



Team Performance in Maritime Pilotage, The Supporting Role

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Summary

In The Netherlands, Maritime Pilotage is a public duty performed by a private system of pilots since 1988. The maritime pilot is an independent professional giving independent advice to a ship's master. He is unable to perform his duties without a team that supports him in executing his duties. In this paper, the process of maritime pilotage is considered from the supporting role point-of view. First the Pilot Support Team (PST) is defined, in which the pilot himself is identified as a team member. Finally, using a team effectiveness model, ten suggestions for improving the PST performance are made.

Introduction

In a previous paper: Improving Teams Performance in Pilotage Waters (Theotterdam.pilot.com, 2022), I discussed the NAV team that is formed when a pilot is performing his duties, working on a ship to enter or leave a harbour. The team that is formed to perform the task has some unique characteristics:

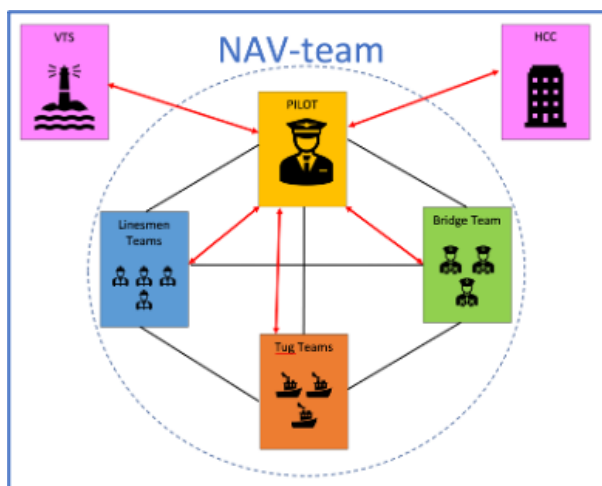


Fig1: The NAV-team

- The short duration of the team (duration of the voyage)
- Multi team structure with different goal of each team, with a shared common goal.
- Varying composition of the team with every voyage

- High degree of standardized working procedures which have been established over years of cooperation with various team members.
- A pilot typically works in multiple of such teams during a working day.

In this paper the process surrounding the maritime pilot is considered, namely the team that performs the supporting role. Also, it is determined if the maritime pilot himself is a team member.

The difference between a team and a group is investigated with Dutch legislation as a framework.

In this paper, “the process” is defined as “All actions required to facilitate the maritime pilot in his profession in a safe, effective and efficient way”.

Groups and Teams

A Group is two or more individuals, interacting and interdependent who have come together to achieve objectives. A Work group is a group that interacts primarily to share information and to make decisions to help each group member perform within his or her area of responsibility. Other definition is : A group of people with different skills and different tasks, who work together on a common project, service, or goal with a meshing of functions and mutual support (washington.edu, 2021), P.1

A Team is a group whose individual efforts results in performance that is greater than the sum of individual inputs. (Robbins et al. P.274). A work team generates positive energy through coordinated effort. The individual efforts result in a level of performance greater than the sum of those individual inputs.

In both work groups and work teams there are:

- Behavioural expectations of members (Working arrangements, Procedures)
- Collective normalization efforts (Standardization)
- Active group dynamics (Meetings, discussions)
- Some level of decision making (Governance structure)

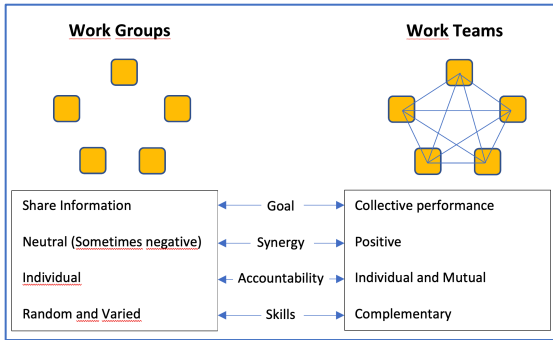


Fig 2: comparing work groups and work teams.

Goal:	Sharing information vs. Collective performance
Synergy	Neutral vs Positive
Accountability	Individual vs. Individual and Mutual
Skills	Random and Varied vs Complementary

Table 1: Comparing groups vs. teams.

