

MARITIME COMMUNICATIONS

An investigation into connectivity at sea

Wherever you are, so are we.

Foreword from the General Secretary



At a time when those on land can access anything and contact anyone in the world at the touch of a button from a device in their pocket, many vessels still only provide basic communication services for seafarers.

Nautilus International would like to see all seafarers have access to an 'at home' service at sea - connectivity similar to that enjoyed by those of us who get to go home to loved ones every night - because after all, the ship is the seafarer's home for many months of the year.

As the union for maritime professionals, Nautilus is here to make our members' voices heard and to address issues our members face. Communications, or lack of, is one of the key issues we see again and again in the industry and we know that small, often simple changes, can vastly enhance our members' experiences when out at sea. When problems with a lack of connectivity on land have been solved, why not at sea too? In 2016, we saw astronaut Tim Peake Tweet, video call and watch the football from the International Space Station, yet we still cannot deliver the same level of access for our seafarers.

To better understand the current provision for those living and working at sea and to gauge the opinions and attitudes of how seafarers feel communications could be improved, we carried out a survey of our members.

The results underline that much more could be done to provide enhanced communications for those spending much of their lives at sea. To reduce potential isolation, improve communication with family and friends and maintain links with home life, effective connectivity is key. With nearly 2,000 respondents from a range of maritime professionals, our survey will provide the voice of the seafarer which is so often lacking. We also asked employers their views, to ensure common concerns can be acknowledged and addressed.

Thank you to everyone who took part in the research and to those who offered their full and frank thoughts on the issue. With your input, we are able to better understand the needs of our members and tackle the issues that matter.

This survey is only the start of the campaign and over the next six months we will be unveiling more of our findings and encouraging companies, members and ship connectivity providers to join the conversation and work together to improve communications for those living and working at sea.

Yours sincerely

Mark Dickinson
General Secretary
Nautilus International

Connectivity at Sea

Statistics show 91% of UK homes have broadband access and the UK Government recently announced that access to the internet should be a basic right, rather than a luxury. Yet our results show that despite 88% of the seafarers we spoke to having internet access at sea, those who do often have limited access at high cost.

The Maritime Labour Convention¹ recommends that reasonable access to ship-to-shore telephone communications, email and internet facilities should be available to seafarers, with any charges for the use of these service being reasonable in amount.

As a Union, we are campaigning for greater access to communications for all seafarers. Our Crew Communications campaign seeks to promote the need for internet provision at sea, hear from the companies and members that already benefit from improved services and also to provide members with the tools to call upon their employers to implement changes.

We surveyed nearly 2,000 Nautilus International members online to understand attitudes and opinions of both crew and vessel owners with regards to communications at sea. Survey respondents were all currently employed in sea-

going roles, working onboard a range of vessel types and were 97% male. They were predominantly from the UK and the Netherlands, covering all levels of experience, age, and roles within the sector. These figures are broadly representative of the industry as a whole. The Union also conducted a second survey covering employers.

As a result of the findings, Nautilus is calling on shipping companies to provide internet access to all members, and by extension all seafarers, on their vessels, and for those already doing so to provide this free of charge. With evidence from this survey highlighting that individuals are increasingly making employment choices based on the availability of internet access, it is vital for companies to keep their vessels up-to-date with the latest connectivity and broadband services.

By working with existing data in the sector, and

companies and bodies already supporting improved communications at sea, we will gain a better understanding of the need for access and use this to increase the pressure on shipping companies. One of the most common things we heard from companies and members in this survey was the prohibitive cost of internet access at sea. Therefore part of our campaign will include calling on service providers for clarification on how difficult Wi-Fi at sea is to install and to ensure that it is cost-effective. This will help give our members a strong argument to go back to companies with recommendations on the ways to improve communications at sea.

‘reasonable access to ship-to-shore telephone communications, email and internet facilities should be available to seafarers’



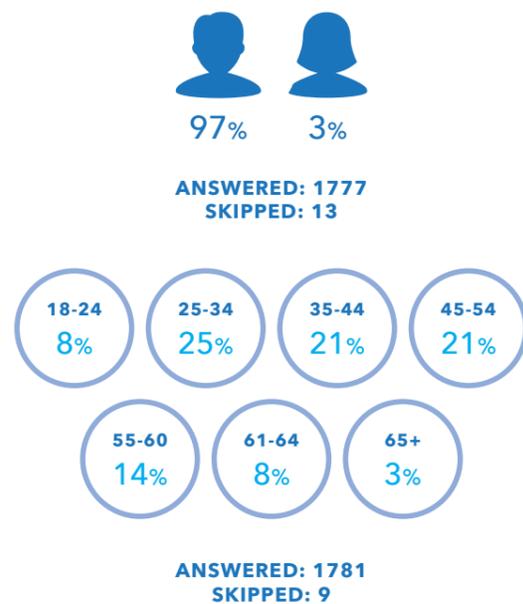
Our Findings

To find out if the recommendations of the Maritime Labour Convention were being followed at sea, statistical data was collected on communications onboard the ships of those surveyed.

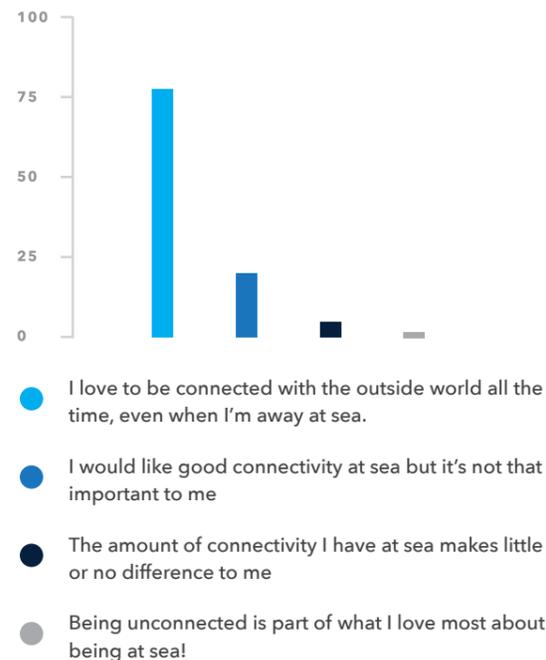
Many questions contained an option for additional information to allow respondents to convey their opinions on the subject. Qualitative information has been included, with exact comments shown. We surveyed 1,125 people from the UK as part of the survey, and 665 from the Netherlands, as well as representatives of 18 companies, giving us a sample size of nearly 2,000.

To ensure complete anonymity of participants and to encourage those surveyed to answer truthfully and thoroughly, any information relating to companies or vessel names has been removed. The survey included 71 questions for both UK and Dutch respondents and 38 for companies; and results have been rounded to the nearest whole number.

