



Guidelines and Additional Information to the International Standard for Maritime Pilot Organizations

Part B

© 2015 ISPO International Users Group

No part of this document may be reproduced, utilized, stored in any retrieval system or transmitted in any form or by any means electronically or mechanically, including photocopying, recording or by any information, storage or retrieval system without the permission of the ISPO International Users Group.

	Guidelines and Additional Information to the ISPO	Page I
	Amendment Page	Part B

AMENDMENT PAGE

Revision	Date	Details	Initials Authors	Initials Checked by	Initials Approved by
0	29.01.97	final report of ISPO feasibility study	MMD	CAJ	TEW
0	16.07.98	discussion draft document for ISPO project team	JCvH/ MMD/ HWT/ PdB/ HD	MMD/ TEW	HWT
1	13.10.98	update, fine tune ISPO. Issued for Comment IMPA congress Shanghai, People Republic of China	JCvH/ MMD/ HWT/ PdB/ HD	MMD/ CAJ	HWT
2	11.05.99	update, fine tune ISPO. Issued for Comment ISPO Task force	JCvH/ RWS/ PdB/ HD/ HWT	RWS/ CAJ	HWT
3	05.04.00	update, fine tune ISPO Issued for Comment IMPA congress Honolulu Hawaii	JCvH/ RWS/ ThvdH/ HWT	CAJ/ AdD	HWT
4	01.09.06	Update, fine tune ISPO issued for the first meeting of the international users group (IUG)	HvD	JFH/ AdD/ CH	EvD
5	07.12.10	Approval of the revision by the IUG working group during the meeting of associates.	H. vd Lugt B. Dockx M.J.vd Hoek	G. Devis M. Veenstra	IUG
6	20.03.13	Approval acceptance of the revision carried out by the IUG working group during the meeting of associates.	H. vd Lugt B. Dockx H.B.W. Broers H.W. Tabak M.J. vd Hoek	E. van Dijk	IUG
7	02.10.14	Revise chapter 11. Update definitions. Small amendment to page III, regarding the IUG membership.	H. vd Lugt B. Dockx C. Kline M.J. vd Hoek	E. van Dijk	IUG
8	18.11.15	Update, total revision and fine tune.	H. vd Lugt B. Dockx C. Kline S. Linssen M. Mihaylova L. Bailey	J.W. Bentinck	IUG

TABLE OF CONTENTS

1	Introduction	1
1.1	General.....	1
1.2	Scope	1
1.3	Application.....	1
1.4	Certification	2
1.5	ISPO Configuration	2
2	Definitions	3
3	Functional Requirements ISPO Management System.....	4
4	Documentation Requirements ISPO Management System	5
4.1	General.....	5
4.2	Management Manual Requirements	6
4.3	Control of Documents	6
4.4	Control of Records	6
5	Management Responsibility	7
5.1	General.....	7
5.2	Role of the maritime pilot	7
5.3	Designated Person.....	7
6	Recruitment, Training & Qualification.....	8
6.1	General.....	8
6.2	Medical Fitness of Maritime Pilots	8
6.3	Training, Qualification and Certification of Maritime Pilots - General	9
7	Pilot Operations	13
7.1	The Maritime Pilot	13
7.2	Communications	14
7.3	Passage Planning	15
7.4	Vessel Traffic Service (VTS) / Vessel Traffic Management (VTM).....	16
7.5	Portable Pilot Unit (PPU).....	16
7.6	Embarking and Disembarking	17
8	Logistic Operations.....	20
8.1	General.....	20
8.2	Pilot Scheduling	20
8.3	Transport Operations	21
9	Emergency Preparedness	22
9.1	Pilot Operations.....	22
9.2	Transport Operations	22
10	Customer Related Processes.....	23
10.1	General.....	23
10.2	New Services or Changing Existing Services	24
10.3	Control of Monitoring and Measuring	25
10.4	Customer Communication.....	25

	Guidelines and Additional Information to the ISPO	Page III
	Table of Contents	Part B

11 Risk, Incident and Accident Management.....	26
11.1 General.....	26
11.2 Risk Management	26
11.3 Incidents, Accidents and Risk Events	27
12 Measurement, Analyses and Improvement.....	29
12.1 General.....	29
12.2 Internal Audits	29
12.3 Analysis	31
12.4 Continuous Improvement.....	31
12.5 Management Review	31

	Guidelines and Additional Information to the ISPO	Page 1 of 31
	1, Introduction	Part B

1 INTRODUCTION

1.1 General

These guidelines and additional information complement ISPO Part A and contain recommended guidance and information to assist maritime pilot organizations in applying or reinforcing their measures to give the ISPO full and complete effect in a uniform manner.

Although the guidelines suggested are not mandatory they should be taken into account.

In this document additional information is indicated by the use of italics and a different letter type. It must be considered as informative only.

Observance of the recommendations contained in these guidelines and additional information will assist the maritime pilot organization in achieving its goal and maintaining the highest practicable safety, and quality standards with due regard to safety of human life and avoidance of damage to the environment and property.

Assistance is provided in these guidelines and additional information with respect to certain articles of the ISPO. The numbering of the chapters and paragraphs of these guidelines corresponds to the ISPO Part A. The numbering of the sub-paragraphs is unique. Furthermore, if no additional guidance is available or necessary only the title of the paragraph will be included.

1.2 Scope

- 1.2.a The objectives of the ISPO guidelines may be summarized, in order of priority as follows:
- To provide recommendations for certification so that smaller well run maritime pilot organizations can comply
 - To give information to assist larger maritime pilot organizations to meet the ISPO and to use modern methods for the improvement of efficiency of the maritime pilot organization
- 1.2.b Interpretation of each individual element within these guidelines should be done by each individual maritime pilot organization. However, interpretation of each individual element cannot be treated separately to determine conformity with the ISPO. The ISPO must be taken as a whole.
- 1.2.c Information related to the compliance with the ISPO should be open for scrutiny during verification. The following specific arrangements may be required to provide the evidence needed for compliance verification:
- Documented systems, procedures and instructions
 - Documented evidence of periodical verification of the daily routine operations

1.3 Application

- 1.3.a These guidelines and additional information apply to maritime pilot organizations that are certified to the ISPO.

	Guidelines and Additional Information to the ISPO	Page 2 of 31
	1, Introduction	Part B

1.4 Certification

1.4.a *When a classification society performs an ISPO third party audit, three gradations of non-conformity with regard to the ISPO may exist:*

- *Gradation 1: Major Non-Conformity*
The absence of elements of the ISPO or lack of effective and systematic implementation of a requirement of the ISPO, evidenced by either a single incident or a combination of a number of similar incidents.
- *Gradation 2: Non-Conformity*
An isolated incident or an observed situation where objective evidence indicates the non-fulfilment of a specified requirement of the ISPO.
- *Gradation 3: Observation*
A statement of fact made during an ISPO audit and substantiated by objective evidence.

1.4.b *Under the following circumstances the ISPO certificate of compliance is withdrawn:*

- *If a major non-conformity is raised at a periodical verification audit and has not been satisfactorily solved when reviewed at an additional verification audit (and this) within the agreed maximum time limit of three months*
- *If the contract between the maritime pilot organization and the classification society is cancelled (no take over)*

If the certification is withdrawn, the classification society must inform the IUG of the action taken. This must be done in writing to the IUG administrator.

When the certificate is withdrawn, the individual maritime pilot organization can no longer claim to be ISPO-certificated and to be in the possession of an ISPO certificate of compliance. The classification society will request the individual maritime pilot organization to return the ISPO certificate of compliance and the maritime pilot organization will lose the IUG membership.

