

Xtera

Sustainable Development Plan

In 2015, world leaders agreed to [17 Global Goals](#) for Sustainable Development, officially known as the Sustainable Development Goals (SDGs) shown below.



Spurred by the obvious environmental issues and the focus on them during the current COP26 meetings this update describes Xtera's current and future plans to support sustainability.

In recent years the issues of global climate change, environmental degradation and equality have become clear to all of us and Xtera intends to ensure that it contributes in positive ways in all areas where it can. Our goal to be a premium provider of turnkey subsea telecoms systems and technology is entirely compatible with being a good global citizen. Winning and retaining business by the excellence of our products and services will be further enhanced by behaving in an ethical and cooperative way. Greater diversity and involvement in sustainability will aid innovative solutions.

Good telecommunications allow people to meet via teleconferences, thus helping reduce unnecessary travel, so we are already contributing to developments which have the potential to improve the climate and make people's lives easier and better. However, it is important that the materials that we use, our production / implementation processes also have low environmental impact. We also want to ensure that we conduct our business in ways that have positive impacts.

This document describes the processes already in place and the importance of maintaining them, but it also describes ways in which we will improve.



“As a global provider of critical infrastructure, we know how important it is to implement working practises that are sustainable, safeguard the environment and will benefit society as a whole.

Together with our employees, partners, and customers we are working to fulfil sustainability goals which support the United Nations Global Compact initiative. Alongside utilising best practises to protect our natural resources, this also means educating, creating equal opportunities and supporting local communities.”

Keith Henderson, Chief Executive Officer

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New initiatives for 2022

Our intention is to find ways of improving our performance and to that end we are launching two new initiatives this quarter:

1. We will measure how well we perform.
 - a. As a first step, we will review the number of flights taken, this being probably the most critical travel impact for the company.
 - b. We will examine if there are other useful metrics which should be tracked, for example we will look carefully at the specifications and design processes to see if they can be improved.
2. We will set up a working group, including people with a mix of skills and interests, which will focus on sustainability, aiming to foster greater awareness and to create new ideas.

INTRODUCTION

As a global provider of critical infrastructure, we know how important it is to implement working practises that are sustainable, safeguard the environment and will benefit society as a whole.

Together with our employees, partners and customers we are working to fulfil sustainability goals which support the 2015 United Nations Global Compact initiative. Alongside utilising best practises to protect our natural resources, this also means educating, creating equal opportunities and supporting local communities.

How Xtera works

Xtera operates a compact and lean workforce with just two centres (in the UK and the US) but has installed systems in more than 60 countries.



Figure 1: Worldwide installations with just two compact facilities

This is achieved by outsourcing production and using partners for cable, Power Feed Equipment (PFE) and marine services. This approach suits the highly variable activity cycles of subsea cable systems and means that Xtera doesn't own facilities which consume resources – and impact the environment – when there is no production. It also allows us to support local industries.

While Xtera itself has a relatively small operational footprint, the credentials and behaviour of partner companies is very important and a later section of this document lists key suppliers and how they address sustainability issues.

Travel and offices



Travel has a significant environmental impact in terms of the emissions produced by airplanes and cars. While a company that builds international communications systems cannot avoid travel completely, it should seek to limit it. Similarly, the need for people to be in a common office (usually reached after a car journey) is sometimes unavoidable but should also be restricted.

Even before the problems created by Covid 19 a number of people such as the CPSO, CTO, SVP Sales and Director of System Engineering were working from home offices. During the isolation mandated during certain phases of the fight against the virus people have become creative in finding ways to work remotely:

- Engineers have set up equipment in ways that allow them to perform measurements remotely
- Customers have been able to inspect equipment and transmission demonstrations via video
- We have improved ways of sharing documents

Although it is now legally possible for staff to visit the office and lab facilities, visits have been limited and everyone is encouraged to minimize their travel and to continue with as much home working as they find practical. To ensure that this can be done in ways that don't adversely affect health, all staff are encouraged to check that they have laptops, external monitors (if desired) and any IT support that is needed.

Buildings have a noticeable impact in terms of consuming energy – and other resources – and emitting heat. Thanks to changes in the ways that staff are using central facilities, we intend to reduce the size of our US office and we will be moving to a smaller one in the next few months.