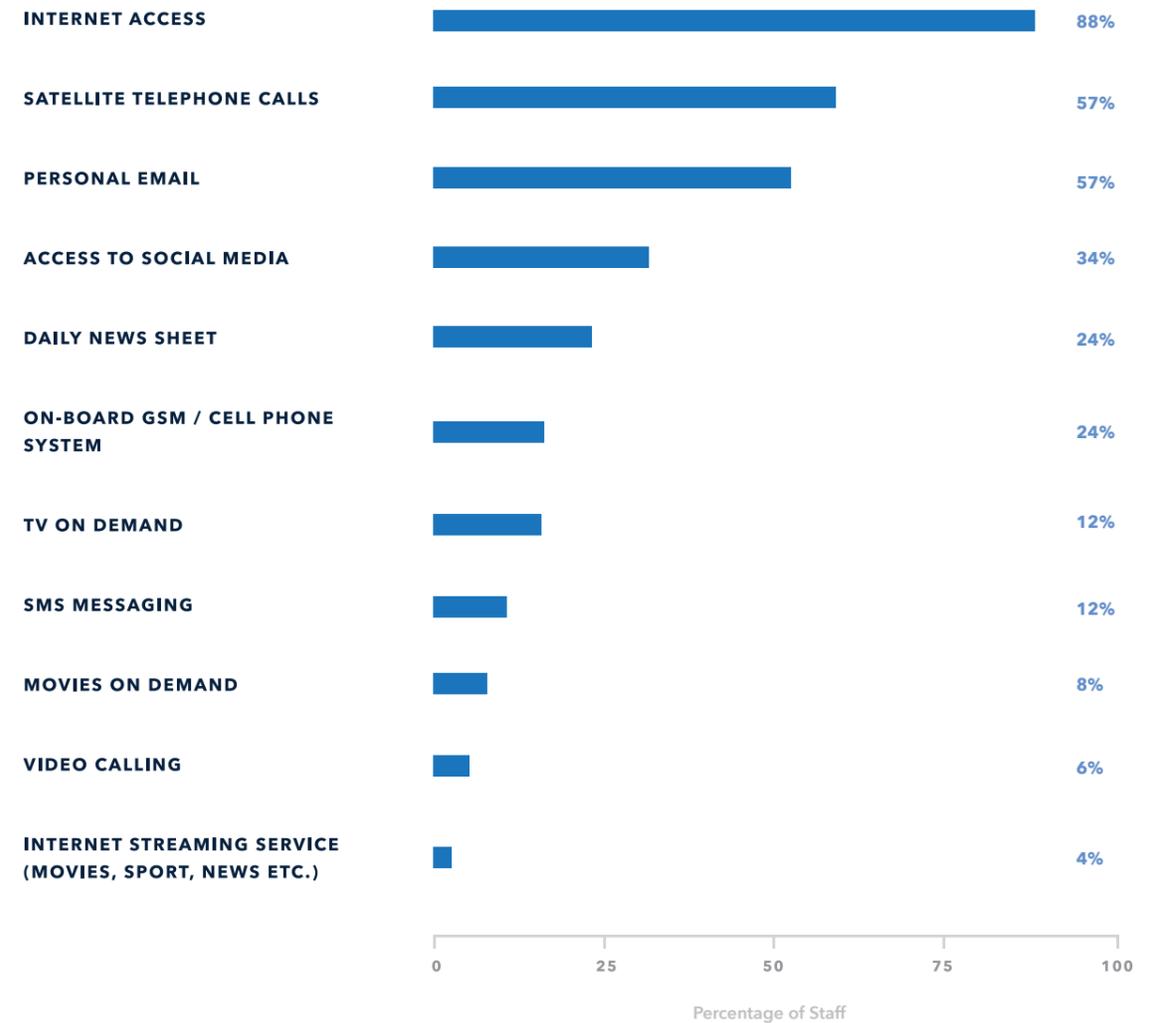
NAUTILUS INTERNATIONAL CREW COMMUNICATIONS SURVEY



How important is it for you to be connected when you are away at sea?

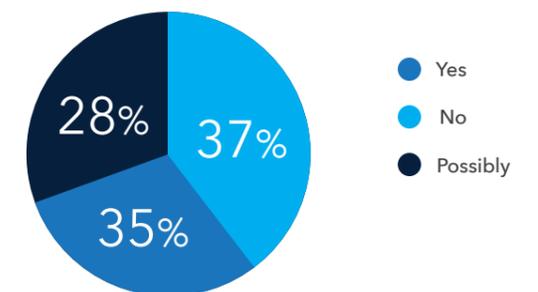


What services are provided for your personal use onboard by the ship operator?



Whilst this shows nearly 90% of ship operators are providing internet access for personal use, dramatically fewer respondents had access to personal email (just 57%) and social media (34%), and just 6% are able to use video calling, showing that despite some operators' provision of internet, the primary features that seafarers would look for to be able to stay in contact with family and friends ashore are still unavailable.

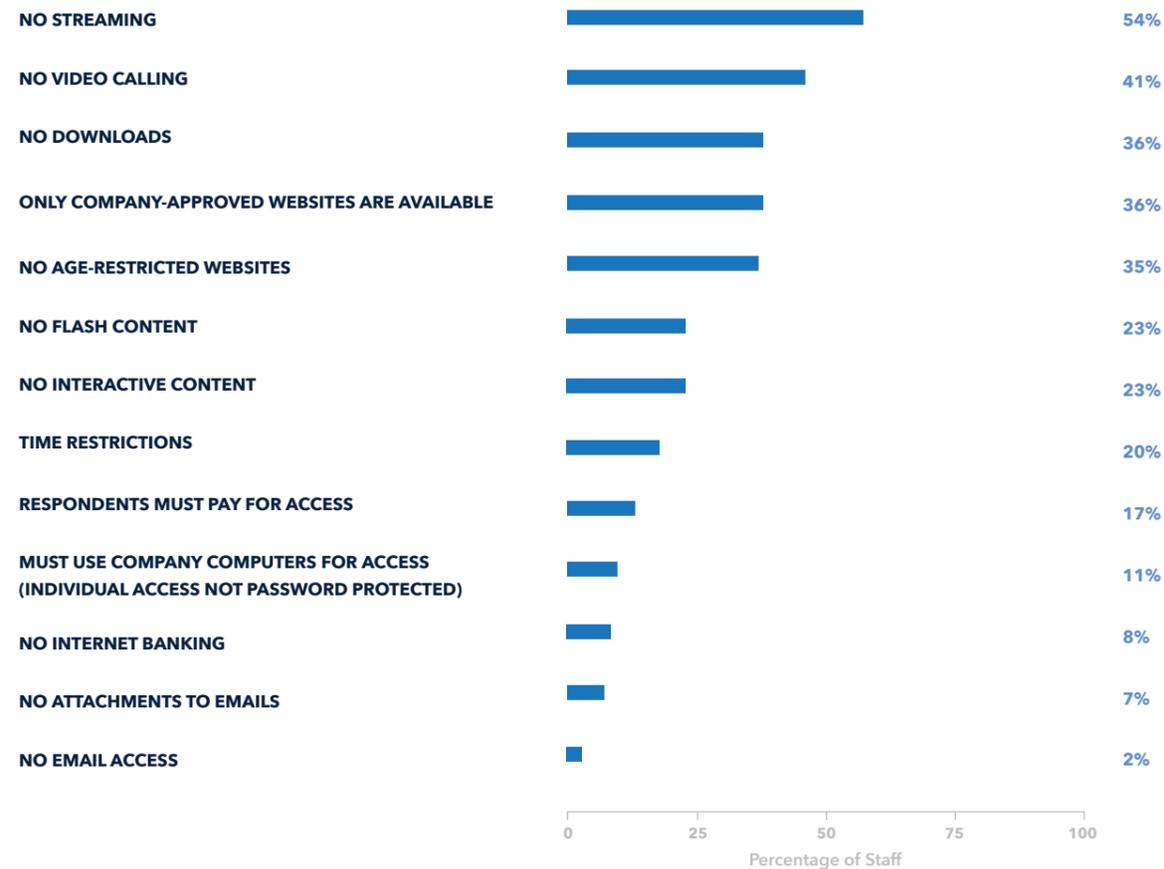
Would you move to a different company if it provided better onboard connectivity than your present one (all other Terms & Conditions being equal)?





