Since founding Executive Ship Management 20 years ago, chief executive officer B S Teeka has grown it into the flagship of a group of companies.

PHOTO: EXECUTIVE SHIP MANAGEMENT

EXECUTIVE SHIP MANAGEMENT

Sea change in ship management

Executive Ship Management's Phoenix system has proven so effective that the company is now selling the software to its industry peers.

WHETHER the need was for a comprehensive software system or better-trained crew members, Executive Ship Management's approach was the same: in-house development.

Since starting operations in 1998, the third-party ship management company has become the flagship of a group of related firms, including a software provider and a crew training institute.

It counts 750 shore staff and more than 8,000 seafarers on its payroll, and manages a portfolio of over 150 vessels. But the company intends to remain a "boutique" player, says chief executive officer B S Teeka: "I don't want to be a big ship manager, I want to be a quality ship manager."

A former marine engineer with experience on the high seas, he came to Singapore in 1997 after 15 years in the industry in Hong Kong.

"We had no big companies supporting us," he reminisces. Yet the advantage of starting out in a market like Singapore was that no connections were required to do business, and government support was impartial: "Here, I don't have to know anybody."

The group's expansion included the setting up of commercial shipping arm Adhart Shipping in 2007; the acquisition of marine supply, engineering and repairs services firm Arc Marine in 2008; and the establishment of Executive Offshore, which owns and operates offshore supply vessels, in 2010.

Within Executive Group's fleet of marine-related businesses, however, one firm might stand out as relatively unexpected: South Nests Software Solutions, set up in 2009.

Executive Ship Management began riding the digital wave as early as 1999. Says Mr Teeka: "We knew all along that to be more efficient, we needed software."

The firm adopted enterprise resource management software, and added more off-the-shelf software solutions for various functions as and when the need arose.

Yet the issue, says Mr Teeka, is that "these all couldn't connect". Staff had to access one system for planned maintenance, another for accounts, another for crew management, and so on. The same data often had to be entered more than once, into the respective systems.

INTEGRATED SYSTEM

Eventually, the company decided to start a software firm to create its own proprietary system, so that all the components could "shake hands with each other".

After South Nests Software Solutions was set up, development began in 2010. In 2012, Phoenix took flight. The web-based software brings together all the functions needed in ship management: from inventory, purchasing and vessel accounting to planned maintenance, crew management, and ship performance.

The integrated nature of the system makes it easy to get an overview of any issue, says Mr Teeka. If there is an incident of engine trouble, for instance, it is easy to see what caused it, who was in charge on that ship at that point in time, when the engine part was last maintained, and so on. "In one platform, you get everything. You don't have to jump here and there (across different systems)."

Phoenix also features dashboards for at-a-glance monitoring. For instance, the planned maintenance dashboard tracks parameters such as the number of critical overdue jobs or major overhauls due in the next 60 days, for each ship.

Phoenix is a boon not just for Executive Ship Management, but the shipowners who are its clients, says Mr Teeka. Shipowners have access to parts of the Phoenix system for each of their ships and can thus track matters for themselves, including ship performance and operation costs.

For instance, shipowners can track the speed and fuel consumption of each of their ships, and compare this against the contract requirements. They can also track ship performance in different weather conditions, and when sailing empty – known as ballast passage – versus laden.

The Phoenix database also contains the minute technical details of each ship, including ship manuals and drawings, as well as of the equipment and parts onboard, such as the maker's reference number and how many parts are in stock.

Thanks to the interconnected nature of the Phoenix system, the same equipment part is reflected in both the purchasing and planned maintenance systems, making it easy to keep track of whether purchases are needed or have been made.

Each ship's particulars and certifications can be easily downloaded, and the contact details of each ship's administrative crew are also available.

After more than five years in use, Phoenix has proven so effective that Executive Ship Management is selling the software to its peers in the industry, with the first contract for the software signed in September 2018.

The Phoenix system is being offered in the form of various components, so companies can pick and choose the ones they need. Says Mr Teeka: "For example, every company has its own way of (approach-

ing) safety, so they may not want that module."

Even as Phoenix takes off outside Executive Ship Management, the firm is continuing to improve its use of data analytics by assembling new datasets. Currently, its analytics efforts cover vetting inspections and Port State Control inspections.

Handy graphic visualisations make it easy to identify common issues that arise during inspections, and these can be further sorted by geographical area, place of inspection, and oil major, among others. With inspections happening each day, a big-picture overview helps management make sense of the sea of data: "We can tell the ship staff to be more vigilant in those areas."

ALL HANDS ON DECK

In addressing its own needs, Executive Ship Management has taken the hands-on approach not just for software, but human resources.

"We were not getting good quality crew on the ships," Mr Teeka says bluntly. To pass India's national navigation test in shipping, one needs only to score a passing mark of 50 per cent, he notes.