People



Xtera has a highly experienced staff, many with long careers in subsea communications and/or with the experience of working in several different companies. The same applies to the companies with which we partner: they are well-established players with recognized abilities and experience. We need to retain staff and maintain partner relationships.

However, we also need to recognize that largely due to history, much of the subsea communications industry is staffed by older people with limited diversity in gender and background. To ensure a long-term future and to bolster innovation Xtera aims to recruit younger people and to improve diversity. In addition, we need to find ways to help the new recruits to develop the expertise they need by involving them in relevant work and by finding ways for them to learn from existing staff before they retire. As part of this process Xtera is actively involved in the SubOptic mentoring scheme, which is part of the Diversity, Inclusion and Belonging (DIB) initiative, and we plan to get more of our team involved with it, thus contributing to an industry-wide process and learning how best to help new entrants to the industry.

Education is very important to the team at Xtera. Throughout the life of our company we have worked alongside universities such as UCL, Aston and HHI to promote common learning between industry and academia. We strive to create and freely share educational content to promote innovation, inclusivity and understanding. Visit our [learning page](#) to access our white papers and educational resources.

Safety, health and satisfaction

Xtera sells both terminal and submerged equipment, we also sell services and are often in charge of the overall project management and thus coordinating a number of services, some supplied by external suppliers. As well as the obvious requirement of ensuring that all the products and services are delivered as proposed, it's important that the way in which it is done respects the safety and health of the people involved. So far, our safety record has been excellent with no significant accidents or injuries, a record that we are very keen

to maintain. A secondary objective has been to keep everyone involved and interested in the work and we have been able to build up a team of enthusiasts – not just direct employees, but also sub-contractors and partners – who work well together and operate in a low-bureaucracy environment. Staff retention and willingness to go at least one extra step has been excellent and we have even had people returning to Xtera after leaving for retirement or other reasons.

Green initiatives



As a recent example of our interest in the environmental issues of subsea cable systems Xtera submitted and delivered a paper "Electrical power – greener solutions with minimal compromise" to the 2019 SubOptic conference. For the next conference we have a member as part of the paper committee which covers environmental topics "Clean Green Submarine – Connecting and Protecting People and the Planet". As part of some early background, we have contributed a simple analysis of the carbon footprint of a cable system, currently covering manufacture and installation.

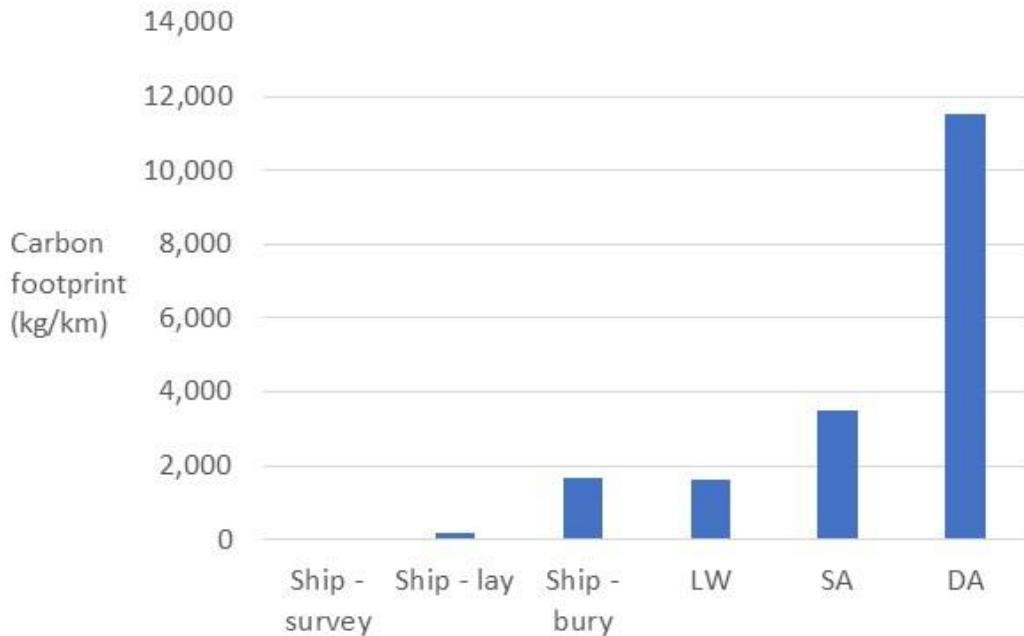


Figure 2: Carbon footprint of subsea cable

Clearly, we need to consider more elements and to question if carbon footprint is the best metric, so this graph should be seen as the first step in a process which will consider repeaters, travel, terminal equipment and the building that house them. As well as contributing to general industrial understanding of the issue, we hope that the study will allow Xtera to see where it can reduce our own environmental impact.