88% of crew are able to connect to the internet regularly

Does your company place any restrictions on your internet access onboard?



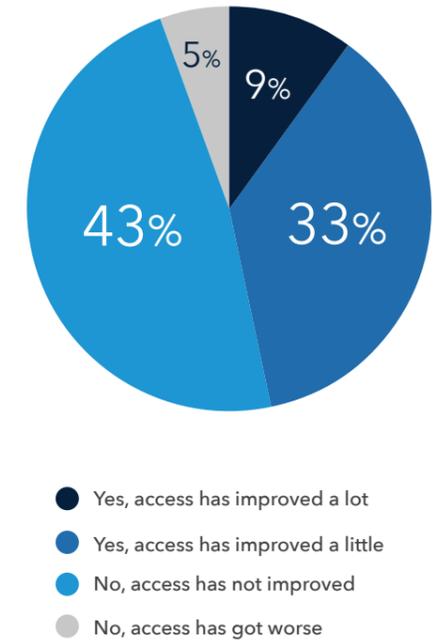
Research shows respondents saw many restrictions on internet usage; many reported that they were only able to access internet pages pre-approved by their employer and these were predominantly ones used for work purposes. Some restrictions were around companies' fears about seafarers accessing inappropriate material or causing security issues, with respondents being unable to access age-restricted websites or streaming. However, 84% of respondents said they would be willing to sign an internet usage policy with their company if it meant

better access to the internet onboard. Some 86% of respondents also said that they had never received any cyber security training from their employers, which could allay some of these fears. Anecdotal evidence also shows that many respondents want to be able to keep in touch with friends and family, yet more than 40% of respondents are not allowed to video call onboard, meaning companies could be doing much more to address this.

The Maritime Labour Convention recommends that 'reasonable access' to ship-shore telephone, email and internet facilities, at a 'reasonable' charge, is now part of the responsibility of the ship operator. However, 67% of survey respondents are still unaware of this, and are fairly evenly split on any improvements they have seen since the Convention's introduction.

Results also show that despite some companies believing that social interaction is affected by the provision of enhanced communications onboard vessels, seafarers still view crew not speaking a common language as having the highest impact on social interaction onboard, with crew using personal devices or spending time alone in cabins following closely behind. This shows that despite companies believing that improved connectivity will have a negative impact on social interaction, it is in fact other factors which are considered more disruptive.

Do you think access to communications services onboard has improved since the introduction of the Maritime Labour Convention on 20 August 2013?



Please rank what impact you believe the following has on social interaction onboard

IMPACT	VERY HIGH	HIGH	MEDIUM	LOW	NONE	RESPONSES
CREW NOT SPEAKING A COMMON LANGUAGE	520	576	296	103	65	1560
THE NUMBER OF HOURS WORKED PER SHIFT (AMOUNT OF FREE TIME)	257	679	440	138	44	1558
AMOUNT OF LEISURE FACILITIES AVAILABLE (EG GYM, TV ROOM)	266	644	433	159	59	1561
CREW USING PERSONAL DEVICES / SPENDING TIME ALONE IN CABINS	483	601	344	106	28	1562
LACK OF COMMUNAL GAMES AVAILABLE	192	498	524	259	80	1553
CREW NOT EATING TOGETHER	314	500	396	208	131	1549
A NO-ALCOHOL POLICY	361	376	317	226	261	1541
LACK OF SHARED SHORE LEAVE	288	515	426	187	137	1553

Nearly two thirds of respondents said they would consider moving company if it provided better onboard connectivity

The results also show that respondents could be influenced by internet provision from employers when making decisions about job opportunities. Nearly two thirds (63%) of respondents said they would or possibly would move to a different company if it provided better onboard connectivity than their present one, with all other conditions being equal.



What reasons does your company give for not providing internet access for personal use onboard?

TOO EXPENSIVE	46%
RUNNING COSTS ARE TOO HIGH	34%
USERS WILL DOWNLOAD TOO MANY LARGE FILES (SUCH AS FILMS)	22%
NO REASON	18%
USERS MAY DOWNLOAD ILLEGAL OR ADULT CONTENT	16%
TOO DIFFICULT TO INSTALL	14%
IT WILL BE A DISTRACTION TO WORK	11%
NEVER ASKED FOR IT	11%
SHIP WOULD BECOME VULNERABLE TO CYBER-ATTACK	8%
SAFETY ONBOARD WOULD BE PUT AT RISK	4%
IT WILL DECREASE SOCIAL INTERACTION ONBOARD	3%

03

Company Findings

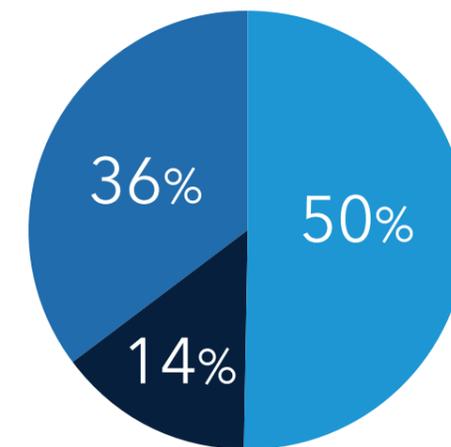
We interviewed 18 companies to discover the attitudes of those being asked to deliver better communications provision.

