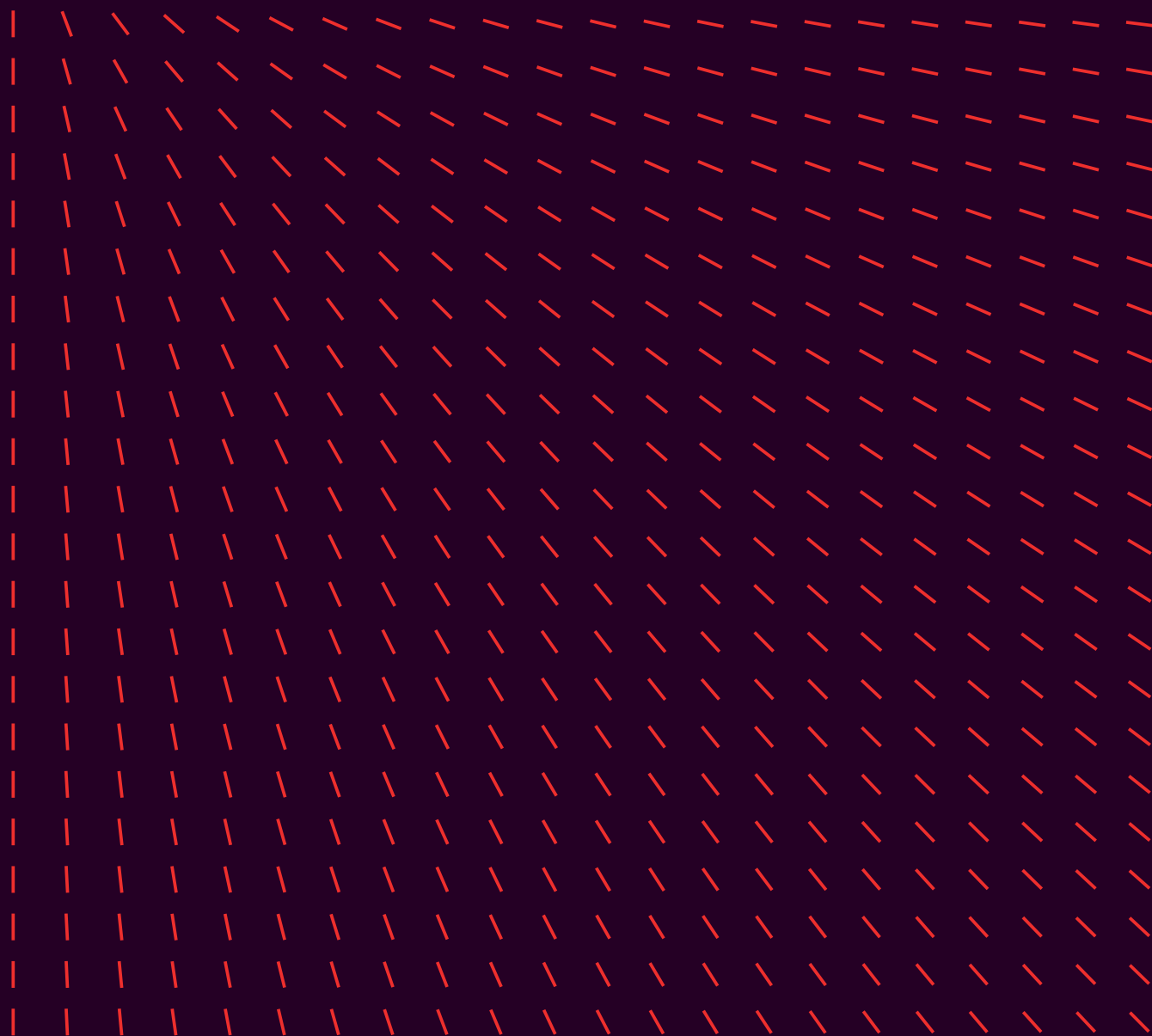


# Introducing Glamox





## Introducing Glamox

Glamox is a Norwegian success story not everyone has heard of. We are a leading lighting company. A major provider of lighting for professional buildings in Europe and to global marine, offshore and wind markets.

