



National  
Shipbuilding  
Office

# Centres of Excellence

## Task and Finish Group

## Summary Overview

March 2025

# Centre of Excellence Task & Finish Group

## CONTENT

### Contents:

1. Background
2. Vision, Definition and Objectives Overview
3. Key Phases of Work
4. Terms of Reference
5. Implementation Plan of Action

### Key Deliverables:

**CoE Gap Analysis**  
to derive  
**CoE Recommendations**  
*to better understand gaps in CoEs  
to support the Shipbuilding  
Enterprise and what does Industry  
want out of a Centre of Excellence  
to meet Shipbuilding Sector needs*

**CoE Playbook**  
*to provide a best practice  
guide to maximise  
engagement across the  
shipbuilding enterprise*

**CoE Digital Directory**  
*to provide visibility of what CoE  
capabilities exist.  
(increase visibility, improve  
accessibility, have clear points of  
contact)*

# Centres of Excellence Task & Finish Group

## VISION

### Background:

- The UK Shipbuilding Enterprise has a wealth of expertise and best practice, but it is recognised that there is a need to understand where there are further opportunities for collaboration around Centres of Excellence (CoE) and where investment could be shared and co-ordinated to deliver benefits. This was the focus of the formed Centres of Excellence Task and Finish Group.
- The Centres of Excellence Task and Finish Group comprised of a breadth of Industry representatives across the Shipbuilding Enterprise; led by Industry – for Industry. The CoE T&FG is sponsored by the Shipbuilding Enterprise for Growth (SEG) forum.

### Vision

The UK's uniquely integrated network of Shipbuilding Centres of Excellence (COE), will contribute to the delivery of the vision for the shipbuilding enterprise, by optimising the production of key systems and shipbuilding processes

### Objectives

- Develop an organisation and structure to deliver the vision statement for CoE aligned with NSbS refresh
- Identify where the UK Industry and CoE initiatives support the overall strategy and where gaps exist in provision
- Engage with industry and respond to developments elsewhere from the NSbS (e.g. Skills Task Force)
- Develop options to enhance collaboration across the sector including by focusing on tools and processes for joint working
- Develop new concepts and proposals for Centres of Excellence

# Centres of Excellence Task & Finish Group

## DEFINITIONS

### Centre of Excellence

#### **Definition**

A Centre of Excellence (CoE) is a team, a shared facility (physical or virtual) or an entity focused on innovation and delivery by providing leadership, sharing best practices, conducting and sharing research, demonstrating capabilities, and offering support and/or training for a focus area of the shipbuilding enterprise.

#### **Objectives**

Develop options to enhance collaboration across the maritime sector including by focusing on tools and processes for joint working.

### Centre of Expertise

#### **Definition**

A Centre of Expertise (CoExp) is an organisation or a facility, focused on innovation and delivery by providing management, displaying best practices, conducting research, delivering capabilities and training, for a focus area of the shipbuilding enterprise.

#### **Objectives**

Develop proposals to enhance existing and deliver new innovative services and products across the maritime sector by focusing on tools and processes for commercial exploitation

# Centres of Excellence Task & Finish Group

## KEY PHASES OF WORK 2023/2024

### Phase 1 – Foundation

1. Define Vision
2. Define CoE Definition
3. Develop CoE Behaviours Paper
4. Develop CoE Models Paper
5. Collate Matrix of current CoEs
6. Initiate CoE Industry Engagement

### Phase 2 – Demand

1. CoE Gap Analysis – Identify desired CoEs from industry engagement (where needed/there is a demand)
2. Provide Toolkit/Playbook for CoE establishment and operations
3. Develop CoE Directory proposal requirements for Industry to access and utilise
4. Make recommendations to SEG for Phase 3 
  - Dissemination of findings
  - Deliver Report Conclusions

### Phase 3 – Delivery

1. Deliver Recommendations, could include:
  - Work to establish new CoEs
  - Facilitate connections between existing CoEs
2. Provide Signposting & Visibility of Opportunities
3. Provide Leadership, guidance & best practice

Status @ Feb 2025

Activity complete

Activity - current focus

# Centres of Excellence Task & Finish Group

## TERMS OF REFERENCE

**AIM (Tasking defined by the SEG):** Explore proposals for Centres of Excellence to identify where Centres could foster areas of national excellence and competitiveness as well as collaboration. Focus on a time horizon beyond 2030 to ensure analysis of future needs.