From the companies interviewed, most of the respondents' roles fell within HR or senior executive level, and companies were from a variety of operating sectors, predominantly in offshore, supply or support vessel sectors, which are known for having better communications onboard than others. The sectors which are known for poorer communications within the industry declined to respond to our survey.

Does your company place any restrictions on seafarers' personal internet use onboard?

NO STREAMING	54%
NO AGE-RESTRICTED WEBSITES	31%
ONLY COMPANY-APPROVED WEBSITES ARE AVAILABLE	23%
MUST USE COMPANY COMPUTERS FOR ACCESS	23%
NO VIDEO CALLING	23%
TIME RESTRICTIONS	15%
NO PERSONAL EMAIL ACCESS	15%
NO DOWNLOADS	15%
NO INTERNET BANKING	15%
NO INTERACTIVE CONTENT	15%
NO FLASH CONTENT	15%
NO ATTACHMENTS TO EMAILS	8%
CREW MUST PAY FOR ACCESS	0%

Does your company allow seafarers access to communications for personal use while at sea?



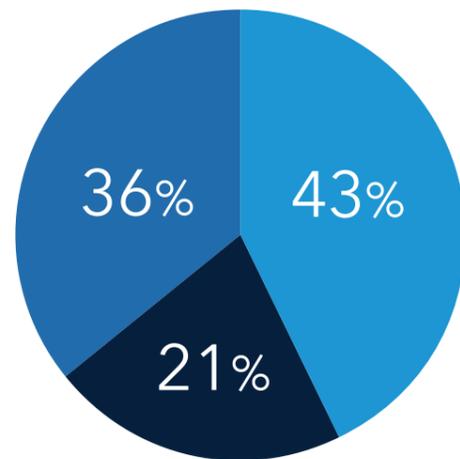
● Always ● Most of the time ● Never

Running costs, content viewed or downloaded and resulting distractions were all seen as obstacles to the provision of internet access onboard.

Companies were split between the effects of access to the internet onboard and corresponding social interactions, with 43% of company representatives

feeling it had no effect on social interaction onboard and 36% of respondents saying it decreased the level of social interaction.

Do you believe that access to the internet for crew to use in downtime whilst at sea has an effect on social interaction onboard?

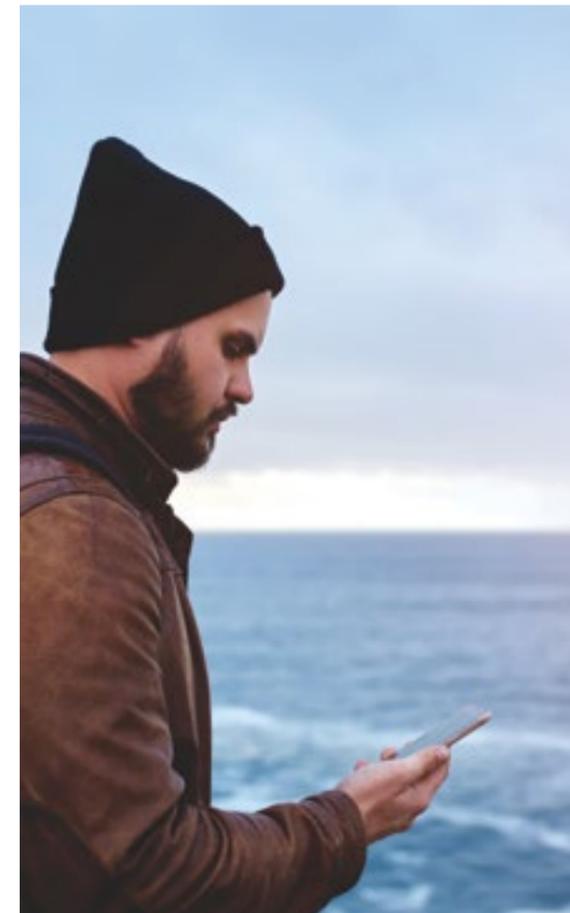


- Yes - it improves social interaction
- Yes - the level of social interaction decreases
- No - it has no effect on social interaction

Does your company have any concerns about the provision of open internet access and other media streaming services for seafarers onboard?

USERS MAY DOWNLOAD ILLEGAL OR ADULT CONTENT	83%
USERS WILL DOWNLOAD TOO MANY LARGE FILES (SUCH AS FILMS)	67%
IT WILL BE A DISTRACTION TO WORK	58%
RUNNING COSTS ARE TOO HIGH	50%
TOO EXPENSIVE TO INSTALL	33%
SHIP WOULD BECOME VULNERABLE TO CYBER-ATTACK	25%
SAFETY ONBOARD WOULD BE PUT AT RISK	25%
TOO DIFFICULT TO INSTALL	8%
IT WILL DECREASE SOCIAL INTERACTION ONBOARD	8%
NO REASON	8%
IMPROVED ACCESS HAS NEVER BEEN REQUESTED	8%

“Having internet connectivity onboard greatly improves the ability to communicate with loved ones back home, thus mitigating the loneliness of being away from home. It makes seafaring more bearable and potentially attractive.”



What services do you provide for seafarers' personal use onboard?

INTERNET ACCESS	93%
ACCESS TO SOCIAL MEDIA	79%
PERSONAL EMAIL	57%
SATELLITE TELEPHONE CALLS	50%
SMS MESSAGING	36%
ONBOARD GSM / CELL PHONE SYSTEM	21%
DAILY NEWS SHEET	21%
TV ON DEMAND	14%
VIDEO CALLING	7%
MOVIES ON DEMAND	7%
INTERNET STREAMING SERVICE (MOVIES, SPORT, NEWS ETC.)	7%

It is surprising to see that despite the Maritime Labour Convention adopted in 2006, still 14% of vessels do not supply any form of onboard communication to seafarers.

Survey Conclusions

We know more than 80% of members completing the Union's membership survey in 2015 said that improved communications was one of the most important collective bargaining issues, second only to improved pay.¹

The results of our survey support this indicator that the impact of communications upon both employees and employers is one of the biggest issues in today's seafaring world, yet unlike pay and safety, is often not at the forefront of the agenda.

Our survey shows that a lack of communications onboard ships and restrictions on the connectivity currently available impacts people's attitudes

towards potential employers, their ability to balance their personal lives with work, morale and isolation.

The results also show that despite companies listing a number of reasons for not investing in better communications for seafarers, respondents said they would be willing to work with companies to address these potential issues through introducing training and changes in company policies.



The industry must act now to continue attracting the best talent whilst also modernising and supporting the existing workforce, their wellbeing and progression.