Founded in Molde in 1947, Glamox began life as pioneer of lighting for businesses big and small. Known for its glamoxation process for creating highly efficient aluminium reflectors for powerful luminaires, a Glamox company also manufactured the Luxo L-1 desk lamp – a design icon and inspiration for Pixar Studio's famous animation.

Today, we are headquartered in Oslo and Norway's largest lighting company with sales in 2022 of

NOK 3 ,772 billion (EUR339 million). Privately owned, we employ around 2,200 people worldwide and have manufacturing sites in Norway, Canada, China, Estonia, Germany, Poland, Sweden, UK, and sales locations in Europe, Asia, and North America. We serve the market managing our portfolio of lighting brands which include Glamox, Aqua Signal, ES-SYSTEM, Küttel, LINKSrechts, LiteIP, Luminell, Luxo, Luxonic, Norselight, and Wasco.



ES-SYSTEM



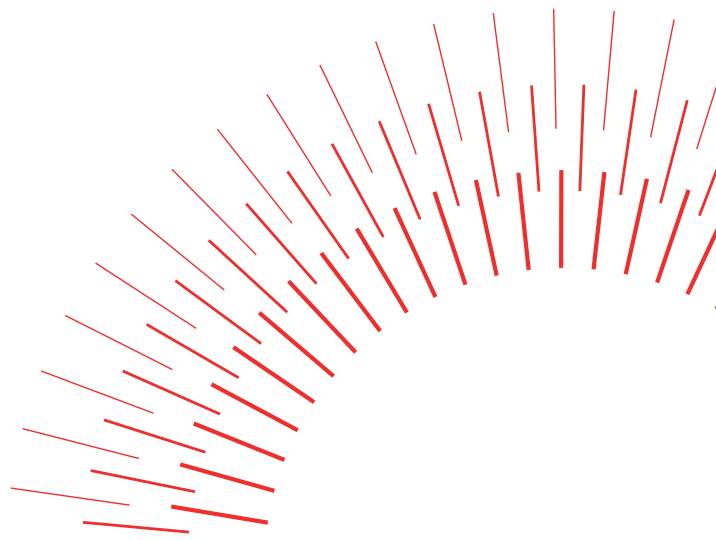




As a company, we punch well above our weight thanks to our focus on excelling in two major segments.

- Firstly, we provide quality energy efficient LED and connected lighting for professional buildings. That's lighting for schools, hospitals, offices, warehouses, industry, and retail. We are also the world leader in Human Centric Lighting: connected lighting that syncs with people's circadian rhythms to help them sleep, feel and perform better.
- Secondly, we provide lighting to global marine, offshore and wind markets. From fishing vessels to navy destroyers, from the most sustainable car and truck carriers to offshore windfarms. If it's in the water, Glamox has a light for it, providing illumination for the softest to the harshest environments with light you can depend on.

Glamox is a performance-led, purpose-driven company. Our vision is to create light for a better life. It's backed by our mission to provide sustainable lighting solutions that improve the performance and wellbeing of people. And we walk the talk. Glamox is committed to becoming a Net Zero company by 2030 and to enhance its position as a great place to work.





# Navigating a rapidly changing world

Current uncertainty, inflation, and tight monetary policies are renewing focus on high-quality companies with appealing fundamentals and a clear pathway to value creation.

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Glamox is a growing business with a strong management team and solid fundamentals, addressing attractive markets and multiple high-growth segments and applications.

We listen to our customers. We appreciate the headwinds buffeting many businesses: the increasing cost of energy and raw materials, both of which fuel inflation. It's a world with lingering supply chain issues and a shift in gravity from global to regional/local production.

While not impervious to these forces, Glamox is well-positioned to cope within this shifting landscape. The way our business is structured helps. Our manufacturing sites are close to our largest markets and our secret weapon is a dedicated Sourcing, Production and Logistics Division. Its remit is to drive down costs, shorten supply chains, further improve quality, and deliver the right product, at the right price, at the right time.

Addressing high electricity prices, our energy efficient LED luminaires, systems, and services provide quality light for our customers, while shrinking their electricity use and carbon footprint.