1.5 ISPO Configuration

The ISPO Configuration is described in Part A

	Guidelines and Additional Information to the ISPO	Page 3 of 31
	2, Definitions	Part B

2 DEFINITIONS

The definitions can be found in Part A, Chapter 2.



3 FUNCTIONAL REQUIREMENTS ISPO MANAGEMENT SYSTEM

- 3.1.a To comply with the minimum requirements of the ISPO, the maritime pilot organization should have one or more policy statements. Each policy statement should be clear and concise, and describe the aim of the ISPO management system, outline the objectives in order to achieve the aim and encourage continuous improvement of the ISPO management system.
- 3.1.b These policy statements should reflect the commitment of the maritime pilot organization's management and be open to review at regular intervals to ensure that they remain effective.
- 3.1.c Interfaces between the maritime pilot organization's management system and any existing port and or fairway policies and procedures should be taken into account in the policy statements of the maritime pilot organization.

	Guidelines and Additional Information to the ISPO	Page 5 of 31
	4, Documentation Requirements ISPO Management System	Part B

4 DOCUMENTATION REQUIREMENTS ISPO MANAGEMENT SYSTEM

4.1 General

4.1.a Where the term 'procedure' appears within the ISPO, this means that the procedure is established, documented, implemented and maintained.

4.1.b *The extent of the ISPO management system's documentation can differ from one pilot organization to another due to:*

- *The size of organization*
- *The formal relation to administration and port authority*
- *The complexity of the processes and their interaction*
- *Local circumstances*

4.1.c *The documentation can be in any form or type of medium, such as:*

- *On paper*
- *Websites*
- *Computer data*
- *Instructions on CD/ CD-ROM/ DVD*

4.1.d *The documentation can contain but is not restricted to:*

- *The organizational structure of the pilot organization*
- *Statements about the requirements and objectives of the safety and quality policy*
- *Requirements in relation to:*
 - *Recruitment and selection of (new) pilots and personnel*
 - *Education, training and competence of pilots and personnel*
 - *Behavior of pilots*
- *Procedures in relation to:*
 - *Relevant operational processes (including work instructions, specifications and forms) of the pilot organization*
 - *Document management*
 - *Internal audits and improvement*
 - *Preventive- and corrective actions*
 - *Internal and external communication*
- *An overview of interaction between relevant processes*

4.1.e *The control of all documentation and data relevant to the ISPO management system is a vital element in the effectiveness of the management system and should be organized so that:*

- *Information and data relevant to all persons concerned with the ISPO management system is made available*
- *Information and data can be retrieved*
- *Data may be revised as a result of a non-conformity*

4.1.f *Documents and data should be examined for adequacy and approved prior to publication.*

4.1.g *A document control procedure should be established which allows users to identify the revision status of all documentation and data and to preclude the use of superseded and obsolete documentation.*

	Guidelines and Additional Information to the ISPO	Page 6 of 31
	4, Documentation Requirements ISPO Management System	Part B

4.2 Management Manual Requirements

- 4.2.a *The maritime pilot organization should arrange the Management Manual and supportive procedure manuals to best suit the organizations structure.*

4.3 Control of Documents

- 4.3.a Documentation should be designed and procedures established to allow changes and amendments to be made in a controlled manner.
- 4.3.b Changes should be readily identifiable and notified to all persons concerned with the ISPO management system, as applicable.
- 4.3.c All persons concerned with the ISPO management system affected by amendments should, as far as reasonable or practicable, be involved in defining and implementing changes.
- 4.3.d The documentation should be organized in a manner that allows all persons concerned with the ISPO management system to readily refer to its relevant publications.
- 4.3.e The maritime pilot organization should appoint a person or persons to be responsible for the control, amendment, approval, and distribution of the ISPO management system documentation.
- 4.3.f The methods of distributing documents and the place prescribed or person designated to keep should clearly be defined.
- 4.3.g Procedures should describe the notification necessary to confirm that obsolete documents have been removed and destroyed. Only the person responsible for the control of documentation should retain copies of obsolete documents.

4.4 Control of Records

- 4.4.a Records should remain legible, readily identifiable and retrievable.

	Guidelines and Additional Information to the ISPO	Page 7 of 31
	5, Management Responsibility	Part B

5 MANAGEMENT RESPONSIBILITY

5.1 General

- 5.1.a *The reason for documenting the responsibility and authority of personnel is to ensure that those involved in the management of safety, environmental protection and service quality know what is expected of them to make the system function effectively.*
- 5.1.b Personnel concerned with the maritime pilot organization's ISPO management system should be given clearly worded, unambiguous definitions of their responsibilities and authority, to assist in motivating them to understand the vital importance of their performance in the success of the maritime pilot organization's management system.
- 5.1.c The maritime pilot organization's ISPO management system should also clearly define and document the designated person's responsibility with regard to:
- Verifying the safety, environmental protection and quality policy statements of the maritime pilot organization
 - Verifying that specified requirements are observed
 - Reviewing the management system and reporting its deficiencies to the management of the maritime pilot organization
- 5.1.d The maritime pilot organization should have a comprehensive knowledge of the legal and regulatory requirements that apply to its activities and services. Such requirements are mandatory and legal and ethical operation is only possible by compliance with these requirements.

5.2 Role of the maritime pilot

- 5.2.a The maritime pilot's performance should at all times demonstrate good faith compliance with the policy statement of the maritime pilot organization and the ISPO management system as well as commitment to contributing feedback to achieve improvement

To achieve above a pilot organization could develop a written Pilot Code of Conduct which clearly defines "proper professional behavior" for the pilots' reference. As an example, reference is made to the 'Code of Best Practice for European Maritime Pilots' of EMPA.

5.3 Designated Person

- 5.3.a For the maritime pilot organization's ISPO management system to be adequately maintained, the following should be taken into account by the designated person:
- Effectiveness and degree of implementation to be verified
 - The deficiencies that must be reported to the responsible level of management
 - Methods used for correcting the deficiencies identified
- 5.3.b The task of implementing and maintaining the maritime pilot organization's ISPO management system is a management responsibility. The verification and monitoring activities should be carried out by a person who is independent of the responsibility for implementation.
- 5.3.c The designated person's assessments must be properly considered by the management but any action recommended by the designated person cannot be dismissed or delayed without justification.

	Guidelines and Additional Information to the ISPO	Page 8 of 31
	6, Recruitment, Training & Qualification	Part B

6 RECRUITMENT, TRAINING & QUALIFICATION

6.1 General

- 6.1.a The maritime pilot organization shall establish procedures to ensure that new personnel and personnel transferred to new assignments related to the maritime pilot organization's ISPO management system are given proper familiarization with their duties. Instructions that are essential, prior to commencing their duties should be identified, documented and given in good time.
- 6.1.b The results of audits and analyses of non-conformities, incidents, accidents and risk events should be considered to enhance training of personnel.
- 6.1.c The maritime pilot organization should consider ways of reviewing individual training needs and of checking the validity of recorded qualifications in accordance with international, national, local and any special maritime pilot organization's requirements.
- 6.1.d The maritime pilot organization should consider the establishment of procedures for the conduct of refresher courses for personnel engaged in critical safety and emergency operations.
- 6.1.e The recruiting procedure for maritime pilots should define the minimum requirements for applicants in accordance with the maritime pilot organization's ISPO management system, and the relevant local and national requirements where applicable. This recruiting procedure should take into consideration – but should not be restricted to – the following:
- Certification
 - Medical fitness
 - Capacity to command
 - Minimum level of education for entry
 - Assessment of experience and seniority
 - Assessment of shiphandling ability

6.2 Medical Fitness of Maritime Pilots

- 6.2.a The medical standards developed by the maritime pilot organization should take into account the views of recognized medical practitioners experienced in medicine as applied in the maritime environment.
- 6.2.b The medical standards used may differentiate between maritime pilot applicants and maritime pilots already providing pilotage services.
- 6.2.c The medical standards should, so far as possible, define objective criteria with regard to fitness for service.
- 6.2.d Examinations of maritime pilots under the Medical Standards should be conducted by a medical practitioner recognized by the maritime pilot organization.
- 6.2.e Persons requiring the use of spectacles or contact lenses to perform duties should carry a spare pair of spectacles.
- 6.2.f The maritime pilot organization is free to require higher and additional standards than those given in in the STCW or other appropriate regulations.

