RACING TEAM

11TH HOUR RACING TEAM
CLIMATE ACTION PLAN

THIS DOCUMENT

The intention of this document is to describe 11th Hour Racing Team's Climate Action Plan (CAP).

- Inform and reinforce internal policy
- Act as a reference for general team outreach and communication on the topic
- Provide a statement of commitment and achievement for stakeholders
- Inspire our wider audiences

CONTENTS

Photography: Amory Ross / 11th Hour Racing

INTRODUCTION

ADDRESSING THE ISSUES OF CLIMATE CHANGE IS FUNDAMENTAL TO THE FUTURE OF OUR SPORT, THE PROSPERITY OF ALL COMMUNITIES, AND THE HEALTH OF OUR OCEAN.

Implementing the actions needed for the sailing and marine sector to align with The Paris Agreement [1] and UNFCCC Sports for Climate Action's target for Net Zero no later than 2040 [2] requires a concerted effort by all.

Building on our previous work, this Climate Action Plan outlines the strategy we at 11th Hour Racing Team will put in place to address this global issue.

[1] The Paris Agreement is a legally binding international treaty on climate change. It was adopted by 196 Parties at COP21 in Paris, on December 12, 2015 and entered into force on November 4, 2016. Its goal is to limit global warming to well below 2 (preferably to 1.5 degrees celsius), compared to pre-industrial levels, by 2050.

[2] The Net Zero target defined by the Paris Agreement is as soon as possible, but by 2050 at the latest. This underlines the urgency for each sector of the global community to set ambitious targets, while acknowledging that for some sectors the task will be easier than others.

The UNFCCC Sports for Climate Action has set the Net Zero target for the sporting sector as no later than 2040. 11th Hour Racing Team aligns with this approach acknowledging that while sport has an opportunity to influence millions of people, it is a non-essential sector and needs to react responsibly and promptly to climate change.

DECLARATION OF COMMITMENT

11th Hour Racing Team is committed to a Climate Positive outcome, drawing down at least 20% more greenhouse gases than emitted by the totality of their operations during the period starting January 2019 and ending July 2023.

Climate actions to achieve this outcome are outlined in the team's Climate Action Plan. The status of each action and end date will be reported in full in the Team's Sustainability Report 2019-2023.

As a signatory of the Sports for Climate Action Initiative to the United Nations Framework Convention on Climate Change we support the goals of the Paris Agreement in limiting global temperature rise to 1.5 degrees Celsius above pre-industrial levels by:

1. Undertaking systematic efforts to promote greater environmental responsibility
2. Reducing overall climate impact
3. Educating for climate action
4. Promoting sustainable and responsible consumption
5. Advocating for climate action through communication

11TH HOUR RACING TEAM

Mark Towill,
CEO & Co-Founder

Charlie Enright,
Skipper & Co-Founder

Damian Foxall,
Sustainability Program Manager

THIRD PARTY REVIEWED

Craig Simmons,
Chief Technology and Metrics Officer UK - Anthesis Group

Date: 1st September, 2022

LETTER OF COMMITMENT

7

United Nations Climate Change
Global Climate Action

5. Letter of Commitment

To the Executive Secretary of the
United Nations Framework Convention on Climate Change (UNFCCC) secretariat
Bonn, Germany

Recognizing the critical need for cities, regions, companies and investors from around the globe to help implement the Paris Agreement and accelerate the transformative change needed to reach greenhouse gas (GHG) emission neutrality (i.e. climate neutrality) in the second half of the twenty-first century, I am pleased to confirm that 1 Degree/11th Hour Racing team supports the vision outlined in the Sports for Climate Action Declaration.

With this communication, we express our intent to implement the principles enshrined in the Sports for Climate Action Framework and commit to working collaboratively with our peers and relevant stakeholders to develop, implement and enhance the climate action agenda in sports.

1 Degree/11th Hour Racing Team will communicate this commitment to our stakeholders and the general public and will report publicly on progress.

Yours Sincerely

Signature	Place	Date
	Hawaii, USA	January 6, 2021

Please send your signed letter of commitment to the UNFCCC secretariat at:
climatedialogues@unfccc.int

OVERVIEW

AT 11TH HOUR RACING TEAM, OUR CLIMATE ACTION PLAN ADDRESSES THE ISSUES RELATING TO THE GREENHOUSE GAS (GHG) EMISSIONS ASSOCIATED WITH OUR OPERATIONS, AND PROVIDES A PATHWAY FOR THE BROADER MARINE INDUSTRY.

The key actions undertaken by our team includes:

1. **Inventory of impacts:** defining a comprehensive inventory associated with the 2019-2023 campaign, which includes our team's preparations, operations, the boat build, and participation in events and races including The Ocean Race 2022-23
2. **Benchmarking:** establishing historical benchmarks to gauge progress during all phases of the campaign
3. **Transparent calculations:** incorporating full Scope 1, 2 and 3 GHG emissions
4. **Team engagement:** working with those at the front lines and engaging all team members in identifying GHG emission reductions related to all the team's internal operations, and externally within the supply chain
5. **A climate positive pathway:** projecting a pathway for our team using targets based on best available data and previous benchmarks
6. **Internal price of carbon:** establishing an internal price of carbon linking resources to policy and action
7. **Insetting:** supporting improvements within the external value chain
8. **Transparent reporting:** publishing annual reports aligned with Global Reporting Initiative standards which have been independently peer reviewed
9. **Continuous assessments:** facilitating the setting of new targets and ongoing reductions
10. **Publishing open-source resources:** The Toolbox was created to make the process of designing and implementing a sustainability plan accessible to any organisation in any sector
11. **Life cycle analysis:** completing a reference life cycle analysis for the design and build of our new 60-foot IMOCA boat, sharing the tools used and the results of this study within the Design and Build Report
12. **Influencing change:** supporting the IMOCA Class and wider marine sectors transition to more sustainable practices, guidelines and rules, including recommendations for a carbon threshold and an internal price on carbon
13. **Collaboration:** working with The Ocean Race - our major event in the campaign - supporting a reduction, mitigation and compensation plan
14. **A nature-first approach:** applying nature based solutions have gone some ways to addressing residual impacts, with an emphasis on bringing blue carbon to market, and highlighting the importance of high-quality carbon credits

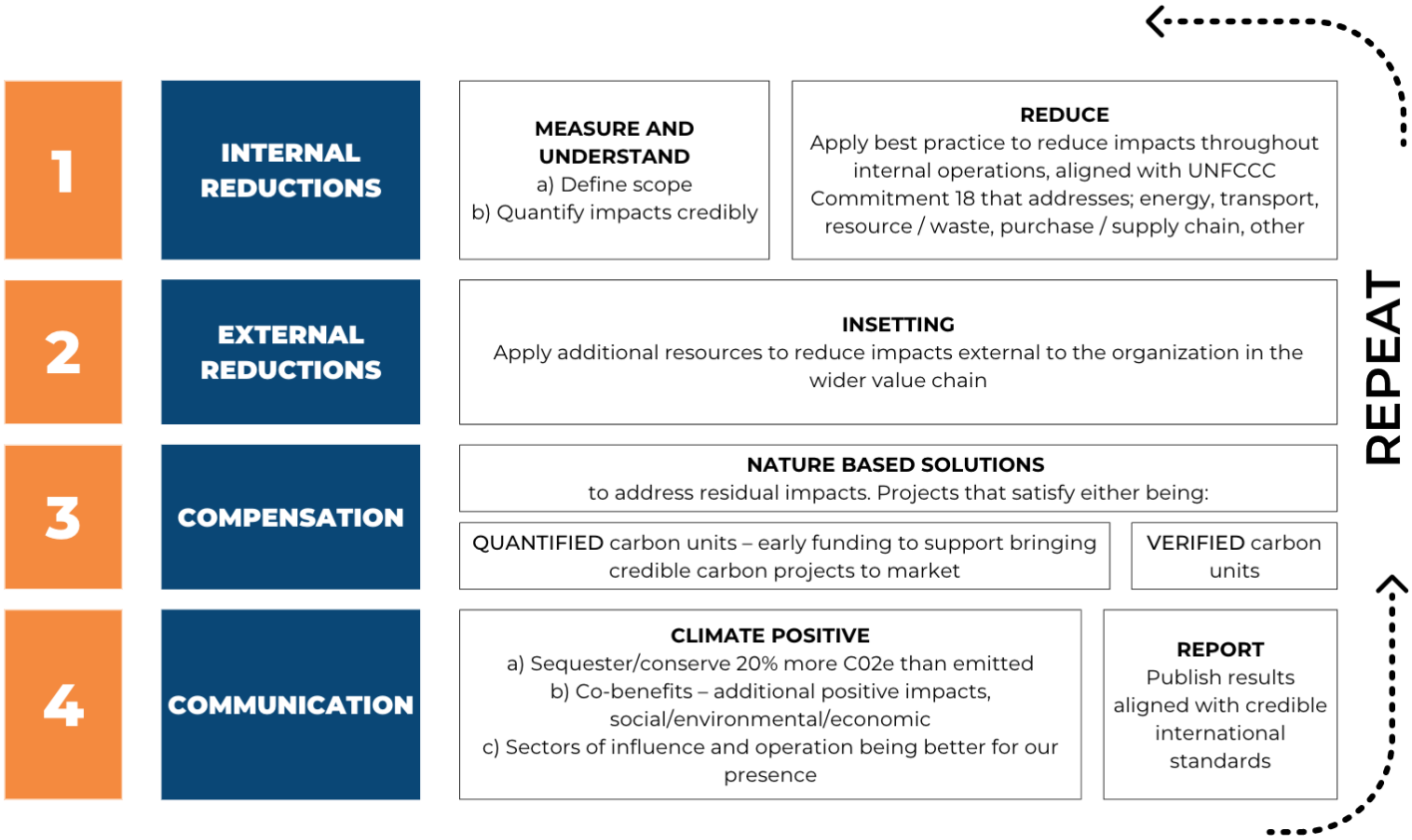
The combined result aims for a Climate Positive approach including: quantifiable actions drawing down 20% more greenhouse gas than emitted, and unquantifiable co-benefits that support regenerative outcomes.

Our team's Climate Action Plan is forward thinking, aligned with credible international standards and is third party reviewed.

An extensive list of our team's climate action and reduction measures can be found here.

STRATEGY

THE 11TH HOUR RACING TEAM CLIMATE ACTION PLAN IS BASED ON THE FUNDAMENTAL OBJECTIVE TO IMPLEMENT IMMEDIATE AND LONG-LASTING REDUCTIONS IN GHG EMISSIONS.



APPROACH

BY 2040 OR 2050?

The Net Zero target defined by the Paris Agreement is “as soon as possible”, but by 2050 at the latest. This underlines urgency for each sector of the global community to set ambitious targets, while acknowledging that for some sectors the task will be easier than others.

The UNFCCC Sports for Climate Action Framework has set the Net Zero target for the sporting sector as no later than 2040. At 11th Hour Racing Team we have aligned with this approach acknowledging that whilst sport has an opportunity to influence millions of people, it is a non-essential sector and needs to react responsibly and swiftly to the impacts of climate change.

NET ZERO OR CLIMATE POSITIVE?

Recognizing the importance of the global Net Zero targets, and aligning with the UNFCCC Sports for Climate Action target of no later than 2040, at 11th Hour Racing Team, we have maintained a climate action strategy since 2017 which has balanced GHG emissions with reduction and carbon sequestration projects for a Net Zero outcome.

However, we have had a growing awareness that given the scale of global issues even this is not enough.

