

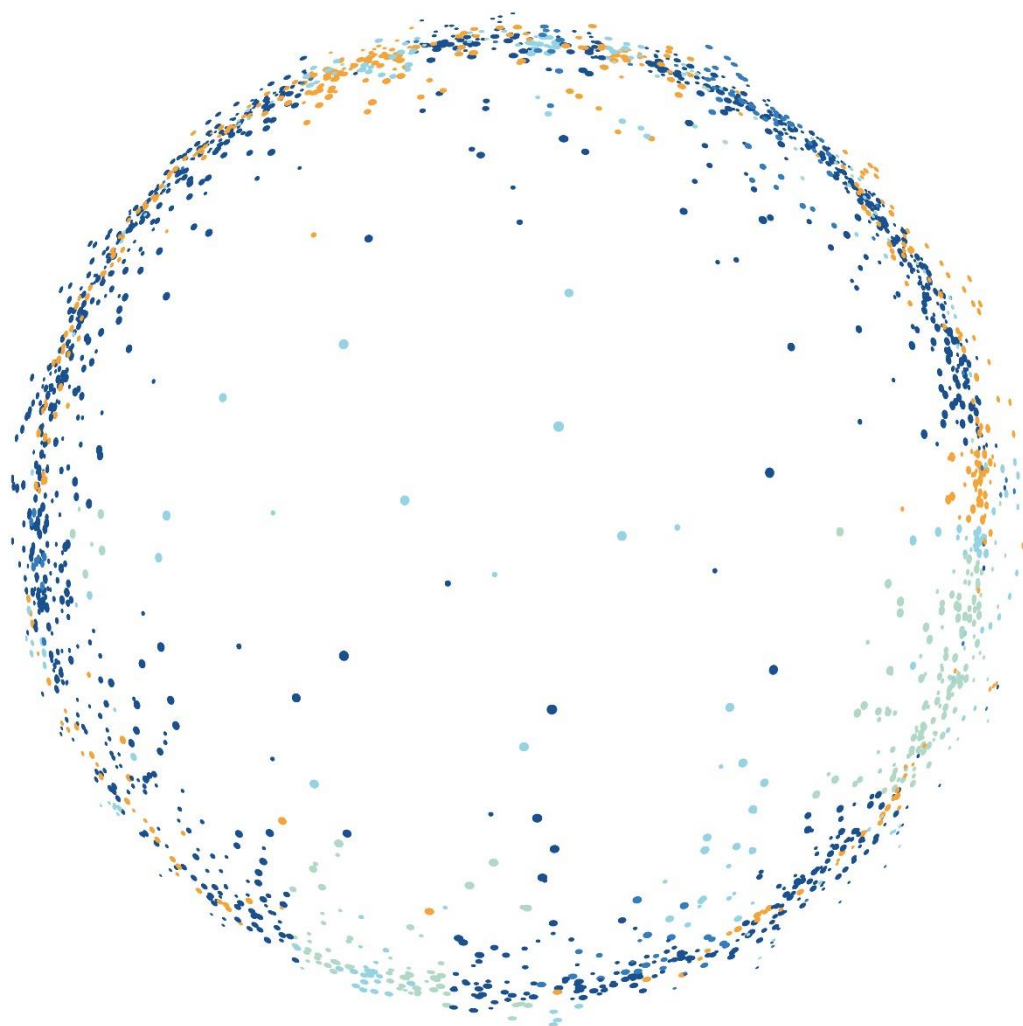
YOUNG SHIP AGENT OR SHIP BROKER OF THE YEAR AWARD 2022

NÍCOLAS HENRIQUE MARQUES ESPERANÇA DE SOUZA

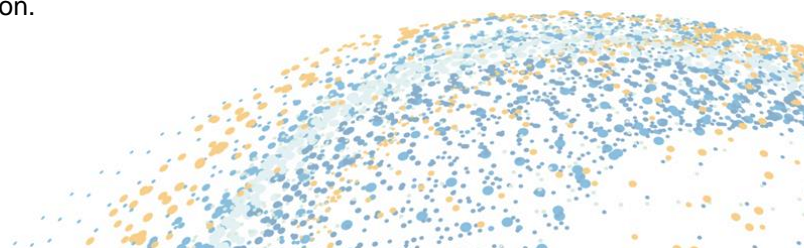
**A TECHNICAL ANALYSIS OF THE KEY ELEMENT BEHIND SHIP OPERATIONS:
HUSBANDRY SERVICES, UNDER THE REMOTE CENTRALIZATION SCOPE**

**BRAZIL
2022**





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ABSTRACT

The present project aimed to analyze the husbandry services based on their importance during ship operations, identifying their variables and applicability in a technical way, understanding their indispensability in the maritime sector, covering the relationships between the interested parties in the supply chain, including the necessary coordination for services development. This approach covered the technical context under recent husbandry scenario, considering operational factors. Remote centralization of husbandry services was analyzed and explained, considered as the future operational methodology for these services, ensuring its essence, efficiency and all the challenges for a desirable continuous development, including ESG policies adoption. To carry out this project, personal experiences and technical bibliography were used as a method of data collection, based on operational perspectives. I committed myself to transforming all this research into an accessible reading, thus facilitating the understanding of people who never had contact with the maritime sector before, without losing the technical spirit of the paper.

Keywords: Husbandry Services, Ship, Remote Centralization of Husbandry Services.

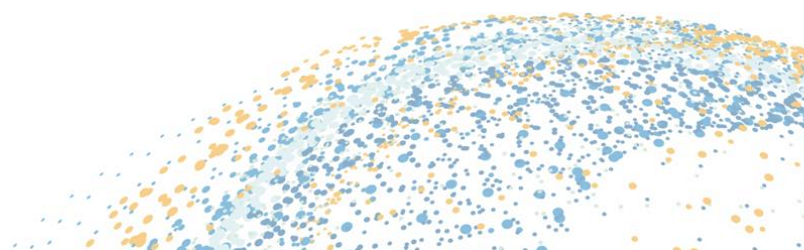
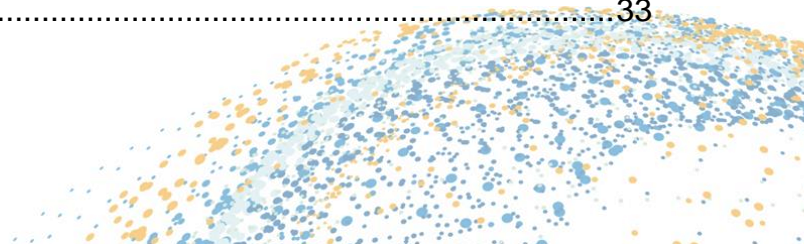


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PREFACE

My name is Nicolás, I'm 22 years old, graduated in International Relations from the Catholic University of Santos. I love to play videogames, read sci-fi books, watch movies, and have some fun with my beloved ones. Since I turned 16 years old, I became part of the maritime industry. 6 years on this road so far, with so much strive and commitment.

I was born and raised in Santos, Sao Paulo, Brazil. City that has the largest port in Latin America. I'm currently part of the Wilhelmsen Group, working as a Husbandry Central Agent (Maritime Agent), in the Central Agency department, also based in Santos, Brazil. My team is responsible for husbandry operations throughout the Americas.

Due to my facility with academic articles, in addition to my professional commitment to this niche, I turned husbandry services into a technical treasure, being able to analyze and study this great matter in detail, considering several operational and theoretical variables so that this monograph could be developed with excellence.

