

## Most requested future professional profiles in Mediterranean Port Authorities

JULY 2020

In 2019, a survey on the most requested professional profiles in Mediterranean ports was conducted by MEDports Association's Employment, Training and Maritime Expertise (ETME) Committee. The survey was answered by 14 ports and 50 trainees from the Arab Academy of Science, Technology and Maritime Transport (Egypt). The survey identified profiles needed in ports in four main areas: port management, IT, environment and city port, port construction and security and safety.

The ETME Committee decided in its meeting on April 15<sup>th</sup> 2020 to continue working on this topic focusing on the future professional profiles and areas of expertise not covered by training institutes today.

Seven profiles were highlighted as very relevant by participants. These profiles are not covered or deficiently covered by current training programs. We have worked on the detailed definition of these profiles and added an additional one on Onshore-Power-Supply bearing in mind the increasing relevance of this topic.

*These job profiles will be key for the future development of Mediterranean ports and they will contribute greatly to their efficiency and competitiveness in a changing environment. The adaptation by ports to new market requirements is a key element for ports' success and their contribution to the society which may be threatened by the lack of the required training.*

Therefore, we strongly invite training institutions to develop a comprehensive training offer in order to cover the needs of job profiles of the future in Mediterranean Port Authorities. Specific training modules will have to be designed for each member of the teams supporting the positions described on this document which belong mostly to managerial positions.

## Professional profiles identified

### BIG DATA ANALYST

<b>Job Title:</b> Big Data Analyst	
<b>Area of Expertise:</b> Big Data management, IT.	
<b>Tasks and responsibilities</b>	<ul style="list-style-type: none"> <li>• Selecting, designing, developing and managing tools directed to make and efficient use of all the enormous amount of data generated daily by port operations.</li> <li>• Effectively analysing and processing data to be one of the main inputs in order to assess the technical performance of the port and institution forecast operations and make recommendations on system improvements.</li> <li>• Implementation of services, profiling source information and executing big data processes.</li> </ul>
<b>Qualifications</b>	<ul style="list-style-type: none"> <li>• Education degree in management information systems, computer science, or a related discipline to work as a big data analyst.</li> <li>• Quantitative Training with a solid understanding of basic statistics.</li> </ul>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>• Well aware of database modelling tools and programs.</li> <li>• Programming and Coding knowledge at least Python, Java, C++, SQL</li> <li>• Know about scripting languages.</li> <li>• Data warehousing; Experience with relational and non -relational database systems.</li> <li>• Define verification procedures and data limitations.</li> <li>• Understand Quantitative Aptitude and Statistics.</li> <li>• Knowledge of Statistics and linear algebra.</li> <li>• Business Knowledge.</li> </ul>
<b>Skills</b>	<ul style="list-style-type: none"> <li>• Must be able to develop solutions for real-time distributed data processing, as well as computational pipelines</li> <li>• Excellent technical abilities,</li> <li>• Strong interpersonal skills in order to communicate with colleagues,</li> <li>• Organizational management and effective project management abilities in order to oversee multiple projects.</li> <li>• Fluency in English is mandatory (French, Mandarin and/or other language are appreciated).</li> <li>• Stay up to date with blogs, news, journals, MOOCS and listening to podcasts.</li> </ul>
<b>Attitude</b>	<ul style="list-style-type: none"> <li>• Well-ordered mind logic thinking with paying attention to details</li> <li>• Ability to learn new skills.</li> <li>• Being able to work in a team.</li> <li>• Analytical ability.</li> <li>• Credibility and transparency.</li> </ul>