**VISION:** The UK's uniquely integrated network of Shipbuilding Centres of Excellence (COE), will contribute to the delivery of the vision for the shipbuilding enterprise, by optimising the production of key systems and shipbuilding processes

Objectives	Approach	Key Outcomes	CoE T&FG Members
<ol style="list-style-type: none"> <li>1. Develop an organisation and structure to deliver the vision statement for CoE aligned with NSbS refresh</li> <li>2. Identify where the UK Industry and CoE initiatives support the overall strategy and where gaps exist in provision</li> <li>3. Engage with industry and respond to developments elsewhere from the NSbS (e.g. Skills Task Force)</li> <li>4. Develop options to enhance collaboration across the sector including by focusing on tools and processes for joint working</li> <li>5. Develop new concepts and proposals for Centres of Excellence</li> </ol>	<p><b>Investigate the Issue:</b></p> <ol style="list-style-type: none"> <li>1. Engagement Approach: Conduct Gap Analysis via Industry Roundtables</li> <li>2. Define Gap Analysis Question Set (10 Qs) to enable consistent feedback (Identify Gaps; Determine Appetite; Develop Approach)</li> </ol> <p><b>Make Recommendations:</b></p> <ol style="list-style-type: none"> <li>1. Increase awareness of Existing CoEs &amp; Specialisms</li> <li>2. Identify Industry CoE Gap Analysis Recommendations</li> <li>3. Develop Industry Gap Key Recommendation Themes</li> <li>4. Ensure alignment to National Shipbuilding Strategy</li> </ol> <p><b>Validate with Industry:</b></p> <ol style="list-style-type: none"> <li>1. Validate CoE Recommendations of new concepts and proposals with Industry</li> </ol> <p><b>CoE Approach Outcomes:</b></p> <ol style="list-style-type: none"> <li>1. Promote Existing CoEs-Connect / Consolidate</li> <li>2. Create new-identified as true CoE Gap</li> <li>3. Special Projects-help improve specific topics</li> </ol>	<ol style="list-style-type: none"> <li>1. CoE Foundations</li> <li>2. CoE Behaviours &amp; Models</li> <li>3. Analysis of existing UK CoEs</li> <li>4. CoE Gap Analysis Recommendations</li> <li>5. NSbS CoE T&amp;FG Final Report</li> <li>6. CoE Playbook</li> <li>7. Make CoE Recommendations to SEG (Shipbuilding Enterprise for Growth) Forum for endorsement &amp; follow on action</li> </ol>	<p>Comprised of senior leaders from industry and academic expert from across the Shipbuilding Enterprise Sector and supported by the NSO. Group is led by industry-delivering for industry with all members volunteers.</p> <ul style="list-style-type: none"> <li>• Harland &amp; Wolff - Chair</li> <li>• QinetiQ – Co-Chair</li> <li>• BMT</li> <li>• GE Vernova</li> <li>• BAE Systems Naval Ships</li> <li>• Babcock Marine</li> <li>• University of Strathclyde</li> <li>• Connected Places Catapult</li> <li>• NSO Secondee/BAE Systems Naval Ships</li> </ul>