In 2020 we established a Climate Positive approach, underlining our team’s objective to go beyond just short-term reductions, to considering how we can leave our sector of operations and influence better for our presence – a restorative and regenerative approach.

Climate Positive is an ambitious approach to going beyond the minimum requirements of the Paris Agreement on climate, to address the wider range of global issues outlined by the UN Sustainable Development Goals.

In the context of GHG emissions, we consider Climate Positive to be the state where we draw down 20% more GHG than we emit, giving us confidence to declare our contribution to global climate goals.

Climate Positive can be considered to represent the sum total of both *quantifiable*[3] GHG, and *unquantifiable* co-benefits.

[3] Quantifiable GHG represents the sum total of carbon dioxide equivalent that can be calculated using recognised and verifiable standards. Co-benefits are the added benefits we get when we act to control climate change, above and beyond the direct benefits of a more stable climate.

INTERNATIONAL STANDARDS

THE CORE STANDARDS THAT WE ALIGN TO AT 11TH HOUR RACING TEAM INCLUDE:

UNFCCC

The team is an active member of the United Nations Framework Convention on Climate Change (UNFCCC) Sports for Climate Action Framework outlines the principles:

1. Undertake systematic efforts to promote greater environmental responsibility
2. Reduce overall climate impact
3. Educate for climate action
4. Promote sustainable and responsible consumption
5. Advocate for climate action through communication

The team has adopted this strategy as:

- Measure
- Understand
- Take action
- Inspire

This strategy requires immediate reduction measures, but also a fundamental rethink of the future and action towards long-term goals. The target is to align with the 1.5°C ambition, the minimum requirement is to reduce emissions by 50% by 2030 and Net Zero as soon as possible, but no later than 2040.

As a signatory the team reports their progress towards Net Zero annually within this framework.

WORLD SAILING

World Sailing Agenda 2030, and Special Events Charter have provided fundamental guidance for the team's broader sustainability strategy and informed the Climate Action Plan.

IMOCA

The team is an active member of the IMOCA Sustainability Committee, and the Class defines a Sustainability Charter for IMOCA teams.

THE OCEAN RACE

The Ocean Race has a robust Climate Action Plan, and 11th Hour Racing Team has collaborated closely with the event to synchronise strategies, provide guidelines for all stakeholders, and to ensure that the team complies with event requirements, these include:

- The Climate commitment for teams
- Greenhouse gas emissions – management strategy
- A collective compensation plan

GRI & ISO

The team publishes annual reports referenced to the Global Reporting Initiative, and operates a sustainability management system in conformance with ISO standards, which have been independently peer reviewed.

THE CORE STANDARDS THAT WE ARE INFORMED BY INCLUDE:

PAS 2060

PAS 2060 defines specifications for the demonstration of carbon neutrality.
The team is informed by the PAS 2060 standard, but will NOT claim carbon neutrality per se, rather the team will highlight the approach to supporting the global climate goals, including:

A declaration of commitment to a climate positive outcome
A declaration of achievement, to be published on completion

NET ZERO INITIATIVE

Net Zero initiative guidelines provide additional context on carbon accounting, the limitations of carbon neutrality for organisations, and guidance on insetting.

CLIMATE NEUTRAL STANDARD

Provides a pathway of internal GHG emissions reductions in line with the Paris Agreement.

ADDITIONAL STANDARDS REFERENCED INCLUDE:

United Nations Sustainable Development Goals
Oxford offsetting principles
Science based targets

QUANTIFIED AND/OR VERIFIED CARBON HAS BEEN ALIGNED WITH/SOURCED FROM:

Projects that align with Verra (VCS, CCB), Plan Vivo, Gold Standard of similar international standing.

THIRD PARTY REVIEW HAS BEEN PROVIDED FOR:

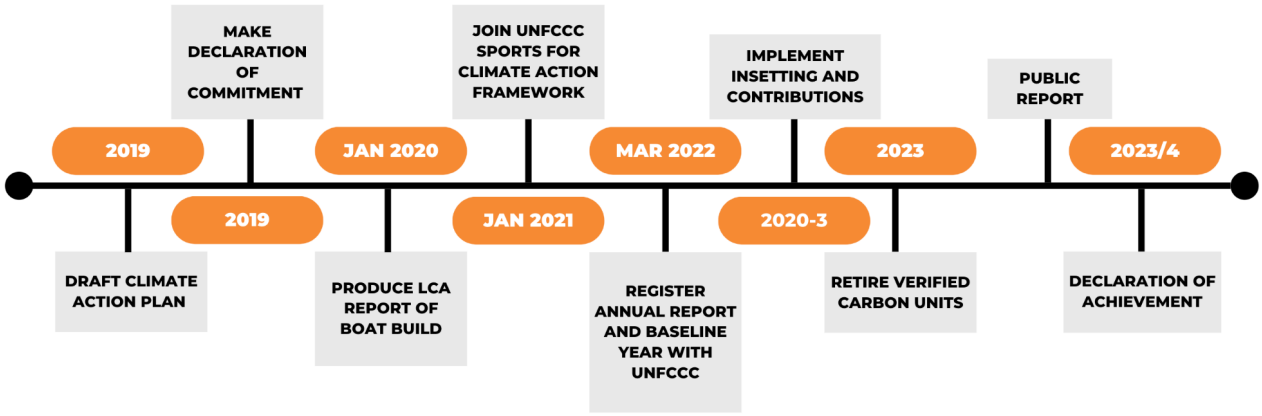
The Climate Action Plan; carbon accounting process; annual reports; ISO management; The Pathway to Net Zero; PAS 2060 declarations;

BY:

Craig Simmons, Chief Technology and Metrics Officer – Anthesis Group
Dan Reading, formerly World Sailing – Reviewed ISO management system

PROCESS TIMELINE

The creation, implementation and outcomes of the Climate Action Plan are the result of detailed research, participation in various climate action working groups, and forward thinking to stay ahead in this rapidly evolving environment.



Graphic: represents an overview of the process and associated timelines.

CLIMATE ACTION TRACKER

The creation, implementation and outcomes of the Climate Action Plan are mapped clearly, relevant documentation is accessible for third party review at all stages in the Team's climate action tracker.

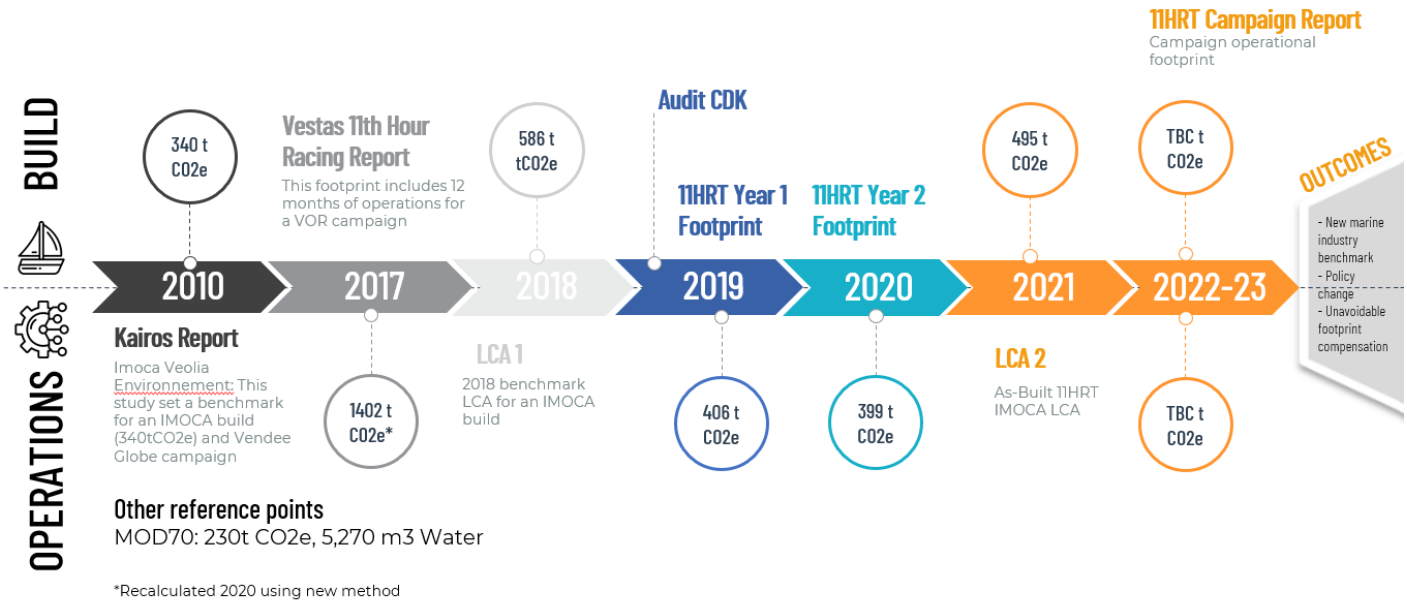
CLIMATE ACTION TRACKER | PROCESS

RESEARCH & PLAN			
Research			
Workshop			
Stakeholder input			
Plan			
Review			
MEASURE & UNDERSTAND			
Year			
2017-18	Trackers	Calculators	Annual report
2019	Trackers	Calculators	Annual report
2020	Trackers	Calculators	Annual report
2021	Trackers	Calculators	Annual report
2022	Trackers	Calculators	Annual report
2023	Trackers	Calculators	Annual report
Benchmark			
REDUCE			
Compare			
2025	Net zero calculator	Net zero pathway	
2028	Net zero calculator	Net zero pathway	
2030	Net zero calculator	Net zero pathway	
2040/2050	Net zero calculator	Net zero pathway	
CONTRIBUTE			
Insetting			
Compensate - Quantify			
Compensate - Verify			
PUBLISH			
Register to standard			
Public			

DATA FLOW	2019	2020	2021	2022	2023	2024
Draft Climate action plan	☑	☑	☑	☑	☐	☐
PAS 2060 Declaration of acheivement for baseline period				☐	☐	☐
PAS 2060 Declaration of commitment				☐	☐	☐
Data to trackers	☑	☑	☑	☐	☐	☐
Inventory check	☑	☑	☑	☐	☐	☐
Trackers to Calculator	☑	☑	☑	☐	☐	☐
Material to Input - Output model	☑	☑	☑	☐	☐	☐
Remote workers to Anthesis model		☑	☑	☐	☐	☐
Lifecycle assessment		☑	☑	☐	☐	☐
Water to WFI		☑	☑	☐	☐	☐
Adc external event footprints (Grants & team events)		☑		☐	☐	☐
Recieve partner footprints	☐	☐	☐	☐	☐	☐
Results to Benchmark	☑	☑	☑	☐	☐	☐
Results to Compare	☑	☑	☑	☐	☐	☐
Prepare graphits	☑	☑	☑	☐	☐	☐
Update Net zero calculator			☑	☐	☐	☐
Update Reduction plan		☑	☑	☐	☐	☐
Third-party review	☑	☑	☑	☐	☐	☐
Annual report	☑	☑	☑	☐	☐	☐
Calculator results to Carbon contributions			☑	☐	☐	☐
Update Climate action plan	☑	☑	☑	☐	☐	☐
Third-party review				☐	☐	☐
Implement insetting				☐	☐	☐
Update climate action plan			☑	☐	☐	☐
Purchase credits				☐	☐	☐
Third-party review				☐	☐	☐
Register			UNFCCC	Registered baseline data with UNFCCC (April 2022)	☐	☐
Report	☑	☑	☑	☐	☐	☐
Public version	☑	☑	☑	☐	☐	☐
PAS 2060 Declaration of acheivement for period				☐	☐	☐
Final retirement of carbon units					☐	☐
PAS 2060 Declaration of acheivement for period					☐	☐

DEFINING OUR FOOTPRINT BENCHMARK

Establishing relevant benchmarks provides a reference point for action and the starting point for climate action.