¹ Membership Survey of 1,965 Nautilus members published May 2015

Restrictions

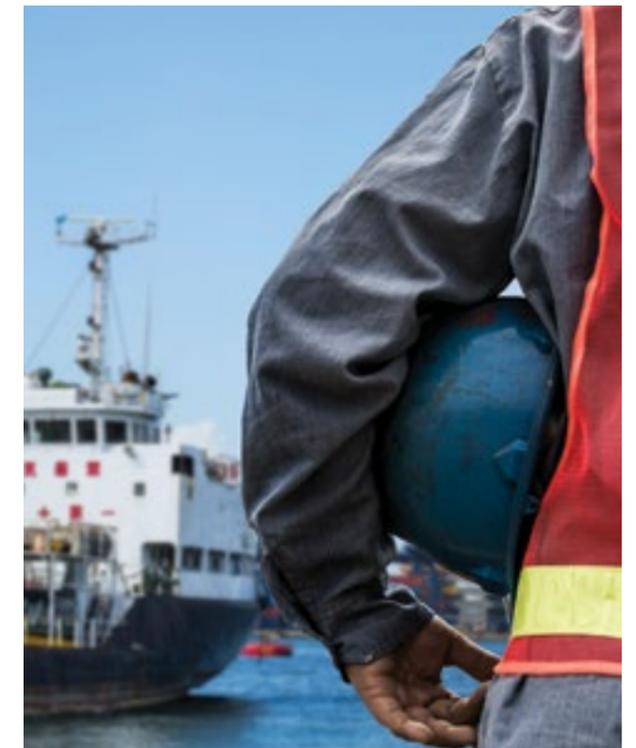
Whilst many companies are taking the first steps towards improving communications at sea - and more than 85% of those we surveyed said they allow seafarers access to communications for personal use all or most of the time while at sea - the restrictions in place still limit what seafarers are able to access. Video calling, access to social media and personal emails are all essential parts of maintaining contact with those at home for seafarers, yet most employers impose limitations around accessing these.

These limitations could be potentially damaging for the industry, with our statistics showing nearly two thirds of respondents saying they would or possibly would move to a different company if it provided better onboard connectivity than their present one, with all other terms and conditions being equal. As technology becomes increasingly invaluable in everyday life, many young people would consider a career with little or limited access to internet an unattractive option.

Anecdotal evidence supports this, suggesting companies should take heed of these results and look towards improving connectivity onboard ships to maintain staff morale and retain quality employees.

Morale

We suggest improved connectivity would also help to boost morale and job satisfaction amongst employees. Our later case studies demonstrate how seafarers often miss key life events through being uncontactable at sea, with Henk Eijkenaar, a 55-year-old master working for a Dutch-based company, reporting he missed the death of his grandparents and the birth of his son through being out of contact at sea. Nicole Gardner, a second mate based in New Zealand, was able to talk her friend through a serious life crisis with the use of communications onboard her ship, showing that improved connectivity doesn't just benefit the seafarers we surveyed, but their friends and family too.



Employment and training

Our survey showed that enhanced connectivity could become a fundamental aspect of young seafarers' decisions when looking for career opportunities.

Nearly two thirds of respondents said they would or possibly would move to a different company if it provided better onboard connectivity than their present one, with all other conditions being equal.

Enhanced communications can also benefit vocational training. Nicole Gardner, who shares her story later, studies in her own time using open online courses, but is often left unable to watch the extra lectures or download supplementary material that is published during the course due to limited connectivity at sea.

Employers have a duty of care in looking after their employees and the opportunity to support workers in their development and building skills that could ultimately benefit the company should be supported wherever possible.

All industries should focus on investing in their future workforces and the maritime industry is no different. With sea trade expected to double in the next 20 years, we need to invest now in the future of the industry and improved communications should play a central part in this.



Why not?

Employees believe the main reason for companies not offering internet provision is cost - with three quarters of members telling us this.

Whilst 83% of companies agreed that the expense of installation and running costs were among their main concerns around the provision of open internet access and other media streaming services for seafarers, the same percentage also said they were concerned about users downloading illegal or adult content.

Companies across the world give their employees access to the internet and regulate this to ensure it is used professionally and securely, and vessels should be no different. Most office-based employees would find it very strange to hear that their internet access was restricted to a select number of business-related sites simply because of concerns that they may access adult or restricted content or stream content.

We would advise all companies who are concerned as to how their employees would use the internet to look at developing an internet usage policy outlining the rules around internet usage onboard in work and social time.

We would also emphasise that the ship is not simply a place of work, it is a seafarer's home for the duration of their trip. Imagine going home for the evening and only being able to access internet sites or connect with the friends that your internet provider thinks are suitable for you, and even then only being able to have a few thousand megabytes of data which must be used whilst sitting next to your neighbours.

For those employers who identify employee isolation as a reason for not enhancing communications, we all know the thousands of families who sit together on their phones in the evening. Statistics from 2014 show that in the UK, 40% of Twitter traffic at peak time is related to TV (Media, 2014), proving that those watching programmes are still using the internet to communicate with a wider audience, something that could be reflected onboard vessels, maintaining a link between seafarers and the wider community.

The results showed that a lack of common language amongst crew has the most impact on social interaction onboard vessels, with crew using personal devices or spending time alone in cabins ranking second. This suggests that whilst improved communication would potentially have a high impact on social interaction between crew, in fact issues such as language impact more.

Who had their say?



SECTORS

OFFSHORE/SUPPLY/SUPPORT VESSEL	21%
FERRY	15%
CRUISE	11%
DREDGER	10%
GENERAL CARGO	9%
CONTAINER SHIP	8%
TANKER	6%
LNG/LPG	4%
RFA	3%
YACHT	3%
CHEMICAL CARRIER	3%
INLAND WATERWAYS	2%
SEMI-SUBMERSIBLE	2%
BULK CARRIER	1%
WINDFARM	1%
REFRIGERATED	1%
SHORE-BASED	0.3%

RANK

MASTER	25%
NAVIGATING OFFICER	21%
ENGINEER OFFICER	15%
CHIEF ENGINEER	14%
MATE	8%
RATING	5%
ETO/ELECTRICIAN	4%
CADET	4%
OTHER	5%

Employees vs Employers

We surveyed 1,790 crew members and 18 companies representing their entire fleets. Of the companies we surveyed, we know that more than 85% said they allow crew members access to communications for personal use when at sea. As previously noted, many sectors which are known for poorer communications within our industry declined to take part in our survey.

The main anomalies revealed by the responses cover reasons for companies not providing internet access for personal use onboard, where there was an overwhelming difference in responses from employers and employees. Some 83% of companies said they were concerned users may download illegal or adult content, whereas just 16% of respondents believed this was a concern for their employers.

This indicates there could be a communication issue between employers and employees in terms of understanding the reasons behind not providing internet for personal use, and shows that the issue around users accessing potentially inappropriate websites or large files is of more concern to companies than cost.