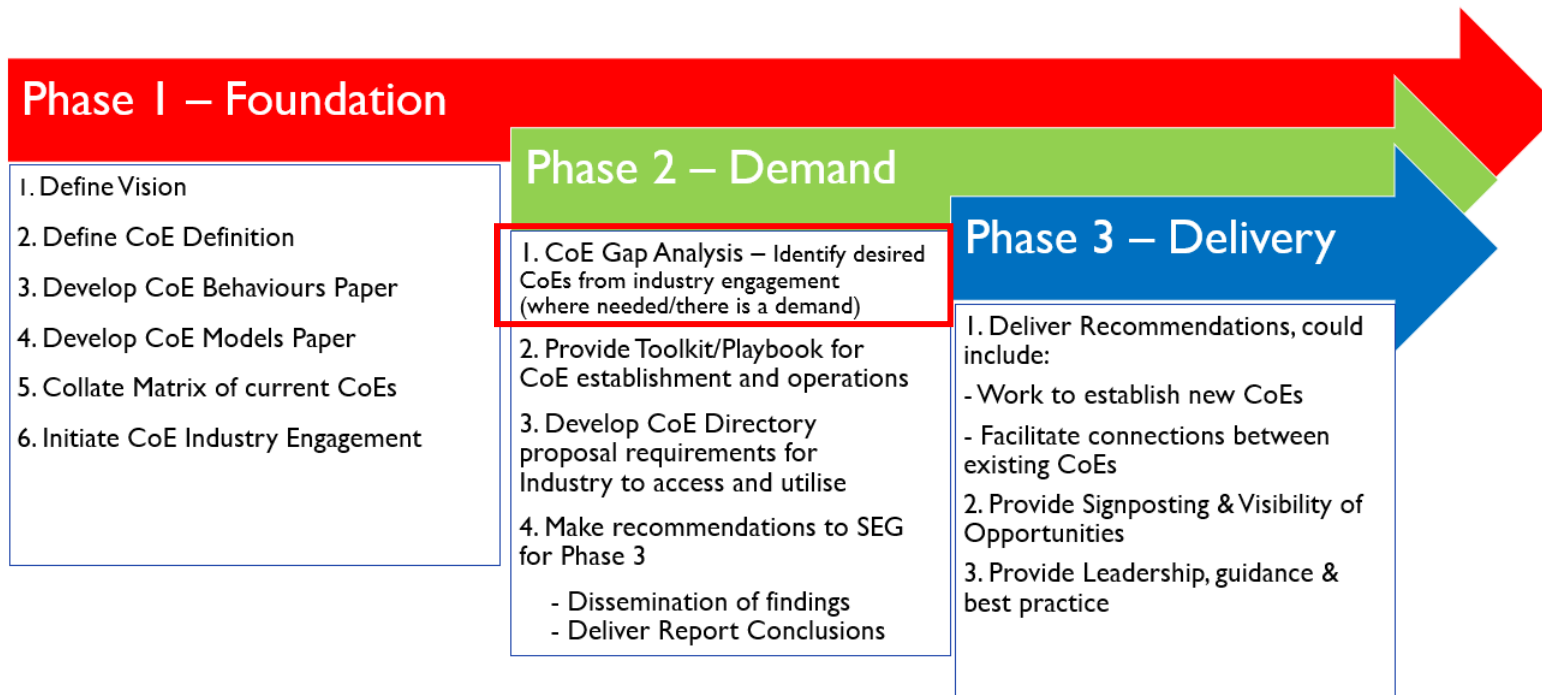
### DEFINITION – CENTRE OF EXCELLENCE

A Centre of Excellence (CofExc) is a team, a shared facility (physical or virtual) or an entity focused on innovation and delivery by providing leadership, sharing best practices, conducting and sharing research, demonstrating capabilities, and offering support and/or training for a focus area of the shipbuilding enterprise.

### DEFINITION – CENTRE OF EXPERTISE

A Centre of Expertise (CofExp) is an organisation or a facility, focused on innovation and delivery by providing management, displaying best practices, conducting research, delivering capabilities and training, for a focus area of the shipbuilding enterprise.