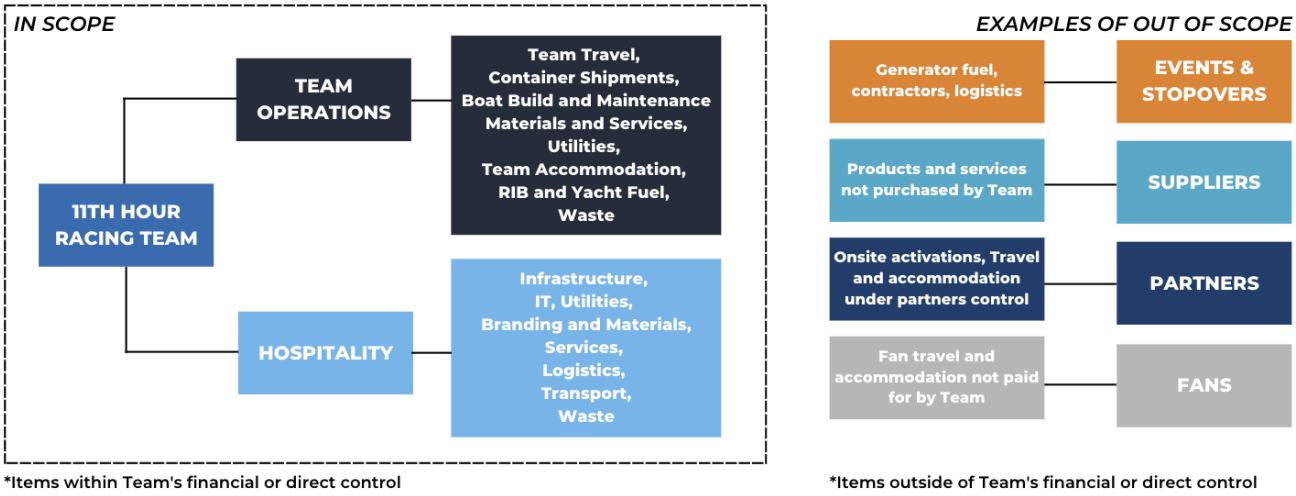
Other reference points
MOD70: 230t CO2e, 5,270 m3 Water

*Recalculated 2020 using new method

DEFINING OUR FOOTPRINT SCOPE

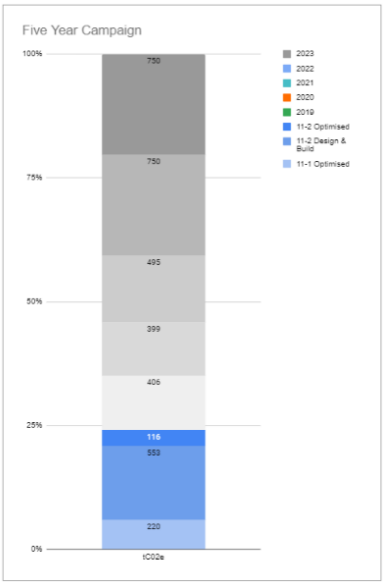
Establishing scope, boundaries, and inventories, especially as it pertains to the wider network of stakeholders (partners, suppliers, the IMOCA Class, The Ocean Race and other teams) was key to understanding the whole system.

To define scopes and allocate responsibility, financial control was used, simply stated as - *'You own it or paid for it, you are responsible for it.'*



The graphic above represents the overlapping scope and boundaries of the team, event and stakeholder systems

Design & Build	11-1 Optimised	11-2 Launched & ready to sail		11-2 Optimised for TOR	
Inventory	Ex-Hugo Boss plus 4 foils (1 set plus 2 others) 1 set sails + 3 1 set rigging	Launched & ready to sail with IMOCA class inventory 1 set foils 1 set sails 1 set rigging		1 spare rudder 1 set foils 1 set sails 1 set rigging	
tC02e	220	553		116	
Operations	**2019**	**2020**	**2021**	**2022**	**2023**
tC02e	406	399	495	750 +/-	750 +/-



The GHG emissions associated with our total campaign from 2019 to 2023 are projected to be 4,000 tC02e +/-. The breakdown is split between:

- The design and build process and optimization of the race boat (in blue)
- The annual operations and participation in events, including The Ocean Race (in grey)

The result emphasizes that while material and equipment have important impacts, even on a relatively small initial lifespan of five years, the use phase of our performance boat represents over 75% of the overall footprint.

DEFINING OUR FOOTPRINT INVENTORY

We use best efforts to include all GHG emissions in our calculations[4] .

Scope 1: All direct GHG emissions including fuel combustion, company vehicles, and fugitive emissions.

Scope 2: Indirect GHG emissions from consumption of purchased electricity, heat or steam.

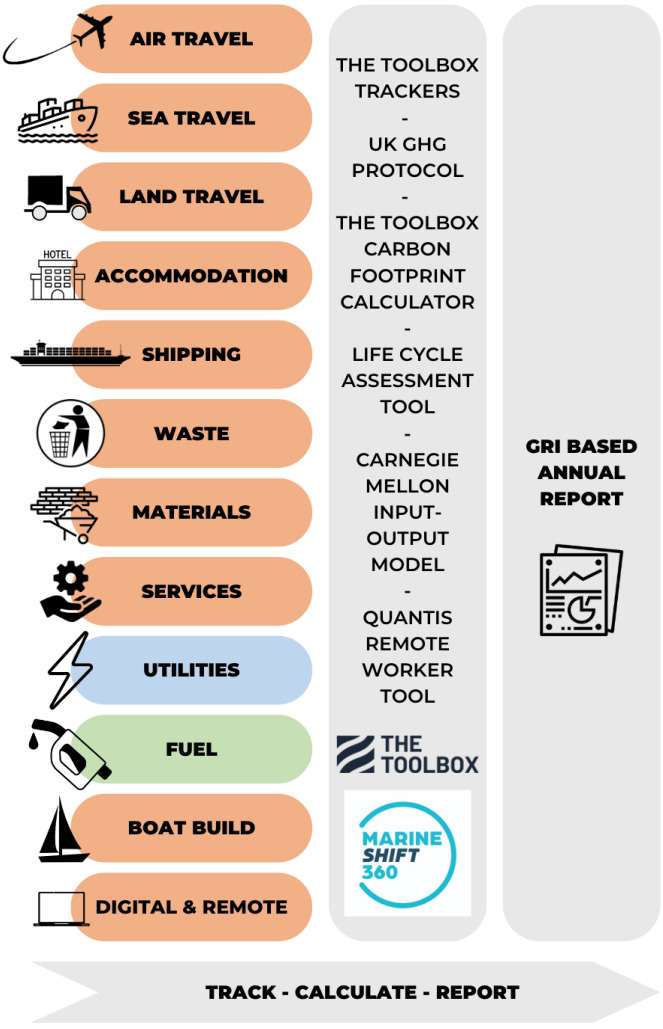
Scope 3: All other emissions – value chain emissions associated with the upstream and downstream impacts of products or services procured by an organization.

The following calculation methods are used to ensure the most accurate and consistent results:

1. **GHG Protocol** – priority method
2. **Marineshift360 life cycle assessment tool** – marine components (boat, sails, etc.)
3. **Quantis remote worker tool** – for team members off-site
4. **Carnegie Mellon Input-Output model** – other Scope 3 by $ spend
5. **Bespoke assessments** – all other

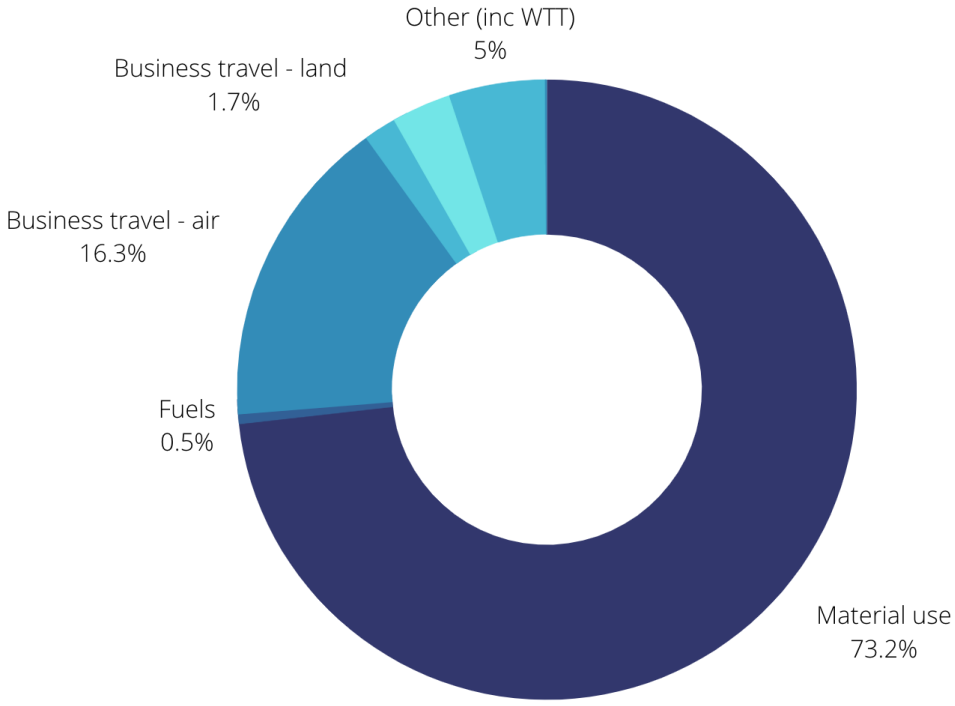
Understanding the relative impacts of the inventory related to our team's operations:

- Identifies key areas for reduction efforts
- Quantifies overall and residual emissions so that they can be mitigated and compensated for



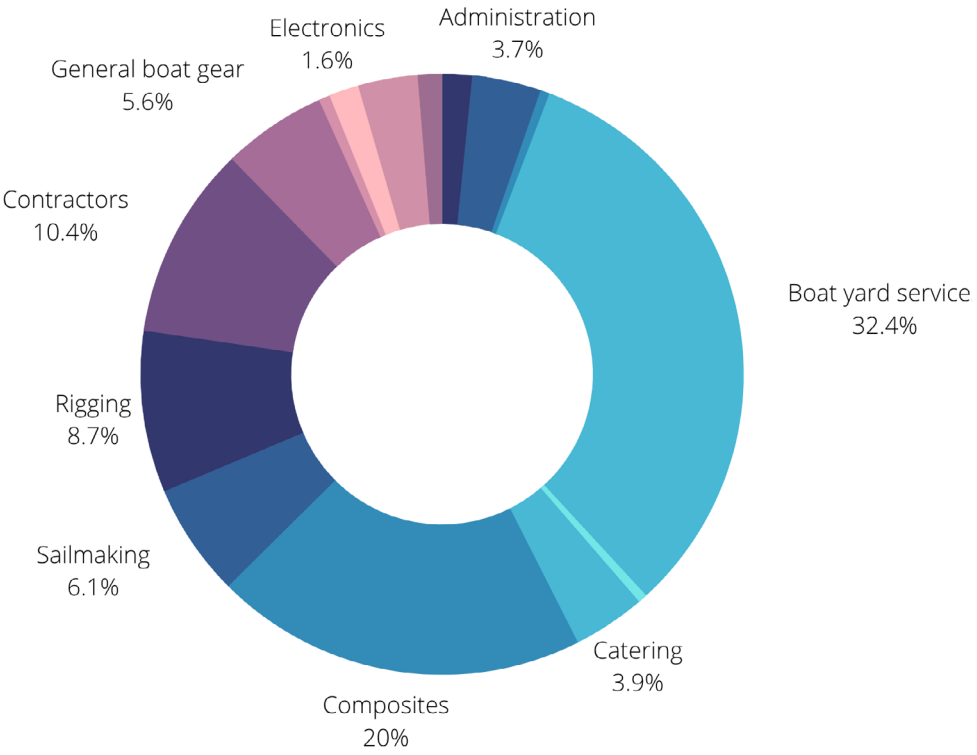
[4] See inclusions and exclusions in the Annex

Detailed breakdowns of annual GHG emissions are published in our team's Annual Reports, examples are provided here:



This graph represents the breakdown the team's GHG emissions in 2020

The importance of detailed measurement is outlined above, identifying material use (products and services purchased) as being the inventory sector responsible for the largest impact, and the need for focusing on this part of our team's inventory through the implementation of rigorous sustainable sourcing standards.



