

Members of European Tugowners association, distinguished guests, ladies & gentlemen;

Good afternoon. It is both a pleasure and an honor speak on behalf of you, Tugowners, today on this stage. I am Chief Operating Office for Svitzer in Europe and having moved to towage only as short as two years ago, I feel privileged and humbled to be given the opportunity to provide Tugowners' perspective on what it takes to do business in Europe today and what changes we can expect in the near future. Who in the audience has more than two years of experience in towage? Pretty much everyone, great! I hope that my view which is not distorted by any long experience will provide an inspiring starting point for discussion.

I will begin with pointing out some of my observations, then I will talk about five challenges we have in the market and finally I will share my thoughts on where we go from here.

When I stepped into the world of towage, I was both fascinated but also deeply shocked about what I discovered. Let me paint you a picture of what I was used to in my operational jobs prior to towage.

It is one warm August day in Thailand in 2010 at about 1am in the morning, imagine me standing in my full PPE on the staircase of a crane discharging containers. My task is to measure cycle times of the discharge of a container in order to understand how long it takes on average to discharge a box. Somewhere down in the container yard, colleagues are sitting next to the truck drivers to understand influences on truck turnaround times and another team is analysing straddle carrier break down causes. Speaking with data, continuous improvement and creating cost efficiencies were given and global understanding and collaboration was expected. We approached shipping like a Toyota factory.

Now fast forward to 2014 when I started in my current job, ok maybe I did not find steam engine vessels but I found a community deeply conservative and confident in their ways of work. A place where decisions are often taken with only a minimum of information, where thinking and acting is very localized to the extent that crew on tugs are not expected to communicate in English to the vessels they are assisting, where new tugs are bought as a response to new tugs bought by the competitor with very little financial justification, where one could feel the attitude “we have always been here and we will always be here” when on board the tugs, where crews had worked in the same river & on the same boat for many years (or even many generations) and felt that the old and established ways are best.

As we also heard from Olaf and Patrick, it is clear that our playground has changed and is changing rapidly in Europe and as Tugowners we cannot afford to stick to our traditional ways, throw up our hands and accept our fate. Do you know what towage will look like in 100 years, in 50 years or even in 5 years? That is ok, I don't either. What I do know is that the way the changes in our landscape will impact us depends on how we respond to them. If we do it right, we can be active players changing shipping.

Right, let's move on to the five key areas where the change is happening.

I'd like to start with **Safety**.

Safety is at the heart of our business and is certainly driving many changes in the industry. Some of these are triggered by regulation, some of them we have driven and in both cases the painful lessons we have learned from past incidents are the root causes.

In Svitzer, we decided to embrace OVMSA level 2 standard globally as directed by OCIMF and believe this is a step in the right direction to help us improve safety in towage. As an industry we have to refrain from competing on safety, as we have a duty to make our industry safer, and we can only get the best results if we do this together. We also have a duty to say "stop" when we are asked to do a job that is unsafe even if this has been done for many years. There have been examples where one tug company does not accept a job because of restricted visibility, while another company does accept the job as they operate under less stringent conditions.

As Tugowners, we have an obligation to influence regulation, whether these are class rules or tug norms to ensure all stakeholders involved understand the circumstances we operate and assist us in becoming the safest in shipping. One example of such is the very valuable work British Tugowners' Association has done with Lloyd's Register to create class rules for tug towing winches. Our many years of working with ropes/lines can assist the industry to improve mooring arrangements and we can contribute to the changes across the industry to make shipping safer. We should not underestimate our sphere of influence and experience.

Every single person needs to go home in one piece and uninjured at the end of the day. Improving safety systems and structures around us is our number one responsibility.

Secondly, there are operational challenges which I refer to as **Survival of the Fittest**.

Olaf's presentation provided us a comprehensive overview of the impact of mega ships on port infrastructure and towage in particular. Apart from physical demands to maneuver these mega ships, we see pilots are becoming increasingly cautious as they handle these large vessels in channels & rivers organized with the vessel sizes of the past in mind. In order to assist these vessels in a timely and safe way meeting pilot & port requirements we need to increase the bollard pull, size and capabilities of our tugs. Remote recovery escort winches are becoming a must have. In most of the ports where we see such tonnage, anything below 50 ton bollard pull is not accepted.

Container vessels are only part of the story, many of the Tugowners in Europe serve LNG terminals, off shore platforms and wind farms. Many of these projects require escort notations, fiFi1 and oil recovery capabilities. We also see new kind of specialised ships, such as RoRos transporting offshore windmill parts.

On one hand there are higher demands on tug capabilities, on the other hand new vessel designs with bow thrusters reduce the customers' and pilots' dependency on towage.

Tugowners' ability and agility to adapt fleet capabilities to changing vessel types and sizes and customer requirements has never been more critical.

This leads me to my next point, which is the commercial challenges that I refer to as **Cost Efficiency is King**

Changing dynamics in our customers' business & the commercial environment they operate in have a huge impact on towage.

In container shipping, we see container rates lowest they have ever been, there is consolidation in the industry through mergers and where there are no mergers there are alliances of major shipping lines. Cost cutting is the name of the game and we are put under pressure to contribute to their savings.

There is more volatility in the market as we see bulk cargo becoming containerized and containerized cargo going back to bulk (which is quite a surprise). 3D printing (now even 4D) is an imminent threat.