# Centres of Excellence Gap Analysis Recommendations



# Centres of Excellence – Round Table Gap Analysis

## APPROACH

**AIM:**

- Hold Industry Roundtable discussions to engage and gather response from various Industries on Centres of Excellence (COE) to better understand gaps in CoEs to support the Shipbuilding Enterprise and what does Industry want out of a Centre of Excellence to meet Shipbuilding Sector needs
- Identify gaps; determine appetite; develop approach to better understand the COE demand from Industry, Government Bodies & Customer, focusing on what is missing in the UK Shipbuilding Sector and/or what exists in other industries that the maritime sector also needs

**OUTCOME:**

- Roundtable discussion outcomes were collated and assessed to generate overall key take aways and develop recommendations on what additional COEs could be useful.
- This resulted in the CoE Final Recommendations Report deliverable; this report has been used to provide evidence from Industry into Government as part of the Comprehensive Spending Review ambition proposals.

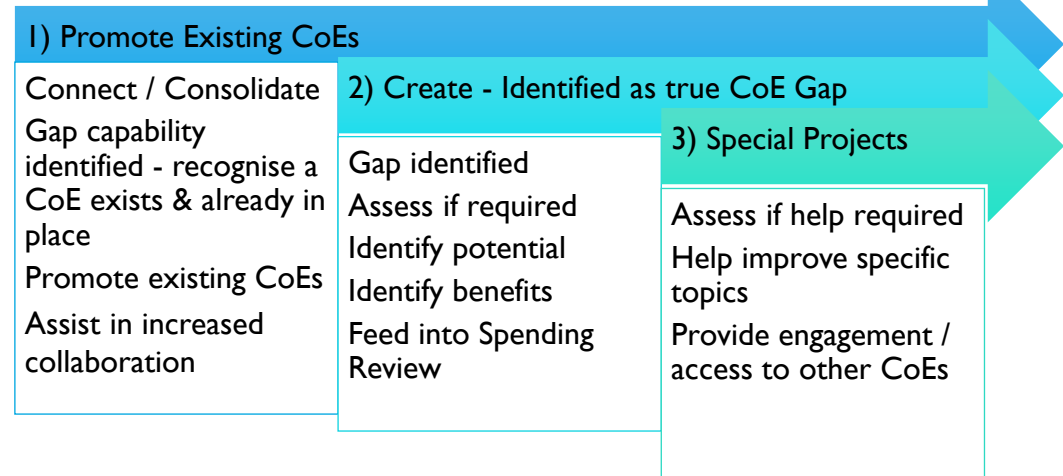
**WHAT ATTENDEES GOT OUT OF THE SESSIONS:**

- Opportunity to shape future, work with others in Sector
- Different type of opportunity to gain value from Industry

**ENGAGEMENT:**

- Over 2023/2024, Industry Roundtable engagements took place across 9 associations and over 80 people in attendance to understand gaps in CoEs to support the Shipbuilding Enterprise. Participants were well engaged in the initiative which generated much interest
- Participants ranged across SMI (Society of Maritime Industries):  
 Defence MDSG Council; Commercial Marine Engineering;  
 Ports and Terminals Infrastructure; Maritime Autonomous Systems;  
 Science & Technology; Mar-RI-UK-Academic & Research Institutions;  
 Cruise Lines Industry Association; Workboat Association;  
 British Marine-Leisure & Small Commercial

**RECOMMENDATION APPROACH:**






# Centres of Excellence STORYBOARD JOURNEY

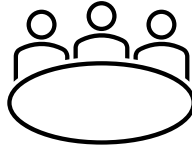
**Definition:** A Centre of Excellence (COE) is a team, a shared facility (physical or virtual) or an entity focused on innovation and delivery by providing leadership, sharing best practices, conducting and sharing research, demonstrating capabilities, and offering support and/or training for a focus area of the shipbuilding enterprise