## CYBERSECURITY MANAGER

<b>Job Title:</b> Cybersecurity Manager	
<b>Area of Expertise:</b> Cybersecurity, legal aspects of IT	
<b>Tasks and responsibilities</b>	<ul style="list-style-type: none"> <li>• Protect the organization's data from misuse, theft and corruption in order to ensure de continuity of operations.</li> <li>• To define the security policies and ensure compliance with the implementation of security plans.</li> <li>• Risk assessment, planification and implementation of security measures and tools; monitor Internal and External Policy Compliance; regulate access to information and training staff on proper use of information systems; define the procedures to take place in case of an intrusion.</li> <li>• Ensure the rapid recovery of the organization operations.</li> </ul>
<b>Qualifications</b>	Education degree: <ul style="list-style-type: none"> <li>• Information technology.</li> <li>• Computer science, engineering or a related discipline.</li> <li>• Other Certificates Java, CISSP, CEH, and Comp TIA Security.</li> </ul>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>• Programming, coding and tracing knowledge.</li> <li>• Define Data risk assessment.</li> <li>• Manage critical data and clarity around information-driven processes across key business areas.</li> <li>• Knowledge of system security, and data assurance.</li> <li>• Understand data architecture, administration, and management of operating systems.</li> <li>• Awareness of common web vulnerabilities.</li> </ul>
<b>Skills</b>	<ul style="list-style-type: none"> <li>• Strong interpersonal and persuasion ability.</li> <li>• Data risk assessment and analysis.</li> <li>• Problem-solving and analytical ability.</li> <li>• Commitment to continuous development and continuing education, to stay on top of IT and cybersecurity trends.</li> <li>• Fluency in English is mandatory (French, Mandarin and/or other languages are appreciated).</li> </ul>
<b>Attitude</b>	<ul style="list-style-type: none"> <li>• A collaborative work style.</li> <li>• Ability to clearly articulate different concepts.</li> <li>• Good and active listener.</li> <li>• Engage well with colleagues.</li> <li>• Logic Thinking and tracing.</li> </ul>

## MANAGER OF SINCROMODALITY AND INTERMODAL NETWORKS

<b>Job Title:</b> Manager of sincromodality and intermodal networks	
<b>Area of Expertise:</b> Intermodal connectivity, Logistics	
<b>Tasks and responsibilities</b>	<ul style="list-style-type: none"> <li>• Developing, managing and monitoring infrastructure, commercial and operational aspects of the intermodal network that connects the port area to</li> </ul>

	<p>inland and short sea locations which consists of a network of facilities distributed in the hinterland and short sea locations and connected to the port by intermodal corridors (rail, short sea, road and air transport services).</p> <ul style="list-style-type: none"> <li>• Promotes and participates in the development of railway and short sea services; as well as in the management of terminals Participated by the port authority and/or third parties- and in the analysis of competition and potential new developments.</li> <li>• Monitors and promotes the infrastructure needed for the operational and commercial viability of the services (port and inland terminals, railway infrastructure, road connections, etc.).</li> <li>• Working hand in hand with the national infrastructure agencies in order to coordinate schedules of rail and short sea services and to solve incidents that affect the reliability of the services, such as delays, accidents and infrastructure damages.</li> <li>• Works with rail and short sea operators, shipping lines and maritime agencies, logistics operators and shippers in order to be able to adapt the services provided by inland terminals to their requirements.</li> </ul>
<b>Qualifications</b>	<ul style="list-style-type: none"> <li>• Degree level or hold relevant qualifications/experience on ports, logistics and rail sector.</li> <li>• Experiences in working with rail and short sea operators, shipping lines and maritime agencies, logistics operators and shippers in order to be able to adapt the services provided by inland terminals to their requirements.</li> </ul>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>• Understand different modalities of transport such as air, sea, or intermodal freight transport. Specialize in one of the modalities and possess a deeper knowledge of the details and procedures of that modality.</li> <li>• Wide Knowledge of Multimodal transports Elements That Benefit for: reducing transport cost, Improvement of the product's path from the manufacturer to the customer, Minimizing delivery time, Creating more loading opportunities, Reducing the risk of damage to Cargo.</li> <li>• Supply chain Knowledge; The flow of goods in the supply chain, movement and storage of raw materials, work-in-process inventory, and Door to Door Methodology.</li> <li>• Acquainted with new developments and innovation concerning inland and sea transportation.</li> <li>• Know current and future intermodal options and alternatives such as the piggybacking system, the road-rail system, fishy back system, low body systems or the push-pull cargo sprinter.</li> <li>• Ideally he / she should be part of the port's top management in order to be able to interact effectively with the national infrastructure managers and agencies.</li> </ul>
<b>Skills</b>	<ul style="list-style-type: none"> <li>• Being acquainted with new developments and innovation concerning inland and sea transportation.</li> <li>• Organizational management and effective project management abilities in order to oversee multiple projects.</li> <li>• Problem-solving and analytical ability.</li> <li>• Ability to influence others and leading cross-functional teams</li> <li>• Strong commercial orientation.</li> <li>• Financial competences.</li> </ul>