Executive Ship Management's solution to the lack of high-quality seafarers was to train its own crew. It set up the Samundra Institute of Maritime Studies in Mumbai in 2002, for post-sea training, followed by another campus in Lonavala in 2005, for pre-sea training.

The Lonavala campus produces 400 cadets a year, guaranteeing them jobs aboard ships managed by Executive Ship Management. Asked how it has been able to absorb the regular stream of graduates, Mr Teeka noted that the firm will be adding 25 ships to its portfolio in 2019.

Both campuses feature simulated environments, such as an engine room simulator, a navigation simulator with different weather conditions, and an integrated gas tanker simulator in Lonavala, and a bridge simulator in Mumbai. The Lonavala campus also includes a replica "ship" on land, on which cadets can train.

Apart from these facilities, the training institutes also make use of e-learning, with the first such module introduced in 2010.

Executive Ship Management's proprietary e-learning programmes convert textbooks to a digital format with animated illustrations and recorded narration. In what the firm dubs "blended learning", trainees go through these e-learning programmes with a facilitator, who helps to keep cadets on track and can address any issues.

The e-learning programmes allow for greater consistency as the delivery of lesson content does not vary, in contrast to traditional methods which rely on individual teachers, says Mr Teeka. He notes that the cadets' results in government-conducted examinations have improved after the introduction of e-learning.

The firm has also developed Electronic Performance Support Systems for sea staff and superintendents. These are digital training modules that staff can access and use at their own pace and wherever they are.

A maintenance module, for instance, is specific to a particular model of equipment, with detailed animated instructions for each step of the maintenance process. Thirty-four such programmes have been developed so far, for areas such as engineering; navigation; health, safety and environment; cargo handling; hull maintenance; and ship inspection.

Executive Ship Management's focus on training people for the future does not stop there. Mr Teeka stresses that although the firm was founded by him and his wife, it is not a "family business".

Around 2013, the management undertook a course in leadership succession planning – ensuring that the firm can remain in steady hands as it sails forth into the future.

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(From left) Senior manager for the e-learning project Rajan Bhandari; chief financial officer Siju George; general manager of human resources and crew Lancy D'Souza; and general manager for vetting and operations Sumit Rawla have witnessed many changes in their time with Executive Ship Management, whether in the classroom, onboard ships, or in the office. The company plans to move to an Internet-of-Things approach, in which data flows from ship sensors directly into the Phoenix software system, without having to be entered manually.

PHOTO: EXECUTIVE SHIP MANAGEMENT

Going digital on the seas and on shore

WHETHER onboard ships or in the office, Executive Ship Management has seen dramatic changes in the last decade as more processes go digital.

Sumit Rawla joined the firm in 2004, having been sailing on oil and chemical vessels since 1991. As a master on a ship managed by the firm, his duties included using printed checklists to manually record tasks.

"Now the master fills up everything while on the ship, with electronic forms," he points out.

In his earliest days on the sea, he also saw requests for information arriving via radio, and sent documents to shore by post. By the time he joined Executive Ship Management in 2004, email was already in use, but communications between ships and the shore still took time.

When he left sailing to join the shore office in 2010, he became the one asking ships for information. Fortunately, things became more convenient when Executive Ship Management rolled out its own web-based software system, Phoenix, in 2012.

In developing the system, feedback was sought from former seafarers such as himself, he recalls. "We were asked our inputs – what exactly is required."

Now general manager for vetting and operations, he can retrieve information from Phoenix directly, instead of having to request it from ships. As a web-based, cloud-based system, Phoenix can be accessed on the go or from home, he adds: "You don't have to come to the office at odd hours just to get the information to share with someone else."

In some cases, he does not even need to get the data himself. Shipowners are given access to parts of the Phoenix system concerning their own vessels. This provides greater transparency and access to information, while eliminating unnecessary back-and-forth communication.

Chief financial officer Siju George has a similar story to tell about progress. In the early days, accounts were paper-based, he recalls: "It was hard to access information."

Although Executive Ship Management adopted enterprise resource management software in 2000, problems remained. As the company was using separate off-the-shelf software for several functions, the same data often had to be entered multiple times into various systems.

Apart from being inefficient, this could also result in different systems showing different values, making it hard to ensure the accuracy of data. "Now it's just a single entry," he says.

The next step is for Phoenix to be truly real-time, says senior manager Rajan Bhandari. "Twenty-four hours is too long a time," he adds, referring to the current process where seafarers enter data into Phoenix by filling out digital forms each day.

The plan is to move to an Internet-of-Things approach instead, in which data flows from ship sensors directly into the system, without having to be entered manually. As new ships already come equipped with sensors, and there are digital modules onboard showing real-time readings, all that needs to be done is to link this system back to shore.

"We will start with our own ships to demo the system," he adds. By piloting the approach with ships in its offshore unit, Executive Offshore, the company can then try to interest the owners of the ships that it manages.