A detailed breakdown of GHG emissions associated with products and services purchased in 2020

CLIMATE ACTION & REDUCTIONS

Working with our team and with our stakeholders to identify and implement GHG emission strategies is an ongoing task that requires persistence and ambition.

Some of the key actions undertaken include:

FUELS

		Best Practice	Internal	External	
Diesel	Instead of a conventional alternator charging system the boat is fitted with an electric motor generator, and 48 Volt system, which will improve charging efficiency from around 60% to over 90%.		✓		90%
Diesel	Onboard renewables (solar panels & hydro-generators) provide 75%+ of onboard power needs		✓		75%
Petrol	Electric powered RIBS, resulting in a reduction of 10% fuel use per year		✓		10%

ELECTRICITY

Sustainable sourcing	Built in France, 11th Hour Racing team's IMOCA 11.2 benefited from the low energy impact of the French average for most suppliers, and a 100% renewable energy tariff for CDK Technologies, this gave a 98 tC02e (15%) reduction compared to the EU average.			✓	15%

MATERIALS

		Best Practice	Internal	External	
Sustainable sourcing	CDK Technologies: Collaboration between CDK and their supplier GURIT to store and return packaging results in 1 tC02e reduction per year, and a saving of E4000		✓		1 T
Sustainable sourcing	The Team engaged with 50 suppliers in its sustainability discovery and engagement plan. 100% of these suppliers expressed a willingness to collaborate on the sustainability agenda, and are working with the Team to co-create and deliver goals and initiatives.			✓	50
Sustainable sourcing	CDK Technologies have an integrated material management system that tracks in detail materials from order through the system to either end product or waste treatment. This material management system was adapted to incorporate the nomenclature of the life cycle assessment inventory.			✓	
Sustainable sourcing	A sustainability audit of the build facility at CDK Technologies highlighted a list of best practices already in place onsite, including: Insulation of the main manufacturing building roof at Port La Forêt, energy sourced on a 100% renewable tariff, manufacturing efficiencies including a 30% reuse of steel materials in the plug component resulting in an energy reduction of ~30k MJ.	✓			30%
Sustainable sourcing	CDK Technologies implemented a waste management course for internal team leaders in 2017 after a new waste service was put into place which increased their recycling rates from 10% to 55% of their annual breakdown.	✓			55%
Sustainable sourcing	CDK Technologies started to implement some of the actions from the 2019 environmental audit commissioned by the Team. Examples include: local window manufacturers take dry cloth carbon offcut waste for processing into new products. CDK switched to LED lighting for the entire site that typically lasts five times as long as the fluorescent equivalent and has been shown to generate energy savings of 20-30% A new route for recycling prepreg backing (PE and PP, at a volume of approximately 2 metric tons per year), through a local waste contractor who collects and processes it for remanufacturing. Saving: 528 kg CO2e per year.			✓	30% 0.5 T
Sustainable sourcing	The use of PEFC certified wood in the deck mock-up reduced the impact by 45 kg CO2e.			✓	45
Sustainable sourcing	Recycled carbon fiber (rCF) has just 5-20% of the greenhouse gas emissions of virgin carbon fiber and in many cases provides a valid alternative. Prominent examples include nonstructural parts. The team used rCF in their cradles.		✓		80%
Sustainable sourcing	G-TEX recycled carbon material was paired with PowerRibs between layers to increase strength and to allow resin to flow through. As a result, the Team was able to achieve a 50:50 resin to fiber ratio.	✓			80%
Sustainable sourcing	Bio-based resins have approximately 50% lower carbon footprint, use half the amount of scarce resources, and consume 50% less energy and water than an average non-bio-based resin alongside lower toxicity impacts for human health. The Team used bio-based resins for the splashes, engine box, deck fairing, and hatches.		✓		50%
Sustainable sourcing	Recycled PET core used for some components has a 56% lower global warming potential than virgin PET core. The boat builders used it for cradles, engine boxes and deck fairings.		✓		56%
Sustainable sourcing	Europe produces 85% of the world's flax, and much of this is in Normandy, France. The Team used ampliTex™ flax fibers with lower GHG footprint than carbon fiber, and the fibers themselves are biologically decomposable.		✓		95%
Sustainable sourcing	The Team's running rigging includes bio-based dyneema and Marlow/DSM's recycled-based dyneema.		✓		50%
Sustainable sourcing	Rigging Works provided the in-house services to the team, including specific attention to sustainable best practices: rigging ordered and woven to spec at Marlow, ensuring minimum offcuts/waste, optimized transport and packaging, stockpiling used ropes and offcuts for recycling.		✓		

WASTE

		Best Practice	Internal	External	
Landfill avoidance	2019 waste diverted from landfill	✓			0.3T
Landfill avoidance	2020 waste diverted from landfill	✓			3.5T
Landfill avoidance	2021 waste diverted from landfill	✓			2.5T
Landfill avoidance	Design and build waste diverted from landfill			✓	20T
Circular materials	The Team supported the Givebox initiative by consolidating a large inventory of unused products to be passed on to new owners	✓			
Circular materials	GEN2: The teams carbon recycling partner provides a recovery service for the team, which is also extended to other teams and the local marine industry		✓		8T

TRAVEL

Travel policy	Updated team travel policy reduces domestic flights taken within Europe, with annual reductions of 6 T CO2e	✓			6
Team logistics	Team logistics policy provides accommodation within proximity of work, enabling public transport or cycle/walk commute	✓			
Travel policy	Updated team travel policy - Switch to hybrid rental cars, resulting in a 60% impact reduction	✓			60%

SHIPPING

Air freight	Transat TJV: better logistical planning replaced airfreight with shipping results in a 4.77 t CO2e reduction	✓			4.77
Air freight	North sails USA: better logistical planning replaced airfreight with rail	✓			

MANAGED ASSETS

		Best Practice	Internal	External
Remote workers	A significant shift in organizational policy enabled more remote working for 50% of the team		✓	
Digital footprint	The Sail designer, North Sails uses two supercomputers at the Wolfson Unit at the University of Southampton which have been rated in the top 500 of the world's greenest machines. (Greenlist, 2013, 2017).			✓
Digital footprint	The net carbon emissions associated with the Team's google workspace platform is zero. This is due to renewable energy purchases to offset the emissions from the Google data centre energy use. Google matches 100% of the electricity they use with renewable energy, including the Google cloud			✓
Digital footprint	The Team uses Kinsta for its website hosting which uses the Google cloud platform.			✓
Digital footprint	The Team uses Image Relay, a certified B-Corp, for its digital asset management. They use Amazon Web Services to hold the digital assets which exceeded 50% renewable energy usage for 2018			✓

5.6

OTHER

Partnerships	As a key development partner in the MarineShift360, facilitated the creation of a bespoke tool for the marine sector industry			✓
Peers and partnerships	The Ocean Race: The team worked with the Race to Restore working group to define a climate action and blue carbon strategy			✓
Peers and partnerships	UNFCCC Sports for Climate Action: the team worked within various working groups to establish global climate action strategy for the sports sector			✓
Policy	IMOCA class rules - Team pilots the implementation of 100 kgs of alternative materials, which subsequently becomes an IMOCA standard rule			✓
Policy	IMOCA class rules - LCA for all new builds			✓
Policy	IMOCA class rules - green sail rule			✓
Policy	IMOCA class: the Team provided two recommendations - internal price on carbon & a carbon cap			✓
Toolbox	Toolbox provides climate action pathway for 250 users			✓
Toolbox	Toolbox: the Team worked with key suppliers to calculate and address their climate impacts			✓
Internal policy	By setting an internal price on carbon ($25.tC02e) the team integrates an assessment of climate impact in policy and decision making		✓	

BEYOND REDUCTIONS

There are a number of mechanisms and tools that we are applying to address our climate impacts:

INTERNAL PRICE OF CARBON

A key mechanism for leveraging GHG emissions within an organization is the establishment of an **Internal Price on Carbon**[5] **(IPC**). The IPC is defined in two different ways:

1. As a driver of policy and decision making, a virtual IPC is set at €100 for one ton of GHG emissions. Simply described: €100 is the additional cost the team will pay for a product or service to avoid one ton of GHG emissions.
2. As a climate action tarif, based on the average price of Blue Carbon, the actual IPC is set at €25 for one ton of GHG emissions, which generates a climate action fund to:
   a. Support beyond 'business as usual' solutions that required additional resources to implement. This is known as **insetting.**
   b. Address residual emissions, through contributions to external solutions. Otherwise known as **offsetting.**

CLIMATE ACTION FUND

By assessing our climate impact and responsibilities for the full campaign from September 2019 to July 2023, and using the internal price of carbon, we generate and allocate an annual carbon budget to fund climate action.

INFLUENCING POLICY

We share our climate action progress internally with our team members to explore insetting opportunities and develop and activate reductions of our footprint within each department's value chain. Direct associations are made between climate action, the climate action fund, and the economies available within departmental annual budgets.

Externally, we share our approach with other stakeholders, partners and peers in an open and transparent way. We:

- Look for insetting opportunities within the value chain
- Share lessons learned and provide recommendations. Examples to date include:
  - Supporting the establishment of the Sustainable Marine Alliance
  - Supporting key partners and suppliers with measurement and climate action through The Toolbox
  - Proposing an internal price of carbon for the IMOCA Class
  - Proposing a carbon cap for the IMOCA Class
  - Proposing a climate action fund for the IMOCA class

[5] UNFCCC SPORTS FOR CLIMATE ACTION - Moving from Commitments to Action (44): "Signatories may consider establishing internal carbon pricing to help fund adaptation or mitigation projects in the supply chain or outside the organisation."

INSETTING

Initial GHG emission reductions due to improvements within an organization's operations only get us so far, there is always a quantity of remaining emissions. The interventions needed to reduce these remaining emissions typically require specific collaborations and investment to implement solutions within the wider value chain. This is called insetting.

Beyond reductions, insetting is a priority because it addresses the very real challenges in the value chain, enabling us to bring down our emissions year on year.

"Throughout our research of the topic, we have found a lack of emphasis on the importance of external investment to reduce emissions in the value chain. We strongly believe that insetting is the missing link in climate action."