## Investigate the Issue



**Objective:** Identify where the UK Industry & CoE initiatives support the overall NSBs strategy and where gaps exist in provision


**Engagement Approach:**  
Conduct Gap Analysis via Industry Roundtables




**Defined Gap Analysis Question Set (10 Qs) to enable consistent feedback**  
(Identify Gaps; Determine Appetite; Develop Approach)

QUESTION TOPIC	QUESTION NO.	REVISED QUESTION SET (ROUNDTABLE)
IDENTIFY GAPS IN EXISTING CENTRES OF EXCELLENCE	1	Do you utilize any COEs currently? Do you currently collaborate with another firm in a way which facilitates the sharing of best practice? If so, who?
	2	Where would your business find a Centre of Excellence valuable? What part of your business' operations would benefit from guidance from a Centre of Excellence? (Examples: Tool fixture improvements, Job Time Supply Chain, Sals, Testing)
DETERMINE APPETITE	3	Are you aware of existing Centres of Excellence that are not on the COE Manual?
	4	How would you be willing to work to establish a new, or expand existing, COE and support recruiting their identified as Gap? What knowledge/best practice could your business bring?
	5	How do you think your business could contribute to a Centre of Excellence? What would you be willing to collaborate on?
DEVELOP APPROACH	6	What are the barriers for COE being effective?
	7	What resources would you need? Early on encourage participation in a Call.
	8	How can we generate as much value from existing Centres of Excellence - facilitate connections, maximize visibility, provide introductions and engagement?
	9	What business would you expect to be displaced (Competition or Collaboration)?
	10	How would your business be willing to work commercially and financially with Centres of Excellence? Should there be an overarching organization to connect centres and facilitate engagement?


**Objective:** Engage with industry and respond to developments elsewhere from the NSBs




## Make Recommendations




**Increase awareness of Existing CoEs & Specialisms**








**Identify Industry CoE Gap Analysis Recommendations**




**Objective:** Develop options to enhance collaboration across the sector including by focusing on tools and processes for joint working



**Commence CoE Recommendation feedback loop with Industry**

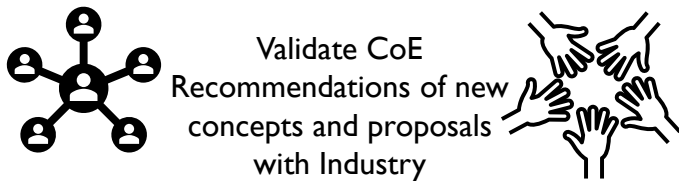



## Validate with Industry




**Objective:** Develop new concepts and proposals for Centres of Excellence

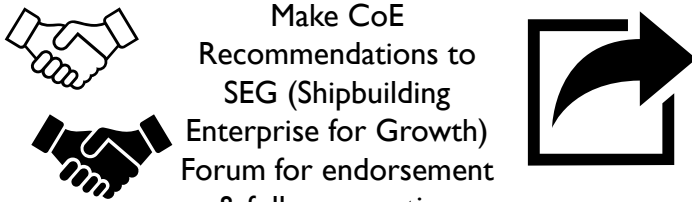
**Validate CoE Recommendations of new concepts and proposals with Industry**



