

# turning blue

## Course Curricula and Training Methodology

Turning Blue  
Awareness Training





# Turning Blue's Course Curricula and Training Methodology

Deliverable n° 4 | D3.4, WP3

## Date

June 2024

## Authors

ProSea - Stichting Prosea Marine Education

## Partners

Aproximar – Cooperativa de Solidariedade Social, CRL

ProSea - Stichting Prosea Marine Education

PFA – Pelagic Freezer Trawler Association

IPS - Innovative Prison Systems

Click F1

STICHTING 180

EaSI – European Association for Social Innovation

Magnetar Ltd

IRFIP - Istituto Religioso di Formazione e Istruzione Professionale

**Agreement Number:** 101124686 – Turning Blue – EMFAF-2023-Blue Careers

Co-funded by the European Union. Views and opinions expressed are however those of the author(s) only and do not necessarily reflect those of the European Union or the European Climate, Infrastructure and Environment Executive Agency (CINEA). Neither the European Union nor the granting authority can be held responsible for them.





## Contents

1. Introduction.....	4
2. Turning Blue Training Curriculum.....	6
3. Supporting materials & activities.....	13
3.1 Supporting materials.....	13
3.2 Activities.....	14
4. Program.....	19
5. Quality Standards .....	21





# 1. Introduction

The main aim of the Turning Blue Awareness Training (hereinafter referred to as the Awareness Training) is to develop innovative and tailor-made training material to inspire and engage young people (between 16 and 30 years) serving time in prison to pursue a sustainable 'blue career' in the Blue Economy. The following objectives were kept in mind when developing the training:

- Improve the target group's knowledge and awareness about the sustainable Blue Economy and respective career opportunities.
- Create an innovative and attractive training methodology to motivate the target group to pursue a 'blue career' after serving time in prison.
- Upskill the target group and enhance their access to new career opportunities.
- Improve the target group's ocean literacy culture.
- Through a bottom-up approach, develop an 'Instructor manual' for trainers to deliver an attractive and tailor-made training on the Blue Economy that can be replicated in different European prison services.

Deliverable 4 provides a first overview of the Turning Blue training curriculum and methodology. It details the specific training topics, and associated learning objectives, including the estimated time needed to deliver the various training topics. In addition, various supporting materials and activities will be discussed to make the Awareness Training more engaging. The content and structure of the Awareness Training outlined in this document is preliminary and may be subject to modification.

According to the European Commission, the Blue Economy consists of the following 13 sectors:

- Blue biotechnology
- Coastal tourism
- Desalination
- Infrastructure and robotics
- Marine living resources





- Marine non-living resources
- Marine renewable energy
- Maritime defense
- Maritime transport
- Ocean energy
- Port activities
- Research and innovation
- Shipbuilding and repair

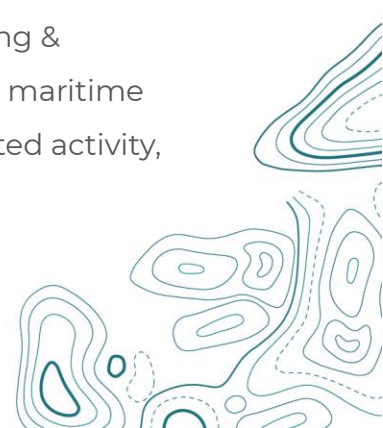
However, when considering the profiles of the project's target group, certain sectors within the Blue Economy are not pertinent in terms of employment opportunities. In the Turning Blue Competence Profile and Roadmap, four sectors emerged as promising (i.e., they have the potential to foster employability):

**Shipping, Fishing & Aquaculture, Maritime Services & Tourism, and Port Work.**

These four sectors will be referred to and elaborated on during the Awareness Training.

In the Awareness Training it has been opted to use the term 'maritime sector' instead of 'Blue Economy', to ensure clarity and consistence. By using the term 'maritime sector', participants are provided with a more tangible and relevant framework as the term 'Blue Economy' is often considered too abstract for the target group of the Turning Blue initiative. This approach ensures that the training remains aligned with realistic job prospects, avoiding unnecessary complexity. The usage of 'maritime sector' was tested during the focus groups in the Netherlands and Portugal, yielding positive results. The participants understood the definition and scope.