	Guidelines and Additional Information to the ISPO	Page 9 of 31
	6, Recruitment, Training & Qualification	Part B

6.3 Training, Qualification and Certification of Maritime Pilots - General

6.3.a The maritime pilot organization should establish minimum training requirements and qualifications for maritime pilots prior for undertaking the work as a maritime pilot.

6.3.b The maritime pilot organization should establish a training scheme to enable any maritime pilot under its management who does not comply with the established standard of competence, to reach the necessary standard.

6.3.c The maritime pilot training programme should be based on practical on-board instruction and training provided on full-scale ships under the guidance of a maritime pilotage instructor.

6.3.d *Aids to maritime pilot training programmes may include but are not restricted to:*

- *training vessels*
- *approved laboratory equipment training*
- *class room training*
- *computer based training*
- *simulator training*
- *manned models.*

6.3.e The maritime pilot training programme should include but not be restricted to the following:

- Personal survival techniques
- Personal safety:
 - Embarking and disembarking equipment
 - Man overboard
 - Rescue equipment
 - Emergency actions during transfers via pilot boat or helicopter
 - First aid
- Social responsibility:
 - Interpersonal skills
 - Communication
 - Effects of fatigue on performance
 - Physiological surrounding of human performance and lifestyle associated with shift work
- - Bridge Resource Management (BRM)

6.3.f The maritime pilot training programme should take into consideration relevant IMO model courses.

Examples of these courses are:

- *Radar Navigation (Operational Level)*
- *Radar Navigation (Management Level)*
- *ECDIS (used ENC with corresponding Usage Level)*
- *Elementary First Aid*
- *Medical First Aid*
- *Proficiency in Personal Survival Techniques*
- *Proficiency in Personal Safety and Social Responsibility*

6.3.g These courses may be used to enhance, update or supplement existing training materials in order to improve the quality and effectiveness of the maritime pilot training programme.

- 6.3.h The maritime pilot training programme should include instruction (training, qualification and/or certification) on “maritime pilot computer based specific systems” used during the provision of pilotage services, for example Portable Pilot Unit (PPU). The maritime pilot should have instructions on a specific manufacturer piece of equipment in use by the pilot organization. This training should include all relevant safety aspects such as:
- theoretical aspects of all major characteristics of data;
 - practical capabilities and skills;
 - system operational principals;
 - system limitations;
 - errors in displayed data, errors of interpretation and risk of over-reliance;
 - real-time navigational environment, detection and misrepresentation of data;
 - system failures and effects;
 - methods of correction for obtaining accurate position fix;
 - system accuracy (passive and active equivalent range errors and RMS).

6.3.i The maritime pilot training programme should be delivered by a maritime pilotage instructor. For this purpose the use of didactical techniques is recommended.

6.3.j *The maritime pilot training programme should be designed with due regard to the different levels of competence which exist within a pilot organization.*

Below an example of a Pilot Experience Table. It may be used by a specific pilot organization, for a specific port, area, or country. The extent of the table is defined by the pilot organization.

	<i>Ship dimensions</i>	<i>L</i>	<i>XL</i>	<i>XXL</i>
<i>Designated area</i>	<i>Area I</i>	<i>P</i>	<i>P + A</i>	<i>P + B</i>
	<i>Area II</i>	<i>P</i>	<i>P + C</i>	<i>P + D</i>
	<i>Area III</i>	<i>P</i>	<i>P + E</i>	<i>P + F</i>

“P” in the Maritime Pilot Experience Table refers to the minimum level of competence defined by the pilot organization for an on-board maritime pilotage.

A, B, C, D, E and F in the Maritime Pilot Experience Table refer to the experience and seniority considered necessary to carry out maritime pilotage on a specific ship in a designated area. The level of (additional) experience and seniority starts at A and progresses towards F.

Horizontally in this example, three different ship dimensions are represented, according to the successive complexity of ship handling. The indications L, XL and XXL can represent either the length over all or (L×B×T) or volume or draft etc., according to local good practice, tradition and/or custom.

Vertically, in this example, three designated areas are represented, of which each area requires specific skills and competence. The specific skills and competence required for each area could be based on the extent of experience of maritime pilotage in this area considered necessary, to be able to deal with the specific geographical particulars of that area.

6.3.k The maritime pilot organization should keep written record for all maritime pilots under its management, stating the name, place of birth, certificate or license number, date of birth and date of issue of certificate/ license or registration in a common register.

	Guidelines and Additional Information to the ISPO	Page 11 of 31
	6, Recruitment, Training & Qualification	Part B

- 6.3.l In order to ensure the continued proficiency of maritime pilots, the maritime pilot organization should satisfy itself at regular intervals that all maritime pilots under its management continue to maintain their level of competence and compliance with the organization's ISPO management system.

Documented checking criteria may assist both the pilot being checked and their assessor to achieve this outcome.

- 6.3.m The pilot organization should establish and maintain programmes for maritime pilots, in compliance with relevant rules and regulations that support the updating of the knowledge and skills.

The programme could include but not be restricted to:

- *Theoretical knowledge: which may include approved laboratory equipment training, classroom training and/ or computer based training*
- *Practical skills: which may include approved in-service training and/or simulator training*
- *New developments affecting pilotage services*
- *Lessons learned from reported non-conformities, accidents and risk events*
- *Safety equipment and personal survival techniques*
- *Risk management techniques and appropriate actions to control risk*

- 6.3.n For developing continued proficiency programmes the maritime pilot organization is encouraged to consider new developments.

These programmes may include:

- *Aids to navigation*
- *Navigational equipment/ Bridge automation concepts*
- *Vessel handling and maneuvering*
- *Port and VTS/ VTM specific operational requirements*
- *Port and fairway safety and quality management systems*
- *Risk management techniques*
- *"maritime pilot computer based specific systems" for example Portable Pilot Unit (PPU)*
- *Human factor and fatigue management issues*
- *Communication equipment and skills*
- *New best practice in the maritime industry*

- 6.3.o The maritime pilot organization should establish and maintain a training programme for shore based maritime pilots.

- 6.3.p The standard of competence for shore based maritime pilots should include:

- Compliance with the maritime pilot training programme
- Holding a valid appropriate maritime pilot certificate
- Compliance with the IALA VTS Operator Competence Chart as required by the maritime pilot organization
- Compliance with local VTS/VTM authority requirements

- 6.3.q The maritime pilot organization should establish the maximum period of time per designated area in which a maritime pilot is permitted to be absent from providing pilotage services.