I wrote this monograph with the objective not only to raise awareness of the professionals from the maritime industry, but for all people who are interested in discovering how ships manage to maintain excellent conditions for their operational purposes around the world, as well as academically promote this scenario that involves a dynamism of coordination which is absolutely necessary for every existing ship.

I turned the sea my biggest practical challenge, not only transforming the oceans into my dream but the grandeur of the waves my purpose.

Welcome on board.

1. HUSBANDRY SERVICES

Husbandry services are essential for all existing vessels in the current maritime scenario and may occur at the same time as ship's operation during a port stay¹, in the smoothest and most practical way possible, without impacting vessel schedules. Although they are key elements behind all ship operations, for many, these are totally unknown services. My objective here is to spread this matter as far as I can into and outside the maritime industry.

Many factors are necessary to perform the coordination of these services, such as commitment, punctuality, and flexibility. The coordination of husbandry services deals with a foreigner parties, then principals in general entrust husbandry agents the responsibility to coordinate these services, considering husbandry agent is fully aware of country jurisdiction, acting as a customer's extension in foreigners ports, having the same concerns and operational care that the principals himself would have.

Belongingness is a feeling that must be present in every husbandry agent, due to most of the times when an appointment is received, it is necessary to combine the professional commitment and the technical understanding of the function, in order to perform the best possible coordination.

1.1. DEFINITION

The word "husbandry" comes from centuries ago, it meant "management of a household", an older meaning for the word "husband" that nowadays means "to manage cautiously". Currently in practice, we understand as "the careful use of money, food, supplies, etc." (CAMBRIDGE DICTIONARY, n.d.).

In maritime industry field, husbandry services are a practical coordination that involve all the ship owner's administrative needs for the vessel, directly related to vessel's maintenance. Services that are directly coordinated by a husbandry agent with representation in the area where the services are required, whose has a network with

¹ Complex Husbandry Services goes beyond than coordinated services during a port stay, which also involves emergency cases. This matter will be explained in the topic 1.3.

local authorities and suppliers, providing not only services, but trustiness to the ship owners.

Husbandry services can't be confused with Protective Agent services, since the latter is directly related with local representation regarding nautical interests, on behalf of ship owners. Dealing with sensitive asymmetry of information between ship management and local agent, such as: uncomfortable relationship with agents, uncharted territories and complex governmental regime in some cases.

1.2. MAIN ELEMENTS

The main elements of husbandry services are the essences of its core business, services that are most requested by the ship managers. In view of many variables within each type of service, I will exemplify in a clear and didactic way.

1.2.1. CREW CHANGE

Crew change is without a doubt the most requested service anywhere in the world when it comes to husbandry services. These services basically consist of embarking new seafarers who's travelled from their home countries to a certain port – anywhere in the world – where the vessel will call and disembarking seafarers were already on board.



Image 1 Source: Nicolas Henrique

According to the IMO, “Crew changes are vital to prevent fatigue and protect seafarers’ health, safety, and wellbeing – thereby ensuring the safe operation of maritime trade [...]” (IMO, n.d.).

To ensure a good operation, all interested parties must be communicated accordingly. As soon as an agency receives an appointment for a crew change from ship management, several arrangements must be made locally, so that crew change can happen in a smooth way. That’s the reason husbandry agent must be fully aware of local jurisdiction and must have a good network with local suppliers and port authorities, to deliver necessary reliability.

Ship's management company – crew manning department – that acts on behalf of the ship owners must inform the husbandry agent regarding all details about seafarers that will disembark (**off-signers**) and whose will embark (**on-signers**). Once all documentation is received locally by the agent responsible for this service, husbandry agent starts local arrangements with local authorities (may include, but is not limited to: Federal Police, Port Authorities and Health Authority). After all the formalities and

authorizations granted by competent authorities – which certainly change from country to country – the crew change can be carried out.

In a didactic way, the husbandry agent coordinates the arrival of seafarers from their country of origin and is responsible for all the clearance coordination and formalities with local authorities to carry out the embarkation of these seafarers. On the other hand, for seafarers who will disembark, the husbandry agent coordinates the entire repatriation process, from the moment seafarers disembark until the moment they catch the repatriation flights.

“ILO’s 2006 Maritime Labour Convention (MLC) states that the maximum continuous period that a seafarer should serve on board a vessel without leave is 11 months. This period may be exceeded in situations of “force majeure”, but any extension must be accompanied by appropriate safeguards to avoid any abuse and protect seafarers’ rights.” (IMO, n.d.)

The agent responsibility in charge of this service must carry out a practical coordination of all seafarers’ logistics. May include, port clearance, immigration assistance (port and airport), transportation, launch boat, medical assistance (if applicable)², hotel accommodation and any assistance required by seafarers in accordance with the ship management’s parameters.

An interesting point to be observed is the commitment and care agent must have while coordinating this service. Crew change involves the coordination of people who may have never visited the country where the vessel is calling. For this reason, it is necessary to know the importance of good coordination, making seafarers feel well supported from the moment they enter the country until they leave, considering it’s the initial of contract term for many and the end for others.

It’s very important to maintain a good standard of services in order to stablish future cooperation and to promote a good level of professionalism in this area. In view of vessel’s operation occur 24/7, husbandry assistance must follow its schedule, not being limited to any ‘office work hours’. Even though local authorities have their own office hours, a good

² **We will see medical assistance being applicable in the topic 1.3. where will be explained the COVID 19 variables, it includes PCR tests, medical evaluation, etc.**

husbandry agent will always be one step ahead to avoid any delays to get port authority clearance and health authority permissions.

1.2.2. SPARE PARTS

Spare Parts assistance is indeed present in many husbandry calls worldwide. The concept around this matter goes to connect a specific spare part sent by vessel's technical managers aligned with ship owners to a specific vessel, corresponding its needs. Spare Parts in transit is directly related to (FAL) *Convention on Facilitation of International Maritime Traffic of 1965*.

“This convention promotes to facilitate maritime traffic by simplifying and reducing to a minimum the formalities, documentary requirements and procedures on the arrival, stay and departure of ships engaged in international voyages” (FAL, 1965).

FAL convention's main objectives are to prevent unnecessary delays in marine traffic, to aid co-operation between governments, and to secure the highest practicable degree of agility in formalities and other procedures. Spare parts delivery is so important that this process couldn't be under all standard local bureaucracies, considering the global supply chain. In view of FAL convention covers *Spare Parts in Transit*, transit facilitation of spare parts is ensured for signatory countries of the convention.

This service contains a high level of importance due to possible technical repairs in the vessel, not only for preventive maintenance reasons. Spare parts assistance is very essential in a way or another to maintain vessel in good technical float conditions.