**Finalise and agree CoE Recommendations of new concepts and proposals for Centres of Excellence with Industry**



**Make CoE Recommendations to SEG (Shipbuilding Enterprise for Growth) Forum for endorsement & follow on action**



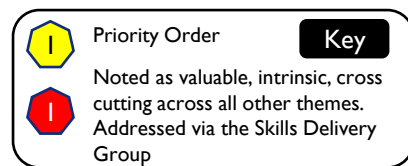
# Centres of Excellence

## GAP ANALYSIS QUESTION SET

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QUESTION TOPIC	QUESTION NO.	REVISED QUESTION SET (ROUNDTABLE)
IDENTIFY GAPS IN EXISTING CENTRES OF EXCELLENCE	1	Do you utilise any COEs currently? Do you currently collaborate with another firm in a way which facilitates the sharing of best practice? If so, who?
	2	Where would your business find a Centre of Excellence valuable? What part of your business / operations would benefit from guidance from a Centre of Excellence? (Examples: Yard facilities improvements, Sub-Tier Supply Chain, Skills, Testing)
	3	Are you aware of existing Centres of Excellence that are not on the COE Matrix?
DETERMINE APPETITE	4	How would you be willing to work to establish a new, or expand existing, COE and support resolving their identified as Gaps?
	5	How do you think your business could contribute to a Centre of Excellence? What would you be willing to collaborate on? What knowledge/best practice could your business bring?
	6	What are the barriers for COE being effective?
	7	What reassurances would you need, if any, to encourage participation in a CoE?
DEVELOP APPROACH	8	How can we garner as much value from existing Centres of Excellence – facilitate connections, maximise visibility, provide introductions and engagement? What behaviours would you expect to be displayed (Competition vs Collaboration)?
	9	How would your business be willing to work commercially and financially with Centres of Excellence?
	10	Should there be an overarching organisation to connect centres and facilitate engagement?

# Centres of Excellence (CoE) – Industry Gap Key Recommendation Themes



**1**

## BETTER CoE ORGANISATION

- Develop an on-line, curated CoE Digital Directory of UK Shipbuilding Enterprise CoEs
- Mechanism to signpost & increase visibility of CoE opportunities
- Connect and enable CoEs across the UK Shipbuilding Enterprise
- Develop a Playbook for CoE Best Practice

Provide Industry with a **one-stop-shop** to signpost what CoE capabilities exist.

**2**

## UK TRANSITION TO NET-ZERO

- Empowered UK Shipbuilding Net Zero **Overarching Body**
- Shipbuilding Green Technology **'Federation'**
- Develop **Sustainable Energy** solution for New/Alternative Fuels & Port Infrastructure

Drive/Support **Shipbuilding Enterprise Sustainability**

**3**

## RESEARCH & INNOVATION INSTITUTE

- Shipbuilding Enterprise Research and Innovation **National Development Roadmap**
- Nationally recognised thought leadership on major imperatives
- Tech Scale-up from Prototype to Manufacture

Make the **UK Innovation Network** Operate for the Shipbuilding Enterprise

**4**

## FUTURE PLATFORM POWER & PROPULSION

- Create a collaborative strategy & **road map to future power and propulsion UK capabilities**
- Technology & operational-readiness focus next-generation capabilities
- Accelerate development towards market-focused fuel solutions

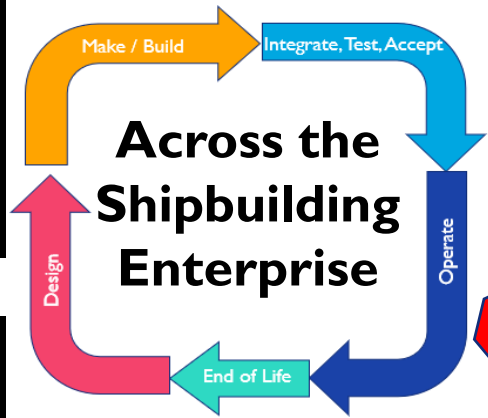
Develop UK Power & Propulsion New Technology USP