This absence may be due to:

- *Training courses*
- *Service elsewhere*
- *Research*
- *Medical/ physical condition*
- *Any other reasons.*

	Guidelines and Additional Information to the ISPO	Page 12 of 31
	6, Recruitment, Training & Qualification	Part B

- 6.3.r If a maritime pilot exceeds the maximum period of absence, the maritime pilot organization should provide him with a refreshment programme and assessment as deemed necessary.
- 6.3.s *To develop an own maritime pilot training programme reference can be made to the Standard of Training, Certification and Watchkeeping for Seafarers (STCW) which contains several maritime competence tables that can be used as an example.*

	Guidelines and Additional Information to the ISPO	Page 13 of 31
	7, Pilot Operations	Part B

7 PILOT OPERATIONS

7.1 The Maritime Pilot

- 7.1.a A maritime pilot should be fit for duty, which includes not being under the influence of alcohol, drugs or any other substance that may impair ability.
- 7.1.b A maritime pilot is responsible for his/her own professional development derived from the training and experience provided and as required by the maritime pilot organization.
- 7.1.c A maritime pilot should contribute to a good working environment with the master and bridge team members while providing maritime pilotage.
- 7.1.d A maritime pilot should be aware of the possible differences in culture and languages on board vessels.
- 7.1.e A maritime pilot should contribute to a good working environment with other port services involved in the pilotage passage.
- 7.1.f A maritime pilot is responsible for his behavior while providing maritime pilotage.
- 7.1.g A maritime pilot should be fully aware of all factors that may affect the pilotage passage. The information may be obtained from the following sources:
- The maritime pilot organization's ISPO management system
 - Navigational warnings and notices to mariners with respect to the designated area
 - Shipboard systems and equipment, e.g. ARPA
 - Shore based systems and port operations
 - Meteorological and hydrological information
 - VTS/VTM
 - Port and fairway safety and quality management systems
 - Maritime pilot computer based specific systems
 - Any other information system in use, such as Automated Information System (AIS)
- 7.1.h A maritime pilot should be reasonably up to date with analyses from the "reporting system" made available to him (non-conformities, accidents, and risk events) in support of his professional development and performance. This includes but is not restricted to:
- Corrective actions
 - Lessons learned through the maritime pilot organization
- 7.1.i A maritime pilot should co-operate with the maritime pilot organization's ISPO management system with respect to:
- Training and proficiency programmes
 - Specialized courses

	Guidelines and Additional Information to the ISPO	Page 14 of 31
	7, Pilot Operations	Part B

7.2 Communications

- 7.2.a The maritime pilot organization should establish procedures for the following communications between:
- The maritime pilot organization and the vessel or vessel representative, e.g. arrival and departure confirmation
 - The maritime pilot and the bridge team
 - Parties involved with hand-over(s) during pilotage passage
 - The maritime pilot and the Supporting maritime pilot
 - The maritime pilot or the maritime pilot organization and the port/fairway related services
 - The maritime pilot or the maritime pilot organization and other allied services
 - The shore based pilot and the VTS/VTM authority
 - The shore based pilot and the bridge team
- 7.2.b Information exchange between the maritime pilot organization and the maritime pilot should be conducted in such a way that sufficient time for the preparation and planning of the pilotage passage is established before embarking of the maritime pilot. This information exchange should be limited to the information which is strictly necessary to assist in the planning and execution of the pilotage passage. The information exchange can vary from ship to ship, trade to trade, port to port, fairway to fairway, designated area to designated area and should only be used by the maritime pilot for the preparation and planning of the pilotage passage.
- 7.2.c After the embarking procedure detailed information exchange should take place between the master and or bridge team and the maritime pilot.
- 7.2.d The maritime pilot organization should establish a consultation structure with other port/fairway services, for example port authorities and shipping line representatives, to discuss special maritime pilot related services and pilotage issues. If this discussion leads to additional advice, this should also be communicated to the maritime pilot involved in the pilotage passage concerned.
- 7.2.e Any person from the pilot organization involved in the abovementioned consultation structure should be qualified and/or experienced in local maritime pilotage service aspects and any local port and fairway regulations.

	Guidelines and Additional Information to the ISPO	Page 15 of 31
	7, Pilot Operations	Part B

7.3 Passage Planning

- 7.3.a The procedures for the preparation and planning of the pilotage passage may include, but not be restricted to the following items:
- Pre-arrival or pre-departure checklist
 - Embarking and disembarking procedures
 - Maritime pilot card
 - Communication procedures
 - Use of ship's crew and shipboard systems
 - Navigational aspects of port and or fairway
 - Hydrographic and meteorological aspects
 - Boatmen support and consigned mooring plan arrangements and requirements
 - Berthing or unberthing procedures
 - Tugboat support and consigned towing line arrangements
 - Navigational warnings and notices to mariners with respect to the designated area
 - Berths, quays, dry-docks and or lock characteristics
 - Calibration and updates of navigational information and data of the maritime pilot computer based specific systems, if in use
 - Rules and regulations by national administrations and local best practice
- 7.3.b The maritime pilot organization should ensure that with regard to the passage planning all applicable guidelines, standards and procedures are taken into account as far as possible, so as to reduce the risk of miscommunication and misunderstanding between:
- The maritime pilot and the bridge team
 - The maritime pilot and supporting maritime pilot
 - The piloted vessel and shore services (e.g. VTS/VTM)
 - The piloted vessel and other maritime traffic in the designated area
- 7.3.c The planning of the pilotage passage should be discussed between the master and the maritime pilot after the embarking procedure. Any amendments to the pilotage passage plan should be agreed on by the maritime pilot and the bridge team.
- 7.3.d The planning of the pilotage passage should be agreed between the master and the maritime pilot before the maritime pilot starts assisting the master and/or bridge team in the navigation of the vessel and the execution of the pilotage passage commences.
- 7.3.e During the execution of the pilotage passage it is appropriate to review and update the pilotage passage plan and inform the master and/or the bridge team accordingly.
- 7.3.f *Depending on national and local regulations and local best practice the master may delegate the conduct of the navigation to the maritime pilot who directs the navigation of the ship in close cooperation with the master and or the bridge team.*
- 7.3.g *It is important at all times that during the execution of the pilotage passage the responsibilities of the maritime pilot, the master and the bridge team are agreed and clearly understood. The presence of the maritime pilot does not relieve the master and or the bridge team of their duties and obligations regarding the safety of the ship.*
- 7.3.h The maritime pilot organization should instruct the maritime pilot that any hand-over procedure between maritime pilots during the pilotage passage takes place on the bridge of the vessel and that this procedure is clearly defined and unambiguous. The above hand-over procedure does not apply when the ship is safely berthed, for example in a lock or alongside a berth.

	Guidelines and Additional Information to the ISPO	Page 16 of 31
	7, Pilot Operations	Part B

7.3.i The maritime pilot organization should establish procedures between the maritime pilot and any supporting maritime pilot as to define responsibility, authority, tasks and communications aspects. It must always be clear to the master which pilot is the maritime pilot and which is the supporting maritime pilot.

7.3.j The maritime pilot organization should instruct the maritime pilot that the outcome(s) derived from the passage planning process is/are communicated effectively to the bridge team members, allied services, and port/fairway authority.

7.4 Vessel Traffic Service (VTS) / Vessel Traffic Management (VTM)

7.4.a The maritime pilot organization should establish and maintain communication procedures with the local VTS or VTM, where such services are established in port and/or fairway. This may include:

- Traffic flow, density and traffic pattern information (TTI, STI & FIS)
- Restricted visibility
- Emergency preparedness, emergency control and calamity abatement
- Resource planning
- Allied services alterations, e.g. tugs, boatmen, lock masters, etc.
- Water management
- Weather forecast
- Suspended maritime pilotage
- Incident/ accident reporting
- Disturbance in communications of the information systems
- Integrity warnings for local port and fairway information and navigation systems

All established procedures and agreements necessary for the execution of the pilotage service in relation to the VTS/VTM authority should aim for harmonization and standardization.