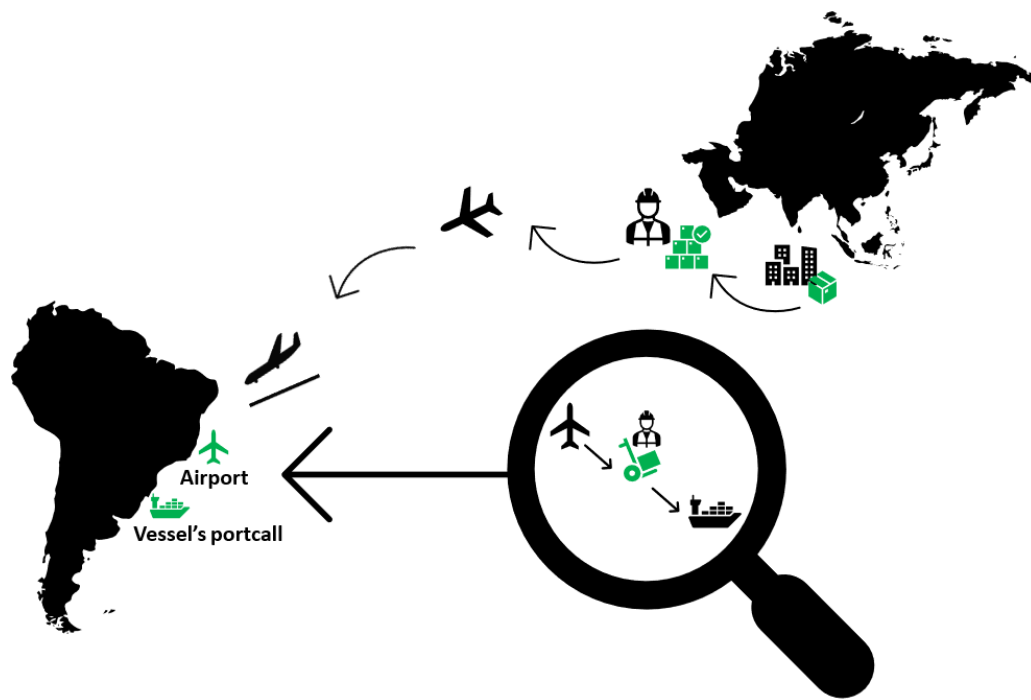


Image 2 Source: Nicolás Henrique

Vessel's technical managers hire a cargo agent to take care of all procedures and technical bureaucracies at origin before sending cargo to the consignee abroad. Once technical managers have the spare parts ready to send, cargo agent starts to act then on, performing all arrangements locally to send the spare parts to the destination by airfreight.

When cargo is schedule to be sent, cargo agent needs to send all related documents to the husbandry agent at destination, Air Waybill, Packing List and Commercial Invoice. With necessary documents received at destination, the husbandry agent can get in touch with a local customs broker to prepare all formalities to perform the cargo clearance as soon as spare parts arrive at destination airport and then, schedule the cargo transportation to the vessel.

All the coordination is established by logistical planning considering the day cargo will arrive at destination, managing the necessary time for clearance and delivery at port/vessel. The delivery of spare parts – once spare parts at port – can be arranged by launch boat or inland transportation, depending on vessel position, port regulation as well as customer decision. The reverse process can also occur in some exceptions, collecting a spare part on board and send abroad to a consignee appointed by the customer.

1.2.3. COURIER

Courier assistance is a fundamental support provided to the vessel with the objective to delivery and connect parcels to the vessel. There isn't a specific party to send a courier to a vessel, then, ship owners, ship managers and even technical managers can dispatch a shipment. It includes but is not limited to documents, charts, books, publications, CD, DVD, flash drive, etc. All similar objects in small quantities.

It's very important to never confuse a courier with spare parts. In case a spare part is sent as courier, the cargo may be retained, taxed, or lost during transit.

"The express industry simplifies and speeds the process of transporting goods. It organizes collection, usually at the end of the business day, allows the sender access to information on the progress of shipments from pick-up to delivery, and provides proof of delivery. Where shipments cross international borders, the express industry handles customs clearance as well as the payment of duties and taxes as required." (OXFORD ECONOMICS, 2009).

When aforesaid principals want to connect some important documents to the vessel, a courier company is used to perform the transportation of the parcel from origin to the destination, applying a door to door logistic.

Once a pick-up is schedule, some documents are issued. Then, a copy of AWB must be sent to the respective husbandry agent at destination for tracking purposes with courier company.

As soon as parcel arrives at agency office at destination, the husbandry agent is responsible to arrange transportation to deliver the parcel on board in due time after vessel's arrival. It's a service that doesn't require high coordination complexity, however, it remains a necessary service considering the importance of parcels. In this way, the agent's notion of responsibility needs to be refined to carry out the best coordination in a practical way.

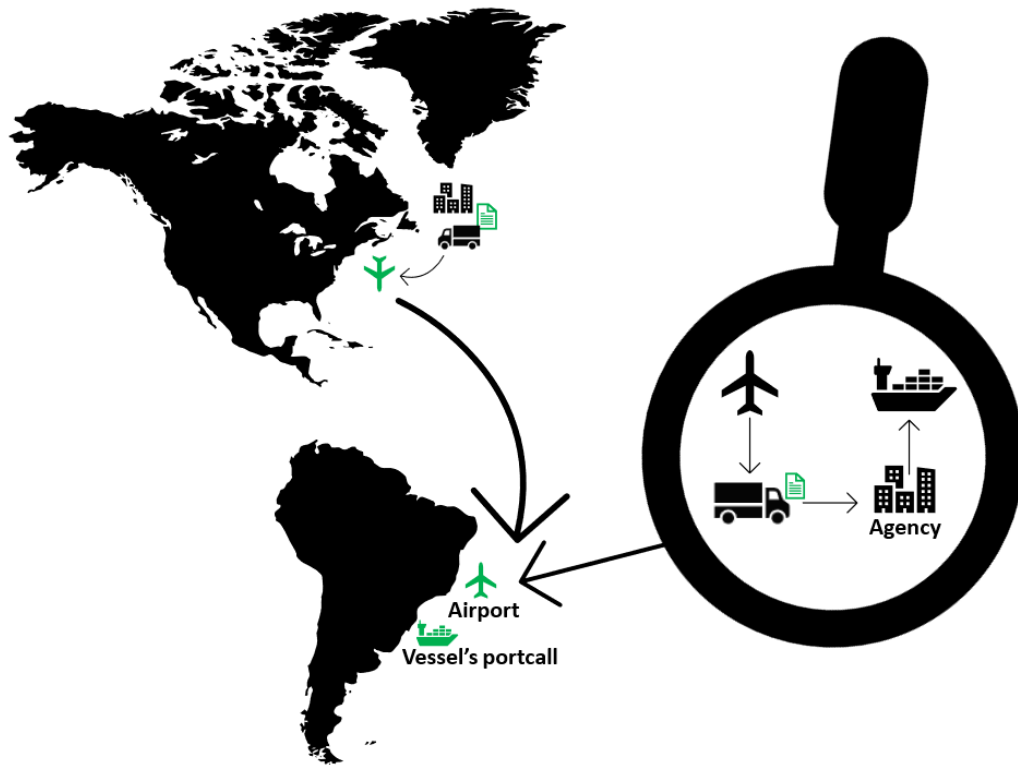


Image 3 Source: Nicolás Henrique

Some specific items can't be shipped due to international and local regulations. It's recommended to check in advance with the courier company the restrictions of prohibited goods and the limits regarding the maximum weight and dimensions allowed, which may vary according to the transport service contracted.

1.2.4. CASH TO MASTER (CTM)

During the vessel's voyages, there are no ATM machines on board, then it's impossible to get physical cash, except from shore. For this reason, Master appoints a husbandry agent to provide a 'Cash to Master' service. Cash is needed to pay suppliers, considering vessel's expenses during the voyage and crew salaries. The process is quite simple to understand but not so trivial since husbandry agent is dealing with customer's cash.