Using the term 'maritime sector' and discussing four main sectors, helps participants understand the sector more easily by presenting it in familiar and distinct components. Shipping involves the transportation of people and goods across the sea, thereby covering the 'maritime transport' sector. Fishing & aquaculture consists of the harvesting of marine living resources. The maritime services industry is a broader sector and includes all other ocean-related activity,





including 'coastal tourism, 'marine non-living resources', 'marine renewable energy', 'maritime defense', and 'shipbuilding and repair'. Lastly, port work encompasses all activities conducted within ports, which includes the EU Blue Economy sector port activities. By framing the maritime sector in these terms, the training provides a clear understanding, ensuring that participants can see direct links to potential career paths.

It is important to recognize that certain activities of the Awareness Training are country-, facility-, and participant-dependent. The country-dependent reality and job market will influence the potential jobs available and feasible for the participants, which should be carefully investigated by the trainer prior to conducting the Awareness Training. In addition, prison facilities may have varying schedules, rules, and available resources. Lastly, the training should be tailored to the participants' knowledge and interest as needed. The primary goal is to inspire the participants, so this should be kept in mind when conducting the Awareness Training, allowing for flexibility in the curriculum. In order to facilitate this, various suggestions for interactive activities and workshops are presented and it should be investigated what is feasible per training.

## 2. Turning Blue Training Curriculum

Based on the results of the conducted focus groups with the target group in the Netherlands and Portugal, 11 topics emerged as being important to incorporate in the Awareness training. These topics are set out below, and described in the following way:

- (1) Topic
- (2) Description
- (3) Learning Objectives: what the participant will be able to do after completing this training
- (4) Supporting materials & activities: further details in section 3.





Topic	Description	Learning objective(s)	Supporting materials & activities	Time
<p><b>1. Introduction to the Maritime Sector</b></p>	<p>This first section of the training starts with introductions of the trainer(s) and participants, as well as the Awareness Training itself. The participants are asked to form pairs and to create mind maps on the maritime sector to gauge their level of knowledge. The mind maps are afterwards discussed in class. The four subsectors of the maritime sector (shipping, fishing &amp; aquaculture, maritime services &amp; tourism, port work) are introduced.</p>	<p>Understand what to expect from the Awareness Training</p> <p>Understand how we define 'maritime sector' during this training</p>	<ul style="list-style-type: none"> <li>• Lecture with PowerPoint</li> <li>• Mind map</li> </ul>	<p>45 min.</p>
<p><b>2. Shipping Industry</b></p>	<p>The shipping industry is introduced through videos and a lecture. The importance of shipping (responsible for 80-90% of global trade) is highlighted. Various industries (containers, cruise, oil tankers etc.) are set out and the variety of ships is demonstrated through a memory game. Potential jobs are discussed, including practical information on what the jobs look like, expected salaries, and necessary further education. It is important to be transparent and clear about the career possibilities.</p>	<p>Have a basic understanding of the shipping industry</p> <p>Understand potential jobs and careers in the shipping industry and are informed of the job requirements, expected salaries, and education</p>	<ul style="list-style-type: none"> <li>• Lecture with PowerPoint</li> <li>• Videos</li> <li>• Ships memory game</li> </ul>	<p>1-1.5 hr.</p>





Topic	Description	Learning objective(s)	Supporting materials & activities	Time
<p><b>3. Fishing &amp; Aquaculture</b></p>	<p>Introduce the fishing and aquaculture industry through videos and a lecture. If possible, Virtual Reality (VR) can be used to allow the participants to experience the industry more closely. Discuss the country-specific fishing and aquaculture sectors, such as pelagic fisheries. Potential jobs in the industry are discussed, including practical information on what the jobs look like, expected salaries, and necessary further education. It is important to be transparent and clear about the career possibilities.</p>	<p>Have a basic understanding of the fishing and aquaculture industry</p> <p>Have a basic understanding of the differences between fishing and aquaculture</p> <p>Understand potential jobs and careers in the fishing and aquaculture industry and are informed of the job requirements, expected salaries, and education</p>	<ul style="list-style-type: none"> <li>• Lecture with PowerPoint</li> <li>• Videos</li> <li>• VR simulation</li> </ul>	<p>1-1.5 hr.</p>
<p><b>4. Maritime Services &amp; Tourism</b></p>	<p>Introduce and discuss the maritime services and tourism industry. This topic may vary significantly between countries, and it should be carefully considered which subsectors and jobs to include. Examples are the navy, offshore energy, and tourism. A construction game can be played to engage participants (see section 3). Potential jobs in maritime services are discussed, including practical information on what the jobs look like, expected salaries, and necessary further education. It is important to be transparent and clear about the career possibilities.</p>	<p>Have a basic understanding of three sectors in the maritime services and tourism industry</p> <p>Understand potential jobs and careers in the maritime services industry and are informed of the job requirements, expected salaries, and education</p>	<ul style="list-style-type: none"> <li>• Lecture with PowerPoint</li> <li>• Videos</li> <li>• Construction game</li> </ul>	<p>1-1.5 hr.</p>