This may be down to the results around cyber security onboard vessels, with 64% of companies saying one of their vessels had been infected with a computer virus or malware, compared to just 39% of crew who said they had sailed on a vessel that became infected.

Better communication between seafarers and their employees, facilitated by the Union's established pathways and properly agreed policies, would help both sides to air these issues and allay certain fears.

There is a caveat in that we must consider many company respondents to the survey are already providing access to communications when at sea and therefore cost is not as much an unknown as for those who are yet to invest. Survey results for employers and employees were broadly drawn along the same lines for many of the other questions, including those on the effect of internet access on social interaction onboard vessels.

The results show broad support across the board for enhanced communications for all - from members to companies, and the benefits this can bring. At Nautilus we are working tirelessly on behalf of our members to make this a reality, to challenge the issues and misconceptions around implementation and to help modernise the seafaring industry, making it an attractive and supportive place to work.

These results give us a strong foundation to call for more action on improving communications for seafarers and support our members as they challenge their employers to invest in an enhanced communications package for all.

Stories from the Sea

As part of our investigation into communications at sea and to understand the real-life issues that come as a result of the lack of connectivity onboard, we also spoke in detail to three seafarers to understand their experiences of staying connected when at sea.

Henk Eijkenaar, 55

A ship's master on sea-going cargo ships, he is currently working for a Dutch-based company. He serves as a member of the Council of Nautilus International and as a representative member of the Dutch trade union federation FNV.

He has seen connectivity improve since starting at sea in 1979, but still finds internet provision very poor onboard a number of ships he's worked on: "On my ship, we have internet via satellite connection which is capped with a data limit. The crew can only access internet through their personal account which is limited, meaning you can use internet only for a short time or for low-bandwidth purposes.

"This means you can't use it for calls, video calls or downloads. The internet limitations include emails,

so if you use too much internet, it will stop you from accessing your emails altogether. There is no Wi-Fi available onboard and emails can only be accessed from the ship's two computers (one of which is on the bridge and the other in the ship's office).

"One of the biggest problems is that people ashore don't realise what it means to be at sea without internet and the importance that technology plays in communicating with your friends and family when working away. The company's main argument for the lack of investment is due to the uncertain economic situation. Despite this, crews are reluctant to complain because if they do, the company could cut off access completely."

Seafarers spending time at sea with limited connectivity often miss important life events due to their lack of contact with those at home. Henk said:

"I really miss contact with friends and family by phone or video call. Seafarers aren't able to participate in normal social media use, impacting greatly on our social lives, which could be improved by better connectivity."

He also supported the survey's suggestions that improved connectivity would make a company more attractive as an employer.

"The lack of regular contact with family and friends makes working in a stressful industry even worse; it certainly won't impact well on our work ethic either!

"There are already systems available which will provide better, unlimited internet use which will ultimately reduce usage costs. However shipping companies do not want to invest in this as they see it as additional and not a profit-generating cost.

"Whilst we should address cyber crime and the other dangers of modern communications, especially during work and how to overcome it, I do hope communication for the crew will improve in general. High-speed internet connection inside private cabins should be a basic requirement."

"I missed the death of my grandparents 15 years ago and the birth of my son three years after that. If I had good connectivity onboard, I'm confident that I would have been told about both events. I only found out about both of the events when I entered port, I had no idea what was going on when I was at sea."

Nicole Gardner, 36

Nicole is a Nautilus member and second mate based in the dry bulk sector in New Zealand. The ship she currently works on has free internet with limited downloads for employees, with five communal computers available for personal web browsing.

"With permission from the company, the team has also purchased and installed several Wi-Fi routers around the ship that the crew can use for personal internet access on our own devices. In general, the internet connectivity is intermittent and slow, but we normally have enough signal to check email or use Skype/Viber/WhatsApp for text and occasionally voice messaging for at least a few hours a day most days. This is much better than when I first started working at sea in 1996 on sailing ships with no private communication systems whatsoever for the crew.

"My first experience of crew connectivity at sea was in 2003, when we had what could be described as very limited email access; the captain used to print crew emails out and stick them on a notice board! The first time I had general internet access to private email and web browsing wasn't until 2012. Nowadays connectivity is so important and whilst it would be nice to have more data for videos and social media, I would favour a more reliable and stable connection. If I had the opportunity, I'd even be willing to pay for it out of my own wage.

"I have to be mindful of how much data I use because of the limits in place and whilst 100gb of data might sound like a lot, this soon goes, and is limited due to the high cost of satellite internet access for the company.

"I don't think companies perceive any direct benefit to providing crew with internet access. There is also a perception that crew with internet access or other private means of communication will be distracted by outside concerns such as family, home or relationship problems, or will waste time browsing the net rather than watch keeping or sleeping, leading to safety issues and accidents.

"Last year, when a close friend dropped me off at the airport to join the ship, he told me he was planning to commit suicide while I was away, and said goodbye. When I joined the ship, I used the ship's internet access to stay in regular contact with him, and eventually (after over a month) convinced him that suicide wasn't the option."

"Having internet access onboard helped me to stay in touch with my support network ashore, and to provide support to my friend while still being able to focus on doing my job. Without internet access, I would probably have left the ship as there is no personal support system onboard, and I know from previous experience that my ability to focus on watch keeping deteriorates when I'm under that sort of stress."

Nicole also agrees that if she were to look for another job, improved connectivity would make a company more attractive to her, and this is common with others around her: "From talking to cadets, and people who are considering going to sea as a career, the lack of internet access can be enough to put them off. We need more new blood coming into the industry, and if lack of internet is a barrier to new entrants, I think it certainly needs to be addressed."

Andrew Lindsay, 60

Andrew is a chief engineer based in Brazil and is also a Nautilus member. He works in the offshore sector and considers himself one of the luckier seafarers in the industry as internet provision is available to all onboard his vessel.

Andrew says whilst internet connectivity has come a long way since he started working at sea, the service is still plagued by intermittent connections and slow speeds, something he believes should be changed to help seafarers: "I think the main issue we face when it comes to connectivity is the slow connection speeds, which can be a real struggle when video messaging family, for example."

Whilst onboard internet has been available in some form since the 90s, Andrew thinks the industry has been slow to engage properly with the needs of seafarers as a result of cost and says the industry certainly hasn't kept up with mainstream advances in the technology.

"I didn't experience internet access onboard until 2002, but this was in a very limited capacity. These days, speed is the thing I miss most about onshore connectivity - it can be a struggle to watch videos or engage in any substantial data transfers, particularly when using Wi-Fi in cabins."

Improved connectivity wouldn't influence Andrew in looking for future employment opportunities, but he is fortunate to have regular access to the internet, unlike thousands of other seafarers who still struggle to access personal email, social media and other tools: "Luckily, other than slow speeds when downloading larger files, we have no limit on downloads onboard my ship, which I'm aware is unusual in the sector."