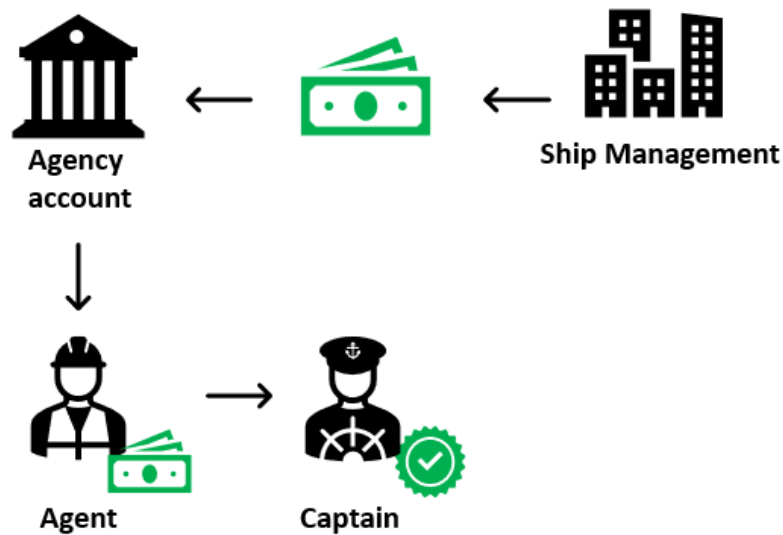


Image 4 Source: Nicolás Henrique

Master is the person who decides the exact amount needed on board (aligned with ship managers). After master's decision, ship management company proceed with the cash remittance to the agency in order to receive the amount on board as soon as possible. Once the agency receives this amount on their account, they proceed with the withdrawal request with bank institution – since cash to master involves high quantity – it uses to take some working days to get the money available.

When cash is available, the respective agent must perform a quick and safe service coordination while carrying thousands of dollars. Sometimes it includes an armed escort during money's delivery to avoid any problems such as robberies or ambushes along the way to the vessel.

As technology advances, so do all husbandry services. Lately a new option like “cash to master” has been tested and applied in some port calls. It's the launch of a digital wallet, a new generation payment solution, which optimizes the payment and bank transfer process by ship owners.

This allows seafarers and suppliers to get paid faster and more and efficiently, allowing a better control over funds for online purchases, reducing risks and operating costs. This innovation is great for seafarers, who will be able to send financial support to their families even when they are under a long period on the ocean. Surely “e-wallet”

innovation will be adopted along the years to come, so that “green bills” will be no longer necessary on board as much as they were in the past.

1.2.5. OIL SAMPLES

The Oil Samples service involves collecting a sample of a certain type of oil that was previously purchased by vessel’s technical managers to verify all the specifications of its composition, certifying that it complies with marine oil environmental regulatory compliance for its practical use. In most cases, vessels land two types of samples: Lubricant Oil Sample and Fuel Oil Sample.

When a Husbandry agent is appointed to perform this service, it’s his responsibility to coordinate all local formalities and establish a logistic plan to pick up the samples and coordinate the oil sample dispatch to the respective destination. After collecting the oil sample on board, it’s handed to the agent the landing report, where contains all information regarding the oil sample collected such as dispatch information, shipper, consignee, package dimensions, size, weight etc. The sender must present some documents to courier company before dispatching samples, it may include but is not limited to: AWB, Commercial Invoice, Not Dangerous Cargo Declaration, General Cargo Security Declaration and Commodity Transportation Datasheet.

If the service is related to fuel oil sample, husbandry agent must always act on urgent basis to avoid any single delay. The reason for this urgency is due to the vessel’s necessity to know if the fuel oil can be really burned without damage the main engine. New fuel oil is never mixed with the old one until a full report from laboratory is raised attesting satisfactory fuel conditions for it. “Conducting bunker fuel analysis is essential on-board ships to prevent engine failures, reduce vessel downtime and repairs as well as to ensure marine environment regulatory compliance is being met.” (MARITEC, 2022). The most common and required properties for fuel oils are density, aluminum silicate compounds, viscosity, and water.

Nevertheless, by no way this means that lubricating oils are not important or not urgent. It only means that one type of oil has an extreme urgency considering it can impact vessel’s operation.

“Lube oil is a one of the essential elements for operating any kind of machinery on board ship. Lube oil is responsible for lubrication and cooling of the parts which are operating relative to each other, giving rise to frictional and other types of stresses on the machinery. Without the use of lube oil, we cannot imagine any machinery operation on ship.” (MARINE INSIGHT, 2021)

The most common and required properties for lubricating oils are alkalinity, oxidation resistance, load carrying capacity, thermal conductivity, detergency, dispersion, high flash point, and low demulsification number.

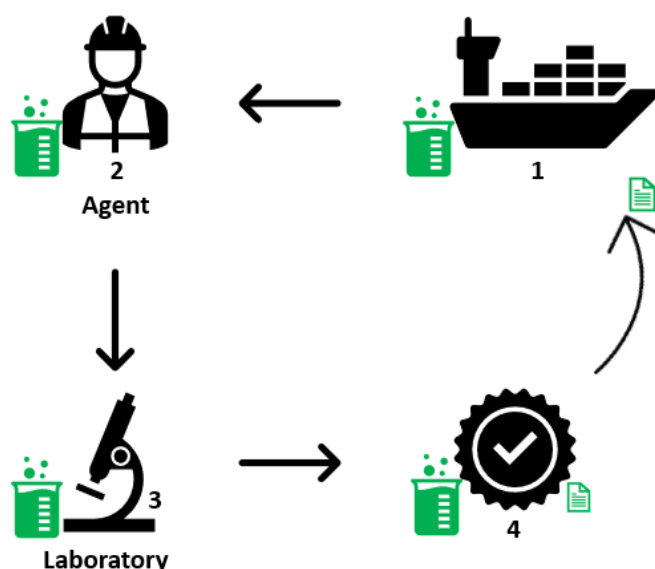


Image 5 Source: Nicolás Henrique

If samples don't match the regulatory oil specifications, vessel must change the oil in order to avoid further problems with vessel engines. All disposal process must also follow specific regulation to match environmental laws.³

1.2.6. OTHERS

Despite the most frequent services, we cannot fail to mention the other husbandry services that can be performed worldwide. It's always good to repeat, husbandry services are related to the maintenance of the vessel. We can understand how huge this scenario

³ To dispose lubricant oil is quite simple (proper unit discard) compared to fuel oil which must be de-bunkered. *De-bunkered is basically the same thing as taking out the fuel after you filled up a car.

is just by imagining how big a vessel is and how many maintenances are required over the time. Even the least required services are still fully operational, and can bring not only customer satisfaction, but operational results.

There are also services under the scope of what we consider “Coordination of booked services”, it means, administrative services for the vessel in general, includes garbage removal, underwater inspection, hull cleaning, renewal of ship certificates, sludge removal, among many others.

1.3. COMPLEX HUSBANDRY SERVICES

Services called “pure” husbandry are to be considered those that by nature can be coordinated remotely, as previously explained in the previous topics. However, I will go deeper, explaining complex husbandry services. Which are exactly those that goes beyond a remote coordination, making it necessary to have a local licensed agent to perform the mentioned services.

In some scenarios vessel may don't have a cargo operation schedule in a specific port, but still wants to perform a husbandry service call. Sometimes vessel can be OPL (out of port limits), at anchorage or if necessary vessel can come alongside just to perform husbandry services. In view of complex husbandry services, vessel can be assisted, even without having a cargo schedule under a port stay, this coordination can go beyond the port limits if necessary, always checking local authorities' regulation. For example, whether it's a case of a medical emergency, Master has no other option than perform a service call to settle this situation as soon as possible considering seafarer's health, disembarking him, and coordinating with agents in regard to medical treatment.

When dealing with cases where will be necessary to carry out vessel clearance, layby berth, protective agent roles or dry docking, local action by a licensed agent to act in a specific port is necessary, given the complexity of the services to be coordinated. This is the real essence of complex husbandry services.