Topic	Description	Learning objective(s)	Supporting materials & activities	Time
<b>5. Port Work</b>	There are also many jobs in ports, which are highlighted in this separate topic. This is important for participants who do not want to work at sea. Like topics 2, 3, and 4, an overview of potential jobs is given and discussed. Examples are waste handling, forklift driving, and welding.	Have a basic understanding of the work in ports  Understand potential jobs and careers in ports and are informed of the job requirements, expected salaries, and education	<ul style="list-style-type: none"> <li>• Lecture with PowerPoint</li> <li>• Videos</li> </ul>	1-1.5 hr.
<b>6. Experiences from Maritime Sector</b>	A guest speaker is invited to talk about their job with the participants. The guest speaker needs to work in the maritime sector, should be available, and preferably has experience with connecting to young people and/or giving guest lectures. Inviting a guest speaker can inspire participants to pursue a career in the maritime sector as they hear real-life examples. In addition, participants have room to ask any remaining questions regarding job qualifications etc.	Comprehend what a job in the maritime sector entails	<ul style="list-style-type: none"> <li>• Lecture with PowerPoint</li> <li>• Videos</li> <li>• Guest speaker</li> </ul>	1 hr.
<b>7. The Ocean &amp; Sustainability</b>	A basic understanding of how the ocean works and its importance for life on earth is provided to increase the participants' ocean literacy. Simultaneously, sustainability is introduced using the 3 Ps (People, Planet, Prosperity), while a basic understanding of climate change is taught. Some environmental challenges related to	Increase their ocean literacy  Understand the 3P concept of sustainability (People, Planet, Prosperity)	<ul style="list-style-type: none"> <li>• Lecture with PowerPoint</li> <li>• Videos</li> <li>• Underwater sound quiz</li> <li>• Plankton drawing</li> </ul>	1.5 hr.



Topic	Description	Learning objective(s)	Supporting materials & activities	Time
	<p>the maritime sector are introduced, such as marine pollution, invasive species, underwater noise, air emissions, and overfishing. Depending on the local situation, the trainer can decide which challenges are discussed in the training, as it is not necessary to discuss all challenges in order to avoid an excess of information. Various activities are proposed (underwater sound quiz, art workshop, demonstrating ocean specimens), which can be employed depending on availability.</p>	<p>Comprehend the basics of climate change and its consequences</p> <p>Identify various environmental challenges related to the maritime sector</p>	<ul style="list-style-type: none"> <li>• Demonstrating ocean specimens</li> </ul>	
<p><b>8. Workshop: Safety at Sea</b></p>	<p>This workshop features a demonstration of (a part of) the STCW Basic Safety Training by an official instructor. It may, for instance, include the launching of a life raft and preparation for sea survival. The Basic Safety Training is mandatory for all seafarers. It can be explored whether a portion of the official training can be delivered by an instructor, thereby contributing to the participants' completion of the training requirements.</p>	<p>Understand (or be certified in) part of the STCW Basic Safety Training</p>	<ul style="list-style-type: none"> <li>• Lecture with PowerPoint</li> <li>• Guest speaker</li> <li>• Basic Safety Training workshop</li> </ul>	<p>1.5 hr.</p>
<p><b>9. Workshop: Culture &amp; Life in the Maritime Sector</b></p>	<p>In this workshop, participants will learn about the culture and life on board of vessels. The culture on board of ships is a unique blend of camaraderie, discipline, and hierarchy and can offer a positive</p>	<p>Understand the culture and life aboard ships</p> <p>Understand the code of conduct aboard ships</p>	<ul style="list-style-type: none"> <li>• Lecture with PowerPoint</li> <li>• Videos</li> <li>• Communication workshop</li> </ul>	<p>1.5 hr.</p>