A Life on the Open Waves



Specialist technology journalist Paul Quigley discusses the net benefits of total internet connectivity working away at sea.

In 1773, the great writer and lexicographer Dr. Samuel Johnson wrote in his letters to his friend James Boswell: "Being in a ship is being in jail, with the chance of being drowned... a man in jail has more room, better food, and commonly better company."

Perhaps Johnson, clearly speaking from experience at having been at sea, knew that the sheer isolation and poor conditions alone were not the only hardships that seafarers faced, but that the disconnect from the reality of normal life on land and lack of interaction with fellow human beings was even worse than being a criminal.

Despite modern creature comforts onboard most commercial vessels, communicating with loved ones and kindred spirits at home or on land is still difficult for many, even today.

While ship operators have done much to provide amenities for their staff who are at sea for weeks and

months on end, what are now commonly seen as standard fare at home - internet access and phone network access are still largely unavailable on a like-for-like basis. Going to sea, for far too many seafarers, still means being cut off from social media that we have all become accustomed to in our professional and personal lives.

But there is no longer any need for this to continue. Historically, ship operators would cite cost as the key barrier to non-provision of connectivity for staff out at sea. With the major strides being made by international network operators and providers such as Inmarsat, Iridium and others, the cost argument is now largely seen as a red herring. According to recent statistics from Inmarsat, the cost of providing decent communications onboard is now less than 0.3% of all operating costs. And that cost itself is also now reducing further to 0.2% and lower as high technology capacity and competition drive down pricing to provide maritime access.

Some companies have also argued that online access may have a negative effect on the mental and social wellbeing of seafarers. This has resulted in policies to ration usage and not to interfere with day-to-day ship operations. Even this argument has now largely been put to bed due to the level of automation and remote monitoring carried out by highly technically-efficient ship staff. The survey makes clear that seafarers are willing to accept policies for responsible use, in exchange for better connectivity - and it also makes it clear that they are also willing to switch to companies that offer such improved onboard access.

Indeed, the 'new normal' for many ship owners and operators is to ensure that their staff perceive no difference in maritime and terrestrial network services, as it is now being seen as a key enabler for mental health and wellbeing of their workers on long-haul and other duration voyages. The increases in staff efficiencies, feelings of inclusion and connectivity are now top reasons for all ship companies to abandon old ways of contention ratios and rationing usage, but instead to offer an almost - 'all-you-can-eat' level of internet connectivity as its people would be able to experience if working on land.

Moreover, the days of 'us and them' industrial relations 'management versus trades unions' are long gone.

Instead of adversarial relations, good governance and codes of conduct have replaced such counter-productive sentiments with a more collective, collegiate form of business relations where boardrooms, managers, unions and workers are now in lock-step to provide cost-effective and healthy environments in which both profits and personnel can flourish. This is the new normal in 21st Century socio-economics. Ubiquitous connectivity is a win-win and should be seen as such.

So when today's seafarers step on board modern sea-going vessels to work, it is no longer akin to going back hundreds of years to isolation and feelings of social disconnect. Instead, the argument for total connectivity is now a compelling one as all the myths of cost or distraction have now largely been dispelled.

Ship owners, as responsible employers, now almost have a moral obligation to provide such internet access as a fundamental right in the terms of employment for their seafarers. Staff should never again be expected to be subjected to being cut off. Sea connectivity is the new normal, and those that would contest the health and wellbeing of their staff not to have the same rights as land-based colleagues should be the ones made to walk the plank.

Staying Connected



Inmarsat, a pioneer of mobile satellite communications, has been powering global connectivity for nearly four decades, and understands how important it is for companies and seafarers to stay connected whilst at sea. In supporting crew welfare initiatives through collaboration with unions, industry, charities and associations, Inmarsat is helping to shape the future of the connected ship.

If shipping lanes are the arteries facilitating upwards of 90% of world trade, then ships and seafarers are the red blood cells oxygenating the global economy. Yet, modern day seafarers still face many hardships. Their life is often a lonely one, isolated and devoid of the basic services most of us take for granted.

The Maritime Labour Convention is a welcome step in the right direction, particularly with respect to ensuring a minimum baseline for living and working conditions. However, while life at sea has moved one step forward, life on shore is racing ahead - accelerated by technology and the 'networked economy'.

Supporting this is increasingly ubiquitous internet access. Once limited to the home and the office, the digital ether now envelopes us wherever we

might go, even spreading into subterranean metro networks and into the sky. The trend is as plain in the developing world as it is in the developed. Yet, somehow, shipping [mostly] remains off the grid. This disconnect should be treated as more than a mere inconvenience. Today, connectivity is about more than just social media and web surfing. It is increasingly a prerequisite to function in daily life. The ability to connect is becoming the default setting.

Seafarers recognise this. As this excellent Nautilus survey shows, close to 80% of seafarers cite wanting to be connected with the outside world whilst at sea. Half of respondents said they would support the company in return for investment in improved onboard connectivity.

While most ship owners and operators provide some form of access, its use is typically constrained by numerous restrictions. Seafarers on similar ships on a similar route may have a vastly different internet experience. One may have the freedom to log-in and check social media whenever they like and perhaps even view that short viral video, while their counterpart may be rationed to text-only emails within certain hours.

This is concerning, since fundamentally there are no longer any technological or financial barriers to providing decent connectivity at sea. The same advances that have propelled the 'networked economy' on land have allowed satellite operators to significantly improve both the capability and flexibility of their offerings to the maritime sector bringing down the cost of basic vessel connectivity to approximately 0.3% of the total cost of operating a vessel.

We have invested a significant amount in the satellites and infrastructure that power our new Fleet Xpress service, which helps redefine connectivity at sea. Notably this incorporates a platform for user-friendly access to a range of apps supporting crew welfare and other requirements. Fleet Media, for instance, delivers movies straight to crew members' devices and opens up

possibilities for remote training and granular control over what content is and isn't accessible. Cognisant that no two shipping companies are the same, we now offer a much wider range of plans to fit every fleet and every budget.

The disappearance of practical barriers means that the remaining need for change lies in mindset. There is a historic reluctance to provide connectivity to seafarers and the industry has a collective responsibility to address this. Only when we come together as a maritime community, will this truly change. As one respondent in the Nautilus research pointed out: "In this day and age a proper high speed internet connection should be available as normal, not as the exception."

This is not something we take lightly, or something we do alone. We work with a host of partners and charities, who work untiringly to improve the quality of life for seafarers from a safety, training, emotional and social perspective. We are in the business of improving the quality of life at sea whether it is from an operational standpoint driving vessel efficiency, from the safety perspective of ensuring that vessels in harm's way can be reached and supported and lives saved, or by enabling crew to stay connected to family and loved ones around the globe, wherever they are.