1.4. COVID-19 VARIABLE

Since the emergence of the COVID-19 pandemic, the health and operational impact that this virus would bring to the maritime sector was remarkable. Inevitably, the maritime sector suffered extraordinary restrictions in terms of operability. In fact, the initiative taken to fight the virus was planned and several requirements have been determined by governments with the intention to prevent the spread of the coronavirus. However, cargo operations and husbandry services had to become increasingly cautious and comply with all the exacerbated local requirements, increasing costs exponentially and raising technical obstacles.

All these measures raised a crew change crisis, the core business of husbandry services. According to the IMO, “seafarers have been the unsung heroes of this pandemic, as the world relies on them to transport more than 80% of trade by volume, including vital food and medical goods around the globe [...]” (IMO, n.d.).

“Over 90 per cent of shipping businesses are re-thinking how crew changes are managed as a result of the Covid-19 pandemic, according to new research carried out by specialist travel management company, ATPI Marine & Energy. [...] Almost half of research respondents (45 per cent) state that crew changes have become at least twice as time consuming and stressful compared to pre-Covid times. 15 per cent of shipping professionals highlight the increased stress and time reaching a four-fold increase.” (ATPI, 2022)

When thinking about facts of all the operational representation that crew members have for maritime trade, it was fearful considering the future in which this category would find themselves during the entire corona virus crisis. “The continuing inability of ship operators to conduct crew changes has been the single greatest operational challenge confronting the global shipping industry since the Second World War.” (ICS, 2020)

Many crew members were not even granted the right to disembark and be repatriated to their home countries, causing contract extensions beyond acceptable time by maritime conventions. Crew change handling has multiplied its complexity and COVID-19 protocols have increased the costs of disbursements exponentially. PCR tests, hotel quarantines, vaccination schemes, medical care/evaluation and health reports started to

be part of the entire crew change process around the world. All protocols were instituted to ensure no contamination under crew change process.

On the other hand, there were crew members who were unable to obtain a boarding pass, were held in their homes without having the right to get a contract to perform the function of a seafarer on board.

"Due to Covid-19 and delays in repatriating seafarers, the entire crew planning system is destroyed, and crew rotation patterns are all over the place. It will take a lot of time and effort by crew managers and ship owners, and need the assistance of the international community and governments, for the regular crew change system to be re-established" (Jensen, Henrik 2020)

Despite the number of Covid-19 cases decreasing and governments re-adapting their local restrictions, we still haven't gotten rid of the problem. The impacts pandemic has brought will last for many years to come. Nevertheless, the consequences of all these developments will serve for the maritime industry to focus on a truly innovation in husbandry services.

1.5. FUTURE OF HUSBANDRY SERVICES

We live in a time when more than ever husbandry services need to be well coordinated and must follow an excellence standard in the face of the complexity of operations and port requirements. It takes a huge sense of diligence to coordinate husbandry services, so it's very important to understand the coordination must be unique, total focused and dedicated.

Always thinking on maximizing the quality, optimizing time, and reducing costs. The future of husbandry services is certainly planned considering these precious variables, and I'm committed to present this future to all of you reading this paper.

The following matter deals with a commercial and operational treasure not that common in maritime industry before 2000s and surely impacts the way we conduct husbandry services anywhere in the world. The future is called Remote Centralization of Husbandry Services. I'll explain what this centralization is – taking into account important factors – and show you how this project can be 100% operationally effective nowadays.

2. REMOTE CENTRALIZATION OF HUSBANDRY SERVICES

Remote Centralization of Husbandry Services (RCHS) concept aims to protect and extend husbandry services by utilizing scale advantages and introduction of new digital solutions. We can mention safety and compliance focus, global consulting agency, professionalized procurement, optimized costs, and operational efficiencies as great principles for this matter. Central agency team was created as the core department inside RCHS concept.

2.1. INITIATIVE

To work in the smartest and most efficient way possible, RCHS was established into the current husbandry scenario. The initiative was thought to be a centralization for all customer needs throughout husbandry services. The RCHS comes up with the idea of providing improvements and efficiency in management and operational processes. All customers can contact the RCHS, either to appoint services or just to raise enquiries related to husbandry procedures.

Imagine a scenario where a ship management company is handling many vessels around a large area and has the intention to perform husbandry services. It could be very stressing and complex to appoint one company/agent per port where the vessel was going to call. Not even mentioning how expensive it could be, without any synchronous operational efficiency.

Foresaid, appointing a central agency team to handle husbandry services in a specific region is the smartest decision customers could ever take. The centralization of services is practical and functional. Once customer appoints the Husbandry Central Agent⁴ to handle certain vessels around the continent, the magic starts to happen.

The centralized team takes all necessary actions to coordinate local services, being the focal point for the appointed husbandry services during vessel's attendance. If

⁴ Husbandry Central Agent is the professional that works in the central agency team, following RCHS concept.

physical presence is needed in-port for delivery of any services, centralized team engages suppliers or local representatives to perform these activities.

The capacity of the RCHS is such that it is also possible to coordinate complex husbandry services, even if partially remote, designating local representatives to perform these services. This raises operational representation to an initiative that in fact is bringing results above expectations, satisfying customer trustiness.

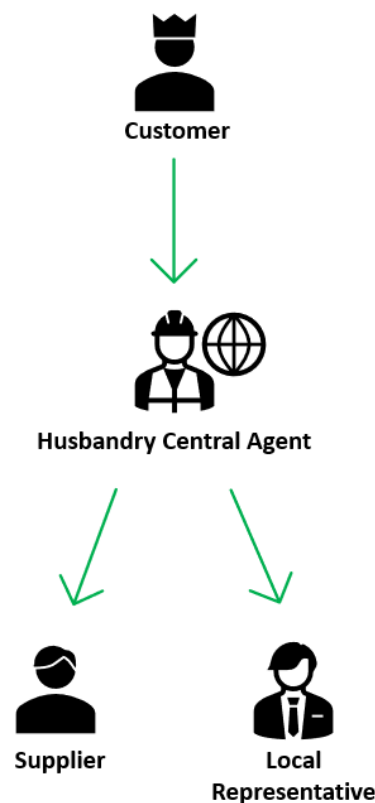


Image 6 Source: Nicolás Henrique

Nowadays I'm coordinating dozens of vessels' port calls around the region of Brazil, from north to south. Customer contact is totally centralized in me and I'm able to instruct all local representatives and suppliers to work accordingly with customer's instructions, coordinating all operations in a centralized way.

"With the increasingly competitive market, the shared services model helps companies to perform better, as they promote elements such as centralization of processes, economies of scale and efficiency, standardization and optimization of processes, improvement in services quality, areas and greater control". (Saavedra, Vanessa, 2022)

The centralization of services has been adopted by many companies around the world, being essential for the commercial and operational development. Although centralization can be applied in several ways, such as shared service centers, the need for this type of implementation remains genuine.

2.2. CHARACTERISTICS

Considered as principles, the RCHS characteristics are indeed important for its concept and for maritime industry, delivering more than results, but also reliability.

Global Consulting Agency & Husbandry Specialist – Shared husbandry database to timely and efficiently support customers with real-time information worldwide, counting on crew change specialists to find optimal port solutions for required services. A dedicated support added value services for key customers.

Safety & Compliance Focus – Standards to ensure all transport companies arranged by RCHS meet or exceed the safety requirements for transporting crew, passengers, customers, and employees.

Professionalized Procurement – Standardized supplier selections and management processes to provide quality, compliant and safe services at most favorable costs.