Topic	Description	Learning objective(s)	Supporting materials & activities	Time
	environment for participants to develop professionally, but also on a personal level. Furthermore, the importance of adequate communication (in the workplace) is discussed. Participants are made aware of various types of communication styles and how to improve their own communication through a workshop.	Communicate in a constructive, open-minded manner		
<b>10. Practical Session</b>	This session will vary depending on location and circumstances. In case there is enough time, it is encouraged to conduct a practical session with participants. Various examples of activities are provided in section 3.	Apply practical and hands-on experience related to the maritime sector	<p><i>Dependent on location and circumstances</i></p> <ul style="list-style-type: none"> <li>• Net mending</li> <li>• Tying knots</li> <li>• Fish filleting</li> <li>• Navigation</li> <li>• Excursion</li> </ul>	1-1.5 hr.
<b>11. Final Workshop</b>	The final workshop will combine various practical exercises to create confidence in the participants to apply for a job in the maritime sector and to further develop the necessary soft skills. Now that they know more about the maritime sector, they are instructed to choose a specific industry that stood out to them and prepare a job application for that industry. This can be done in various ways. Participants can	Apply to a job in the maritime sector with confidence	<ul style="list-style-type: none"> <li>• Lecture with PowerPoint</li> </ul>	2 hrs.



<b>Topic</b>	<b>Description</b>	<b>Learning objective(s)</b>	<b>Supporting materials &amp; activities</b>	<b>Time</b>
	<p>choose to write an application letter, record a video, or practice a job interview with the trainer. This exercise can be done individually or in groups of 2-3, depending on the group dynamics.</p> <p>The training is concluded, and the participants are asked to fill out an evaluation form.</p>			



## 3. Supporting materials & activities

### 3.1 *Supporting materials*

Various supporting materials and teaching methodologies are used to make the Awareness Training interactive and engaging. It is important to have a varied program, as this promotes engagement. Below are descriptions of the supporting materials noted in the overview above.

- **Lecture with PowerPoint:** During the lectures it is important to prioritize interactivity by engaging participants through frequent questions and discussions. Moreover, PowerPoint slides should be complementary aids rather than distractions, meaning text should be kept to a minimum. The usage of videos and photos is encouraged.
- **Mind map:** Participants are instructed to create a visual representation of their ideas and knowledge regarding the maritime sector. Mind maps are a useful aid for organizing thoughts and information, allowing participants to start the training with exploring their knowledge on the maritime sector.
  - A4 or A3 papers
  - Writing material
- **Videos:** Videos can enhance understanding and engagement by providing real-life examples of the maritime sector. They can offer day-to-day realities of blue careers and help participants connect theory with practical applications. Please ensure the videos are downloaded on the device, as internet connection is not guaranteed/allowed in some prison facilities.
- **Ships memory game:** The shipping industry contains a plethora of ships, all having different functions and roles. In order to illustrate this to the participants, a memory game is played. A set of cards with different types of ships and their functions/cargo is created and the participants must find the matching pairs (see figure 1). This allows them to explore the large variety of vessels in the shipping industry and understand their specific purposes in an engaging way.





Figure 1. Example of Ships memory game featuring a bulk carrier and a container ship.

## 3.2 Activities

The Awareness Training can be made more engaging by including activities when teaching the various topics. In the overview above, various examples of activities are mentioned, which are elaborated on below. Please note that the feasibility of these activities depends on the circumstances, such as the facility. In addition, some activities, like net mending and navigation require specialized skills and instructors. Therefore, the activities should be seen as examples and sources of inspiration. It is important to assess what is possible for each specific training session and country.

- **Virtual Reality (VR) simulation:** A simulation is employed using a VR headset to further enhance the participants' understanding and awareness of the maritime sector. This immersive tool allows participants to increase their understanding of the fishing & aquaculture industry, for instance, by experiencing the day-to-day operations on a fishing vessel firsthand. Through VR, they can explore the insides of fishing vessels, observe the





equipment and techniques used, and even participate in simulated fishing activities. A VR simulation may also be used for a different topic depending on the availability. For example, participants can take a virtual dive to experience the diversity of life underwater. The following link contains various 360° dives available for VR simulations:

<https://sanctuaries.noaa.gov/education/fun/virtual-dive-activity-sheets.html>.