**5**

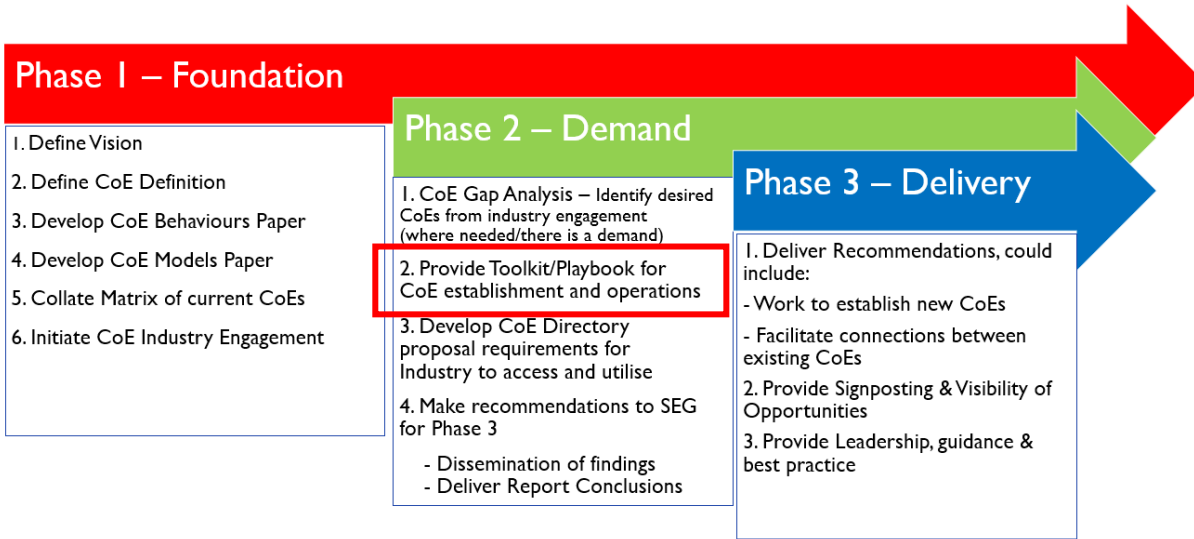
## SHIPBUILDING SKILLS

- Develop pools of **Regional Mobile Skills Sharing Workforce**
- Develop **Green Skills Pool** (Emerging Technologies / Clean Maritime)
- Increase Diversity** in the Shipbuilding Enterprise sector in particular female participation

Co-ordinate and drive Shipbuilding Skills development



# Centres of Excellence Playbook



The purpose of the CoE Playbook is to provide a best practice guide to maximise engagement across the shipbuilding enterprise through the practical foundations of:

- a) what makes an effective CoE;
- b) how to establish and operate CoEs;
- c) how to engage with the market.

# Centres of Excellence CoE PLAYBOOK LAUNCH



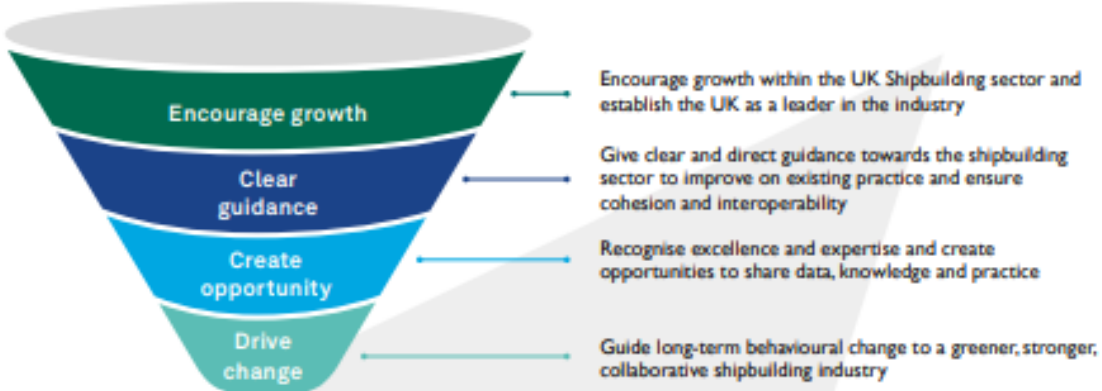
## Centres of Excellence Playbook

In support of the National Shipbuilding Office  
November 2024



### Centres of Excellence Definition

A **Centre of Excellence (CoE)** is a team, a shared facility (physical or virtual) or an entity focused on innovation and delivery by providing leadership, sharing best practices, conducting and sharing research, demonstrating capabilities, and offering support and/or training for a focus area of the shipbuilding enterprise.