Optimized Costs – Centrally procured services across region boundaries to provide best cost price for customers, allowing transparent disbursements accounts (DAs). Planning of crew and spares movements to optimize costs through a single bank account easing and simplifying financial transactions and reducing banking costs.

Operational Efficiencies – Ability to leverage data, technology experience and competence of central agency team globally into delivery of operational efficiencies. Round the clock operation, basically knowing there is always someone overlooking after the vessels and its operations irrespective geography or time-zone, providing standardized service delivery and operational reporting globally with ability to continuously monitor.

2.3. GEOGRAPHICAL COVERAGE

The biggest variable in the history of humanity was and will always be the human variable. When we talk about geographic coverage and the practical impact that a department can have on a continent, we talk about significant accomplishments.

Clearly, since we're referring to a dedicated coordination point (RCHS) involving international business and operations in many countries, the Central Agent's understanding and flexibility must be raised to the tenth power. Dealing with foreigner suppliers and local representatives within another culture and time-zone is fascinating, a thing that only a remote centralization with a big geographical coverage can provide.

International Relations have never been so necessary than before. Engaging with foreigner suppliers and local representatives are indeed a great experience but also a great challenge. Geographic coverage is one of the most important points of the RCHS routine. The project is known for its flexibility and remote coordination of husbandry services, and for these reasons, the geographic coverage considering RCHS' umbrella is immense. Through a centralized team, an entire continent can be the scene of action, as you can see the example below:

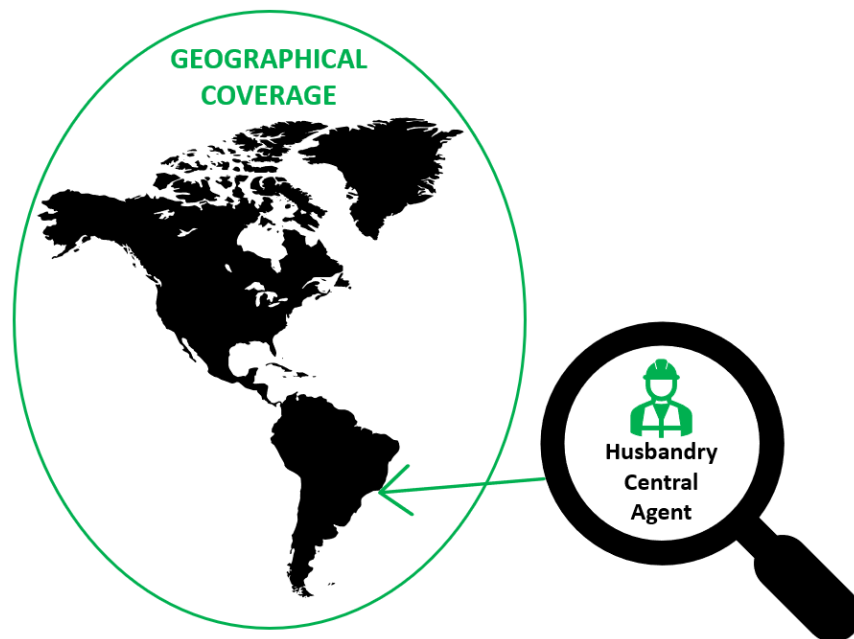


Image 7 Source: Nicolás Henrique

Geographical coverage is only possible to be adopted considering implementation of integrated systems⁵ that allow the interaction of central agents throughout the continents and remoted regions. A huge adaptability is required from the husbandry central agent, considering the agent must be aware of all guidelines, port requirements, local and federal authorities metrics and ports regulations in the region where the service is being carried out.

This work goes far beyond the simple coordination of husbandry operations but transcends boundaries. Being an agent capable of having the flexibility to deal every day with authorities, suppliers and local representatives from different countries is commendable. For commercial purposes, this is the goose that lays the golden eggs. Basically, with the argument of: "contact this person for every husbandry operation you need in a specific continent and consider the job done".

2.4. EFFICIENCY

Long ago, efficiency depended on fewer factors than it does today. Time has become faster with technology emergence, inevitably everything has changed quickly and often prevents processes and people from keeping up with such speed. In order to achieve customer satisfaction that ensures real efficiency, it is necessary to maintain a good harmony between these three pillars: People, Processes and Systems (PPS).

The certainty that the three pillars are in tune are the operating results that the company presents over a given period. The remote centralization model allows a space for the existence of these metrics and, consequently, their application. The applicability of the RCHS today is only possible due to highly developed systems to provide support to agents throughout the operation chain, consequently the adjustment of processes and procedures follow the same line of development, thus becoming great resources for people, so that properly trained staff can perform the job in the best possible way, with all necessary support a company can give.

⁵ Integrated systems change from company to company, being for tracking purposes, registering information, general reports, etc.

As we're talking about efficiency, I need to show in practice how RCHS can be fundamental for current husbandry scenario, delivering not only services but efficiency for customers. For example, currently in my company, for husbandry matters in Brazil, we have around 1075 registered suppliers that assist us in several regions from north to south. RCHS covers around 25 countries in the Americas, so you can get an idea of the range a remote centralization is capable of. For such expressive numbers, necessarily the PPS must be finely tuned so that we face no negative impacts in the operational process.

In the year 2021 we had 5231 husbandry port calls across Americas, which is a surprising number considering the post-COVID-19 crisis recovery. In 2022, the numbers tend to increase, since proportionally we have already exceeded two thirds compared to the previous year in the same period, currently 3700 port calls until July of 2022. Although we see an increase in husbandry operational volume, it is also necessary to understand how clients evaluate the method and the services provided. Throughout 2021 – and current year of 2022 – customer satisfaction surveys were conducted following the completion of husbandry port calls. The results were highly satisfactory since all customer satisfaction surveys responded in the period of 2021 and 2022 delivered 99.12% of customer satisfaction⁶.

2.5. CHALLENGES

Nowadays, the biggest challenge for RCHS is the development of Supplier Management. There are several processes necessary for the expected results, which will make RCHS objectives to be achieved. Supplier Management is “[...] the process of assessing supplier performance, defining and setting expectations for quality and delivery, and maintaining supplier relationships.” (ZYCUS, 2018).

Inside Supplier Management scope, there are necessary processes that includes technical evaluation of suppliers. Through a tool of supplier management system, it's important to define metrics among contracted suppliers, assessing the risk of supply and attendance as requested by the contractor. Taking this metric into account, it is necessary

⁶ Mentioned customer satisfaction results were retrieved from an internal database of Wilhelmsen group, considering only husbandry calls.

for both parties to establish collaboration, so that the relationship, performance and even business values can be developed.

Indeed, an assessment that measures the performance of the suppliers is required, ensuring that it meets the contractual terms and metrics established by the contractor, such as price, delivery time, quality, etc. The challenge of developing Supplier Management – currently the biggest challenge for RCHS – is quite complex, but there are many practical benefits to be enjoyed afterwards.

Once the supply chain is consolidated, despite the availability of several suppliers, it's natural that contractors direct their purchase orders to certain suppliers, streamlining the purchase process, optimizing contractual terms, delivering best quality results.

“One of the main objectives of supply management is to purchase goods and services to support the vision, mission, objectives, goals, core competencies, critical success factors, and business model of the organization. [...] this process plays an important part in identifying, mapping, analyzing, restructuring, and managing the supply chain processes in the organization.” (THOMAS INSIGHTS, 2019)

With a good implementation of Supplier Management, the operational risk reduces colossally. When there are well-established contractual processes and relationships, there is a greater efficiency in terms of costs, such as taking advantage of fixed prices or progressive discounts in exchange for longer contracts, for example.