7.4.b The maritime pilot organization should instruct all maritime pilots under its management to follow the communication procedures as agreed between the maritime pilot organization and the local VTS/VTM authority.

7.4.c All maritime pilots performing duties at the local VTS station should be instructed by the maritime pilot organization to perform in compliance with the IALA VTS operator or supervisor competence charts, as required by the maritime pilot organization and VTS/VTM authority.

7.5 Portable Pilot Unit (PPU)

7.5.a The pilot organization should establish and maintain procedures for the safe usage of PPU systems during the pilotage passage. These procedures should take into consideration - but should not be restricted to – the following:

- Maritime pilot training, qualification and complementary certification scheme;
- Operation and utilization
- Harmonization and integration of VTS/VTM port base system
- Alarms, failures and effects
- Maintenance and repairs
- System test and acceptance protocols
- Updating software

	Guidelines and Additional Information to the ISPO	Page 17 of 31
	7, Pilot Operations	Part B

7.5.b *The PPU should at all times be considered as a computer based specific system for the maritime pilot and an aid for the maritime pilot when carrying out his work at the pilotage passage.*

7.5.c Where it is determined that a PPU should be used during a pilotage passage, a training program should be established to ensure that maritime pilots are trained, qualified and/or certified in its use.

This training program should also include a contingency plan dealing with equipment failure and replacement of PPU systems.

The particular PPU systems adopted and in use by a pilot organization should be as uniform as possible in order to improve standardisation of equipment, training and procedures in a consistent way.

7.5.d In spite of the absence of specific regulatory requirements, industry standard and/or guidelines the pilot organization should check the quality assurance system of the manufacturer and/or data supplier of the maritime pilot computer based specific systems in use. This check by the pilot organization does not take away the responsibility of the manufacturer or data supplier. Checking the PPU system in use should take the following in consideration:

- Functionality
- Reliability
- Usability
- Efficiency
- Portability
- Maintainability

Special attention must be given to the establishment of the necessary procedures in order to take care of checks for maintenance, repairs, testing, up-dating of hard- and software and/or data. The pilot organization should establish a planned maintenance system for periodic and scheduled maintenance checks with logs of usage and faults/failures.

7.6 Embarking and Disembarking

7.6.a The maritime pilot organization should establish and maintain embarking and disembarking procedures for all transport services used in support of the pilotage services.

7.6.b These procedures should include but not be restricted to:

- Technical and safety operational data particular to the transport service provider
- Communication requirements between the transport service provider and the vessel to be piloted

7.6.c Any maritime pilot transfer arrangement, together with any suspension arrangements or attachments fitted and intended for the use of the embarking and/or disembarking of the maritime pilot, should be in compliance with local, national and international requirements.

	Guidelines and Additional Information to the ISPO	Page 18 of 31
	7, Pilot Operations	Part B

7.6.d The embarking and disembarking procedures for pilot vessels should include but not be restricted to:

- Pilot vessel technical operational restrictions, such as:
 - Maximum wave and swell height
 - Current direction in relation to swell direction
 - Tide height
 - Wind speed and direction
 - Visibility data
 - Manoeuvring data
 - Weather restrictions
- Pilot vessel safety operational restrictions

The maritime pilot organization should establish clear instructions regarding maritime pilot transfer arrangements. These instructions should be communicated to the vessel and the vessel representative as part of the communication procedures outlined in paragraph 7.2. These instructions should include but not be restricted to the following information:

- Pilot ladder position, side of vessel and specially required securing arrangements, if necessary
- Pilot ladder construction
- Ropes and heaving lines
- Accommodation ladder position and side of the vessel
- Mechanical pilot hoist position and side of the vessel
- Other equipment if necessary, in addition to IMO/SOLAS requirements

	Guidelines and Additional Information to the ISPO	Page 19 of 31
	7, Pilot Operations	Part B

- 7.6.e The embarking and disembarking procedures for helicopter transfers should include but not be restricted to:
- Helicopter technical operational requirements, such as:
 - Operating conditions
 - Weather restrictions
 - Manoeuvring data
 - Performance requirement
 - Helicopter safety operational requirements:
 - Safety briefings prior to commencing operations
 - Survival training - aircrew and maritime pilots
 - Emergency equipment - fire fighting and personal survival
 - Required attire
 - Shipboard operating requirements:
 - Operating area - landing, winching and/or other areas
 - Shipboard crew
 - Operating instructions for maritime pilots, including:
 - Embarking and disembarking
 - Winching = lowering and hoisting
 - Communication between the vessel and the helicopter
 - Communication between the helicopter and the maritime pilot, including:
 - Initial before approach (prior airborne)
 - In flight
 - After landing - rotors running turnaround
 - After landing - shutting down
 - Winching operations

The procedures for communication between the vessel and the helicopter aircrew should clearly define the responsibility and authority of the aircrew in relation to the vessel crew.

The master of the vessel is responsible for the overall safety of the ship. The safety of the helicopter and the aircrew remains at all times the responsibility of the helicopter pilot. In order to carry out their respective responsibilities the helicopter pilot and the master must agree on the proposed operation.

Clearance for any helicopter operations and permission for the helicopter to land on board are given entirely at the discretion of the master of the vessel. If the master of the vessel is in any doubt whether the helicopter operations may jeopardize ship safety, he/she may stop the operation at any time.

	Guidelines and Additional Information to the ISPO	Page 20 of 31
	8, Logistic Operations	Part B

8 LOGISTIC OPERATIONS

8.1 General

- 8.1.a The maritime pilot organization should verify that all transport services, whether they are integral parts of the organization or purchased services, comply with the requirements established under the maritime pilot organization's management system.
- 8.1.b Where a maritime pilot organization chooses to outsource logistical services, the organization should ensure control over such processes. The type and extent of control to be applied to these outsourced processes should be defined within the management system.
- 8.1.c The maritime pilot organization should establish and maintain scheduling information for maritime pilots as part of the logistics system, which should take into consideration - but should not be restricted to:
- Maritime pilots information:
 - The validity of the maritime pilot's certificate or license (e.g.: designated area(s), size of vessels, type of ships)
 - The maritime pilot's required competence availability
 - The working and resting hours and maximum continuous period of duties for all maritime pilots fit for duty, recognizing delays and emergencies
 - Vessel information:
 - Vessel particulars
 - ETA/ETD
 - Cargo information, e.g. dangerous goods (HAZMAT)
 - Restrictions and special conditions
 - External information:
 - Communications with Masters, port authorities and agencies with respect to vessel movements, berth locations, anchor and waiting positions
 - ETA/ETD of the vessel

8.2 Pilot Scheduling

- 8.2.a The established monitoring system for working hours of maritime pilots should comply with national and local requirements. This monitoring system may consider a Fatigue Alertness and Endurance Management Plan (FAEMP). Special emphasis should be given to the issues surrounding fatigue, impaired alertness and operationally induced performance decrements.
- 8.2.b A FAEMP may include but is not restricted to the following aspects:
- A period of performed maritime pilotage duties should be preceded by a rest period.
 - The maritime pilot organization should ensure that maritime pilots receive adequate opportunity to achieve sufficient quality and quantity of restorative sleep.
 - The maximum continuous period of maritime pilotage duties in any 24 consecutive hours.
 - Acceptable performance criteria for safe and efficient scheduling and planning of resources in pilotage services.
 - An appropriate level of preparedness for all reasonable and foreseeable emergencies in pilotage services.
 - Any anticipated maritime pilotage passage or successive passages may not exceed the defined maximum continuous period for maritime pilotage duties. An exception should be made in the case of delays beyond the control of the maritime pilot or the maritime pilot organization, or for any emergency occurring during pilotage passage.
 - Maritime pilot resting time before the next assignment of the maritime pilot.
 - A maritime pilots log of working hours including working and stand-by hours.

