across NDA.

Objective:

This Guide establishes a shared model of how to engage with cross-NDA learning and in doing so improve performance across NDA. This process describes how to structure a learning process and sets expectations for sharing, learning and integrating learnings systemically into working practices.

A common NDA structured process helps to establish the following:

- A common process that all OpCo's recognise and can refer to when sharing learning
- A common terminology underpinning a common way to share knowledge, best practices and learn
- Common timescales to ensure timely learning
- A consistent set of NDA-wide KPIs to provide a common way to discuss and evaluate the effectiveness of the learning process



For NDA to evolve as a learning organisation, staff, teams, leaders and companies must be able to follow good practice across these three building blocks.

Foundation

Organisational learning is the ability to learn from events and learn from others to adapt to changing situations. This means continuously improving practices, procedures and behaviour to reflect new knowledge and insights in order to become more efficient and effective in achieving the NDA mission.

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Good practice identifies three building blocks which enable successful organisational learning:

Tangible Benefits:

- Increased employee engagement, satisfaction and commitment
- Striving to get to the root cause of issues, and ensuring that learning is effectively embedded
- Incidents, repeat incidents and near misses are reduced
- Best in class expectations and processes
- The willingness to be more proactive in sharing best practices and positive outcomes – what went well

Implications:

- Leaders need to invite participation and ideas from all team members
- Leaders need to ensure that individuals are fairly treated and not blamed for issues
- Systemic issues need to be understood and influenced
- The “right” and “wrong” behaviours and how they are incentivised need to be clarified



Supportive Learning Environment

Objective:

Create an environment where people feel safe to learn and challenge existing ways of working

Employees:

- Feel safe disagreeing with others, asking naive questions, admitting mistakes and presenting minority viewpoints
- Recognise the value of opposing ideas
- Test, trial and implement new and innovative solutions
- Take time to look for improvements in processes and ways of working



Concrete Learning Processes

Cross-organisational learning is easy, practical, systemic and available to the people who will benefit from it

Formal processes exist to:

- Generate, collect, interpret and disseminate information
- Trial and test improvements to job procedures
- Access and assess external best practices
- Identifying and solve problems
- Develop employees' skills
- Support triple loop learning across the organisation



Senior Leadership Sponsorship

Leadership demonstrates good attitudes to learning and disseminating information

Leaders:

- Are willing to entertain alternative viewpoints and novel ideas
- Make time and space for problem identification, knowledge transfer and reflection
- Engage in active listening
- Use questioning techniques to encourage staff to innovate

Evolution

Evolving the Good Practice Guide

A shared understanding of process is the first step to becoming a true learning organisation. This Guide is designed to evolve as the NDA group evolves its organisational learning capability. If you have ideas to share to improve this Guide and the information within it, contact: crossNDAsharing@nda.gov.uk

Information about cross-NDA learning can be found on the Hub:

[Group: Cross Estate Learning: Working Group | The Hub \(ecosystem.org.uk\)](https://ecosystem.org.uk)



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- Nuclear Decommissioning Authority
- Nuclear Transport Services
- Nuclear Waste Services
- Sellafield Ltd

External:

- Civil Aviation Authority
- EDF Nuclear Generation Ltd
- Ministry of Defence
- International Association of Oil & Gas Producers
- Shell
- Automotive manufacturing
- Arup

Care has been taken to ensure that the Good Practice Guide is closely aligned to the NDA Knowledge Management Strategy, Knowledge Management Maturity Assessment Tool and Collaboration Knowledge Management and Digital Discovery.

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A full list of contributors and key references are included on the next page.

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In addition to the learning gained from industry practices, the following industry and academic publications were used to develop the models in this Guide.

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Operating Experience and Learning

A Guide to Good Practice

This guide was produced by the cross-industry OE and Learning Group (OELG) and published on behalf of the Nuclear Industry Safety Directors Forum

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Next Steps

How to use this Guide to improve your organisational learning

Benchmark

Benchmark your current processes against the Good Practice Guide as described in the Quick Reference section



Evolve

Use the materials and resources to evolve your own process



Identify

Identify Performance Gaps



Test

Test and refine your new process

Contact crossNDAsharing@nda.gov.uk for help, advice and to share lessons learned

Notes