**This Playbook:**

- Acts as a best practice guide to maximise engagement across industry
- Highlights the benefits of CoEs
- Defines Centres of Excellence and Centres of Expertise
- Details challenges facing CoEs
- Describes how to establish and operate CoEs
- Articulates how to engage with CoEs

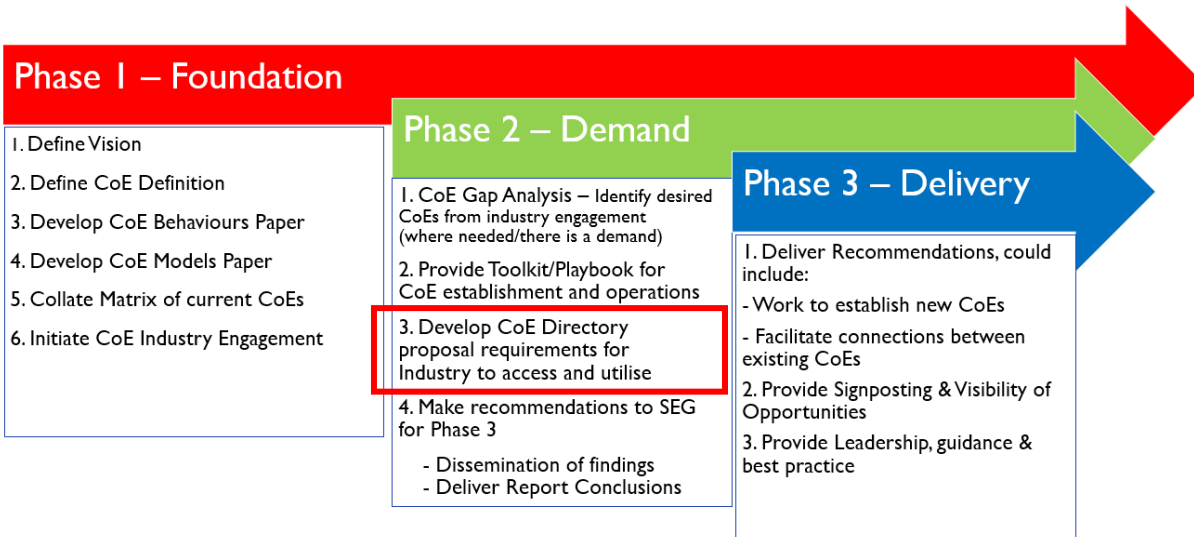
The audience for the Playbook will vary, comprising of organisations:

- seeking to become a CoE
- are already an existing CoE
- organisations from within related industries looking at how they can collaborate with CoEs to help solve challenges
- From Small and Medium Enterprise through to larger organisations,

The aim is to be able to provide easily accessible, useful advice for those seeking to deepen their involvement with the UK shipbuilding enterprise.

Knowledge transfer and collaboration are crucial to stimulate success and growth.

# Centre of Excellence Digital Directory



- A key theme from Industry Roundtable feedback was to provide visibility of what CoE capabilities exist and to understand a brief description of their scope.
- The intention is that this will take the form of a CoE Digital Directory with the aim to provide a benefit to Industry of being able to easily access a Centres of Excellence Directory – a one-stop-shop to understand COEs (increase visibility, improve accessibility, have clear points of contact).
- There is a vision for the Curation of a Shipbuilding Enterprise COE Digital Directory (a longer-term service) with the scope of work including the set-up, management, maintenance, support and development of the COE Digital Directory for the next (2-5) years.
- This will help to drive an interactive CoE community of practice, encourage knowledge sharing, promoting collaborative behaviours & connections