Xtera is one of the few suppliers in the industry who has supported projects which make use of redeployed cable to create new submarine cable systems. This provides an excellent way of recycling a product (cable) which has limited value to one customer but immense potential value to another. Examples of redeployment projects we have led are HUGO, SEABUS and GOKI.

The way we do business



Xtera has various policies covering corrupt practices and ethical policies, but also aims to encourage a culture of doing more than the legal minimum. We try to make sure that our proposals are clear and straightforward; that our communications with customers and potential customers don't include concealed intent or clauses. During projects we aim to inform customers of any issues promptly, aiming to resolving them quickly, rather than concealing and hoping to fix them before they become evident.

We also want to have satisfied customers who will give us repeat business and are always happy to receive feedback, even when it is negative. We are working to improve the way this occurs at the end of projects, as this has been identified as a minor observation during the last Quality Audit.

Processes



Xtera operates an ISO9001 quality system which includes a number of specific processes. For every product we have a life cycle which includes a high-level requirements document. This specification includes requirements that the product shall not include any hazardous substance or material and that at the end of life it shall be possible to recycle or safely dispose of the product. The specification also defines safety levels which typically are designed to cover optical safety – wet-plant typically operates at quite high-power levels and the light is not visible, thus increasing the potential hazard – and electrical safety, as operation up to several thousand volts is a feature of subsea cables. The design process includes a series of lower-level checks and reviews before the design is moved into manufacture.

Goal 14 Life Below Water



As a supplier of submarine cable systems Xtera strives to support 'Life Below Water' in all aspects of its projects, from permitting through to construction and operation over their 25-year life. Submarine cable systems are designed to respect the natural environment in which they are installed, and during the planning phases care is taken to respect conservation and protection areas. International laws are respected throughout the industry during planning, installation, operation and decommissioning phases of projects.

Oceanography and the SMART initiative



Some years ago, a combination of the ITU-T, academic oceanographers, cable system operators and suppliers formed a joint task force to consider how telecom cables might be used to provide oceanographic data. The SMART (Science Monitoring And Reliable Telecoms) initiative was aimed at using submerged electronics to monitor various oceanographic parameters and ideally to help in providing an early warning system to minimize damage from tsunamis.

As Xtera has already implemented some sensors in its repeaters and branching units we have been involved in some of the meetings and are regular attendees at the conference calls that occur to keep members of the joint task force up to date. Although the sensors used are not the type that are preferred by oceanographers, one of our customers has used them to monitor water temperature around repeaters supplied by Xtera.