When the oil price is down, our offshore customers are suffering so are we. When the oil price is up (eventually) slowly and steadily offshore oil work will decrease and we will see a move on to wind farms & sustainable energies which has already started.

We see in the UK a decline in coal and the disappearance of the steel industry.

No one is safe. The days of long stability is over and overnight one customer or one port can go completely under distress. This is leaving us very vulnerable.

As our customers' business gets under pressure, it becomes crucial for them to get their costs down. Despite towage being a very small cost in the greater scheme of things, we are not being exempted from very rigorous procurement and ruthless negotiation processes. How does this reflect on us? Can we afford not to have a similar focus in our businesses? Can we continue to act as we did for many years with an increasing cost trend year on year? I personally do not believe so. Creating cost efficiencies is the only way forward to ensure a sustainable business in the eye of change and it benefits ourselves and our customers.

The forth and very evident driver for change is environmental concerns which I refer to as **Green Pressures**

The green pressures on us are twofold: Regulatory and Commercial. We are as any other player in shipping expected to reduce greenhouse emissions and the regulation will only get stricter. Commercially, we are expected to help ports, terminals and our customers reduce their carbon footprint and the days that non-adherence will be a disqualifier from tenders & contracts are not far. These pressures are here to stay. Most of our operating areas are in the center is European cities where our impact is under scrutiny every day.

Switzer was an early adaptor of environmentally friendly tugs with its ECO tugs generation 1 and generation 2 which reduces fuel consumption by up to 10% compared to traditional tugs and emission of nitrogen oxide up to 80%. Recently, we have seen further innovative developments in the industry in the forms of hybrid tugs that can sail on either full electric power via a set of batteries or on a diesel-electric generator set and LNG tugs that eliminates Sulphur emissions and reduces nitrogen oxide emissions 92 per cent. Development of world's first RSD CNG tug is ongoing as we speak.

While these are promising developments, there is a lot more work to be done in order to bring in true benefits. The challenges with these new technologies are yet to be overcome. Take the current CNG tug development for example, the relatively high frequency and longer duration of bunkering pose a significant challenge as to where these tugs can be used best and what sort of utilization can be expected of them. Battery technology is still at its infancy before it is ready to fully replace existing solutions and be economically feasible. We need to continue to work closely with the leaders in the field to contribute to the developments to ensure solutions developed are as practical as they are green.

Last but not the least, technological and digital advancements are significant factors affecting towage which I refer to **Small Tug Big Data**

Now about my fascination and shock that I mentioned when I started. We as Tugowners and Tugoperators have deep insight into each port which can make a huge difference to how the port works. We know where the bottlenecks occur, how peaks & lows can be balanced and where and when the highest risk occurs. We know this BUT we cannot demonstrate it efficiently and effectively without a focus on data. Towage holds a critical role in the shipping supply chain and can be a change leader to drive port wide efficiencies including our own business. We cannot achieve it without changing the way we operate. We can look at big data trend from a commercial angle and from an operational angle.

Commercially more and more customers are asking for this type of intelligence. Do you know where competition will come from in the coming years? Do you believe the only competitors are in this room? I doubt it. Online Technologies such as e-booking, software providing visibility and control over customers' entire supply chain, apps that allow you to have real time data by touch of a finger. Flexport in San Francisco wants to be the Uber of the oceans, they are shaking the freight forwarding sector. Can you imagine such platform for towage, what it would mean and how it would change the way we do business? And it can come from anywhere, not only from within this room.

Operationally using big data may revolutionize the way we do maintenance & operate our vessels. Enter ESRG, a company which produces sensors for US Naval boats that collect and process data providing a holistic prognosis of the entire boat system. ESRG's general manager believes this Big Data Analytics market could double or triple in size by 2030. He notes that this could be easily facilitated through new build ships, which have prime automation, censoring, control and communication systems and make up about 30,000 of the 100,000 commercial vessels

worldwide. If technology could be used on those 30,000 ships, it could save an estimated \$20 billion in maintenance, fuel consumption and environmental fines expenditure. Can we afford to miss this opportunity?

We should modernize towage, working our small tugs with big data not only to gain efficiencies and become value adding partners to our customers but also catch up with future. That future is already here and we will fall behind if we do not act.

To summarise, our lives as Tugowners are not getting any easier. Operational and commercial realities of today will only get more challenging tomorrow. We are expected to run top class fleet delivering safe and green operations all at the same time creating cost efficiencies and savings for ourselves and our customers utilizing latest technologies. The push & pull is a fine balance we need to strike while we ensure cost reductions, operational optimisation and highest safety and environmental standards.

So is the sun setting on towage in Europe? Absolutely not. Despite being sometimes seen as a undervalued little sister to our bigger brothers in shipping, we as Tugowners have the capability and power to be ahead of the game, even better to be game changers, modernize our industry & make it a true value adding part of the shipping supply chain. At the same time, we should refrain from being arrogant and complacent as to our irreplaceability and know that competition can come from anywhere, not only from within this room. Whilst towage is still very much part of the local community we need to think global in terms of our impact and contribution to shipping.

We have these five challenges, yes, we can shy away from them or we can let them work for us. It will not be easy and it will take a lot of effort. I believe we have the strength and will to overcome them and together we can raise the profile of towage up to where it belongs.

Thank you.