Despite the characteristics and future benefits that may occur if we manage to face the biggest challenge of the RCHS have been presented, the development complexity is given by the factor of supplier don't understand the strategic objectives of the contractor, not achieving the desirable goals for both parties. Information asymmetry should be avoided as much as possible in order to facilitate the understanding in the contractual process.

The reason I brought this matter inside challenges for RCHS is to explain how the current precarious operational background in some regions can be overcome if the Supply Management really be applied in the effective way it should be, due to establishing international contracts in many regions is a real challenge. Then, what will be the point of a company proposing to carry out remote coordination of husbandry services if the standard of hired services is not satisfactory with high-cost prices, without quality?

The more supplier management develops, the better suppliers the agency will have in different port regions, helping establish competition that raises quality of services and sets fairer prices. From the moment you have a scenario of action at a continental and global level, maintaining the good quality of your services and establishing contracts with local representatives that are efficient, offering a cost-benefit is highly complex.

For example, in some Central America countries it is difficult to establish contracts with some suppliers and local representatives because local companies don't comply with the necessary parameters for contractual purposes, whether quality, financial or operational measures.

The operational monopoly in some countries/regions also impacts our power to act and contract suppliers due to the centralization of information and operations being held by a specific company. In this way, even if we look for local alternatives, suppliers choose to not establish commercial relationships with other parties in order to not lose the agreement with the company that “monopolizes” the operational services of a certain region.

These desired improvements are not related to the negotiation capacity of the supplier management, but to the commercial and operational variables that we find in different regions today. An effective supplier management is useless as there is no practical possibility of contracting local suppliers in a specific region.

In the past, there wasn't a fixed metric for each company establish commercial and operational parameters within the scope of supplier management. But lately we have seen parameters that are being adopted are the UN's sustainable practices, corroborating the sustainable policies agenda, such as the ESG, “[...] an acronym that stands for environmental, social and governance, and corresponds to an organization's environmental, social and governance practices.” (PACTO GLOBAL, n.d.).

2.6. CONTINUOUS DEVELOPMENT

In fact, when we face the main challenge of the project (development of supplier management) as it is one of the pillars for continuous development, we will be taking an important leap in this regard. The remote centralization project is a step towards bringing

the necessary representation to the husbandry business niche, enabling a technical development of future manpower in this context.

The actual continuous development is to adapt every will to ESG policies (**Environmental**, **Social** and **Governance**), that will inevitably expand the supply chain positively. ESG are established principles to not only achieve continuous but sustainable development. The more the ESG essence get rooted in our routines, with sure we'll reach desirable sustainability. According to economists and journalist's specialists in this field, ESG skeleton as follows:

“Environmental: refers to the practices of the company or entity focused on the environment. Topics including global warming, emission of polluting gases, such as carbon and methane, air and water pollution, logging, waste management, energy efficiency, biodiversity, among many others.

Social: relates to social responsibility and the impact of companies and entities in favor of the community and society. Mostly it refers to topics such as respect for human rights and labor laws, safety at work, fair wage, diversity of gender, race, ethnicity, creed, etc. Also including data protection and privacy, customers satisfaction, social investment, and local community relationship.

Governance: is linked to the policies, processes, strategies and management guidelines of companies and entities. They include, for example, corporate conduct, composition of the board and its independence, anti-corruption practices, existence of reporting channels on cases of discrimination, harassment, and corruption, internal and external audits, respect for the consumers rights, data transparency, executive compensation, between others.” (VALOR, 2022)

As much as Supplier Management presents its demands, it is essential that companies adopt ESG policies for their future negotiations and maintenance of current contracts. In this way the entire supply chain will be positively impacted from top to bottom.



Image 8 Source: Cash Me

Future suppliers must not only have the best prices, but the best policies adopted regarding sustainability, these must be important fundamentals throughout the

negotiation. This means that, if a company adopts ESG as a principle, inevitably this company will have an entire supply chain process in accordance with ESG terms.

Adopting ESG in the supply chain allows the company to achieve greater business objectives, considering its position in a sustainable global scenario. Continuous development is totally related to facing challenges as supplier management process, allowing ESG policies be applied in the whole supply chain.

2.7. MY JOB AS HUSBANDRY CENTRAL AGENT

To be a husbandry central agent is an everyday challenge. We always face new situations, new problems and new success. It's part of our job. Since I arrived in this niche of husbandry operations, I basically discovered a new world and committed myself to do my best. I met many people with so much strive and commitment, willing to teach me, so still today I'm so grateful for the opportunity and I promised myself I would never take this opportunity for granted.

My objective has always been to be the "guy on the chair". And not unlike what we see in movies, whoever coordinates remote operations needs to be highly committed to deadlines and reliable information. As forementioned, even if someone outside maritime industry starts to work in a place where PPS (People, Processes and Systems) are indeed present in company structure, it's just a matter of time to receive a proper training and perform a good job.

Here below you can see my desk at Wilhelmsen Port Services.

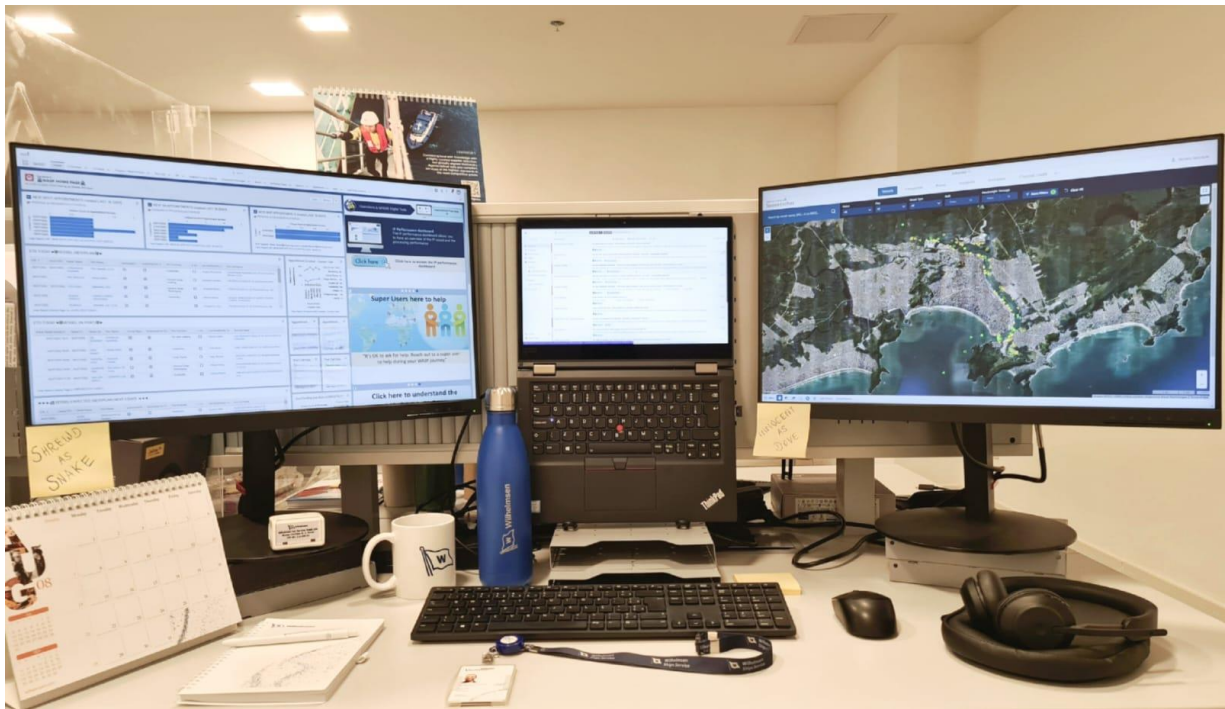


Image 9 Source: Nicolás Henrique

If I receive a call from customer, with 5 clicks I can open any vessel overview and all related husbandry services and schedules, ensuring effectiveness. This is only possible to perform because my company has established a good support on processes and systems, turning possible the employee development in its centralized function.

