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Foreword

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 8, *Ships and marine technology.*

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The International Maritime Organization (IMO) has identified a strong need to recruit and retain seafarers globally. This document has been developed to help recruit new maritime professionals and to assist them, as well as existing maritime professionals, to enter and build their career path for their professional achievement within the international maritime industry. Additionally, it aims to provide professional alternatives and information pertaining to existing maritime industry stakeholders who are faced with career path decisions due to industry evolution, personal circumstances or changes in professional goals in order to adapt to these changes.

The rationale of having a functional career guidance document is to provide a reference for possible occupations in the maritime industry, including minimum education and training requirements for a given occupation so that candidates can take the necessary steps to meet their goals.

Ships and marine technology — Maritime education and training — Maritime career guidance

1 Scope

This document provides a powerful decision-making tool for persons that either have clear professional development goals or have uncertainties related to the progression of their career paths, including minimum education and training requirements for a given occupation so that candidates can take the necessary steps to meet their goals. This document seeks to assist professionals in (or those who would like to enter) the maritime sector, on board or ashore, in determining what they would like to achieve professionally, establishing how to get there through this proactive tool, taking into consideration

— personal circumstances and academic background,

— previous work experiences, knowledge and skills,

— short, medium and long-term ambitions,

— changing education and training requirements resulting from continual industry evolution,

— current and future job opportunities,

— impact of technology, and

— shifting personal interests, attitudes, abilities and goals.

This document helps identify potential jobs within the maritime industry, on board and ashore, in order to provide alternative career paths.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

4 Basic concept of maritime career guidance

4.1 General

The basic concept of this document is shown in Figures 1 to 3, which provide the general categories of careers available in the maritime industry.

4.2 Major fields of employment in the international maritime industry

Figure 1 provides a diagram of the major fields of employment in the international maritime industry described in this document.