Damian Foxall, Sustainability Program Manager

Image caption: Foils being processed for carbon fibre recycling. A project undertaken by 11th Hour Racing Team with our partners, Gen 2 Carbon, and extended to all other competing IMOCA teams as a long-term insetting project.

CASE STUDIES

External examples of insetting projects from other sectors have informed our strategy, as well as projects we have been directly involved in.

CARBON INSETTING AT BEN AND JERRY'S

"In 2013 we moved away from carbon offsets and towards a process called "carbon insetting" which means we are working on reducing emissions within our supply chain. We know that dairy farms represent the largest source of GHG emissions and in 2013 we initiated a Manure Separator project with Vermont-based Native Energy that will reduce methane emissions on Caring Dairy™ farms. The Manure separation equipment and a drum composter will process cow manure into a sanitary bedding material in place of increasingly costly sawdust.

The project is designed to:

- *Reduce greenhouse gas emissions by removing a portion of the manure solids that are traditionally held in the farm's manure lagoon where they break down and produce methane gas*
- *Decrease potential run-off pollution, primarily phosphorus, by reducing the volume of waste material that needs to be spread on nearby fields*
- *Strengthen the long-term financial sustainability of the farm by reducing costs associated with bedding and hauling and spreading waste material*

The project will reduce 10,550 metric tons of CO2 over the first 10 years of the project's operations.

The investment we made in the project covers all of the emissions from our manufacturing plants and our air travel for 2013.

Part of the plan for climate mitigation in Europe included the installation of a bio-digester and a new heat conversion plant at our manufacturing site in Hellendoorn, the Netherlands. The biodigester turns the factory's dairy waste into energy. Although we have some kinks to work out to improve its performance, we are decreasing our reliance on natural gas and we are on our way to converting the site to be CO2 neutral."

Source:
2013 SEAR Report, Accessed: https://www.benjerry.com/cms/render/live/en_US/sites/us/home/about-us/sear-reports/2013-sear-report.html

LOW CARBON INSETTING

In 2017, an America's Cup team collaborated with Low Carbon and local stakeholders to provide GHG reductions to the team for their two year campaign onsite in Bermuda, resulting in renewable energy benefits for the island for the next 28 years.

194 solar panels installed at Bermuda's National Museum with Land Rover BAR's Renewable Energy Partner, Low Carbon, generating more than 93,600kWh of clean energy per year, avoiding 43 tonnes of CO2e per year, compensating for the team's energy footprint in Bermuda within 2 years, saving enough money for the Museum to hire a new staff member dedicated to cultural heritage preservation.

CLIMATE ACTION PATHWAY OPERATIONS

Understanding how we will achieve further reductions is the first step in projecting a Climate Action Pathway.

The challenge for any organization working in 'gig-based' sectors, where the scale of operations and revenue can vary widely from one period to the next, is how to project forward into the 'unknown'?

To achieve this we based the projection on the assumption of similar scales of revenue, activity and operations and termed this 'like for like'.

Our sustainability team worked with all team departments to identify future reductions, taking into account new technologies and opportunities.

Comparing, past, current, and future scenarios for our team in preparation and participation in The Ocean Race, defines:

- A baseline scenario – an initial representation for our team's operations up to 2030
- Reductions across the inventory of emission sources for each annual cycle
- An assessment of data and projection quality
- Secondary effects where they can be predicted

An intensity metric tC02e per $100 spend facilitated a comparison across periods or activities with different scales of operation and revenue.

Each element of our team's inventory is assessed and quantified for climate action action

11th Hour Racing	BASE YEAR 2017-2018		2019		2020		BASE YEAR 2021		BASE YR 2021 2022			BASE YR 2017-2018 (TOR) 2023			BASE YR 2021 2029			BASE YR 2017-2018 (TOR) 2030		
SECTOR	tC02e	%Total	tC02e	%Total	tC02e	%Total	tC02e	%Total	tC02e	tC02e Reduction	% Reduction	tC02e	tC02e Reduction	% Reduction	tC02e	tC02e Reduction	% Reduction	tC02e	tC02e Reduction	% Reduction
Fuels	15.055	1.90%	2.87	0.89%	2.83	0.71%	3.54	0.72%	2.761	0.78	22.00%	2.635	12.42	82.50%	2.407	1.13	32.00%	1.129	13.93	92.50%
Electricity	8.35	1.12%	0.489	0.19%	1.72	0.43%	1.43	0.29%	1.430	0.00	0.00%	0.835	7.52	90.00%	2.746	-1.32	-92.00%	0.835	7.52	90.00%
Water supply	0.005	0.00%	0.069	0.01%	0.18	0.05%	0.08	0.02%	0.080	0.00	0.00%	0.004	0.00	20.00%	0.080	0.00	0.00%	0.004	0.00	20.00%
Material use	261.15	26.35%	183	45.12%	277.00	69.55%	266.00	53.81%	260.680	5.32	2.00%	188.028	73.12	28.00%	194.180	71.82	27.00%	109.683	151.47	58.00%
Waste disposal	0.08	0.01%	0.025	0.01%	0.58	0.14%	0.06	0.01%	0.290	-0.23	-383.00%	0.064	0.02	20.00%	0.290	-0.23	-383.00%	0.044	0.04	45.00%
Business travel -air	308.95	31.18%	125.13	30.85%	65.31	16.40%	108.13	21.87%	112.455	-4.33	-4.00%	302.771	6.18	2.00%	90.829	17.30	16.00%	271.876	37.07	12.00%
Business travel sea	0.014	0.00%	0.48	0.12%	0.26	0.06%	2.01	0.41%	2.010	0.00	0.00%	0.011	0.00	20.00%	1.508	0.50	25.00%	0.008	0.01	45.00%
Business travel - land	1.41	0.14%	44.46	10.90%	9.59	2.41%	37.89	7.66%	25.007	12.88	34.00%	1.170	0.24	17.00%	24.629	13.26	35.00%	1.170	0.24	17.00%
Freighting goods	170.97	17.25%	9.33	2.30%	4.78	1.20%	11.35	2.30%	11.350	0.00	0.00%	136.776	34.19	20.00%	8.513	2.84	25.00%	59.840	111.13	65.00%
Hotel stay	165.38	16.69%	9.9	2.44%	17.80	4.47%	30.59	6.19%	30.590	0.00	0.00%	165.380	0.00	0.00%	27.531	3.06	10.00%	115.766	49.61	30.00%
Managed assets - Remote workers	0	0.00%	1.75	0.43%	3.65	0.92%	8.12	1.64%	8.120	0.00	0.00%	0.000	0.00	0.00%	4.060	4.06	50.00%	-4.000	4.00	0.00%
Managed assets - Digital Footprint	0	0.00%	1.1	0.27%	3.15	0.79%	0.88	0.18%	0.906	-0.03	-3.00%	0.000	0.00	0.00%	1.320	-0.44	-50.00%	-1.500	1.50	0.00%
Transmission & Distribution	1.16	0.12%	0.13	0.03%	0.00	0.00%	0.00	0.00%	0.000	0.00	0.00%	0.116	1.04	90.00%	0.000	0.00	-92.00%	0.116	1.04	90.00%
WTT - fuels	3.76	0.38%	0.77	0.19%	0.72	0.18%	0.88	0.18%	0.686	0.19	22.00%	0.658	3.10	82.50%	0.810	0.07	8.00%	0.282	3.48	92.50%
WTT - UK & overseas	1.62	0.16%	0.13	0.03%	0.50	0.12%	0.36	0.07%	0.360	0.00	0.00%	0.162	1.46	90.00%	0.720	-0.36	-100.00%	0.162	1.46	90.00%
WTT - Business travel air	34.57	3.49%	13.703	3.37%	7.15	1.80%	11.84	2.40%	12.314	-0.47	-4.00%	33.879	0.69	2.00%	11.840	0.00		30.422	4.15	12.00%
WTT - Business travel sea	0.003	0.00%	0.02	0.00%	0.05	0.01%	0.45	0.09%	0.450	0.00	0.00%	0.002	0.00	20.00%	0.450	0.00	0.00%	0.002	0.00	45.00%
WTT - pass veh & land travel	0.33	0.00%	10.62	2.69%	2.30	0.58%	9.23	1.87%	6.092	3.14	34.00%	0.274	0.06	17.00%	9.230	0.00	0.00%	0.274	0.06	17.00%
WTT delivery vehs & freight	18.01	1.81%	1.55	0.38%	0.75	0.19%	2.23	0.45%	2.230	0.00	0.00%	14.408	3.60	20.00%	2.230	0.00		6.304	11.71	65.00%
TOTAL	990.817	100.60%	405.526		398.32		495.07		477.812	17.26	3.49%	847.173	143.64	14.50%	383.371	111.70	22.56%	592.415	398.40	40.21%
Team Events					0.84															
TEAM TOTAL	990.817		405.526		399.16		495.07		477.812			847.173			383.371			592.415		
kgC02e.$100	9.91		#DIV/0!		#DIV/0!		4.67		4.51			7.99			3.62			5.59		
Out of scope																				
Partner Footprints	411.31																			
TOR Hospitality base	103.54																			
CAMPAIGN TOTAL	1505.667		405.526		399.16		495.07		477.812			847.173			383.371			592.415		

TWO YEARS	1325		TWO YEARS	976	26%
BOAT BUILD	553		BOAT BUILD	332	40%
FULL TWO YEAR CAMPAIGN	1878		FULL TWO YEAR CAMPAIGN	1308	30%
	Base year			Reduction	

The result describes our team's climate action pathway

Comparing a two-year Ocean Race campaign including a new boat build in 2022-23, to a similar scenario for the same event in 2029-30. A total reduction of 570tC02e (30%) is projected from this initial study. This is 20% less than the targets set by UNFCCC highlighting the need for redefining our sport's meaning, goals and global impacts.

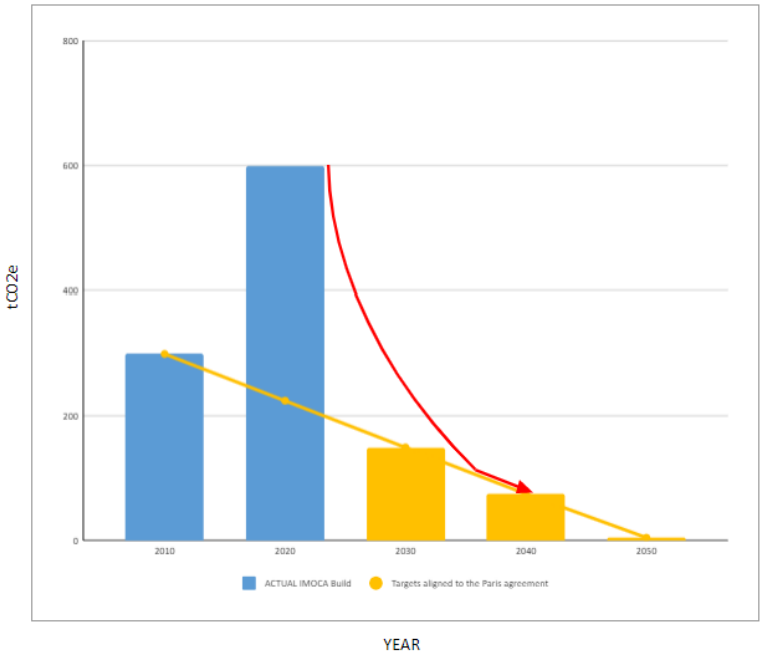
CLIMATE ACTION PATHWAY DESIGN & BUILD

Certain workflows such as the team's Design and Build Report require specific project-based assessment, in this case to identify sector specific reductions for future builds.