All monograph topics are indeed present in my daily routine. Once you have all knowledge and tools available, you can be under control of any operation. Although I can track vessels berthing in port of Santos (Brazil) just by looking outside the window (where I'm based), I don't board vessels. Here below you can find my daily window landscape.

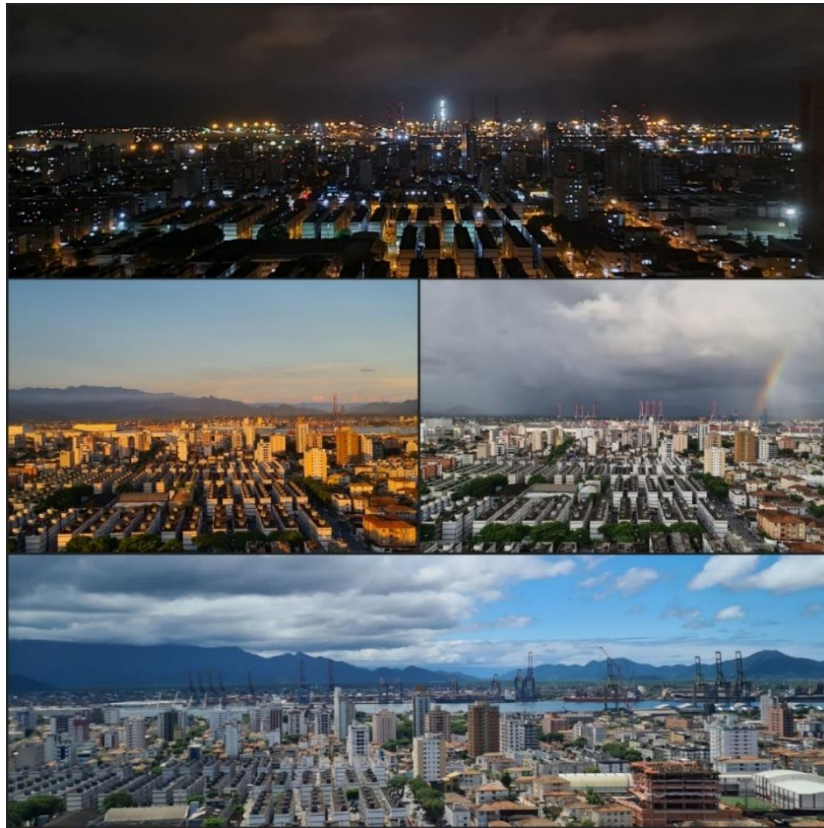


Image 10 Source: Nicolás Henrique

As stated earlier, nowadays I'm coordinating Brazil port calls in Latin America team. Since Brazil has continental proportions and a huge number of ports in its coast, to be inserted into all federal regulations and requirements is an everyday challenge, and it's exactly these challenges that motivate me and make me happy working as a Husbandry Central Agent.

CONCLUSION

There was in fact a need for these services to be disseminated in an academic way to become a theoretical basis for anyone interested in the area, in order to understand what husbandry services really are. These services have a large representation in the maritime industry, being highly necessary for ships to maintain excellent navigation conditions. The indispensability of these services is a permanent fact, as they deal directly with the ship's maintenance, whether operational or administrative reasons.

Firstly, an explanatory method of husbandry services was established in addition to the conceptual one, where main elements of these services were inserted in a didactic and technical way, with the objective of promoting this matter inside and outside the maritime industry.

Current husbandry scenario contextualization was also exposed to elucidate the facts in a real way, dealing with not only operational variables, but commercial ones. Then, it was possible to realize that these services are highly adaptable by their own nature, as they can be shaped according to the commercial, technological, sanitary, and environmental context.

The complexity of this adaptation considering the post-COVID-19 pandemic was discussed so that the reader could learn about the current husbandry scenario, causing a contextualization between the reader's prior knowledge, applied to the exemplification of the facts. In this way, a precursor characteristic was adopted in this monograph, since currently there almost none academic articles regarding the essence of husbandry services.

Second, a hypothesis has been raised that the Remote Centralization of Husbandry Services (RCHS) would be the revolution for husbandry services coordination, utilizing scale advantage and introductions to new digital solutions, ensuring effectiveness.

Considering the data presented, such as geographic coverage, number of registered suppliers, husbandry port calls and customer satisfaction survey results, it can be concluded that the hypothesis is indeed true and currently corroborates to an operational development of the RCHS in long-term scale.

A good part of these results is due to the ESG metrics adoption to the company's internal policies, positively impacting not only supplier management, but supply chain in general. The ESG was understood as an important factor within the RCHS, as allows sustainable development within an operational perspective, being the current challenge of RCHS.

ESG policies linked to the RCHS results bring a commercial enhancer of colossal strength, as it establishes a position for the company within a sustainable global context, not only necessary, but desirable. In short, the continuous development of husbandry services is applied to state-of-the-art technologies, which enable highly developed coordination, inserted under a remote centralization scope.

The understanding that the RCHS is the most comprehensive and effective coordination variable possible, can ensure adaptability and growth in many companies under husbandry context. These services can be the core business of any agency worldwide since the efficiency is much more related People, Processes and Systems than any other thing. Once the matter is treated as carefully as possible and variables are indeed predicted, positive results will come on way or another.

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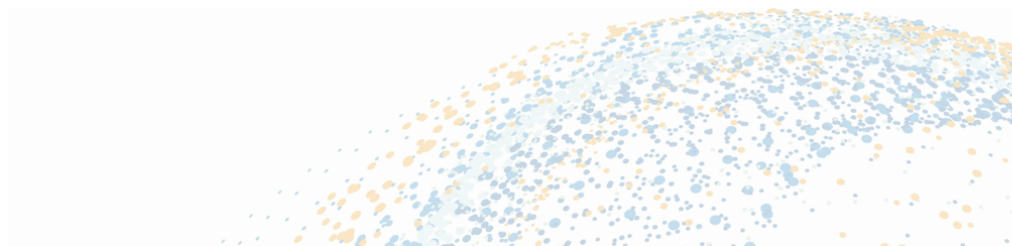
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GLOSSARY

CENTRAL AGENCY – Remote centralization of husbandry services location.

HUSBANDRY CENTRAL AGENT - Professional that works in the central agency team.

PRINCIPALS – Customers in general.

SHIP OWNER – Company that owns the vessel and pays for its operation.

SHIP MANAGERS / SHIP MANAGEMENT – Company that manages and maintain ships on behalf of ship owners.

CREW MANNING – Company or department inside ship management managing crew on ships.

TECHNICAL MANAGER / TECHNICAL MANAGEMENT – Company overseeing the ship in terms of maintenance and operations.

SEAFARERS – A crew who regularly travels by sea.

FAL – Convention on Facilitation of International Maritime Traffic.

IMO – International Maritime Organization.

E-WALLET – A digital wallet.

VENDORS – Local suppliers.

PPS – People, Processes and Systems.

RGHS – Remote Centralization of Husbandry Services.

MASTER – The captain of the ship.