- VR headset
- VR controllers
- Compatible computer with VR simulation
- **Construction game:** During the maritime services topic, participants can engage in an interactive suction bucket construction game. Suction buckets function as fixed platform anchors for wind turbines and other maritime constructions, see figure 2. These foundations are relatively simple to simulate on a small scale. Using a container or aquarium filled with water and a sandy bottom, an inverted tin can is placed on the sand. A small hole in the center of the can accommodates a plastic straw. Once the can is positioned on the sandy surface, a participant can suck the air out through the straw. This action causes the can to sink into the sand and creates a vacuum seal, effectively simulating the construction of suction buckets on a miniature scale. Please watch the following video for a demonstration: <https://www.youtube.com/watch?v=I52K67vyGVA>.
  - Container/aquarium
  - Sand
  - Can
  - Plastic straw
  - Water





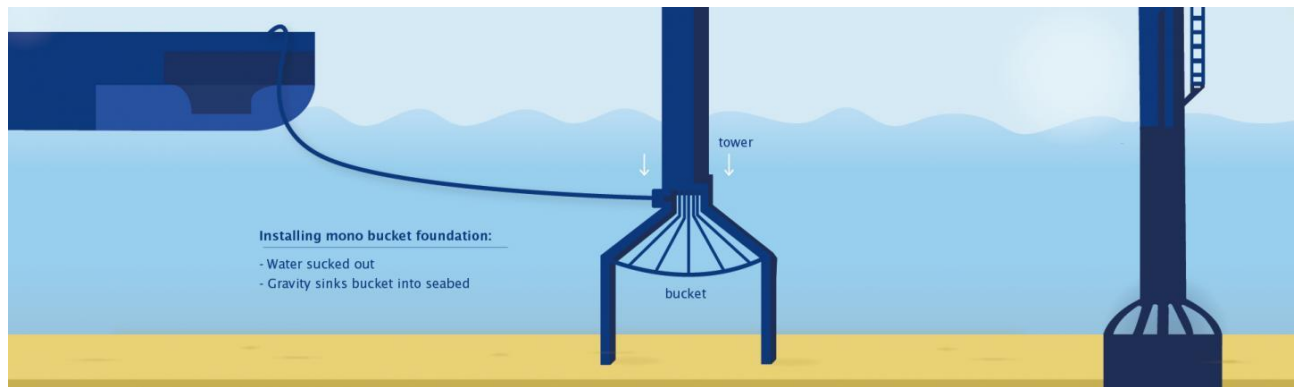


Figure 2. Schematic drawing of suction bucket. Source: Van Oord.

- **Guest speaker:** Inviting a guest speaker from the maritime sector can provide firsthand insights and experiences, making the Awareness Training more relatable and inspiring for participants. The guest speaker can share personal stories and practical advice, offering a valuable perspective. This interaction can also allow participants to ask questions and engage in meaningful discussions, further enriching their learning experience. Inviting a guest speaker can also increase participation, as having various speakers keeps participants engaged.
- **Underwater sound quiz:** This quiz features various underwater sounds, such as animal sounds and anthropogenic sounds, and participants are instructed to guess the source of the sound. The quiz is designed to increase participants' awareness of the importance of underwater sound for marine life and the effects of noise pollution caused by human activities.
- **Art workshop:** Plankton is crucial for the ocean and underwater life. A large variety of plankton exists with intricate shapes and forms. Participants can learn more about the importance of plankton while using their creative talents to depict the organisms in all their diversity. Engaging in a drawing activity helps participants connect to the topic and enhances their understanding through a hands-on, creative approach.
  - A4 papers
  - Colored pencils
  - Markers
- **Demonstrating ocean specimens:** If possible, the topic 'The Ocean & Sustainability' can be made more captivating by bringing marine





specimens to demonstrate to the participants. Examples are fish eggs, organisms in formaldehyde, and coral fragments. This allows participants to immerse themselves in hands-on exploration.

- **Basic Safety Training workshop:** The workshop provides participants with practical skills and knowledge related to safety at sea. Following the international convention on Standards of Training Certification and Watch keeping for seafarers (STCW) and fishing vessel personnel (STCW-F), the Basic Safety Training is mandatory for all seafarers and fishers. Some parts of this training might be taught in a closed prison facility, which gives participants an advantage when searching for jobs after their release. In case this is not possible in a certain facility, the following website can be used as inspiration for preparing a similar workshop:  
[www.veiligwerkenopzee.nl/en/](http://www.veiligwerkenopzee.nl/en/)
- **Communication workshop:** The workshop starts by discussing various forms of communication (verbal vs non-verbal, aggressive vs constructive) and why good communication is important. The participants are then instructed to do an exercise where one volunteer stands in front of the group and describes an image (consisting of various shapes) only using words, that the rest needs to draw. This is followed by another image with more abstract shapes, which is more difficult to explain. The aim of the exercise is to show that good communication is complicated, especially when lacking descriptive words. Afterwards, another exercise is done where different pictures are shown to which the participants are asked “what do you see?”. Answers vary, which illustrates people’s different perspectives and the effect it has on their world view. This workshop allows participants to consider the effects of proper communication and be aware of the nuances and challenges inherent in conveying ideas effectively.
- **Net mending:** Net mending is a centuries-old tradition of repairing and maintaining fishing nets. The workshop allows participants to learn a new skill and be inspired to work in the fishing industry.
  - Piece of net
  - Net mending needle
  - Fishing net rope