Groups and Teams in Pilotage

In the Netherlands Pilotage act: The Regional Pilots Association (RPA) is a body of individual pilots, who are independent professionals (self-employed). The duty of these RPAs is to enhance the proper execution of the profession, share information and ensure the right number of pilots are available to run the pilot service. From these factors it can be determined the RPA is a Group.

However, there is something in Dutch legislation that says something about the output, the result of the process: In the Dutch Pilotage act article 15: The collective members (assembly) of the Regional Pilot Association are responsible for the efficiency of the pilot service in their region. In other words, the collective needs to work as a team to optimize performance (output) since they are mutually accountable, which is also a characteristic of a team.

Thus, the legislator forces the individual pilots to work together as a team. set up a team structure, procedures (In other words: a process) to ensure an efficient pilotage service.

Efficiency is a dynamic concept: what was effective in 1988 is no longer effective today. Therefore, the pilotage law enforces innovation, meaning: moving with the times and deploying the most modern means in achieving efficiency.

In its supervisory role of pilotage, the competition chamber ACM strives for "the most efficient working

method". This can only be achieved when there are team structures that guarantee best practice. (output)

Since pilots are specialists in piloting ships, and not necessarily in optimizing their team's effort as described above, a supporting company was established in 1988. This supporting company consists of employees, who specialize in their own fields of knowledge to shape the supporting process. Pilots are shareholders of this company. Governance of the company is achieved is by a board made up of pilots and employees.

When do pilots work together as a team?

The pilot is the advisor of the master, an independent professional. He is self-employed and free from commercial pressure, in his advice to the master of the ship. From this legal construct it could be concluded that the pilot is not required to work with his fellow colleagues as a team.

However, the legal public requirement to provide an efficient pilot service is not only limited to the organizational aspect of the pilot service. At the same time, it can be argued that an efficient pilotage service is about operational efficiency inside the port, for instance when dealing with traffic flows or traffic arrangements for an optimized admission policy. After all, pilotage is a tool for the harbourmaster to obtain maritime safety and efficiency.

So, when a group of pilots works on the same ship or work simultaneously in each other vicinity in the port they are required to work as a team, to optimize the output.

The Pilot Support Team (PST)

The supporting company in The Netherlands is not responsible for the training of the pilot, this is taken care of by the national- and regional pilots associations. Let's consider a maritime pilot anno 2023. He is a well-trained maritime expert, fit for duty.

The following support is needed for the pilot to perform his/her duties:

1. Transportation
By Land: (Taxi company, Contract management) By sea: (Own) seagoing Fleet, Technical Support & Maintenance, Data analysis, ISM-Compliance. By air: Helicopter Lease, Contract management
2. Planning / Dispatch
Internal working arrangements (e.g., roster), Working arrangements with external partners (E.g., Port authorities), Planning department. (Dispatch and Planning)

3. Quality Assurance System
Standard procedures for the operation, Risk Assessments, risk mitigation, Compliance to a standard, Incidents, accidents, damage registration (IAD).
4. Information (IT)
Means and methods of communications. Laptops, phones, access to designated website
Phone / designated apps. VHF hardware and licensing, Hydro / meteo information, both actual and predictive. Traffic information, both actual traffic pattern as well as Port Planning information, arrivals and departures. Other nautical service providers information, terminal Information, access to marine notices.
5. Administration
General administration, Billing, Customer support, Complaints registration, Communications and Public relations.
Human Resources (for employees), Legal support, Compliance, Audit and Risk, Control
Strategy (long term future developments). Reporting Requirements: Public requirements (e.g., CSRD, public website), to government agencies (Competition chamber / ministry), to harbour authorities (e.g., IAD's).

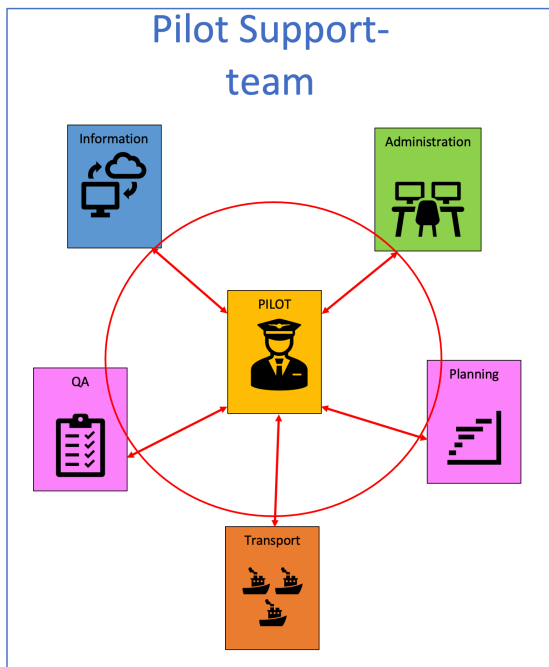


Fig 3: The Pilot Support Team (PST)