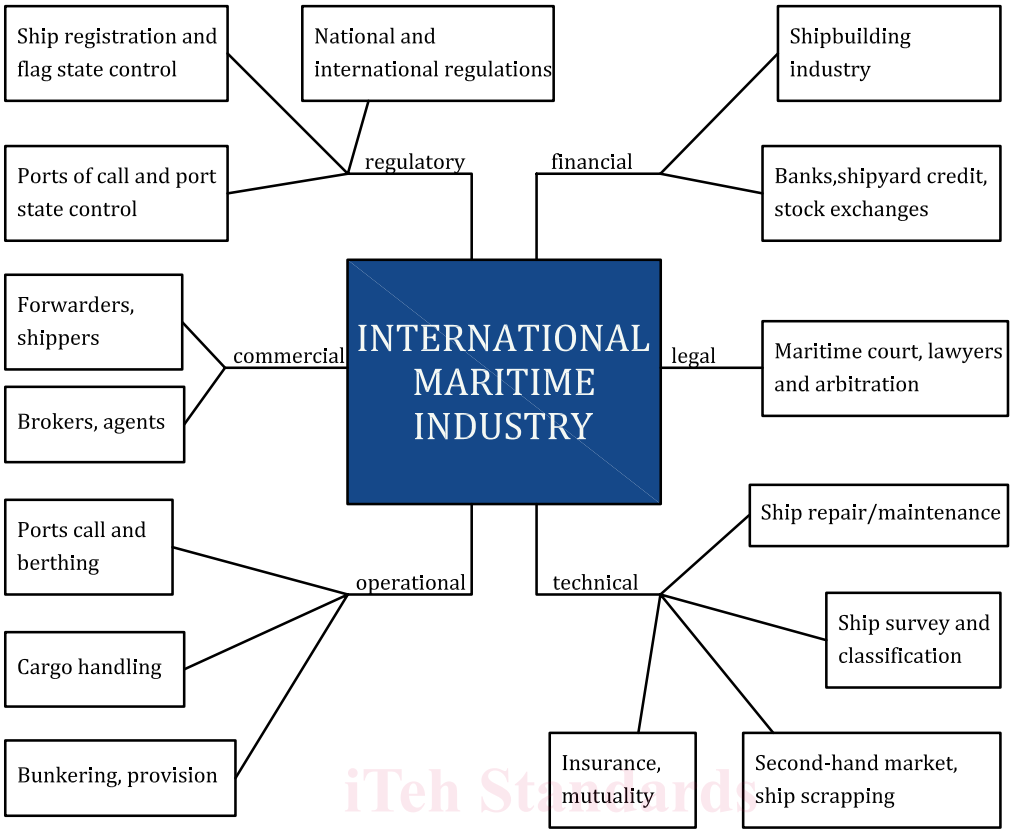

Figure 1 — Major fields of employment in the international maritime industry

4.3 Non-traditional field career paths in the maritime industry

4.3.1 General

This document focuses on the traditional employment fields in the maritime industry. It should be noted that there are other paths for employment in the sector. Examples of non-traditional paths for employment include, but are not limited to, those described in 4.3.2 to 4.3.5.

4.3.2 Emerging technologies in support of operations

The evolution of the industry with regards to the operation of ships, the mitigation of ship-generated pollutants/wastes, the increase of efficiency, and other maritime-related technologies have resulted in the need for professionals capable of installing and maintaining this type of equipment.

4.3.3 “Hawse pipe” progression

A sea-going career could include starting at a hands-on, entry level position, with a systematic progression of jobs leading to the highest level of employment on a ship. The “hawse pipe” career path allows an individual to learn all of the aspects of the operation of a vessel, from either the deck or engine department standpoint, in accordance with the parameters set forth by a country’s national legislation for compliance with the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW)[1], as amended. This path is also applied in the catering and hospitality departments in accordance with industry practice.

4.3.4 Application of computer technologies in all aspects of the maritime industry

Many shipboard elements can now be managed with computers or computer-based applications. There is a need for professionals capable of supporting this type of equipment and systems. This trend

includes computer-based applications, both on board and ashore, including remote monitoring of on-board equipment.

4.3.5 Military to maritime industry

Military experience and training are also transferable to maritime industry paths, both seagoing and ashore.

4.4 Personal career course charting

A recommended action plan for individual career development is illustrated in Figure 2.

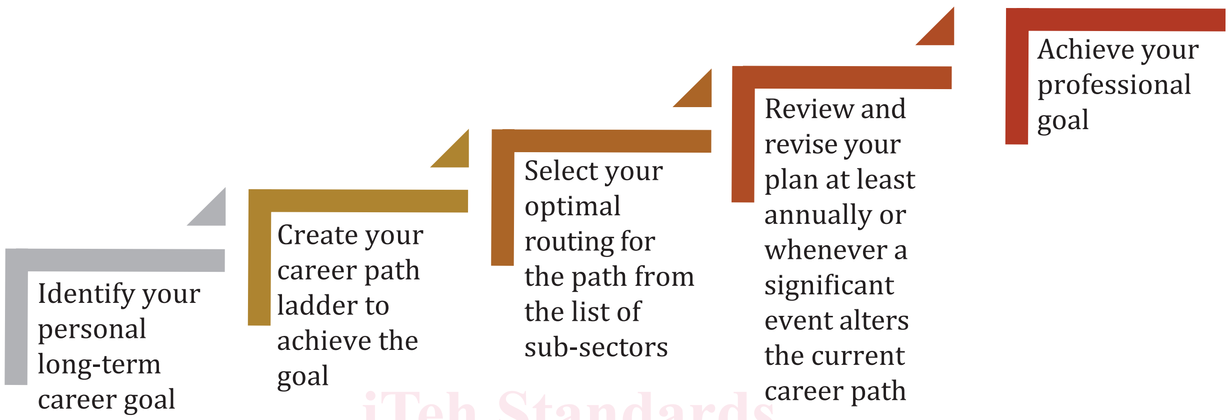

Figure 2 — Personal career course charting

4.5 Areas of potential employment in the maritime industry

Figure 3 provides a diagram of areas of potential employment in the maritime industry, some of which are currently addressed in the career guidance described in this document. Information to assist in the selection of alternate employment oaths is described in Clause 5.