	Guidelines and Additional Information to the ISPO	Page 21 of 31
	8, Logistic Operations	Part B

8.2.c *Maritime pilot organizations are encouraged to initiate study and revision of present manning and work scheduling practices to evaluate their appropriateness to the physical, legal and economic environment. These studies should particularly define high risk operations during pilotage services, the current state of health of the maritime pilot, subjective sleep quality and fatigue levels.*

8.3 Transport Operations

8.3.a The maritime pilot organization should ensure that the procedures for the assessment and acceptance of transport services comply with all applicable local, national and international rules and regulations as well as the maritime pilot organization's ISPO management system.

8.3.b The pilot vessel operation requirements should take into consideration - but should not be restricted to the following operating procedures, plans and instructions:

- Shipboard operations:
 - Special shipboard operations, e.g. where risk events may occur
 - Critical shipboard operations; e.g. where an error may immediately cause a risk event
 - Safety related operations, e.g. vessel in dangerous position
- Vessel maintenance:
 - Repairs
 - Inspections and surveys
 - Preventive measures
- Shipboard equipment operation:
 - Critical equipment and systems
 - Communication equipment
 - Safety equipment
 - Embarking and disembarking equipment

8.3.c The master of the pilot vessel should be provided with clear guidance on his/her responsibility and authority regarding matters affecting the safety of the persons on board, the environment and the vessel.

8.3.d The maritime pilot organization should provide clear procedures and instructions defining the communications between the master of the pilot vessel and the maritime pilot.

8.3.e The helicopter operation requirements should take into consideration - but should not be restricted to the following operating procedures, plans and instructions:

- Helicopter operations:
 - Special operations, e.g. where risk events may occur
 - Critical operations; e.g. an error which may immediately cause a risk event
 - Safety related operations, e.g. vessel in dangerous position
- Helicopter maintenance
- Helicopter equipment operation:
 - Critical equipment and systems
 - Communication equipment
 - Safety equipment
 - Embarking and disembarking equipment

8.3.f The helicopter pilot should be provided with clear guidance on his/her responsibility and authority regarding matters affecting the safety of the persons on board, the environment and the vessel.

8.3.g The maritime pilot organization should provide clear procedures and instructions defining the communications between the helicopter pilot and the maritime pilot.

	Guidelines and Additional Information to the ISPO	Page 22 of 31
	9, Emergency Preparedness	Part B

9 EMERGENCY PREPAREDNESS

9.1 Pilot Operations

- 9.1.a The maritime pilot organization should establish and maintain emergency preparedness procedures applicable for all pilotage passages regarding risk events and incidents. These should include but not be restricted to:
- Communication procedures with local port/fairway authorities
 - Procedures to assist emergency response teams from local port/fairway authorities
- 9.1.b The maritime pilot organization's contingency plans may include:
- The composition and duties of all personnel acting within the maritime pilot organization's contingency plans
 - Procedures for mobilization of appropriate emergency response, which may include the establishment of an emergency response team
 - Procedures for establishing and maintaining contacts between the maritime pilot on board the vessel and the port/fairway authorities
 - Procedures for requesting assistance from allied services in the event of risk events, incidents and emergencies
 - Procedures for notifying and communicating with next of kin of maritime pilots
 - Procedures for issuing information and answering queries from the media and the public
 - List of contact names and telecommunication details of all relevant parties who need to be notified and consulted by the maritime pilot organization
- 9.1.c In designing these procedures the maritime pilot organization should ensure that all contingency plans are consistent with any port/fairway contingency planning already in place.

9.2 Transport Operations

- 9.2.a The ISPO management system should make sure that appropriate measures are in place to ensure a correct response to risk events, incidents and emergency situations involving all transport services.
- 9.2.b The transport services contingency requirements should take into consideration - but should not be restricted to the following procedures, plans and instructions:
- On-board contingency plans:
 - Allocation of duties and responsibilities of all personnel on board (pilot vessel or helicopter)
 - Procedures to be followed in response to different types of risk events
 - Communication methods, i.e. reporting, request for third party assistance
 - Shore based contingency plans:
 - Composition and duties of the persons acting by the plan
 - Emergency response procedures
 - Procedures to be followed in response to different types of risk events
 - Communication methods including list of contacts, dealings with the media and notifications to next of kin
- 9.2.c The maritime pilot organization's emergency procedures should be consistent with the transport services procedures.

	Guidelines and Additional Information to the ISPO	Page 23 of 31
	10, Customer Related Processes	Part B

10 CUSTOMER RELATED PROCESSES

10.1 General

10.1.a This chapter contains guidelines to streamline the customer related processes. The customer related processes should take into consideration - but should not be restricted to:

- Determination of the customer requirements and expectations
- Complaints procedure
- Performance indicators
- New services or changing existing services
- Control of monitoring and measuring
- Customer communication

10.1.b The maritime pilot organization should determine the requirements and expectations of the interested parties. These interested parties may include:

- Customers and their stakeholders
- People within the organization
- Investors and/or owners
- Suppliers
- Society, in terms of community and civilians who are affected by their organization or service

Once the maritime pilot organization has determined who their interested parties are, the maritime pilot organization should make reasonable attempts (in order to meet the requirements and expectations) to:

- React to interested parties' requirements and expectations
- Convert determined requirements and expectations into internal demands
- Communicate these internal demands through the whole organization
- Concentrate on process enhancement in order to provide added value to the identified interested party

10.1.c To meet customer and stakeholder requirements and expectations, the management of the maritime pilot organization should try to:

- Understand the requirements and the expectations of customers and potential customers
- Determine the main characteristics of the service for their customers and stakeholders
- Determine other competitors in their playing field and their performance
- Determine opportunities and weaknesses for their organizations

10.1.d *Examples of the requirements and expectations of customers and stakeholders are:*

- *Meet the requirements of the service*
- *Reliability of the service*
- *Availability*
- *Delivery*
- *Price/costs*
- *Service safety*
- *Service liability*
- *Effect of the service on the environment*

	Guidelines and Additional Information to the ISPO	Page 24 of 31
	10, Customer Related Processes	Part B

10.1.e *When considering the relationship with the community, the maritime pilot organization should:*

- *Show its responsibility to health and safety*
- *Take the consequences for the environment into account including the preservation of natural resources*
- *Determine the applicable legal requirements and other requirements to which the maritime pilot organization subscribes and relate to its environmental aspects*
- *Determine the present and potential influence of the services, processes and activities on the community and especially the local community*

10.2 New Services or Changing Existing Services

10.2.a The maritime pilot organization should review the design and development of new or changing existing services in order to enhance the customer satisfaction. The results of this review should be taken into consideration throughout the process.

External input may include:

- Requirements and expectations of the customer or market
- Requirements and expectations of other interested parties
- Contributions of suppliers
- Input of end users
- Change of applicable legislation
- International standards
- Industrial methods of work

Internal input may include:

- Policy and goals
- Requirements and expectations of employees within the organization, including the employees who receive the output of the processes
- Technological developments
- Feedback from previous experiences

Where a new or changed existing service has been implemented it should be reviewed to ensure the planned outcomes have been achieved and any further opportunities for improvement exist.