Table: Comparing future improvement tracks, calculated using the MarineShift360 beta software October, 2021

FUTURE BUILD AND IMOCA CLASS CHOICES AND NET ZERO TARGETS	FEASIBILTY	DESCRIPTION
	EASY	No barriers
	GOOD	Requires basic planning
	POSSIBLE	Technically possible, certain barriers to be overcome

	IMPROVEMENT TRACKS	FEASIBILITY	REDUCTION tC02E	NEW BUILD	NEW BUILD SECONDHAND MOLD	SECONDHAND BOAT ONLY	IMOCA RULES
TEAMS	100% local suppliers, no international transport or airfreight	EASY	7	☑	☑	☐	☐
	Reuse of the moulds (Once)	EASY	171	☐	☑	☐	☐
	Reuse of boat	EASY	553	☐	☐	☑	☐
SUPPLIERS	Reduce packing through reverse logistics	GOOD	1	☑	☑	☐	☐
	Improve insulation of main build facility	GOOD	1.8	☐	☑	☐	☐
	Net zero energy supplier (Boatyard only)	GOOD	36	☑	☑	☐	☐
IMOCA	Define minimum cloth weight (300 gsqm)	GOOD	0.046	☐	☐	☐	☑
	Prohibit plugs (Female mold only)	GOOD	45.6	☐	☐	☐	☑
	Replace all titanium with stainless steel	GOOD	3.7	☐	☐	☐	☑
ALL	Molds - Integrate rCF (+/- 20%)	POSSIBLE	23.6	☑	☐	☐	☑
	Molds - Integrate Flax (+/-20%)	POSSIBLE	16	☐	☐	☐	☐
	Molds - Substitute all epoxy resin by bioresin	GOOD	2.7	☑	☐	☐	☑
	Use only PEFC certified wood	EASY	0.1	☑	☐	☐	☑
	Built for reuse and longevity (steel structure of moulds	GOOD	6.8	☑	☐	☐	☑
	Collect and mutualise the PE prepreg backing for recycling	EASY	2.9	☑	☑	☐	☑
	Design & Build for four RTW races	GOOD	66.5	☐	☐	☐	☑
TOTAL: Calculated with MarineShift360 beta software on October 1, 2021			tC02e	80	219	553	152
			% TOTAL BUILD	14%	40%	100%	27%



FOOTPRINT OF AN IMOCA BUILD
Aligned to the Paris Agreement

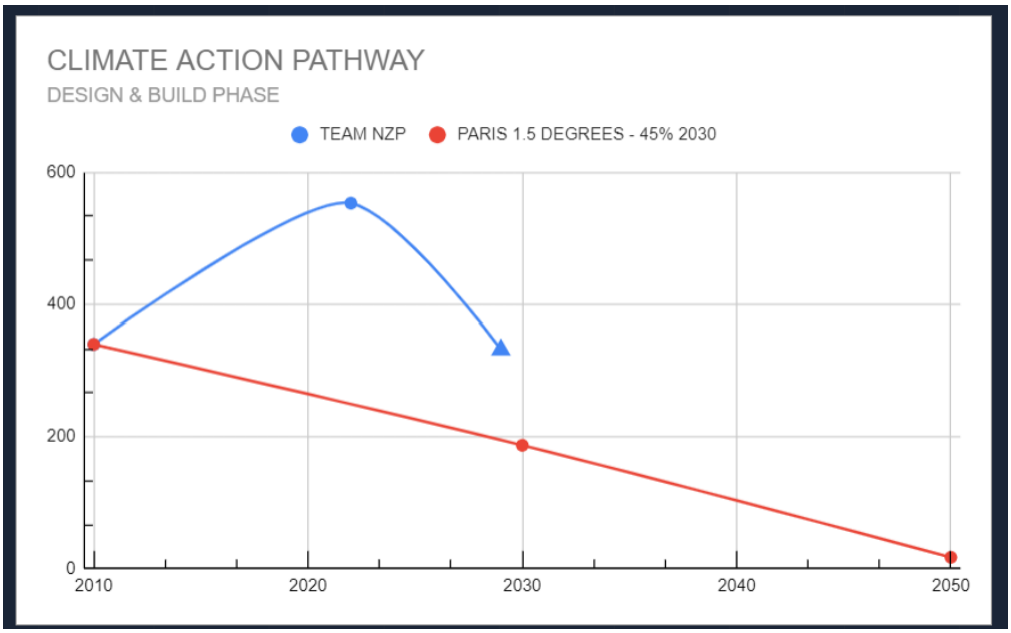
Comparing a previous IMOCA build in 2010 (340 tC02e), to our team's build in 2020 (553 tC02e), highlights the current trend in the performance marine industry which has been going too fast in the wrong direction. The yellow trend aligns IMOCA builds with the Paris agreement targets, and the red trend line indicates the transition that is now required to achieve these goals.

CLIMATE ACTION PATHWAY FORECASTING REDUCTION PATHWAYS

Comparing the GHG emissions associated with our team's operations, the racing and new boat build, along with improvement projections, describes the trend of the team's climate action pathway towards global climate goals.

The graphs below are created using:

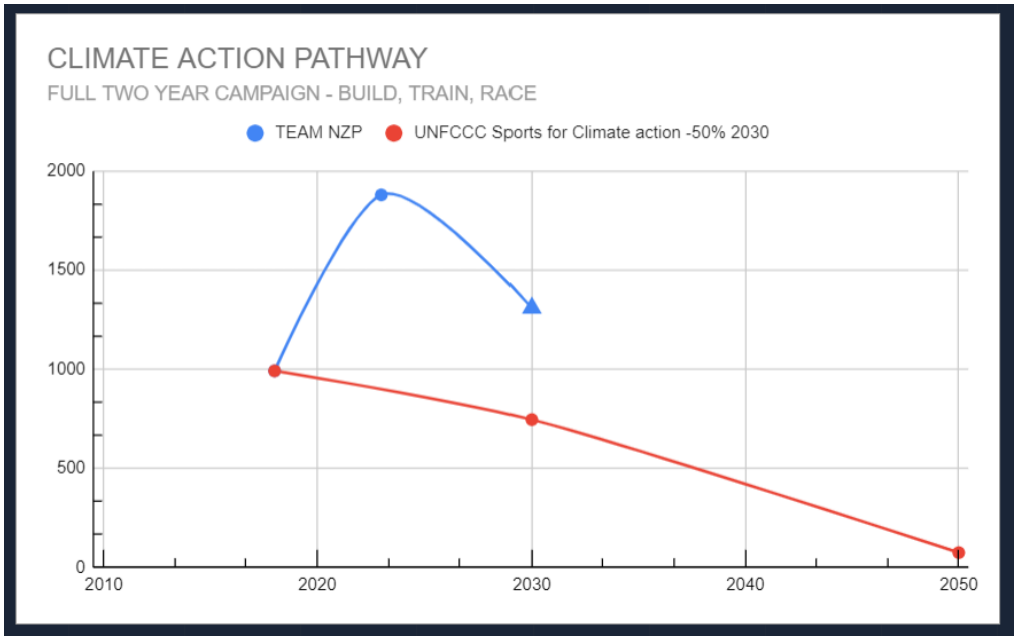
- The Climate Action Tracker - A Toolbox template [6]
- Data from both of our team's Ocean Race campaigns 2017-18 and 2019-23
- A simplified linear trend [7] using the earliest credible baseline period
- Assessing the different phases of the campaign (blue):
  - Design and Build of a new IMOCA
  - Annual training and operations (non race year)
  - Race year
  - Combined total (two year campaign)
  - Annual footprint for all years
- Reference pathways (red) are defined by UNFCCC Sports for Climate Action Framework of 50% reduction by 2030



This graph:

- Describes the actual greenhouse gas emissions relating to the design and build of an IMOCA in 2010, and the team's boat 2021 (blue)
- Projects climate reductions identified by the team for a build in 2029 [8] (blue)
- Compared with the UNFCCC Sports for Climate action targets (-50% 2030), (red)

[6] The Toolbox is a suite of guides, tools and templates created by 11th Hour Racing Team for the purpose of establishing a sustainability program within any organization, no matter the size or industry sector.
[7] Using a simplified version of the Science based targets absolute contraction approach
[8] See Design & Build report for more detail



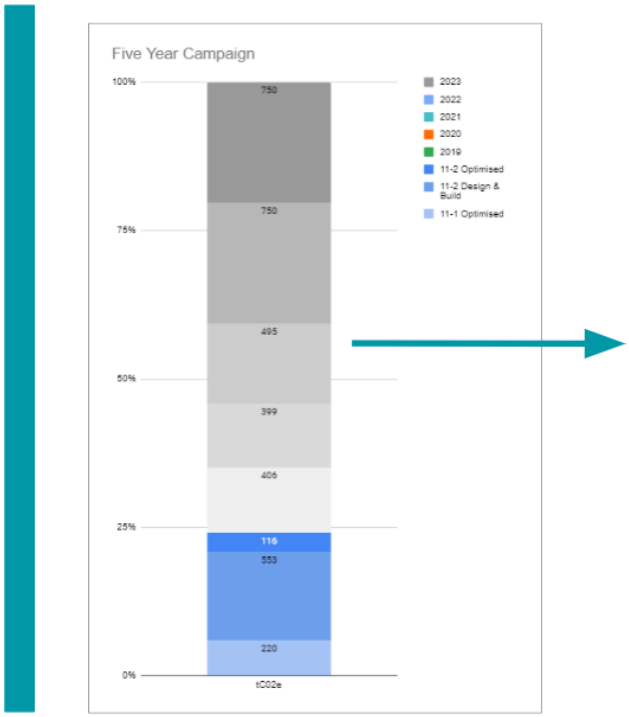
This graph:

- Describes the actual greenhouse gas emissions relating to a two year campaign period: including the design and build of an IMOCA, training and participation in The Ocean Race (2017-18 & 2022-23)
- Projects climate reduction identified by the team for a similar two-year campaign in 2029-2030 (blue)
- Compared with the UNFCCC Sports for Climate action targets (-50% 2030), (red)

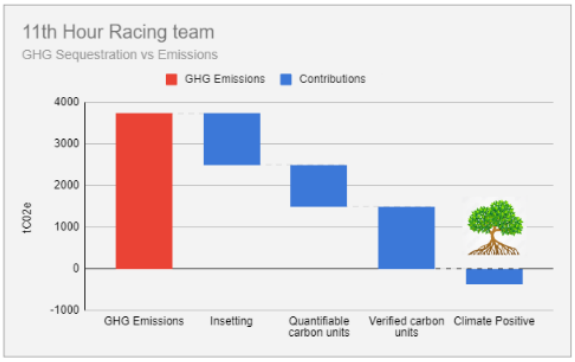
CLIMATE ACTION PATHWAY CARBON ACCOUNT

Maintaining a carbon account of GHG emissions, reductions and actions is central to understanding the residual carbon footprint, and defining a compensation strategy.

The graph summarizes the breakdown of our team's GHG emissions, their source and how we intend to balance them.



3739	GHG Emissions	11th Hour Racing Team
-1239	Insetting	Gen 2 & Low Carbon
-1000	Quantifiable carbon units	tbc
-1500	Verified carbon units	Vida Manglar
-374	Climate Positive	Grants & other
-4113	**Total**	



The table below describes how the GHG emissions are balanced through supporting insetting projects in the external value chain, and the compensation projects that support nature-based solutions [9].