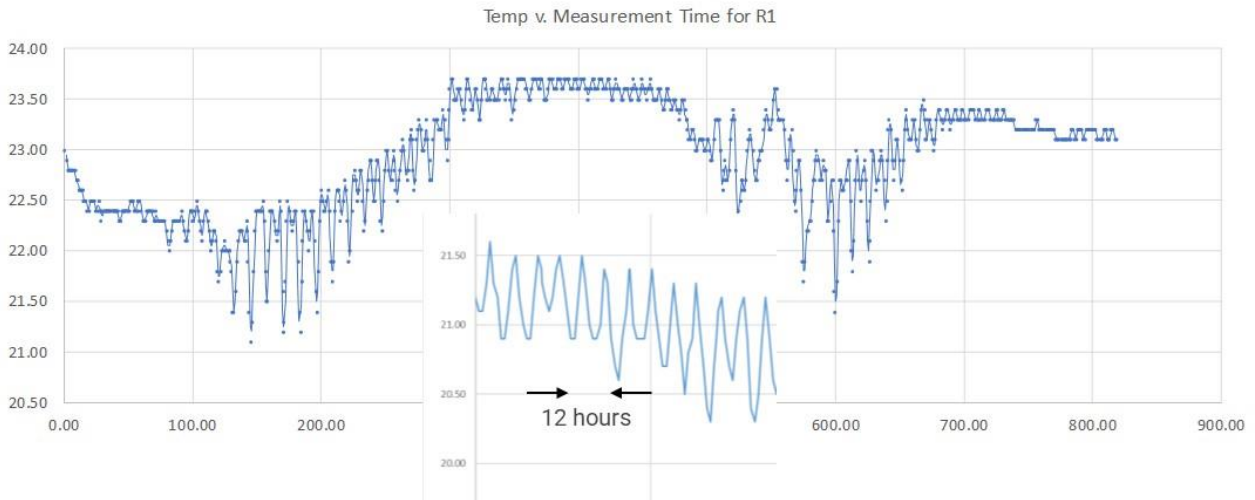


Figure 3: Temperature changes monitored by a repeater

Xtera continues to look at sensors for this application but is also following a more recent trend of using fibre as sensors, a typical example being Distributed Acoustic Sensing (DAS) which currently looks to be an interesting technology.

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Partners and subcontractors



Xtera sources best-in-class products and services from suppliers and partners with established supply records. Cable typically comes from Nexans or NSW / Prysmian and marine services are performed by partners with extensive experience of submarine cable survey and installation, such as Global Marine Services, IT International Telecom and Orange Marine.

As a partner-based supplier, we take a keen interest in the performance of our suppliers and in particular the sustainability plans they implement. Below you will find details from each of our main partners about the processes and procedures they implement to support sustainability.

Global Marine (marine installation partner)



"Sustaining our planet and our business is about more than protecting natural resources. Sustainability to us means helping our customers meet their sustainability challenges, creating employment opportunities, and working with local communities and the industries we operate in across areas such as education and safety to bring about positive environmental change for us all. It is also about balancing economic, environmental and social factors while addressing global challenges and uniting under a common goal: achieving net zero carbon emissions."



Global Marine are committed to sustainable development through a proactive approach to environmental protection, social responsibility, and strong economic progress. The Global Marine Group believes strongly in achieving the global net zero carbon emission goals by 2030 to positively impact climate change. They continuously adapt their policies and procedures to ensure they are actively reducing their carbon emissions across their offices and fleet including some of the latest innovative industry-leading technology.

Global Marine also drive three key initiatives that fall squarely under the Sustainability Development Goals, and are incentives that are strongly supported by Xtera:

- **Diversity, Equality and Inclusion**

We are proud to be a part of Inclusive Employers – the UK's first and leading membership organisation for employers looking to build inclusive workplaces. Inclusion is an overarching culture that encompasses diversity and equality and many other aspects of our working lives.

Inclusive workplace cultures enable our colleagues to do things differently, working in ways that suit them, flex working patterns to ensure their life-work balance is healthy and that they are able to deliver their best for their organisation.

- **STEM Education**

Our STEM Ambassadors work with local schools to demonstrate careers in engineering. They help show that a wide range of interesting and rewarding careers are available to people with STEM qualifications. Through our ambassadors, we aim to engage and motivate students to choose careers in science, technology, engineering and mathematics.

- **Mental Health First Aid**

We are proud to support workplace mental health, driving the need to create workplace cultures where employees feel safe and comfortable to share their whole identities, without fear of judgement or discrimination.

In 2021 we shouldn't have to leave parts of our identity behind – be that our cultural or ethnic background, gender identity, sexuality, disability or health – when we work.

We believe that workplaces play a key role in creating a society where everyone's mental health matters.

Nexans (cable supply partner)

“We are working in partnership with our customers in the fields of energy infrastructure, energy resources and smart buildings to create a safer, smarter and more efficient future. Nexans has been a signatory of the UN Global Compact in favor of a more responsible world economy since 2008, and has committed to achieving carbon neutrality by 2030.”