Our strong customer relationships (evidenced by our high number of repeat customers) are a key differentiator, enabling us to co-create solutions directly with our customers. Relationships that see them through the tough times and celebrate with them in the good.

Strong fundamentals form our bedrock and a launchpad for us to address the three major growth trends reshaping the lighting industry: Sustainability, Digitalization, Health & Wellbeing.







## Growth in Sustainability

### Retrofit Wave – on Land and at Sea

Buildings account for around 40% of the world's total energy use and around 33% of greenhouse gas emissions. Lighting accounts for 15-18%<sup>1</sup> of all electricity consumed.

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Electricity for lighting decreased in 2020, due to lower commercial activity, but 2021 saw a rebound. Going forward, if the world is to achieve net zero by 2050, all lighting must switch to LED by 2025 and with higher efficacy levels by 2030.<sup>2</sup> Consequently, governments across the world are regulating in favour of a more rapid shift to LED.

Today, in Europe, we're seeing a wave of LED retrofit projects in which conventional lighting is replaced by LED luminaires and wireless lighting systems. Driving it is the perfect storm of record energy prices, new energy efficiency regulations, and an EU-wide ban on fluorescent tubes which comes into force next year.

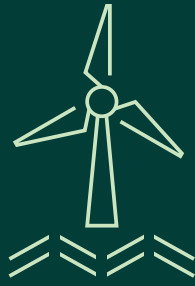
Reducing energy use for our customers is core to what we do. With more than 95% of Glamox's lighting portfolio comprising energy efficient LED, we are perfectly placed to capitalize on this retrofit wave. For instance, simply

replacing a conventional luminaire with a Glamox LED luminaire will reduce electricity consumption by up to 50%, and up to 90% when it's controlled by a light management system (LMS). At today's prices the typical retrofit payback period has dropped from 3-5 years to 2-3 years or below.

This retrofit wave also applies to shipping, where LED penetration is even lower than professional buildings, at an estimated 5-10% for the global fleet. The potential savings for operators are huge. For example, a passenger ferry with a LED retrofit can reduce its overall energy use by around 4%.

Once again, Glamox is superbly positioned. No one has a more comprehensive range of quality LED lighting solutions for shipping than we do. We serve commercial marine, cruise & ferry, navy & coast guard, and offshore energy (including offshore wind) markets.





# The Great Offshore Energy Transition

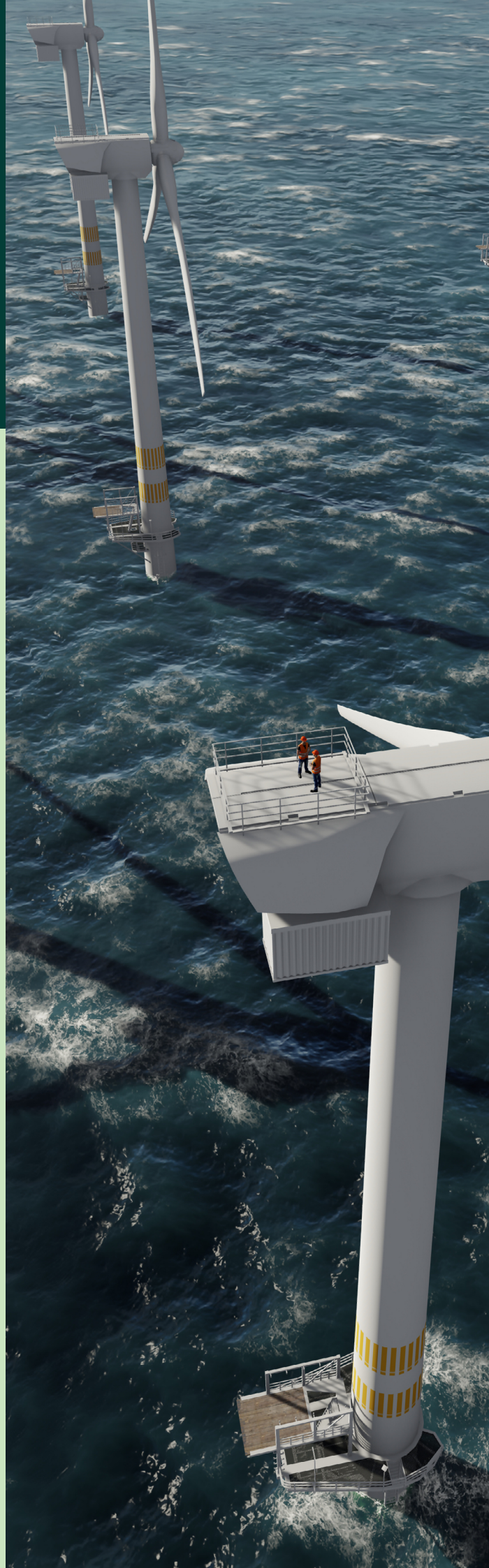
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The current energy crisis is seeing a boom in spending in offshore energy production and the armada of vessels needed to support it. Despite renewed interest in offshore oil and gas, the direction of travel over time is a transition to renewable energy.