11th HOUR RACING TEAM CARBON CONTRIBUTIONS Order of priority: Left to right							
INSETTING		**COMPENSATION**				**NET POSITIVE**	
INVESTMENT OF RESOURCES WITHIN THE VALUE CHAIN		**NON VERFIED QUANTIFIABLE CARBON UNITS**		**VERFIED CARBON UNITS (VCU)**		**ADDITIONAL UNQUANTIFIABLE OR NON CARBON BENEFITS**	
VALUE CHAIN	**tC02e**	**TEAM - BLUE CARBON**	**tC02e**	**TEAM - BLUE CARBON**	**tC02e**	**INSETTING, CARBON RESEARCH AND SUPPORT**	**ASSESSMENT**
GEN 2	tbc			VIDA MANGLAR, COLOMBIA	1500	SAVE THE MED	tbc
RENEWABLE ENERGY	tbc					LEGACY GRANTS - CO BENEFITS	tbc
REMOTE WORKER	tbc					DESIGN AND BUIILD REPORT - IMPACT	tbc
HYDROGEN ENERGY	tbc					THE TOOLBOX - IMPACT	tbc
	0		0		1500		0

[9] The criteria for choosing these projects can be found in Annexes

INSETTING AND COMPENSATION PORTFOLIO

A portfolio of compensation projects are carefully chosen based on the following priorities:

1. **Insetting to invest in change within our value chain.**

The importance of creating change within our respective sectors of operation and influence cannot be overstated. By placing emphasis on insetting (investing in the reduction of GHG emissions outside of our own operations, but inside the value chain), meaningful long-term reductions in the marine sector can be made.

2. **Supporting nature-based solutions.**

In 2018, our team pioneered an early blue carbon project with our title sponsor 11th Hour Racing and The Ocean Foundation which was initiated to balance the GHG emissions related to The Ocean Race 2017-18 campaign. This project was before blue carbon became a verified product on the carbon market. The research undertaken during this early stage of development highlighted the importance of nature-based solutions to climate change. Nature-based solutions to carbon drawdown have multiple benefits beyond just the sequestration and storage of carbon. Blue carbon collectively describes the marine drawdown systems: mangrove, seagrass, seaweed, and wetlands.

The benefits include:

- The capacity to drawdown significantly more carbon, than other terrestrial solutions, and up to 35 times more than a Brazilian rainforest
- The ability to protect this carbon for long periods of time
- The provision of important spawning grounds and natural habitat for marine life
- The creation of natural storm and flood barriers that are typically more efficient and cheaper to maintain than man-made structures (Storm Sandy report)

3. **Early-stage funding for blue carbon projects (quantified)**

In 2020 Verra established the first verified standard for blue carbon, but still today the carbon market offers very few projects to invest in, and these are often purchased on a large scale outright by corporations and brokers. It is evident to our team that the real need is for early investment to provide seed funding to nascent projects. Our team defined an intermediate stage - *Quantified* - as being a project that aligns with all criteria of credible carbon offsets and has the ability and intention to become *Verified*.

4. **A credible approach for verified carbon credits.**

The global carbon offset market is a complex system, with multiple standards and gatekeepers (if they exist at all). For this reason, we recognize the importance of consistent and established international standards and have included Verra verified carbon standard (VCS) projects for inclusion in the compensation portfolio.

5. **A collaborative approach to climate action**

Our team works with suppliers and partners within the marine industry to develop coherent climate action strategy and actions [10] to impact at scale.

[10] A detailed list of compensation criteria can be found in the annexe

INSETTING PROJECTS

External to our team's operations within the wider value chain, we identify projects to support that have been assessed to avoid or sequester GHG emissions within the stated timescales.

GEN 2 CARBON

Activity Carbon recycling partnership
Location Brittany, France and United Kingdom
Description

- We partner with leading carbon fiber recycling company Gen 2 Carbon to recover used boat components and manufacturing offcuts which will be regenerated into recycled carbon fiber
- Result will be a notable reduction to the environmental impact of future IMOCA build projects by diverting large amounts of waste from landfill
- By incorporating recycled carbon and alternative materials in event and Class rules, the offshore racing industry can take an important step towards Paris climate goals

Result 10 tons carbon fiber recovered. GHG emissions saved TBC
Completion date July 2023

TEAM REMOTE WORKERS

Activity Team remote worker initiative
Location Team member home base
Description Team member receives a 1,000 Euro grant to inset within their remote working footprint. At the team members' discretion, examples could include putting the fund towards improved home insulation, covering any upshift in cost to switch to a 100% renewable energy provider, or sustainable commuting.
Result TBC
Completion date July 2023

QUANTIFIED PROJECTS

Our team places a priority on early-stage funding to bring blue carbon solutions to market. The specific projects supported by our team are:

PROJECT PENDING

VERIFIED PROJECTS

Our team's climate action portfolio includes the following verified carbon projects. In addition, as participants in The Ocean Race, our team contributes to the event's GHG emissions strategy, which includes a diverse blend of projects.:

VIDA MANGLAR

Activity Mangrove restoration
Location Colombia
Description For the 12,000 people who depend on the mangroves for food, firewood and livelihoods, the sale of carbon offsets in San Antero, Colombia will provide a degree of financial security as well as the initial funding needed to develop a sustainable ecotourism program and improve fishing practices in the region. Local wildlife will be protected, and a healthier mangrove forest will provide more secure employment — not to mention food security, water purification and better coastal protection against storm surges.
Result 1500 tons CO2e
Completion date
Link https://www.youtube.com/watch?v=CqTjgycrB1o

SUMMARY OF CLIMATE POSITIVE OUTCOME

Assessing the outcome of our team's Climate Action Plan by including both quantifiable outcomes (tC02e), and unquantifiable outcomes which include a broad range of other co-benefits.

OUTCOME	METRIC
INSETTING	tC02e
Supply chain: CDK and Gurit packaging return	
Gen 2 - carbon recycling infrastructure	
Low Carbon – renewable energy	
Hydrogen energy onsite at The Ocean Race	
Remote workers - energy efficiency in the team members' home/offices	
QUANTIFIABLE	tC02e
Project pending / request for proposals	
CERTIFIABLE	tC02e
Conservation International, Colombia	1,500
UNQUANTIFIABLE	
The Sustainability Toolbox	300 users
IMOCA Class support	Rule changes and climate policy
Save the Med - legacy grantee	Estimate of carbon conserved within Marine Protected Areas Under Regeneration, and how this will increase over time
Design and Build Report	Positive impacts in the marine sector as a result of report and outreach
CO-BENEFITS	
Jobs created across all projects	
Acres of mangrove protected	
Young people educated – The Ocean Race stopovers	
TOTAL	tC02e protected/sequestered

SHARING THE TEAM'S CLIMATE ACTION PLAN

We will share our climate action commitments and results with our stakeholders and the general public.

Actions taken to avoid and reduce GHG emissions, accurate measurement and a commitment to balancing unavoidable GHG emissions, will be disclosed transparently.

To better interpret certain elements of the climate action plan, below are some terms we use.

DEFINITIONS

Carbon Neutral

Carbon neutral means that an organisation has accurately measured their GHG emissions and taken action to balance this unavoidable impact – firstly by implementing reductions within the value chain (insetting), and only then through purchasing 'carbon contributions'. It is important to note that being 'carbon neutral' is only possible within a certain time frame, for a certain project, and is relevant to a specific declared inventory. It is not a permanent state that one arrives at, as one's status moves forward through time.

NOTE: At 11th Hour Racing Team we therefore do not claim to be carbon neutral, but have been balancing carbon emissions with sequestration projects since 2017.

Climate Positive

Climate positive underlines our team's objective to go beyond just short-term reductions to considering how we can leave our sector of operations and influence better for our presence – a restorative and regenerative approach.

In the context of GHG emissions, we consider climate positive to be the state when we draw down 20% more than we emit, giving us the confidence to describe a climate positive contribution.

Climate positive can be considered to represent the sum total of both these categories: quantifiable accountable GHG emissions, and unquantifiable co-benefits.

Co Benefits

Co-benefits describe a broad range of additional outcomes that result from a compensation action, they may be environmental, social or economic benefits.

Compensation and Balancing

We avoid using the term 'carbon offsetting', and rather explain that through our compensation strategy we are contributing to global net zero goals by balancing our residual GHG emissions, through investing in insetting within our supply chain, and/or nature-based solutions which drawdown carbon on our behalf.

Compensate

After reducations and to address our residual [or remaining] GHG emissions, we compensate by investing in carbon sequestration solutions outside of our operational boundary. These include insetting and blue carbon solutions.

Carbon Sequestration

Carbon sequestration is the process that prevents carbon emissions from human activities reaching into the atmosphere, or allowing for removal of already emitted carbon from the atmosphere by capturing and securely storing it through physical, biological or technological processes.

Greenhouse gas emissions (GHG)

These include carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFC), perfluorocarbons (PFC), sulphur hexafluoride (SF6), and nitrogen trifluoride (NF3) and contribute to global warming.

Insetting

Our Team prioritizes interventions to reduce emissions and/or remove greenhouse gas from the atmosphere outside our own operations but within our value chain.

Net Zero

Net zero is the balance between the amount of GHGs produced and the amount removed from the atmosphere. The Paris Agreement of 2015 calls on organizations to measure, reduce and define a pathway to achieve 50% reductions by 2030 and achieve net zero by 2050. This is a global goal and refers to the combined efforts of nations, industry and individuals. This trajectory is also referred to as the net zero pathway.

Note: Our team references and aligns with the earlier date of net zero by 2040 as defined by the UNFCCC Sports for Climate Action Framework.

Planet Positive

This describes our team's strategy with regards to all of our sustainability objectives, considering how our team can leave our sector of operations and influence better for our presence – a restorative and regenerative approach.

While Planet positive describes this broader set of objectives, it includes a climate positive approach in relation to GHG emissions.

QUESTIONS & ANSWERS - FAQs

Why is Team's Climate Action Plan important?

Our commitment to addressing climate change is fundamental to playing a leadership role within our sport. By outlining the need to align with the global climate goals of the Paris Agreement, we can be a catalyst to accelerate change within the marine industry.

Our team is committed to a climate positive outcome, drawing down at least 20% more greenhouse gases than emitted by our operations during the period starting January 2019 and ending July 2023.

Describe the Team's climate strategy?

Our climate strategy describes the actions we take to achieve a climate positive outcome by reducing our GHG emissions, addressing our remaining emissions by investing in value chain solutions (insetting), and carbon compensation projects.

How does the Team contribute to the Paris Agreement Goals?

Our Climate Action Plan outlines how we measure, reduce and define a pathway to achieve 50% reductions by 2030 and net zero by 2040 as described by the UNFCCC Sports for Climate Action.

What reductions have you made?

We have prioritized reductions in our areas of highest impact and/or opportunity.
These include;

- Boat construction
- Energy management
- Sourcing of materials
- Waste management
- Travel and transport
- Policy change
- Further improvements in the value chain

Note: Quantitative reductions made in each sector can be found in detail on pages 17-20

The team clearly places a lot of emphasis on insetting, can you explain this further?

Reductions in GHG emissions through improvements within an organization's operations only get us so far, there is always a quantity of remaining emissions. The interventions needed to reduce these remaining emissions typically require specific collaborations and investment to implement solutions within the wider value chain. This is called insetting.

Beyond reductions, insetting is a priority because it addresses the very real challenges in the value chain, enabling us to bring down our emissions year on year.

Why does the team compensate for greenhouse gas emissions?