In figure 3, a schematic diagram is given on the composition of the Pilot Support Team. (PST)

Within the PST, the red arrows are the information lines between the pilot and the various team members. With

all team members there is two-way communication for various purposes. To facilitate these numerous communication lines, multiple ICT solutions are used.

PST-Team members have communication lines to other support team members. Behind every PST member, a supporting system, team or group may be in place to support the PST member. E.g., “Transportation” is supported by a maintenance division, fleet management, warehousing, purchasing department.

From the Figure 3, it is clear that the information flows go not only to-, but also from the maritime pilot. The maritime pilot provides all kinds of information to all five identified team-players in the PST.

Team Member	Information from the pilot
Information	Voyage plan, intended route
Administration	Billing Information (time, draft)
Planning	ETA/ETD/ Time POB
Transport	Planning, pilot ladder details
QA	MPX, IAD reports, feedback

Table 2: Information from the maritime pilot to the PST

When we consider the process having a front-office (The pilot to his customer, the master) and a back-office (information, administration, planning, transport, QA), it is clear the process is interdependent, and it will not be successful without all players involvement. From this it can be concluded the Maritime Pilot himself is a (key) player in the PST.

Team Effectiveness

Using a Team Effectiveness model by Robbins et. al (P.279), the following factors determine the effectiveness of a team: Context, Composition and Team Process.

Context

- Adequate resources (Equipment, staffing, resources, “systems”)
- Leadership and Structure
 - Climate of trust
 - Respecting each other’s tasks, powers, responsibilities
 - Performance Evaluation and Reward Systems

Composition (how should teams be staffed?)

- Abilities of members
- Personality
- Allocating Roles
- Diversity
- Size of teams
- Members Flexibility
- Member preferences

Team Process

- Common Plan and purpose.
 - Mission, vision strategy statement.
 - Short-term and long-term plan.

- Clear instructions.
- Specific Goals (SMART)
 - Availability
 - Workability
 - Reliability
 - Efficiency
- Efficacy ("Effectiveness")
 - Confidence in one's own performance.
 - Raising belief in future success.
 - Interaction between team members: when team players understand the system (know what they know and understand what others know), this will increase creative process to strengthen the team. Get information elsewhere, find solutions for problems.
 - Build on confidence boosting processes,
 - Celebrate small successes,
 - Encourage initiatives.
- Mental Models: Like BRM: shared mental models, everybody is on the same channel, everybody knows what needs to be done, and knows the role of all team players.
 - Good shared mental model leads to increased motivation, positive attitude towards task and each other, higher level of performance.
 - Contributing factors: training, trust, live information feed
- Conflict levels
 - Relational conflicts
 - Task conflicts, to be avoided when performing critical (routine) operations, to be allowed when changing policies, defining new work procedures, brain storming.

Improving team effectiveness

When considering the measures to improve the team's effectiveness first the nature of pilot supporting operations should be considered. The process operates in harsh environments with critical properties: if something fails, people may get hurt, may get killed, or property can be damaged or lost.

Context:

1. Ensure long-term availability of resources: Establish a multiannual budget which is consulted with stakeholders, shareholders, and governing bodies, to facilitate continuity of operations.
2. Establish a long-term vision of the pilot service to facilitate the long-term continuity of the process.
3. Leadership: Promote Servant leadership; Establish a just culture, a safety culture as well as a PDCA (Plan do check act) system in the running of the process.

Composition:

4. Pay attention to team's composition when selecting team's members. The process is more important than the interests of team members.
5. Pay attention to skills. Skills can be taught; Attitude is a property.

Team Process:

6. Team-think: From a process point of view, team members are equally important.
7. Create KPI's and management tools to facilitate the process' management.
8. Use risk management as a tool to achieve active safety and process management.
9. Facilitate training, information sharing, raising process awareness for the team members.
10. Enable feedback from all team players to improve the process on a regular basis.

References

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Definition

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Performance in Pilotage Waters

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