	<ul style="list-style-type: none"> <li>• Interact effectively with the national infrastructure managers and agencies.</li> <li>• Fluency in English is mandatory (French, Mandarin and/or other language are appreciated).</li> </ul>
<b>Attitude</b>	<ul style="list-style-type: none"> <li>• Availability to travel.</li> <li>• Ability to lead cross-functional teams.</li> <li>• Logic thinking Analytical ability.</li> <li>• Keen on being updated with all new developments and innovation concerning inland and sea transportation.</li> <li>• Ability to work under stress.</li> <li>• Enterprising and Conventional.</li> <li>• Credibility and loyalty to the organization.</li> <li>• Adapt actively to different work environments.</li> </ul>

### COLD SUPPLY CHAIN EXPERT

<b>Job Title:</b> Cold Supply Chain Expert	
<b>Area of Expertise:</b> Supply Chain Management	
<b>Tasks and Responsibilities</b>	<ul style="list-style-type: none"> <li>• Ensure the performance of a cold supply chain from order to shipment.</li> <li>• Collect and analyze supply chain data to recommend improvements to boost performance and reduce costs through the coordination with other professionals to implement changes and new systems.</li> <li>• Work in a supervisory capacity; oversee a variety of different companies within the cold supply chain to ensure that the overall process runs smoothly.</li> <li>• Involve in the development and implementation of projects and policies to achieve a smooth transit of goods through the port.</li> <li>• Serve as a liaison between the port authority and cold supply chains representatives.</li> <li>• Conduct data analysis to improve supply chain operations to increase efficiency and reduce costs.</li> <li>• Construct appropriate forecasts to identify key changes that will impact supply chains services and infrastructure requirements in the future.</li> <li>• Act as an interface between the private and public sectors, communicate issues and appropriately resolve customer requests.</li> <li>• Coordinate with other professionals to implement changes and new systems.</li> </ul>
<b>Qualifications</b>	<ul style="list-style-type: none"> <li>• Supply Chain Management, Finance, engineering or similar fields.</li> <li>• Postgraduate studies on Intl. Business/trade and/or maritime sector.</li> <li>• At least 5 years in logistics/freight forwarder/climate controlled warehouses companies.</li> </ul>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>• Know about Supply Chain Management.</li> <li>• Understanding of Finance.</li> <li>• Identify Hazard analysis and critical control points.</li> <li>• Knowing product specific quality control and assurance standards.</li> <li>• Operational understanding of the safety precautions to be taken for product handling.</li> </ul>

	<ul style="list-style-type: none"> <li>• Identify organization’s policies and procedures.</li> <li>• Microsoft Office Applications, especially excel.</li> <li>• Familiarity with supply chain processes (e.g. inventory planning, warehouse management).</li> <li>• Knowledge of ERP systems (SAP, Big Data, IoT, Qlik, Microsoft or similar).</li> <li>• Communication or marketing knowledge.</li> </ul>
<b>Skills</b>	<ul style="list-style-type: none"> <li>• Excellent analytical skills, including the ability to evaluate complex situations and make clear, logical recommendations to address the challenges those situations present.</li> <li>• Negotiation and Excellent written and verbal communication skills in order to build strong work relationships with suppliers, customers and his team.</li> <li>• Solid understanding of his various Tasks related to cold supply chains and its components and information.</li> <li>• Good organizational skills, strong attention to detail and ability to prioritize tasks.</li> <li>• Excellent written and verbal communication skills.</li> <li>• Problem-solving aptitude.</li> <li>• Fluency in English is mandatory (French, Mandarin and/or other language are appreciated).</li> <li>• Understand various business environments.</li> </ul>
<b>Attitudes</b>	<ul style="list-style-type: none"> <li>• Ability to negotiate and build strong work relationships with suppliers, Customers and his team.</li> <li>• Solid understanding of his job related components and information.</li> <li>• Goal oriented.</li> <li>• Multitasking ability.</li> <li>• Attention to details.</li> <li>• Credibility and transparency.</li> </ul>