Addressing our greenhouse gas emissions requires us to:

- Look with in our own operations to implement reductions
- Support interventions in our value chain through insetting

The purpose of the final compensation step is to address any remaining emissions by contributing to external sequestration solutions such as blue carbon.

Note: See question on offsetting versus compensation

How does the Team address compensation?

We compensate for our GHG emissions by:

- Investing in interventions within our value chain (insetting)
- Supporting the development of quantifiable blue carbon projects
- Financially supporting verified carbon projects underlining the importance of robust standards in the carbon market

Why blue carbon

Nature-based solutions to carbon drawdown have multiple benefits beyond just the sequestration and storage of carbon. Blue carbon collectively describes the marine drawdown systems: mangrove, seagrass, seaweed, and wetlands.

The benefits include;

- The capacity to drawdown significantly more carbon, than other terrestrial solutions, and up to 35 times more than a Brazilian rainforest.
- The ability to protect this carbon for long periods of time
- The provision of important spawning grounds and natural habitat for marine life
- The creation of natural storm and flood barriers that are typically more efficient and cheaper to maintain than man-made structures (Storm Sandy report)

Why don't we use the terms offsetting / climate neutral / carbon neutral?

There have been many valid criticisms of certain aspects of the offsetting market, and while we recognise the need for this market as a critical tool to address climate change we specifically avoid the term offsetting and related claims of climate neutrality.

We represent an influential but non-essential sector: sport. As such we strongly believe our role is to contribute to global climate goals through a robust approach to these issues, as well as transparent communication relating to our actions.

We therefore use the terms compensation and contribution which better reflect the reality of the pathway to global climate goals.

Does the climate action journey stop once you have compensated for your footprint?

Throughout the marine industry and sport there are huge reductions to be made to bring us in line with the Paris Agreement (50% by 2030, and Net zero by 2050). Climate action is a cyclical process which requires bold action and continual improvements to achieve these goals much faster than we are doing so now.

How can people be sure your claims are credible?

Communicating and reporting the successes and challenges of the team's work in a transparent way is key to influencing change. We do this by always referencing further information, explaining and disclosing our approach and metrics, and by not using any standalone claims. Our reporting process is aligned to Global Reporting Initiative (GRI) and ISO standards , and includes peer and third party review.

Note: The team's website provides a useful glossary of the various terms used throughout our sustainability work

This declaration of achievement will be completed and published at the end of the campaign in 2023.

DECLARATION OF ACHIEVEMENT

11th Hour Racing Team have achieved a Climate Positive outcome drawing down ....% more greenhouse gas than the totality of emissions (....tC02e) relating to all of their operations for the period starting January 2019 and ending July 2023.

This has been achieved by: internal reductions within team operations, supporting external reductions and removals in their wider value chain, compensating for the remaining footprint with carbon drawdown projects, this has been completed, and where relevant verified and retired in accordance with the international standards on the Date: .....

The combination of these actions and associated co-benefits, are detailed in the 11TH Hour Racing Team 2019-2023 sustainability report, and underline our commitment as a signatory of the Sports for Climate Action Initiative to the United Nations Framework Convention on Climate Change and the goals of the Paris Agreement.

11TH HOUR RACING TEAM

Mark Towill,
CEO & Co-Founder

Charlie Enright,
Skipper & Co-Founder

Damian Foxall,
Sustainability Program Manager

THIRD PARTY REVIEWED

Craig Simmons,
Chief Technology and Metrics officer UK - Anthesis group

Date: .....

ANNEXES

CONTRIBUTION CRITERIA

The selection process for compensation projects took into account the following criteria which represent both recognised standards, but also the broader sustainability goals of 11th Hour Racing Team, and their current understanding of evolving carbon markets.

CRITERIA	DESCRIPTION	
Insetting	Reductions external to our organization's own operations, but with their value chain.	The first priority when addressing unavoidable impacts is to look for reduction opportunities within the organisations value chain. When these comply with certain criteria they can be accounted for with the organisations carbon contributions.
Insetting	Criteria: Additional, Scientific, Longevity, Co-benefits, Third-party verified.	Ensuring that insetting criteria are robust and allow scientific, credible quantification (non-quantifiable benefits may be listed as such).
Quantified	We prioritize supporting 'quantified' blue carbon projects which meet our criteria and principles, and prioritise these projects over verified carbon reduction.	The project developer has capacity and intention to implement blue carbon/ restoration projects to full verification, with VCS, CCB, Plan Vivo, Gold Standard or equivalent.
Nature based solutions	We prioritize nature based solutions.	Focused on Blue Carbon .
Scientific approach		There is robust scientific measurement in place to formally quantify the carbon sequestration estimates.
Credible		The overall project is aligned with international standards and forward thinking.
Additional	Projects must meet the 'additionality' rule.	Carbon removals must be 'additional' to what would have happened if the funding was not available through the carbon credit or contribution mechanism. Consider that a notion of time can add another dimension to the definition of additional.
Longevity	Project sequesters and/or protects carbon for a relevant and stated time period.	The generic period for carbon sequestration calculations is 100 years. Certain carbon capture & storage projects provide permanent/ indefinite sequestration, while on the other hand certain soil-agriculture projects are based on shorter time periods.
Ownership	Land ownership.	The project can be on community, private or government owned land, land ownership must be confirmed, and formal permission granted for the project's implementation.
	Longevity.	The project must have confirmation from the owner that the land and project are protected for the intended duration of the project.
	Double accounting.	The project is at low risk from being double accounted in future local, regional or national carbon declarations, or similar 'double sale' or 'double accounting'.

Accounting	Registry.	The project and credits are listed to a recognised registry .
	Retiring credits (Quantified).	The project developer gives us assurance that if the project becomes Certified, within five years, our contributions are advanced to verified carbon credits and 'retired' in our name.
	Retiring credits (Verified).	The carbon credits are verified and retired in our name, within six months of purchase.
Transparent	All relevant information is publicly available.	Adjustments, issues and shortfalls are transparently communicated, so that relevant solutions can be found.
Co-Benefits	The project has community and government support.	Projects must have a high degree of local community involvement in management and implementation.
	Local employment.	People engaged to work on the project are paid, or a community agreement is made for volunteer labour with earnings into a community chest which is transparently managed.
	UN Sustainable Development Goals.	Projects must have sustainable development co-benefits.
	Legacy.	The project leaves a lasting legacy.
Stakeholder specific	11th Hour Racing Team	The project supports a unified approach and leverages existing strategies and collaborations
		The project aligns with team goals, and addresses other sustainability issues
		The project addresses original sources of impacts - sectoral and geographical
		Taking a leadership role, and establishing a forward-thinking strategy. The project is third-party verified as an integral part of the overall Climate Action Plan.
Engagement	What are the opportunities to engage the overall project and share the story?	Insitu site visit; Virtual tour; Communications plan.
Climate Positive	A regenerative approach - our sector of operation and influence is better for our presence	Total outcome sequesters 20% more carbon than was emitted. Additionally, non-tangible/unquantifiable outcomes may be listed as benefits.

INCLUSIONS AND EXCLUSIONS

This table describes in more detail the inventory associated with our team's operations, what is included in the scope of our carbon account, and what was excluded.

INCLUSION	BOUNDARY
UK GHG Reporting Protocol.	Conversion factors are used for tonnes CO2e calculations with the exception of: Electricity, where the national emission figures are used. Water, being only a small percentage of the total GHG footprint, the UK conversion factors (as opposed to using different factors per country visited) are used for all locations.
Scope 1, 2 & 3.	100% of all emissions are included.
Less than 1%.	Best efforts are used to include inventory with minor impacts.
Inventory data source.	Primary data sources were used whenever available. Detailed information relating to inventory data source can be found in the team's Annual Reports.
Carnegie Mellon EIO-LCA Model.	This input-output model is used for materials and products purchased not related to the GHG protocol tool to give CO2e per US$ spent.
The MarineShift360 Life Cycle Assessment (LCA) tool is used to calculate the footprint of the design and build of the new IMOCA.	The datasets and LCA method used are those within the MarineShift360 model. The MarineShift360 model is a bespoke marine industry tool that provides a cradle to grave assessment of the materials and processes involved in yacht construction. The methodology used in the model has been reviewed by experts at Anthesis to ensure it conforms with best practise and is suitable for producing ISO14044 compliant reports. The database behind the tool is made up of primary research conducted in a number of marine products and processes, as well as data points from a wide range of third-party sources including, for example, the European LCI database.
Other sources.	Certain sectors required additional research, and sources such as Ademe are used to provide the best estimations.
Air travel conversions factors are defined using UK GHG protocol ranges domestic, short haul and international flights.	Domestic flights (<785 km) - as the Team's operations included travel across various countries, the UK domestic conversion factors are used for flights under 785 km in other countries as well Short haul conversion factors (>785 <3,700 km) are used for flights in this bracket International conversion factors (>3,700 km) - are used for all flights above 3,700 km. All flights are factored as economy flights.

Digital footprint.	We have made a specific effort to include the digital footprint of internal team operations, as well as the design and analysis associated with our boat build process. Computing time, energy consumption, as well as the materiality of online services have been included ranging from texts and messaging at one end of the scale to super-computer time at the other. Where possible direct energy consumption has been measured to generate emissions. When not possible, estimations have been applied using the best possible researched data.
Remote workers.	The impact of remote working is included by using the methodology provided by Anthesis 2020.
EXCLUSION	BOUNDARY
Second hand assets.	We will not be including second hand assets on the basis that ownership of the footprint remains with the original purchaser.
GHG emissions are stated in CO2e only.	The breakdown of various GHG gases was not included: carbon dioxide (CO2), methane (CH4), nitrous oxide (N2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sculpture hexafluoride (SF6) that comprise the final emission figures.
Certain categories listed in the UK Government GHG Conversion Tables that have little or no relevance to the Team's operations were excluded or had no data to include.	· Bioenergy was not relevant and the tab was excluded from the CO2e calculations. · Refrigeration and air conditioning – our team bases had no air conditioning and only two small second-hand fridges which were not refilled or serviced. · Company owned vehicles (scope 1) – no company-owned vehicles are used. · Managed asset vehicles – N/A.
Digital hardware.	Unless specifically embedded in the researched factors used for calculating certain aspects of the digital inventory, no upstream, manufacturing or end of life impacts were accounted for in the digital footprint. The digital footprint comprises the use phase only.

REFERENCE DOCUMENTS

TEAM

- This document – The Climate Action Plan
- Team 2019 Base Climate Action Plan
- Team climate research
- Climate action tracker
- Insetting and reductions
- Carbon contributions
- Annual reports
- Design & Build Report
- Vestas 11th Hour Racing Sustainability Report

STANDARDS & REFERENCES

- The Paris Agreement
- Global Reporting Initiative
- ISO standards
- The Net Zero Initiative - A framework for collective carbon neutrality.
- PAS 2060 defines specification for the demonstration of carbon neutrality.
- Climate neutral standard
- Science based targets
- United Nations Sustainable Development Goals
- Oxford offsetting principles
- Project Drawdown
- VERRA standards VCS CCB
- Plan Vivo
- Gold Standard

SECTOR STANDARDS

- UNFCCC Sports for Climate Action Framework
- UNFCCC framework - team signed commitment
- World Sailing Agenda 2030 and Special Events Charter
- The Ocean Race Climate Action Plan
- The Ocean Race GHG emissions – Management strategy
- The Ocean Race blue carbon group - R2R explainer
- The Ocean Race - Climate action requirements for teams
- IMOCA Sustainability Charter for teams

OTHER REFERENCES

- Pricing nature
- NORI podcast

Sustainability@1degree.us

October, 2022