- **Tying knots:** This workshop offers participants an essential hands-on experience in mastering various knots critical to maritime operations. This session delves into the practical applications and importance of different types of knots, from the bowline to the clove hitch, highlighting their roles in ensuring safety and efficiency on board. Participants can learn the techniques for tying secure knots, enhancing their skills in rope handling, which is fundamental to many maritime activities, such as mooring, towing, and rigging.
  - Nylon rope
- **Fish filleting:** Participants will learn the essential techniques and skills needed to fillet fish. Under the guidance of instructors, they will discover the proper methods to efficiently remove bones and skin.
  - Fish
  - Filleting knives
  - Cutting board
- **Navigation:** Basic navigation encompasses the fundamental skills and techniques to determine and maintain a vessel's position, course, and direction while at sea. Participants can be introduced to some fundamentals of navigation, such as reading nautical charts, understanding buoyage systems, and using basic navigation instruments like compasses. Materials needed are dependent on what is available.
- **Excursion:** If it is possible for participants to leave the prison facility under supervision, it is advised to organize an excursion. This could be to a ship in the harbor, so the participants can have a look inside the vessel. It could also be marine environment-related, by organizing an excursion to the beach where marine organisms are collected and discussed to give participants real-life examples of the diversity of life in the ocean. Another option is to visit a company or organization in the maritime sector that is interested in hiring the target group





## 4. Program

Based on the curriculum and methodology above, a suggested program is proposed. The Awareness Training would take place over the course of four days. The program is not final and can be adapted to the time slots of individual prison facilities and the participants. In addition, breaks can be administered freely, and the quantity and time of the breaks is dependent on the group dynamics.

<b>Day 1</b>	<b>Time</b>	<b>Topic</b>
	09.00	Introduction to the Maritime Sector
	09:45	Shipping Industry
	11:15	<b>BREAK</b>
	11:30	Fishing & Aquaculture (part 1)
	12:00	<b>LUNCH TIME</b>
	12:30	Fishing & Aquaculture (part 2)
	13:30	Maritime Services & Tourism (part 1)
	14:15	<b>BREAK</b>
	14:30	Maritime Services & Tourism (part 2)
	15.30	<b>END DAY 1</b>

<b>Day 2</b>	<b>Time</b>	<b>Topic</b>
	09.00	Port Work
	10:30	<b>BREAK</b>
	10:45	Experiences from Maritime Sector
	12:00	<b>LUNCH TIME</b>
	12:30	The Ocean & Sustainability
	14:00	<b>END DAY 2</b>

<b>Day 3</b>	<b>Time</b>	<b>Topic</b>
	09.00	Workshop: Safety at Sea
	10:30	<b>BREAK</b>
	10:45	Workshop: Culture & Life in the Maritime Sector
12:00	<b>LUNCH TIME</b>	





	12:30	<i>[Open time slot]</i>
	14:00	<b>END DAY 3</b>

<b>Day 4</b>	<b>Time</b>	<b>Topic</b>
	09.00	Practical Session
	10:30	<b>BREAK</b>
	10:45	Final Workshop (part 1)
	12:00	<b>LUNCH TIME</b>
	12:30	Final Workshop (part 2)
	13:45	<b>END DAY 4</b>





## 5. Quality Standards

To ensure the highest quality of the Awareness Training, specific standards have been developed. Adherence to the following quality standards is essential when conducting the training:

- Allow for enough time to introduce participants and trainer.
- Formulate relevant objectives per training topic.
- Provide the estimated time necessary for each topic and exercise.
- Be aware: a prison might not have enough time to conduct the complete training. For this reason, a modular approach should be used when developing the training.
- Provide realistic information regarding job perspectives and required skills.
- Ensure that the training outcomes are relevant for employers that need employees.
- Cover various soft skills during the training, such as communication.
- Avoid using too much text on PowerPoint slides. Keep the PowerPoint presentation visual.
- Use a variety of exercises and teaching methods in each topic to keep the training engagement.
- Use 21<sup>st</sup> century teaching methods.
- Use at least 1 energizing activity per training day and incorporate short breaks.
- Ensure participants don't only have to sit and listen to information.
- Ensure the training is suitable for both thinkers and doers.