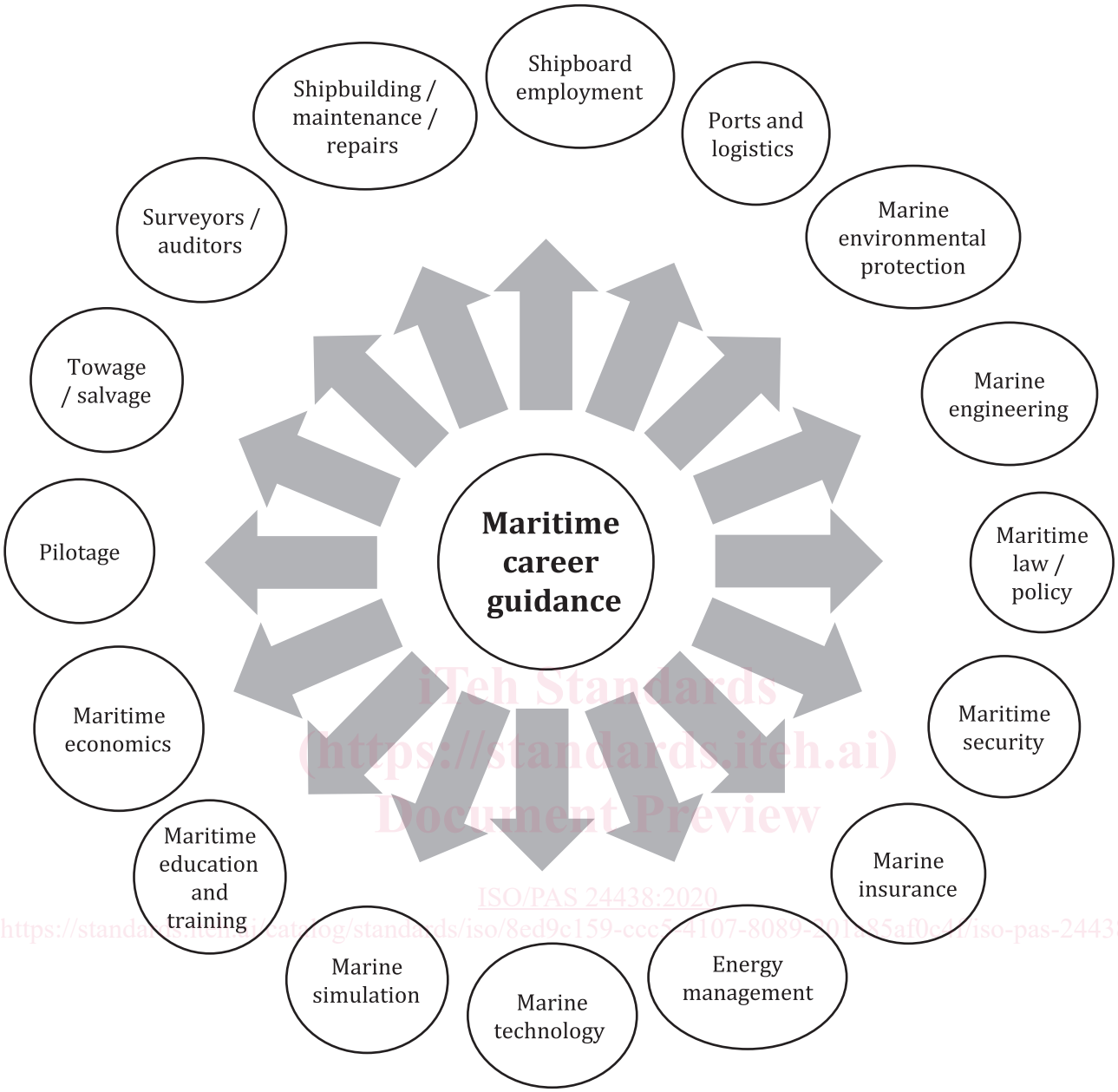

Figure 3 — Areas of potential employment