10.2.b *Examples of the output for the design and development of new and existing services are:*

- *Data showing the relationship between the input and output of processes*
- *Service specifications, including acceptance criteria*
- *Service specifications*

	Guidelines and Additional Information to the ISPO	Page 25 of 31
	10, Customer Related Processes	Part B

10.3 Control of Monitoring and Measuring

10.3.a *Data is important to take fact based decisions. The management of the maritime pilot organization should define the suitable and effective measuring, collecting and validation of data to judge the performance of the maritime pilot organization and the satisfaction of the interested parties. This should contain the judgments of suitability, the purpose of the measurements and the aimed use of data to define the added value for the organization.*

Examples for measuring the performance of processes are:

- *Measuring and evaluation of provided services*
- *Ability of processes*
- *Achievement of project targets*
- *Satisfaction of customers and interested parties*

10.3.b The management of the maritime pilot organization should use customer satisfaction as an indispensable instrument. The process of asking, measuring and guarding feedback on customer satisfaction should provide continuous information. This process should take into consideration fulfilment of demands, requirements and expectations of customers and should include price and services delivery.

10.3.c The maritime pilot organization should define the sources of information of customer satisfaction and should work together with the customers to anticipate future requirements. The maritime pilot organization should plan processes and determine effectiveness and suitability listening to the “voice of the customer”. For the planning of these processes methods should be defined and implemented to gather data. These should include sources of information, frequency for the gathering and judgment of the data analysis.

Examples of sources of information may include:

- *Customer complaints*
- *Direct communication with the customer*
- *Question lists and research*
- *Outsourced data gathering and analysis*
- *Target groups*
- *Reports of consumer organizations*
- *Reports in various media*
- *Branch and industry studies*

10.4 Customer Communication

10.4.a *For the maritime pilot organization it is vital to maintain good communication with their customers and other interested parties. Not only is it important for day to day operations, it is also important for further improvement of the organization. This communication should be of such a kind that customers and interested parties will cooperate now and in the future.*

10.4.b *Good and timely communication to customers and interested parties is essential for all involved and could prevent unnecessary spending of financial and environmental resources.*

	Guidelines and Additional Information to the ISPO	Page 26 of 31
	11, Risk, Incident and Accident Management	Part B

11 RISK, INCIDENT AND ACCIDENT MANAGEMENT

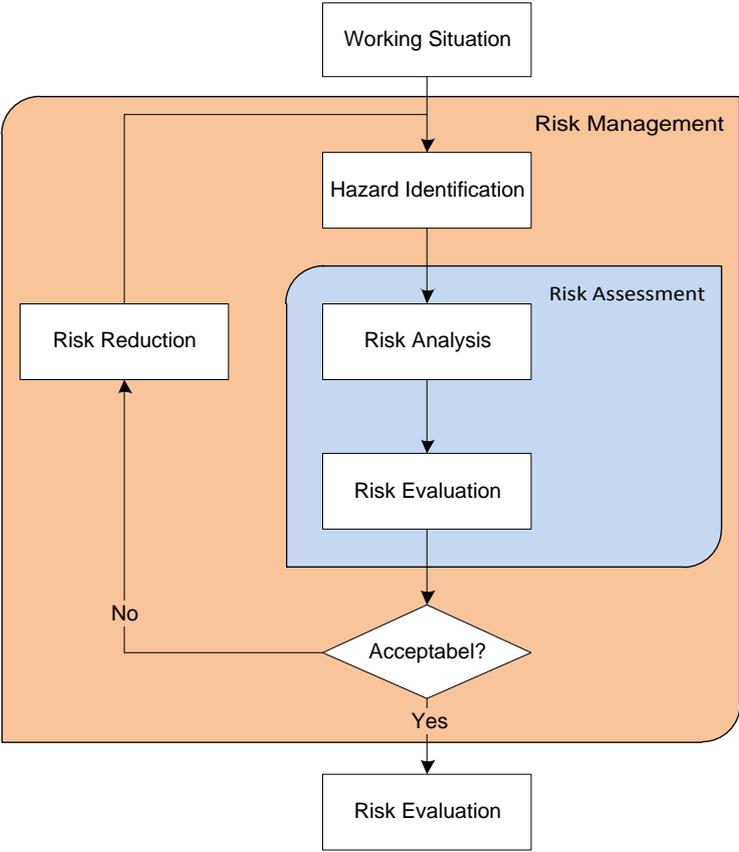
11.1 General

11.1.a The ISPO management system should be designed to allow for updating, amendment and improvement derived from the analysis of incidents, accidents, risk events, observations and non-conformities as well as changed circumstances within the maritime pilot organization.

11.2 Risk Management

- 11.2.a The result of successful risk management should be that:
- The scope of the risk management to be performed is determined by the operation for which the pilot organization is the responsible authority
 - Appropriate risk management strategies are defined and implemented
 - Risks to the services and work conditions are identified in the organizations' risk management strategy and as they develop during the conduct of tasks
 - Risks are analyzed and the priority of applying resources to monitor and mitigate these risks is determined
 - Risk monitoring techniques are selected to determine the change in the risks status and the effectiveness of the monitoring activities and corrective actions
 - The pilot organization collaborates with stakeholders to develop and implement suitable corrective actions in areas of shared interest
 - Appropriate action is taken to correct or avoid the impact of risks
- 11.2.b Risk management of port infrastructure such as fairways and terminals is generally the responsibility of the competent authority. If the pilot organization is not responsible for the ports' admission policy, the risk management as described in this chapter should not normally include assessments of admission policy related risks. The pilot organization should however encourage the use of its expertise by the competent authority.
- 11.2.c The effectiveness of risk management activities should be regularly reviewed by utilizing suitable information collected by the pilot organization. This information can be determined by analyzing data such as inspections, audits, risk event and incident reporting.
- 11.2.d The risk management activities should take into account any changes that may have an effect on safety, quality and the environment, including planned changes to the pilotage area, regional circumstances, responsibilities, authority and tasks of the pilot organization.
- 11.2.e When necessary the pilot organization should ensure that adequate training is provided to ensure the effective implementation of the ISPO management system.

11.2.f Risks can be managed by taking the following steps:



11.3 Incidents, Accidents and Risk Events

- 11.3.a Incidents, accidents and risk events should always be reported. Reports should include a description of the actual facts and descriptions of probable consequences with respect to harm to human life, damage to the environment or property.
- 11.3.b As soon as these reports are received, they should be reviewed and if needed, evaluated by the appropriate management level to determine both immediate and ongoing risk treatments and / or corrective actions if necessary.
- 11.3.c Implementing a risk analysis tool is useful to distinguish between serious and minor incidents in order to focus resources on critical events. Such a tool can also assist in the evaluation and identification of the most appropriate risk treatments and / or corrective actions. The extent of the required accident / incident investigation should be based on a preliminary risk analysis.

11.3.d One example of a risk analysis tool is a matrix. The matrix technique allocates a risk level based on the potential severity and an estimate of the frequency. In determining the severity, priority should be given to personal injury.