## ENERGY TRANSITION MANAGER

<b>Job Title:</b> Energy transition Manager	
<b>Area of Expertise:</b> Energy transition	
<b>Tasks and Responsibilities</b>	<ul style="list-style-type: none"> <li>• Coordinate the collective efforts of the organization towards decarbonisation while balancing the need for the obtention of energy.</li> <li>• Constant correspondence with a multitude of interested parties such as electricity providers and agencies, terminals, shipping lines, other ports.</li> <li>• Coordinate the different port teams (basically operations, infrastructure, finance and commercial) in the projects design and lead the transition.</li> <li>• Initiate, design, facilitate and coordinate projects to accelerate the energy transition through innovation and collaborative solutions.</li> <li>• Communicate proactively with stakeholders to maximize output, engagement, success and relevance of projects.</li> <li>• Develop complete project plans and associated communications initiatives.</li> <li>• Facilitate project workshops.</li> <li>• Develop and deliver reports and presentations.</li> <li>• Communicate key project results to stakeholders.</li> <li>• Report directly to the port's top management.</li> </ul>
<b>Qualifications</b>	<ul style="list-style-type: none"> <li>• University Degree, Engineering, Technology, Management.</li> <li>• At least 4-6 years' experience as project manager or similar.</li> </ul>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>• Environmental knowledge (Energy systems, integrations of energy systems,), sector operations processes.</li> <li>• Knowledge of current issues relating to climate change, mining and energy, clean technologies and transitions.</li> <li>• Define developing and implementing campaign strategies relating to climate change, environmental conservation and sustainable development.</li> <li>• Identify operations of the company in order to recommend changes to energy transition, and manage the steps required.</li> <li>• Knowledge and understanding within areas like energy, digitalization, business development, innovation, transformation, strategy implementation and change.</li> </ul>
<b>Skills</b>	<ul style="list-style-type: none"> <li>• Advance skills in advocacy, community outreach, multi-stakeholder management, and various organizations.</li> <li>• Strong empowerment in order to lead the port's main areas in the transformation.</li> <li>• comparative analysis and synthesis capabilities,</li> <li>• planning and time management skills,</li> <li>• Analytics.</li> <li>• Environmental knowledge or technical skill on environmental issues</li> <li>• Ability to successfully initiate, facilitate, plan and manage e.g. business, energy and digitalization projects.</li> <li>• Strong communication capabilities and talent for building network and trusted relationship.</li> <li>• Fluency in English is mandatory (French, Mandarin and/or other language are appreciated).</li> <li>• Organizational skills.</li> </ul>
<b>Attitudes</b>	<ul style="list-style-type: none"> <li>• Credibility and Transparency.</li> </ul>

	<ul style="list-style-type: none"> <li>• Confidentiality.</li> <li>• Well organized and structured.</li> <li>• Initiative.</li> <li>• Understanding the importance of creating good working environment and strong teams.</li> <li>• Multi-tasking ability.</li> </ul>
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## Onshore-Power-Supply Manager

<b>Job Title:</b> Onshore-Power-Supply Manager	
<b>Area of Expertise:</b> Onshore-Power-Supply	
<b>Tasks and responsibilities</b>	<ul style="list-style-type: none"> <li>• Initiate, design, facilitate and coordinate projects to implement and run OPS systems in ports</li> <li>• Create and oversee the implementation of short and long-term projects and strategies to implement OPS solutions in ports</li> <li>• Calculate the budget, project energy savings, and identify the goals for each project.</li> <li>• Project energy savings, and calculate emissions savings and external costs of potential emission savings.</li> <li>• Undertaking feasibility studies for designing and installing OPS in ports.</li> <li>• Analyse vessel call data to calculate energy demand,</li> <li>• Calculate cost benefits and operating costs.</li> <li>• Keep up to date with legislation affecting OPS, such as the EU Emissions Trading System (EU ETS).</li> <li>• Report to the port's energy transition manager.</li> </ul>
<b>Qualifications</b>	<ul style="list-style-type: none"> <li>• Degree in Marine engineering degree with strong focus on energy systems, smart grid, renewable energy, climate change and processes of change.</li> <li>• Electrical Engineering, Science and technology.</li> </ul>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>• Knowledge of technical methods to reduce the energy consumption of anchored ships such as converting the power generation source from the ship's to alternative energy supply methods.</li> <li>• Well aware of emission reduction methods for anchoring ships such as land-based and ship-based reduction Systems.</li> <li>• Understand ports sustainability management and operations concepts especially resilient infrastructure and equipment</li> <li>• Deep knowledge and up to date with international regulations and IMO Conventions related to port environment , bunkering and sulphur emission reduction.</li> <li>• Advanced Knowledge of occupational health, safety and security in ports.</li> </ul>
<b>Skills</b>	<ul style="list-style-type: none"> <li>• Highly organized individuals who can prioritize tasks and complete multiple simultaneous projects on deadlines.</li> <li>• Technical skills (control systems, distribution systems, power electronic and micro-grid and smart grid).</li> <li>• Highly analytical Skills.</li> <li>• Project Management.</li> </ul>



