



GREENPORT
Alliances



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Sustainable Maritime Operations and Green Port Technologies

Module number 5

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Lecturer contact info

Communication and stakeholder engagement

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SESSION OBJECTIVES

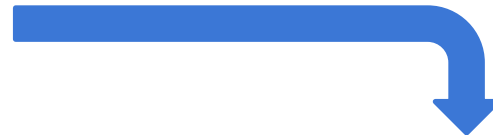
- ❑ **Roles of key stakeholders** in sustainable port operations.
- ❑ **Change management:** behavioral aspects, planning, and information exchange techniques
- ❑ **Experiential exercises** to strengthen communication skills
- ❑ **Safe integration of digital tools** to enhance operational safety and environmental sustainability

Stakeholders, their roles and responsibilities

IN SUSTAINABLE PORT OPERATIONS, EVERY STAKEHOLDER PLAYS A SPECIFIC ROLE THAT CONTRIBUTES TO BOTH SAFETY AND ENVIRONMENTAL PERFORMANCE.

STAKEHOLDER GROUP	TYPICAL REPRESENTATIVES	MAIN ROLE IN SUSTAINABILITY
Pilotage services	Pilots, pilot organisations	Plan safe approach speeds; promote eco-navigation; coordinate arrival timing
Towage providers	Tug masters, dispatchers	Use the right tug power; avoid idle running; optimise operations before and after jobs
Pilot boat services	Coxswains, crew	Conduct safe, fuel-efficient transfers; avoid unnecessary high-speed runs
Vessel Traffic Service (VTS)	VTS officers, schedulers	Sequence ship movements; share tide/current information; monitor berth readiness
Terminal operations	Berth planners, supervisors	Communicate berth availability; ensure cargo readiness; reduce delays
Ship operators	Master, bridge team, owners	Follow speed limits; manage engine power; share fuel/emissions data
Port authority/environmental office	Harbour master, environmental staff	Monitor emissions; ensure compliance; promote green port policies

ROLES



RESPONSIBILITIES

TASK/PHASE	PILOTAGE	TOWAGE	PILOT BOAT	VTS	TERMINAL	SHIP	ENVIRONMENTAL OFFICE
Pre-arrival speed advice	R/A	C	C	A	C	R	I
Tidal-window planning	R	R	C	A	C	C	I
Tug dispatch	C	R/A	I	C	C	I	I
Berth readiness updates	I	I	I	C	R/A	I	I
Approach speed adjustment	R	C	C	C	I	R	I
Fuel/emissions data collection	C	R	R	I	I	R	A
Post-job debrief	R	R	R	C	C	C	I

Stakeholders' information flow

ALL STAKEHOLDERS EXCHANGE INFORMATION. NO SINGLE ACTOR IS ALWAYS CENTRAL.

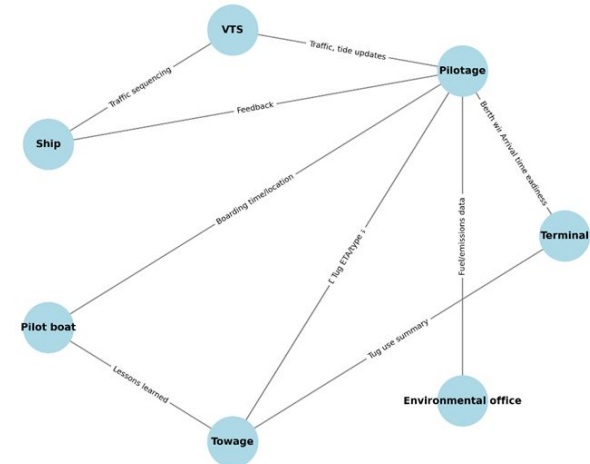
STAGES OF COMMUNICATION

PRE-ARRIVAL → Terminal & VTS provide berth, cargo, traffic, tidal data → Pilot sets boarding time → Ship adjusts speed (JIT arrival, fuel saving).

APPROACH → Pilot boat confirms boarding time/location → Towage shares ETA & tug type → VTS updates ship on sequencing.

ALONGSIDE → Pilot & Towage report arrival & tug use to Terminal → Pilot sends emissions data to Environmental Office.

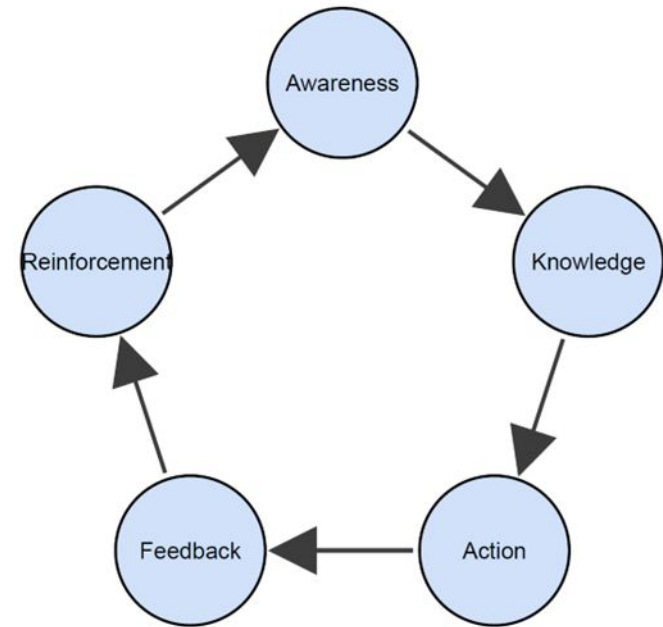
POST-JOB → Pilot debriefs Towage → Towage shares lessons with Pilot Boat → Pilot gives feedback to Ship's bridge team.



Driving sustainable behaviour in port operations

The success of any organization depends not only on technical skills but also on the behaviors and established habits of its people.

- **Training** develops knowledge and skills through courses, simulators, and mentoring, reinforcing both theory and real-world habits.
- **Leadership shapes culture** by example, open communication, and recognition of good practices.
- **Peer** influence drives change via observation, feedback, and healthy competition, embedding efficient habits.
- The **behavioural change cycle** moves from awareness → knowledge → action → feedback → reinforcement, ensuring sustainability becomes routine.



Good planning of effective communication with all players involved

Good planning ensures the right information reaches the right person at the right time, enhancing efficiency, safety, and sustainability.

STEP	ACTION	PURPOSE	EXAMPLE IN PRACTICE
1. Identify stakeholders	List all involved parties	Avoid missing key actors	Pilotage, towage, VTS, terminal, ship's bridge team
2. Define information needs	Specify what each needs to know	Avoid overloading or under-informing	Tug ETA, berth readiness, tidal windows
3. Choose communication channels	Select method for each message	Ensure reliability	VHF radio, direct call, digital platform
4. Set timing and frequency	Decide when and how often to update	Keep everyone aligned	T-12h, T-3h, T-60min before operation
5. Establish feedback loops	Confirm message was understood	Prevent errors	"Read-back" of critical instructions



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