Nexans have produced a video explaining how they are building a sustainable energy highway of the future and contributing to carbon neutrality. [Watch here:](#)



Nexans also believe that people are at the heart of their purpose. Believing a diverse, talented and engaged workforce will help make their purpose a reality. [Watch the video here.](#)

NSW / Prysmian (cable supply partner)

“Every day, we are committed to ensuring the sustainability of our production processes and to safeguarding the environment. We work alongside local communities to ensure that the areas in which we operate are protected and to guarantee workplace safety. The United Nations “Decade of Action” programme has defined tangible solutions to all the challenges posed by the 2030 Sustainable Development Goals. The first and most important objective is to make electrical energy production clean.

A transition is required from the current model — based on fossil fuel use and the main cause of climate change, and hence of about 60% of greenhouse gas emissions — to one based on energy from renewable sources, which preserves the ecosystems for future generations and can be made accessible to an ever-greater number of people in all regions of the world to support their civil and economic progress. Prysmian Group is committed to supporting the achievement of the global agenda goals, contributing to building and upgrading infrastructures for energy transmission and distribution and for telecommunications — the essential drivers for the transition to a new development model for the civil society.”



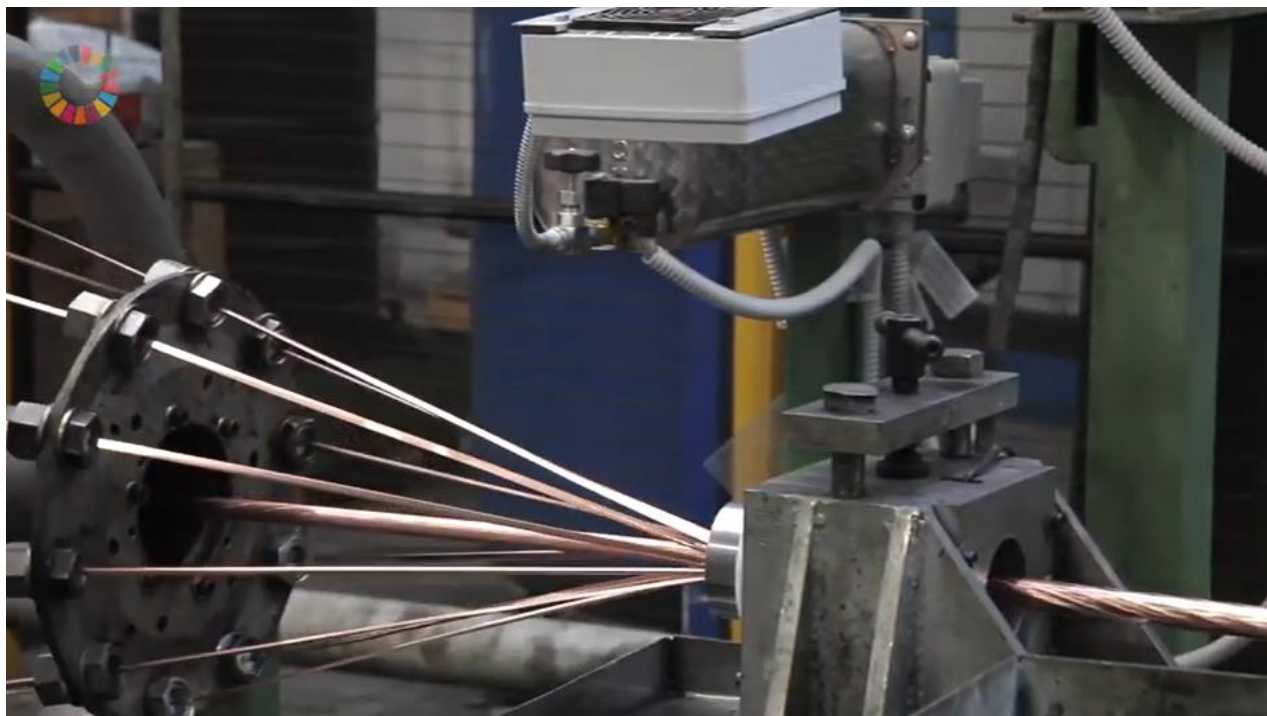
The Prysmian Group also leads from the top promoting full integration of the Task Force on Climate-Related Financial Disclosures framework in the management of climate-related risks and opportunities.

In 2020, in order to further confirm the Group's commitment to managing climate-related risks and opportunities, Prysmian, together with the Control and Risk Committee and the Sustainability Committee, launched the process for fully integrating the framework recommended by the Task Force on Climate-Related Financial Disclosures (TCFD) established by the Financial Stability Board (FSB).