	<ul style="list-style-type: none"> <li>• Decision-making capacity.</li> <li>• Transparency.</li> <li>• Confidentiality.</li> <li>• Foreign languages, especially English.</li> </ul>
<b>Attitudes</b>	<ul style="list-style-type: none"> <li>• Multitasking ability.</li> <li>• Well organized.</li> <li>• Initiative.</li> <li>• Transparency.</li> <li>• Confidentiality.</li> </ul>

### CIRCULAR ECONOMY MANAGER

<b>Job Title:</b> Circular Economy Manager	
<b>Area of Expertise:</b> Energy transition and city port	
<b>Tasks and responsibilities</b>	<ul style="list-style-type: none"> <li>• Enabler of change, to help to reduce waste, increase energy efficiency and promote responsible water use – all as part of a journey towards a low-carbon, sustainable economy in all port community.</li> <li>• Develop and oversee the implementation of short and long-term projects and strategies to implement the circularity strategy.</li> <li>• Set the overall strategy; including planning, developing and implementing a portfolio of projects and activities to support the circular economy.</li> <li>• Develop strong relationships with external stakeholders to identify interventions and assistance mechanisms to improve the delivery of projects.</li> <li>• Understand current and future legislative and policy drivers relating to the circular economy.</li> <li>• Contact the interested players is compulsory in order to coordinate tasks and implementing the new systems.</li> </ul>
<b>Qualifications</b>	<ul style="list-style-type: none"> <li>• Educated to degree level or equivalent in a relevant discipline and/or relevant professional experience.</li> </ul>
<b>Knowledge</b>	<ul style="list-style-type: none"> <li>• Define all processes and activities of your organization using the Circular Thinking.</li> <li>• Understand all businesses of the organization and be able to identify areas for possible circular improvement.</li> <li>• Understanding of Finance.</li> <li>• Knowledge of project design and management in terms of recycling and reducing process waste.</li> <li>• Knowledge of increasing process efficiency, reducing costs and, consequently, through reduction on energy costs and raw materials acquisition as well as increasing efficiency in production processes and higher product added value.</li> <li>• Evidence of successfully engaging with different stakeholders and creating shared vision across groups. Ability to find and make relevant new contacts.</li> </ul>
<b>Skills</b>	<ul style="list-style-type: none"> <li>• High emotional intelligence across cultures.</li> <li>• Capacity to work independently, proactively address problems and meet deadlines.</li> <li>• Engaging communicator across cultures both in person and in writing, ability</li> </ul>

	<p>to adjust style of communication to suit audience.</p> <ul style="list-style-type: none"> <li>• Comfortable speaking to large audiences and running workshops with diverse stakeholders.</li> <li>• Ability to manage multiple project tasks and ad hoc demands simultaneously.</li> <li>• Thrives when working in a collaborative environment and understands that the ebb and flow of team priorities may require “all hands on-deck” at times.</li> <li>• Excellent verbal and written communications skills in English are critical, fluency in additional languages is an advantage.</li> </ul>
<p><b>Attitudes</b></p>	<ul style="list-style-type: none"> <li>• Multi-tasking ability.</li> <li>• Enthusiastic about his working environment.</li> <li>• Stress management ability.</li> <li>• Conflict resolving ability.</li> <li>• Awareness of the importance of his communications abilities and its effect on achieving job goals.</li> <li>• Can work well independently and in teams.</li> </ul>

## Common skills to all positions

All these areas to be covered in ports in the coming years will require new staff or newly trained personnel from the port authorities with some skills and education areas that are common to all the sectors and positions identified.

General skills:

- Strong IT background -knowledge
- Capacity to work in multidisciplinary ecosystems
- English and second language Chinese, French, Arabic, Spanish
- Analytical and problem-solving skills
- Organizational management and effective project management abilities in order to oversee multiple projects
- Project management skills to manage a budget and cope with practical issues
- Ability to influence others and leading cross-functional teams
- Excellent numeracy and literacy skills for analysing and interpreting quantitative and qualitative data, carrying out research, writing reports and making recommendations.
- Microsoft applications
- Knowledge of international trade/business and the maritime sector

The MEDports Association is a non-profit organization gathering Mediterranean Port Authorities and actors from the port and maritime sector.

For more information on MEDports Association's internal activities, follow:

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