Nautilus Advice

For members

For those looking to improve communications onboard their vessels, Nautilus will support you all the way. Our members will benefit from a unified campaign for enhanced communications across all ships and this paper is just the first stage in encouraging members, companies and ship connectivity providers to take action to improve communications for those working at sea.

Our survey findings can be used to support your drive for improved communications and this report includes just some of the many results, more of which will be shared on our website and in the Telegraph in the future. Some of the issues we've discussed within this paper include the value of internet access for personal use and how crew members prioritise this with regards to their remuneration package.

Members are encouraged to list 'improved internet connection' as part of the aspirations they submit to Nautilus organisers before pay and conditions negotiations begin.

Members can also support their organisers by considering the following issues:

Consider the facts - this report includes one of the widest surveys on the subject matter and reveals that the reasons companies have for not improving connectivity are not always the ones that seafarers believe are the most restrictive. By understanding your company's real concerns the Union will be able to provide the correct information to tackle the underlying issues.

Safety in numbers - talk to your colleagues about the results and their opinions and ask them to join you in calling for greater communications onboard your vessel.

Talk to us - Nautilus is your Union and here for any advice you may need.

Reinforce the wider benefits - this isn't just about crew members getting on Facebook or video calling their loved ones; crew communications will benefit everyone onboard, from improving health and wellbeing, providing a platform for training and making your workplace more attractive to others. Any forward-thinking management team should consider how advances in internet usage will help the company grow, attract and retain talent and help build its team.

Benefits

The benefits of improved communications are numerous and far outweigh the concerns companies may have around improving access. As reflected by our findings, improved communications can contribute to improved morale, reduce isolation onboard vessels, help maintain links with home life and also benefit employers by providing crew with the opportunity to undertake training and build their skill set.

Other investigations into communications at sea have highlighted the importance of personal internet access in supporting seafarers' mental health, something which Nautilus supports. A content seafarer is less likely to feel fatigued, make mistakes and potentially put others at risk. The ability to communicate with home through video calls and accessing services such as online banking is key to keeping seafarers part of home life and able to support family whilst away at sea.

Challenging any issues

Whilst many of the companies we surveyed held broadly similar opinions to members with regards to the benefits of improved communications, there are still some issues highlighted by members, particularly with regards to how concerns and issues around the lack of internet provision are communicated to crew.

These include how companies perceive the responsible use of the internet as a greater concern than the cost of installing and running improved communications facilities, although crew members often believe that cost is in fact the most influential factor.

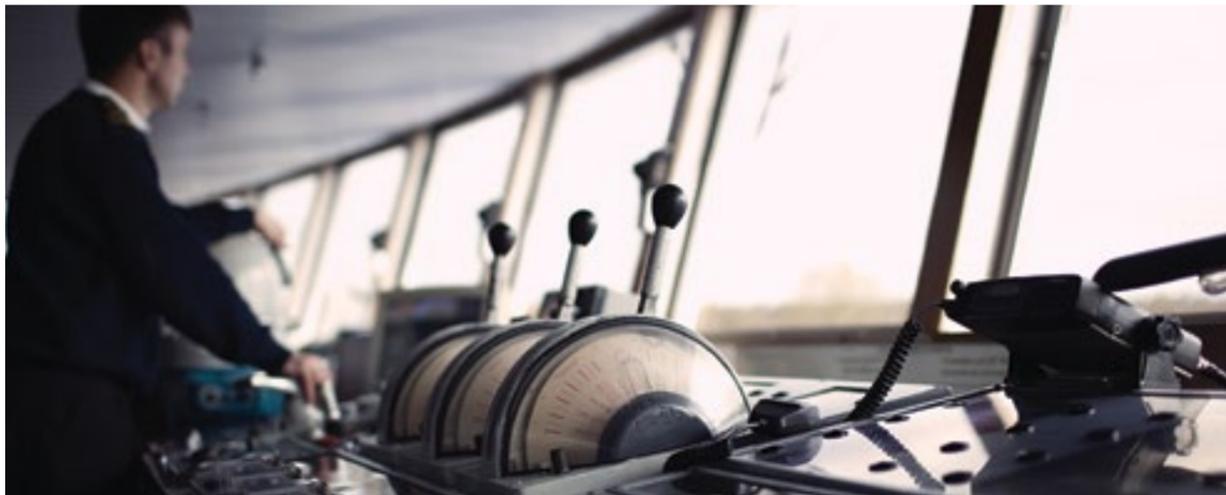
Many of the concerns surround crew using the internet safely and responsibly. By encouraging your management to adopt an internet and social media usage policy members can help dispel these concerns and ensure any enhanced communications package ensures complete crew and vessel safety.



For companies

Companies need to consider the benefits that come as part of an improved communications package and how these will attract future employees. Our survey showed many companies had concerns regarding how communications should be regulated to ensure maximum productivity and protect onboard security but these can all be regulated with relative ease and should not damage the benefits that will come with improved communications.

“Take heed of the survey results. Crew communications is now an integral part of the maritime industry and the issue will only grow in the future.”



Cost

One of the recurring concerns we heard from companies was the cost of improving connectivity, with a common misconception being that installing the internet onboard would mean reducing budgets in other areas.

Nautilus works with a number of companies across the world that advise on the installation of communications systems onboard vessels. Our partner Inmarsat, a global satellite network operator, has discussed how easy it is to improve onboard communications and the wider benefits these can bring in terms of training, skills and retaining talent.

09

The Final Word

The aim of this research is to understand the current communications provision for those living and working at sea. This report presents the opinions of our members to the industry in an effort to improve the current lack of connectivity for those at sea.

The findings clearly demonstrate that wider access to crew communications is a key concern for those working in the maritime sector and the solutions to better connectivity for crew members are relatively simple.

There are fears among businesses in the industry that they may become vulnerable to computer viruses or that crews will view inappropriate or illegal content if access to the internet is increased. These anxieties are easily remedied with properly agreed usage policies and training. If proper training is implemented and clear guidelines are in place for internet access, similar to those used in offices, these apprehensions could be easily alleviated, allowing crew members to interact with their friends and family online and combat the feelings of isolation many seafarers face.

The findings also highlight the potential impact on recruitment the lack of connectivity at sea can have on the industry. Nearly two thirds (63%) of

crew surveyed said they would consider moving companies if onboard connectivity was better, stressing the value of communications to those living and working at sea.

Ultimately it is our job as the Union for maritime professionals to bring to light the concerns of our members and seek to resolve them. The results show there is a real need for improved communications at sea and that the steps to reaching a resolution are feasible. It is our hope this report will provide a talking point within the industry and help employers to better understand the concerns of employees to reach a solution which works for all.

This report marks the start of the conversation. Over the coming months we will be revealing more results from the survey – including members' views on internet access in port – providing sample internet usage policies, and enabling all those concerned with improving the welfare of seafarers to join the debate on communications at sea.

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