Severity	Consequence				Probability		
	People	Hardware	Pollution	Reputation	A	B	C
					Never heard of in company	Incident has occurred in the company	Happens several times per year in the company
0	No injury	No damage	No environmental effect	No Damage	Level 1		
1	First aid treatment	Damage < € 50.000,-	Slight environmental effect (< 10l)	Slight damage Customer complaint			
2	Lost time incident	Damage > € 50.000,- < €100.000,-	Minor environmental effect (< 100l)	Minor damage Local press	Level 2		
3	Hospitalised	Damage > € 100.000,- < € 250.000,-	Local environmental effect (> 1m³)	National Press			
4	Fatality	Damage > € 250.000,-	Massive environmental effect	Severe damage International Press	Level 3		

The matrix distinguishes three investigation levels:

- Level 1: Minor - No further investigation required
- Level 2: Significant - Investigation by the DP or manager
- Level 3: Critical - Investigation Team

11.3.e The analyses of these reports may result in one or more of the following:

- Corrective action being taken
- Emphasis on existing procedures
- Distribution of lessons learned throughout the maritime pilot organization
- Amendment to existing ISPO management system
- The development and improvement of training programmes for maritime pilots
- Retraining of maritime pilot or other personnel
- Recommendations to the system of continued proficiency of maritime pilots

11.3.f If possible, feedback by the maritime pilot organization should be provided to those persons who have made a report required by this section. Feedback should assist in encouraging further effective reporting. Feedback should include an acknowledgement of receipt of the report, its status and any follow up actions taken or recommended.

	Guidelines and Additional Information to the ISPO	Page 29 of 31
	12, Measurement, Analyses and Improvement	Part B

12 MEASUREMENT, ANALYSES AND IMPROVEMENT

12.1 General

12.1.a The maritime pilot organization should establish and maintain a reporting system that should cover the following:

- Internal notifications (internal complaints, suggested improvements, safety issues, etc.)
- Internal and external audits (observations, non-conformities, major non-conformities)
- Incidents and risk events
- Customer complaints

12.1.b Any deviation from the procedures and instructions should be documented in accordance with procedures established in the ISPO management system. The management system should be designed to allow for updating, amendment and improvement derived from the analysis of above as well as changed circumstances within the maritime pilot organization.

12.1.c The maritime pilot organization may consider that the designated person, required by the ISPO, is the most suitable person to carry out many of the functional requirements mentioned in Chapter 3.

12.2 Internal Audits

12.2.a The Pilot Organization should carry out internal audits at least once per year to verify whether Maritime Pilot activities comply with the ISPO management system. These internal verifications should be prepared and conducted in accordance with procedures established by the Maritime Pilot organisation. The procedures should at least consider the following elements:

12.2.b Responsibilities;

The maritime pilot organization should ensure that the system for the execution of internal audits is designed in accordance with accepted audit principles. As a minimum the following principles should be understood:

- The internal audit is a measure of performance of the ISPO management system in meeting its stated objectives
- On completion of the audit, the conclusions drawn are to be fed back to the ISPO management system
- Each internal audit must be carried out by personnel who, at the time of the audit, are independent of the area, department or activity being audited
- Each internal audit must be carried out by qualified and competent personnel

12.2.c Competence and selection of auditors;

The maritime pilot organization should be aware of the requirement to ensure that personnel who are actively involved in internal auditing are competent to do so and as a result, the maritime pilot organization should set appropriate competency standards for internal ISPO management system auditors.

The following could be taken into consideration as being relevant when setting competency standards:

- Practical experience with pilotage services
- Practical knowledge of the support to pilotage services
- Knowledge of the ISPO
- Knowledge of the ISPO management system
- Auditing experience and training

	Guidelines and Additional Information to the ISPO	Page 30 of 31
	12, Measurement, Analyses and Improvement	Part B

- 12.2.d Audit scheduling;
The determination of the number and frequency of the internal audits should depend on the size of the organization, the status and importance of the processes and on the results of previous audits. The schedule should ensure that all parts of the operation and standard are covered through an audit cycle.
- 12.2.e Planning and preparing the audit;
In the planning of each internal audit the following could be taken into consideration to:
- Reach agreement with the auditee on a timetable for the internal audit and the areas, activities or personnel to be audited, without disruption of normal operations
 - Reach agreement on the opening and closing meetings if any, as on the specific ISPO management system elements to be audited
 - Reach agreement on arrangements for pre- and post-audit meetings, if any
 - Reach agreement on arrangements for conducting the internal audit, as procedures or personnel required.
- In the preparation of each audit the following could be taken into consideration to:
- Determine the purpose of the audit, e.g. whether the audit is a scheduled audit, unscheduled, follow up, etc.
 - Determine the scope of the audit, e.g. the specific elements, activities, areas or processes of the ISPO management system to be audited
 - Determine the documentation and human resources required
 - Identify the ISPO management system element of the department
 - Identify the relevant statutory or internal ISPO management system requirements
 - Inform the personnel at the location of the internal audit
 - Prepare an audit plan in consultation with the auditee.
- 12.2.f Executing the audit;
The audits should assess the effectiveness of the ISPO management system in achieving acceptable standards with respect to safety, environment and quality of service.
- 12.2.g Audit report;
The maritime pilot organization should ensure that reporting lines relating to the internal auditing are clearly defined and, where applicable, incorporate all levels within the maritime pilot organization structure. The following aspects should be considered:
- On completion of an internal audit, it should be the first priority of the auditor(s) to report to the management of the specific elements, activities, areas or processes audited
 - On completion of the internal audit, auditors should prepare a documented report containing all audit findings
 - The maritime pilot organization should ensure that the audit reports are distributed to relevant personnel involved in the ISPO management system
- The identification of a non-conformity should have an immediate effect on the operation of the ISPO management system. All non-conformity reports should contain information on the following features:
- Identification of the specific requirement of the ISPO which is not met
 - The nature of the non-conformity
 - Identification of the actual evidence to confirm that a non-conformity exists
 - Agreed corrective action(s) and timescale for completion
- 12.2.h Corrective action follow-up.
Corrective actions provide structured means within the ISPO management system to ensure that:
- Measures are taken to reduce exposure to risk as far as is reasonably practicable
 - Proper responses are put in motion to remedy the non-conformance

	Guidelines and Additional Information to the ISPO	Page 31 of 31
	12, Measurement, Analyses and Improvement	Part B

12.3 Analysis

- 12.3.a The organization should determine, collect and analyze appropriate data to demonstrate the suitability and effectiveness of the ISPO management system and to evaluate where continuous improvement of the effectiveness of the management system can be made. This should include data generated as a result of monitoring and measurement and from other relevant sources.

12.4 Continuous Improvement

- 12.4.a The organization should consider the implementation of a method or procedure to keep the ISPO management system up to date after appropriate changes in the common working practice or new developments inside or outside the organization.
- 12.4.b The maritime pilot organization should determine the requirements and expectations of the employees for recognition, job satisfaction and personal development. The aim of such attention should improve the involvement and motivation of the employees to the maximum.

12.5 Management Review

- 12.5.a The organization's management should review the organization's ISPO management system and applicable policies at planned intervals, to ensure its continuing suitability, adequacy and effectiveness. This review should include assessing opportunities for improvement and the need for changes to the management system, including the quality policy and quality objectives.
- 12.5.b The maritime pilot organization should continuously monitor their activities that are aimed at enhancement of their performance and record the implementation so it can provide data for future improvements. The result of such analysis should be used as input for the management review with the aim of further improving the performance of the organization.

Where suitable the following should be taken into account:

- Data should be transferred into information and knowledge from which the maritime pilot organization can benefit.
- Measuring, analysis and improvement of services and processes should be used to define the required priorities for the maritime pilot organization.
- Measuring methods should be periodically judged and data should be continuously verified on accuracy and completeness.
- Benchmarking for individual processes should be used as an instrument for the enhancement of suitability and effectiveness of processes.
- Measuring customer satisfaction should be considered as indispensable for the evaluation of the maritime pilot organizations' performance.
- Use of measurements as well as providing and communicating received information are of vital importance for the maritime pilot organization and should be the basis for further performance enhancement and for the interested parties involved; such information should be up to date and the goal should be well defined.
- Self-evaluation on a periodical basis should be considered to judge the performance level of the maritime pilot organization and to define the chances for performance enhancement.