Most of TCFD's recommendations — which focus on four key elements, i.e., governance, strategy, risk management, and metrics & targets — have already been adopted by the Group with the aim of fully integrating the framework by 2022 thanks to the support of a partner, a leading player in this field, which has already been identified.

Prysmian Group is highly committed to supporting the development of greener and smarter power grids. Submarine cables are, and will be, an essential part of this development. Prysmian has been involved over the years in many milestone projects across the globe, contributing to the development of entire communities. The focus of the new campaign realized in collaboration with Bloomberg is to showcase the work of organisations, such as Prysmian Group, leading global thought and action on the critical climate issues of our time. We aim to become a thought leader in our industry and a positive contributor towards environmental issues.

Learn more [here](#)



IT International Telecom (marine installation partner)

IT leads from the top through its corporate policy which states:

“IT International Telecom Inc. (IT) is focused on providing our customers with superior quality service while protecting our employees, our customers and the environment in which we work. To achieve this we have implemented an integrated management system that meets the requirements of the OHSAS 18001, ISO 14001 and ISO 9001 standards.

Our management system is based on the following policies and commitments:

It is our policy to:

- *Provide a safe work environment and the requisite training that will enable our employees and persons performing work on behalf of IT to safely complete their assigned duties.*
- *Perform our services in a manner that prevents pollution.*
- *Comply with the applicable legislation, regulations and codes of practice of the regions in which we work.*
- *Meet or exceed our client’s performance expectations, the first time and every time.*

We are committed to:

- *Protecting the health and safety of our employees, persons performing work on behalf of IT, our customers and the public.*
- *Protecting the environment of the communities where we work and live.*
- *Meeting the requirements and expectations of our customers.*
- *Continually improving our health, safety, environmental and quality performance.*
- *We will achieve this by:*
- *Setting, communicating and monitoring our HSEQ performance targets.*
- *Providing our employees with the necessary resources (training, equipment, support) to perform their duties in a safe and efficient manner.*

- *Auditing our integrated management system on an annual basis.*
- *Reviewing our policies, procedures and processes regularly to identify opportunities for improvement.*
- *All IT employees are responsible to work in a manner that upholds our policies and commitments.”*

In terms of Environment, Health & Safety and Quality IT makes the following commitments:

- ✓ *IT is committed to minimizing the impact on the environment while growing its business. IT has implemented an ISO 14001 certified Environmental Management System (EMS) which incorporates pollution prevention and reduction initiatives into IT’s daily operations.*
- ✓ *IT prides itself on ensuring that safety is our first objective. IT’s corporate goal of Zero Incidents is the basis of our ISO 45001 certified Safety Management System (SMS). IT is committed to providing a safe and healthful workplace for all our employees. IT believes that every accident is preventable and IT provides its personnel with the training, equipment and opportunity to meet this objective.*
- ✓ *IT is committed to understanding our clients’ needs and meeting them. Every project is managed with Zero Incidents and clients’ expectations as the end goal. IT has implemented an ISO 9001 certified Quality Management System (QMS) to ensure that quality of service remains a cornerstone of our business. A ‘Lessons Learned’ review is performed on every project to promote continual improvement across the key areas of performance: Safety, Environment, Quality and Efficiency.*

Orange Marine (marine installation partner)

Orange Marine lays out its Corporate Social Responsibility clearly, stating that *“Orange Marine commits to its stakeholders by offering a quality service compliant to ethical and deontological values, while assuring its staff safe and healthy work conditions.”*



In terms of the environment specifically they have the following objectives:

Our environmental objectives

- ✓ *reduce our energy consumption and their impact on the environment and global resources*
- ✓ *consider the potential impact of our activities on the environment of the company and preserve it from any pollution*
- ✓ *plan the means to control risks and accidents related to our infrastructures*

Our commitments to control impacts on our environment

- ✓ *we adapt the transit speed of our vessels and integrate energy savings in the design of new ships*
- ✓ *we limit emissions and harmful aspects of our activities both maritime and terrestrial*
- ✓ *we regularly test the efficiency of the safety and security plans on the sites and ships*

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