Offshore wind is forecast to experience spectacular growth with 900 fixed and floating windfarms forecast by 2030, generating 250 GW of electricity.<sup>3</sup> Some 230 windfarms will be in European waters during the same period.<sup>4</sup> Even a modest windfarm of 60 turbines and one substation, plus support vessels (adjusted for their lifetime) is estimated to account for around 13,000 light points.<sup>5</sup>

The accessible global lighting market for Glamox in offshore wind is forecast to be around NOK1 billion (EUR100 million) by 2030.<sup>6</sup>

At Glamox we have huge experience in providing lighting for offshore industries. We're the only company in the world to offer a complete one-stop-shop technical lighting capability for windfarms and their construction and support vessels. If it's in the water we've a light for it. We support windfarm projects globally. Landmark projects include LED lighting for the wind turbine foundations at Hywind Tampen, the world's largest floating offshore windfarm.





## Growth in Digitalisation

The lighting industry has gone through rapid transformation. LED lighting, which is now the dominant source of artificial light, has gone from 5% of light points sold in 2013 to more than half today.<sup>9</sup>

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Being a digital technology, connected LED luminaires are essentially nodes on a network that can be monitored and controlled remotely to make life easier for facility managers, electricians, and maintenance workers. Luminaires, with built-in sensors for presence detection and daylight harvesting, can be combined with applications to reduce electricity use by up to 90% when compared with non-connected conventional lighting. They also last longer which means lower maintenance costs, further optimising return on investment.

At Glamox, we have taken steps to expand and further strengthen our connected lighting capabilities – from enhancing our ability to provide secure, simple to configure wireless systems for new-build and retrofit projects, to developing a state-of-the-art cloud-based service named Glamox Connect.

Glamox Connect acts as a hub, a 24/7 central monitoring system and dashboard where customers can integrate and combine different light management systems. It enables them to monitor all their devices to get an accurate picture of electricity use, check the health of

their luminaries, and obtain maintenance data for all connected devices and locations. It allows customers to test their emergency lights and run emergency reports automatically from the system. Importantly, it works with wired and wireless networks and can input data to most common building management systems in use today.

Glamox Connect opens up the world of big data. For example, data on room occupancy that gives facility managers insights into how their building space is used; data to help managers of shopping malls to better understand footfall to improve safety and pinpoint the best locations for displays; data used by hospital managers to track and locate high value, life-saving equipment. The potential is vast.

In the future, the data acquired by our lighting systems will unlock new business value alongside the quality of the illumination they provide. And finding new ways to monetize the use of big data for our customers is high on our agenda. To make this happen we look to partner with IT, systems, and software companies.





## Enhancing the customer experience

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Digitalisation is also about getting closer to, and serving customers faster and better.

Our digital roadmap includes the digitalisation of our front- and back-office processes, prioritising investments to enhance customer interactions, e-commerce, and the digitalisation of our operations. Looking to the future, we are already exploring how data-enabled products and services can improve our operational performance and accelerate our abilities to serve our customers even better.





## Growth in Health and Wellbeing

We have the dubious honor of becoming the indoor generation. More than 8 hours of our day is spent under artificial light – much of it at work.

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As the links between work, health, and wellbeing have become better understood, so has the role of light on our health and wellbeing. The right light at the right time influences everything – from our sleep to how we feel and perform. And no one knows the physiological and psychological impact of light better than Scandinavians.

Glamox is the world leader in Human Centric Lighting (HCL). We've sold more than 68,000 HCL luminaires and implemented more than 200 projects – benefiting people in health facilities, schools, offices, and industrial buildings. Our range of tunable luminaires controlled by light management systems can help shift workers to combat fatigue and hospital patients to recover faster. They help school pupils to concentrate better and provide submarine crews with simulated natural light.

We don't stop there. Working with leading universities, we are supporting ground breaking research to pioneer light treatments for dementia and other neurological conditions such as bi-polar conditions.

Once again, Glamox is in pole position to address this growing market thanks to its offerings and proven expertise.

Although still in its infancy, analysts project HCL to grow with a CAGR of 25% from 2021-2027, with Europe being one of the largest markets.<sup>7</sup> The growing number of connected lighting installations, coupled with the post-pandemic focus on health and wellbeing in the workplace, will stimulate growth and make HCL a more attractive proposition.

New codes, such as the WELL Building Standard™, for which our HCL lighting is compliant, are raising the bar for professional buildings. Furthermore, the realisation that 90% of business costs are people-related, and that HCL can improve accuracy levels by 12% and employee happiness levels by 76% bodes well for the future of this remarkable technology.<sup>8</sup>



You sleep better



You perform better



You feel better

# A performance-led but purpose-driven company



## Commitment to Sustainability

Helping our customers to save energy and reduce their carbon footprint is our daily business. This extends to how we design our products. By implementing circular economy design principles, we extend the lifetime of our luminaires and recycle materials, principally plastics and aluminium. We are currently targeting for at least 95% of our luminaires to be recyclable.

As a company, we practice what we preach by making Glamox more sustainable. We are committed to achieving net zero operations by 2030. We've put in place near-term company-wide emission reductions and are committed to the Science-Based Targets initiative (SBTi).

In 2021, about 67% of our energy use came from renewable sources and we will not rest until we reach 100%. In addition, we are striving for zero waste to landfill.

We follow actions to support the UN Sustainable Development Goals (SDGs) with particular focus on:

- SDG 7 Affordable and clean energy
- SDG 8 Decent work and economic growth
- SDG 9 Industry, innovation and infrastructure
- SDG 12 Responsible consumption and production
- SDG 13 Climate action.

As part of our commitments, we've launched a raft of initiatives to reduce our carbon footprint and that of our supply chain. For example, we redesigned the packaging for our C35 and C95 luminaires to maximise pallet utilisation. Our new recyclable cardboard packaging enables us to pack 35% more units per pallet, resulting in an annual reduction of 3,717 kg CO<sub>2</sub>. We are also using recycled aluminium in some of our best-selling products including our C80 luminaire.

Acting responsibly and behaving ethically are important for us. We are proud to be a UN Global Compact participant, and we strongly believe that we must work together to tackle global issues like climate change, extreme poverty, and inequality.



## Making a Brighter Life

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One of our stated goals is to make Glamox a great place to work. Last year 80% of employees surveyed thought this was already the case. But we need to do better. That's why we've set ourselves a target of a Net Promoter Score of +50 for employee happiness, and raised our targets for diversity and inclusion.

Finally, we are redoubling our efforts to ensure we maintain our track record of zero fatal accidents. We don't just want Glamox to be the greatest place to work, but also the safest.

That's the Glamox way.





- 1        Figures vary between 15-18%. The EU puts it as low as 14.5% and the UK at 18%
- 2        [IEA Lighting – Analysis - IEA](#)
- 3, 4     Analyst and proprietary data presented at September 2022 Offshore Wind Workshop
- 5        Latest Glamox estimate, November 2022
- 6        Glamox estimate
- 7        Human Centric Lighting Market 2021 – 2027, Global Market Insights (Residential, Commercial, Industrial, Institutional, Healthcare) [Human Centric Lighting Market Size & Share | Global Report 2027 \(gminsights.com\)](#)
- 8        Amsterdam Study [Human-Centric Lighting | Unify Energy Solutions \(unifyes.com\)](#)
- 9        [IEA Lighting – Analysis - IEA](#)

